Draft Environmental Impact Report

CarMax Auto Superstore

City of Oceanside, California

D19-00021; CUP19-00029; V20-00005

Lead Agency
City of Oceanside
300 North Coast Highway
Oceanside, CA 92054

Prepared By
REC Consultants, Inc.
2442 Second Avenue
San Diego, CA 9210

December 2020

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List of Abbreviated Terms

AB	Assembly Bill
ADT	Average Daily Trips
ALUCP	Airport Land Use Compatibility Plan
AMI	Automatic Meter Infrastructure
AMSL	Above Mean Sea Level
AOI	Area of Interest
APCD	Air Pollution Control District
APE	Area of Potential Effects
APN	Assessor's Parcel Number
APSA	Aboveground Petroleum Storage Act
ASTM	American Society of Testing and Materials
BGS	Below Ground Surface
BMP	Best Management Practice
Btu	British Thermal Units
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Prevention
CAL FIRE	California Department of Forestry and Fire Protection
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards
CalOSHA	California Division of Occupational Safety and Health Administration
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAM	California Administrative Manual
CAO	Cleanup Abatement Orders
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building code
CC	Community Commercial
CCR	California Code of Regulations
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CDHS	California Department of Health Services
CDO	Cease and Desist Orders
CEC	California Energy Commission
CERLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERS	California Environmental Reporting System
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
Cfs	Cubic Feet per Second
CFC	California Fire Code
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CH_4	Methane
CHP	California Highway Patrol
CHSC	California Health and Safety Code

CMU	Concrete Masonry Units
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CPUC	California Public Utilities Commission
CRHP	California Register of Historical Resources
CRPR	California Rare Plant Ranks
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CWC	Clean Water code
CY	Cubic Yards
dB	Decibels
dBA	A-weighted Decibel Scale
DMV	California Department of Motor Vehicles
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substance Control
ECAE	Energy Climate Action Element
EDR	Environmental Data Resources, Inc.
EIR	Environmental Impact Report
ESA	Endangered Species Act
ESA	Environmental Site Assessment
EV	Electric Vehicle
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping Monitoring Program
FRP	Federal Response Plan
FTA	Federal Transit Administration
GHG	Greenhouse Gas Emissions
GWP	Global Warming Potential
H_2S	Hydrogen Sulfide
HA	Hydrologic Area
HAP	Hazardous Air Pollutant
HCM	Highway Capacity Manual
HFCs	Hydrofluorocarbons
HMP	Hydromodification Management Plan
HRA	Health Risk Assessment
HREC	Historic Recognized Environmental Conditions
HU	Hydrologic Unit
HVAC	Heating, Ventilation, Air Conditioning
IBC	International Building Code
ICC	International Code Council
IFC	International Fire Code
IPCC	Intergovernmental Panel on Climate Change

IPS	Inches per Second
LCP	Local Coastal Program
LED	Light-Emitting Diode
LESA	Land Evaluation and Site Assessment
LID	Low Impact Development
LOS	Level of Service
LSA	Lake or Streambed Alteration
LTRP	Long-Term Resource Plan
MBTA	Migratory Bird Treaty Act
MGD	Million Gallons per Day
MLD	Most Likely Descendent
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
MOU	Memorandum of Understanding
MHCP	Multiple Habitat Conservation Program
MPH	Miles Per Hour
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer Systems
MT	Metric Tons
MTP	Master Transportation Plan
NAAQS	National Ambient Air Quality Standards
N_2O	Nitrous Dioxide
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Planning
NCTD	North County Transit District
NF_3	Nitrogen Trifluoride
NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NOC	Notice of Completion
NOP	Notice of Preparation
NO_2	Nitrogen Dioxide
NO_x	Oxides of Nitrogen
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRHP	National Register of Historic Places
O_3	Ozone
OAQPS	Office of Air Quality Planning and Standards
OFD	Oceanside Fire Department
OMC	Oceanside Municipal Code
OPD	Oceanside Police Department
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PAMA	Pre-Approved Mitigation Area
Pb	Lead
PFCs	Perfluorocarbons
PG&E	Pacific Gas & Electric

$PM_{2.5}$	Particulate Matter Less Than 2.5 Microns in Diameter
PM_{10}	Particulate Matter Less Than 10 Microns in Diameter
POC	Point of Compliance
PPB	Parts Per Billion
PPM	Parts Per Million
PPV	Peak Particle Velocity
PRC	Public Resources Code
PRIMP	Paleontological Resources Impact Mitigation Program
RAQS	Regional Air Quality Standards
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act
RECs	Recognized Environmental Conditions
RHNA	Regional Housing Needs Assessment
ROG	Reactive Organic Gases
RPS	Renewable Portfolio Standard
RTP/SCS	Regional Transportation Plan and Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SANTEC/ITE	San Diego Traffic Engineer's Council/ Institute of Traffic Engineers
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCIC	South Coastal Information Center
SCS	Sustainable Communities Strategy
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDG&E	San Diego Gas & Electric
SDWA	San Diego Water Authority
SF	Square Feet
SF_6	Sulfur Hexafluoride
SIP	State Implementation Plan
SLF	Sacred Lands File
SMARA	Surface Mining and Reclamation Act
SO_2	Sulfur Dioxide
SOPA	Society of Professional Archaeologists
SPCC	Spill Prevention, Control and Countermeasures
SR	State Route
SRA	State Responsibility Area
SWPPP	Storm Water Pollution Prevention Plan
SWQMP	Storm Water Quality Management Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
TCR	Tribal Cultural Resource
TMDL	Total Maximum Daily Load
TNW	Traditional Navigable Water
TPA	Transit Priority Area
TPH	Total Petroleum Hydrocarbons
TPZ	Timberland Production Zone

TWLTL	Two Way Left Turn Lane
UPA	Unified Program Agencies
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UWMP	Urban Water Management Plan
VCP	Vitrified Clay Pipe
VMT	Vehicle Miles Traveled
VOCs	Volatile Organic Compounds
WCPZ	Wildlife Corridor Planning Zone
WoS	Water of the Sate
WoUS	Water of the United States
WQIP	Water Quality Improvement Plan

CHAPTER ES.0 EXECUTIVE SUMMARY

ES.1 Introduction

The California Environmental Quality Act (CEQA), Public Resources Code Section 21000, et seq. requires that before a public agency makes a decision to approve a project that could have one or more adverse effects on the physical environment, the agency must inform itself about the project's potential environmental impacts, give the public an opportunity to comment on the environmental issues, and take feasible measures to avoid or reduce potentially harm to the physical environment.

This Draft Environmental Impact Report (DEIR), California State Clearinghouse (SCH) Number 2020089012 was prepared in accordance with CEQA Guidelines Article 9, Section 15120 to 15132, to evaluate the potential environmental impacts associated with planning, constructing, and operating the proposed CarMax Auto Superstore Project (hereafter, "Project"). This EIR does not recommend approval, approval with modification, or denial of the Project; rather, this EIR is a source of factual information regarding potential impacts that the Project may cause to the physical environment. The DEIR will be available for public review for a minimum period of 45 days. After consideration of public comment, the City of Oceanside will consider certifying the Final EIR and adopting the required findings in conjunction with Project approval. In the case that there are any adverse environmental impacts that cannot be mitigated to below a level of significance, the City of Oceanside must adopt a Statement of Overriding Considerations, stating why the City is taking action to approve the Project with or without modification despite its unavoidable impacts.

This Executive Summary complies with CEQA Guidelines Section 15123 "Summary". This DEIR document includes a description of the Project and evaluates the physical environmental effects that could result from Project implementation. This EIR evaluates all subject areas listed in Appendix G of the CEQA Guidelines, which include the following: Aesthetics, Agriculture and Forestry Resources, Air Quality, Biological Resources, Cultural Resources, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, Tribal Cultural Resources, Utilities and Service Systems and Wildfire. The scope of the Project was determined through the consideration of public comment received in response to the DEIR's Notice of Preparation (NOP). The NOP and comments received in response to the NOP are attached to this DEIR as **Appendix A**. Based on preliminary evaluation of the probable effects of the Project and a thorough review of the comments on the NOP, the EIR analyzes effects having potentially significant impacts related to the following:

- Biological Resources
- Cultural Resources
- Geology and Soils
- Hydrology and Water Quality
- Land Use and Planning
- Tribal Cultural Resources

Refer to DEIR Chapter 4.0 *Environmental Analysis,* for a full account and analysis of the subject matters listed above. During the scoping process, it was determined that there would be no impact or less than significant impacts to: Aesthetics, Agricultural and Forestry Resources, Air Quality, Energy, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Mineral Resources, Population and Housing, Public Services, Recreation, Transportation, Utilities and Service Systems and Wildfire. Although the

environmental issue areas above were determined to have a less than significant impact or no impact, an analysis of each of these issue areas was provided for informational purposes. These topics are described in Chapter 4.0, *Environmental Analysis*, of this EIR and supported by analysis contained in the Project technical reports.

For each of the subject environmental topics analyzed in detail in Chapter 4.0, this DEIR describes the following:

- Environmental Setting
- Regulatory Setting
- Thresholds of Significance
- Project Impact Analysis
- Mitigation Implementation and Monitoring
- Level of Significance after Mitigation

A summary of the Project's environmental impacts and the mitigation measures required by the City of Oceanside in order to reduce or avoid these impacts is included in this Executive Summary as **Table ES-2** *Summary of Impacts, Mitigation Measures and Conclusions.* The City of Oceanside applies mitigation measures which it determines: 1) are feasible and practical for project applicants to implement; 2) are feasible and practical for the City to monitor and inforce; 3) are legal for the City to impose; 4) have an essential nexus to the Project's impacts; and 4) would result in a benefit to the physical environment. CEQA does not require the Lead Agency to analyze an exhaustive list of every imaginable mitigation measure, or measures that are duplicative of mandatory regulatory requirements.

This EIR also discusses alternatives to the Project. Alternatives are described and analyzed that would attain most of the Project's objectives while avoiding or substantially reducing the Project's significant adverse environmental effects. A summary of the Project alternatives analysis is provided below in in Section ES.4 *Project Alternatives* and a full discussion of the Project alternatives is provided in Chapter 7.0 *Alternatives.*

ES.2 Project Synopsis

ES.2.1 Location and Regional Setting

The Project Site consists of approximately 10.54 acres located in the southeastern portion of the City of Oceanside, San Diego County, California. Refer to **Figure 1** *Regional Location.* The City is bound by the Pacific Ocean to the west, Camp Pendleton to the north, the City of Vista and unincorporated portions of the County to the east, and the City of Carlsbad to the south. Major features of the area include the beaches, Buena Vista Lagoon, the San Luis Rey River, and the open areas of Camp Pendleton. Regional access is provided from State Route (SR-78), College Boulevard and Plaza Drive. The Project Site is located approximately seven (7) miles east of downtown Oceanside, south of SR-78, east of College Boulevard, and west of Thunder Drive. Refer to **Figure 2** *Vicinity Map* and **Figure 3** *USGS Topographic Map* in Section 2.0 *Environmental Setting.*

The Project boundary encompasses approximately 10.54 acres on APNs 168-012-42-00 and 168-012-43-00. The Project Site is situated on two (2) vacant and undeveloped parcels. The northern parcel is approximately 1.12 acres and is bounded to the north by the east-bound lanes of SR-78 and to the south by Plaza Drive. An existing billboard is located on the eastern portion of this parcel. The southern parcel

is approximately 9.42 acres and is located south of Plaza Drive and west of Thunder Drive. Direct access to the Project Site would be provided from two (2) access points on Thunder Drive. The proposed driveway off of Plaza Drive would be for test drives only and would not be accessible to the public.

The Project Site has a zoning and land use designation of Community Commercial (CC) as identified in the City of Oceanside Zoning Ordinance (Zoning Ordinance) and City of Oceanside General Plan (General Plan). No change to the Zoning Ordinance or General Plan is required.

ES.2.2 Project Objectives

The underlying purpose of the Project is to develop an underutilized site with a CarMax pre-owned automobile dealership that would have positive impacts on the City and local economies. The Project would be achieved through a Conditional Use Permit (CUP), Development Plan, Variance and Sewer Easement Vacation that would allow for the use of a CarMax facility on the Project Site under its existing General Plan land use and zoning designations. The primary objectives of the Project are as follows:

1. Construct and operate a retail commercial facility providing local residents with convenient access to an automobile sales center and related services.

2. Develop a thoughtfully designed, visually appealing automobile sales facility that is aesthetically compatible with surrounding development.

3. Positively impact local economy by creating employment opportunities and generating tax revenue.

ES.2.3 Project Summary Description

The Project proposes the construction of a CarMax pre-owned automobile dealership on a vacant, approximately 10.54-acre site, situated on two (2) parcels (APNs 168-012-42-00 and 168-012-43-00). Phase I of the Project would consist of a sales and administrative building, service building, private carwash, associated access drives, landscaped areas, presentation area, staging area, sales display area, and a customer and employee parking lot on the southern parcel. The northern parcel would be used as an additional sales display area with a security gate and control island and would be developed as part of Phase II of the Project.

All vehicle service work is to be performed inside fully-conditioned buildings equipped with rollup doors. Retail service vehicles and vehicles awaiting disposition off-site are stored in the secured non-public staging area located southwest of the building on a temporary basis. Vehicular access to that area would be strictly controlled through the use of embassy-style security gates. Parking spaces are not designated in this area on the plan due to the change of staging and storage of vehicles within this area on a daily basis. The non-public carwash is located in the secured staging area. An aboveground fuel storage tank with a capacity of 4,000 gallons would be located south of the sales building with a non-public fuel pump adjacent to the carwash within the secured staging area to fuel inventory vehicles as needed.

Prior to issuance of occupancy permits, the following roadway improvements would be completed as part of the Project to the satisfaction of the City Engineer:

- Widen Thunder Drive along the Project frontage into the Project Site. Parking shall be restricted along the Project frontage side of Thunder Drive between the two Project driveways.
- Widen Plaza Drive along the Project frontage to the General Plan classification of a Secondary Collector. The Applicant shall stripe this segment with three (3) travel lanes (two eastbound lanes and one westbound lane).
- Provide a center two-way left turn lane on Plaza Drive in order to match the existing westbound single travel lane configuration adjacent to the DMV.
- Install sidewalks on both sides of Plaza Drive along the Project frontage.
- Include striping for bike lanes on both sides of Plaza Drive along the Project frontage.

The principal discretionary actions required of the City of Oceanside to implement the Project would include a CUP, Development Plan, Variance, Sewer Easement Vacation and certification of this EIR. All development approvals required for the Project are provided in Section 3.5 *Project Approvals* of this EIR.

ES.3 Areas of Controversy

CEQA Guidelines Section 15123(b)(2) requires that areas of controversy known to the Lead Agency (City of Oceanside) be identified in the Executive Summary.

On August 11, 2020 the City posted a Notice of Preparation (NOP) with the San Diego County (County) Clerk in accordance with Section 15082 of the CEQA Guidelines. The NOP was mailed to public agencies, organizations, and other interested individuals to solicit their comments on the scope and content of the environmental analysis. The NOP provided a general description of the proposed actions, a description of the Project area, and a preliminary list of potential environmental impacts. The NOP and comments received during the NOP comment period are included as **Appendix A** of this EIR and were considered as part of the preparation of this EIR. Comments received covered numerous topics including aesthetics, air quality, biological resources, Buena Vista Creek, energy, greenhouse gas emissions, CAP, hazardous materials, land use and planning, noise, public services, transportation and traffic, parking, tribal cultural resources, mosquito breeding and vector control. The initial 30-day public scoping period concluded on September 10, 2020.

Regarding issues to be resolved, this EIR addresses the environmental issues that are known by the City and identified during the public scoping meeting. The EIR also addresses issues that were identified in the comment letters that the City received on NOP for the Project (refer to **Appendix A**).

Besides the topics that were discussed during the NOP and scoping period, there are no identified areas of controversy associated with the Project identified by the City.

ES.4 Project Alternatives

In compliance with CEQA Guidelines Section 15126.6, an EIR must describe a range of reasonable alternatives to the Project or to the location of the Project. Each alternative must be able to feasibly attain most of the Project's objectives and avoid or substantially lessen the Project's significant effects on the environment. A detailed description of each alternative evaluated in this EIR, as well as an analysis of the potential environmental impacts associated with each alternative, is provided in Section 7.0 *Alternatives.* Also described in Section 7.0 is a list of alternatives that were considered but rejected

from further analysis. The alternatives that were considered and further analyzed are provided in the sections below. **Table ES-1** below provides a summary of the effects of each alternative for each of the environmental impact areas addressed.

Table ES-1
Comparison of Project and Alternatives Impacts

Environmental Issue Area	Project Impact	Alternative 1: No Project Alternative	Alternative 2: Reduced Project Alternative	Alternative 3: Alternative Site Location	Alternative 4: Neighborhood Commercial Center Alternative
Aesthetics	Less Than Significant	No Impact	Less Than Significant (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Less Than Significant (Greater Impact than Project)
Agriculture and Forestry Resources	No Impact	No Impact	No Impact (Similar Impact as Project)	No Impact (Similar Impact as Project)	No Impact (Similar Impact as Project)
Air Quality	Less Than Significant	No Impact	Less Than Significant (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Less Than Significant (Greater Impact than Project)
Biological Resources	Less Than Significant with Mitigation Incorporated	No Impact (No creek protection measures would occur)	Less Than Significant with Mitigation Incorporated (Less Impact than Project)	Less Than Significant with Mitigation Incorporated (Less Impact than Project)	Less Than Significant with Mitigation Incorporated (Similar Impact as Project)
Cultural Resources	Less Than Significant with Mitigation Incorporated	No Impact	Less Than Significant with Mitigation Incorporated (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Less Than Significant with Mitigation Incorporated (Similar Impact as Project)
Energy	Less Than Significant	No Impact	Less Than Significant (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Less Than Significant (Greater Impact than Project)
Geology and Soils	Less Than Significant with Mitigation Incorporated	No Impact	Less Than Significant with Mitigation Incorporated (Similar Impact as Project)	Less Than Significant with Mitigation Incorporated (Less Impact than Project)	Less Than Significant with Mitigation Incorporated (Similar Impact as Project)
Greenhouse Gas Emissions	Less Than Significant	No Impact	Less Than Significant (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Less Than Significant (Greater Impact than Project)
Hazards and Hazardous Materials	Less Than Significant	No Impact	Less Than Significant (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Less Than Significant (Less Impact than Project)

Environmental Issue Area	Project Impact	Alternative 1: No Project Alternative	Alternative 2: Reduced Project Alternative	Alternative 3: Alternative Site Location	Alternative 4: Neighborhood Commercial Center Alternative
Hydrology and Water Quality	Less Than Significant with Mitigation Incorporated	No Impact	Less Than Significant with Mitigation Incorporated (Less Impact than Project)	Less Than Significant with Mitigation Incorporated (Less Impact than Project)	Less Than Significant with Mitigation Incorporated (Similar Impact as Project)
Land Use and Planning	Less Than Significant with Mitigation Incorporated	No Impact	Less Than Significant with Mitigation Incorporated (Similar Impact as Project)	Less Than Significant (Less Impact than Project)	Less Than Significant with Mitigation Incorporated (Similar Impact as Project)
Mineral Resources	No Impact	No Impact	No Impact (Similar Impact as Project)	No Impact (Less Impact than Project)	No Impact (Similar Impact as Project)
Noise	Less Than Significant	No Impact	Less Than Significant (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Less Than Significant (Greater Impact than Project)
Population and Housing	No Impact	No Impact	No Impact (Similar Impact as Project)	No Impact (Similar Impact as Project)	No Impact (Similar Impact as Project)
Public Services	Less Than Significant	No Impact	Less Than Significant (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Less Than Significant (Greater Impact than Project)
Recreation	Less Than Significant	No Impact	Less Than Significant (Similar Impact as Project)	No Impact (Similar Impact as Project)	Less Than Significant (Similar Impact as Project)
Transportation	Less Than Significant	No Impact (No roadway, sidewalk or bicycle lane improvements would occur)	Less Than Significant (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Potentially Significant Impact (Greater Impact than Project)
Tribal Cultural Resources	Less Than Significant with Mitigation Incorporated	No Impact	Less Than Significant with Mitigation Incorporated (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Less Than Significant with Mitigation Incorporated (Similar Impact as Project)
Utilities and Service Systems	Less Than Significant	No Impact	Less Than Significant	Less Than Significant	Less Than Significant

Environmental Issue Area	Project Impact	Alternative 1: No Project Alternative	Alternative 2: Reduced Project Alternative	Alternative 3: Alternative Site Location	Alternative 4: Neighborhood Commercial Center Alternative
			(Less Impact than Project)	(Less Impact than Project)	(Greater Impact than Project)
Wildfire	Less Than Significant	No Impact	Less Than Significant (Similar Impact as Project)	Less Than Significant (Similar Impact as Project)	Less Than Significant (Similar Impact as Project)
Meets the Project Objectives?	Yes	No	Partially	Partially	No

ES.4.1 No Project Alternative

The No Project Alternative assumes that the 10.54-acre Project Site would not be developed and that the Project Site would remain vacant, as in its present condition. Under the No Project Alternative no improvements would be made to the Project Site or its immediate surroundings including onsite and off-site utility and infrastructure improvements. The purpose of the No Project Alternative analysis is to allow a lead agency to compare the impacts of approving the proposed project with the impacts of not approving the Project.

Under implementation of the No Project Alternative, potentially significant project impacts associated with biological resources, cultural resources, geology and soils, hydrology and water quality, land use and planning, and tribal cultural resources would not occur. The No Project Alternative would maintain the existing undeveloped condition of the Project Site and would avoid all potentially significant impacts. However, benefits of the Project such as roadway widening improvements, improved traffic conditions on Plaza Drive along the Project frontage, enhancement of pedestrian and bicyclist infrastructure and fencing for creek protection would not be realized under the No Project Alternative. None of the Project objectives would be achieved as a result of the No Project Alternative.

ES.4.2 Reduced Project Footprint Alternative

The Reduced Project Footprint Alternative would construct a reduced size CarMax facility. For the purposes of this analysis, it is assumed that all buildings for sales and service would not change and the Project total building square footage would remain as 11,447 SF. Under this alternative, it is assumed that the vehicle sales display, sales and staging area, and customer and employee parking areas are reduced. Under this alternative an increased biological and planning buffer of 150 feet would be implemented. This increased buffer would provide a greater buffer between sensitive riparian areas of the Buena Vista Creek and the proposed CarMax operations. Under the Reduced Project Footprint Alternative, the proposed sewer re-alignment would not be required and the Project would utilize the existing sewer mains in their existing locations. The area of disturbance by grading and earthwork would also be reduced under this alternative, further reducing impacts to unknown cultural, tribal cultural and paleontological resources.

The Reduced Project Footprint Alternative would have minor reductions to Project impacts related to aesthetics, air quality, biological resources, cultural resources, energy, geology and soils, GHG, hydrology and water quality, noise, public services, transportation, tribal cultural resources and utilities and service systems. The Project under this alternative would still require all Project mitigation measures in order to reduce potentially significant impacts to a level below significant. All other impacts would be the same under the Reduced Project Footprint Alternative and the Project. Project objectives under this alternative would be partially met.

ES.4.3 Alternative Site Location

Table 7.4-1 provides a list of alternative site locations that were evaluated under this alternative analysis. As shown in **Table 7.4-1**, none of the alternative site locations would have met the basic operational requirements for a CarMax facility. The alternative sites were determined to be either financially infeasible, have land use or other site restrictions, or were not located within the intended market area. However, for the purpose of this alternatives analysis, the alternative site located at 1302 Encinitas Boulevard is used to analyze potential impacts related to the construction and operation of the CarMax Project at this location as it is the most feasible of the alternative site locations. The alternative site located at 1302 Encinitas Boulevard currently operates as a BMW dealership and any construction or demolition related to the current site is considered in this alternative analysis.

Development of the Project under the Alternative Site Location alternative would result in reduced impacts to aesthetics, air quality, biological resources, energy, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, public services, transportation, tribal cultural resources and utilities and service systems. The Project under this alternative would still require mitigation measures related to geology and soils and hydrology and water quality for compliance with all geotechnical recommendations and provision of storm water BMPs in order to reduce potential impacts to a level below significant. All other impacts under this alternative would be the same under the Alternative Site Location alternative and the Project. Project objectives under this alternative would be met to an extent, as the alternative site location would not provide the same development area as the proposed Project Site.

ES.4.4 Neighborhood Commercial Center Alternative

The Neighborhood Commercial Center Alternative would replace the proposed CarMax Project with another commercial use such as a neighborhood shopping center on the Project Site. Under the CC zone, uses such as retail sales, food and beverage, full service restaurants and restaurants with drive-thru services are permitted, some requiring a use permit. For the purposes of this EIR alternative analysis, it is assumed that the proposed retail center would develop the entire 10.54-acre Project Site, both the northern and southern parcels, and buildings would be a maximum of 55,000 SF total. This estimated building square footage is based on other commercial retail centers in the surrounding area. Uses within the shopping center could consist of retail ranging from grocery stores, drugstores, cleaners, beauty and barber shops and fast food services.

A neighborhood commercial center with a maximum building size of 55,000 SF would generate approximately 6,600 ADT based on the SANDAG *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (based on the generation rate of 120 trips/1,000 SF). This alternative would result in an intensity of approximately 13 times more vehicular trips compared to the Project.

The Neighborhood Commercial Center Alternative would have increased environmental impacts related to air quality, energy, GHG emissions, noise, public services, transportation and utilities and service systems due to an increase in building size with a maximum of 55,000 SF and increase in vehicle trips of 6,600 ADT compared to 475 ADT generated by the Project. Impacts to aesthetics, agriculture, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, recreation, tribal cultural resources and wildfire would be similar to that of the Project. All required mitigation measures under the Project would also be required under this alternative and would reduce potentially significant impacts to a level below significant. It is anticipated that transportation mitigation measures would be warranted as a result of such increases to traffic generated from the Project Site under this alternative. This alternative would not meet any of the Project objectives.

ES.5 Summary of Impacts, Mitigation Measures and Conclusions

Table ES-2 summarizes the Project's environmental impacts, as required by CEQA Guidelines Section 15123(a). This table also provides the mitigation measures required to reduce potentially significant impacts to a level below significance. After implementation of all mitigation measures, all Project impacts would be reduced to a level below significance. The Project would not result in any significant and unavoidable impacts.

Table ES.5-1
Summary of Impacts, Mitigation Measures and Conclusions

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
Aesthetics (See Section 4.2 for the complete analysis of Aesthetics)		
Threshold a: The Project would be located in an already urbanized area and would be of similar massing and appearance to the existing commercial center to the west, the Project would not degrade views from a visual open space area. Further, the Project would not have an effect on public viewpoint locations that may include views of the Pacific Ocean due to the distance, topography and intervening developments. In its present condition, the Project Site does not provide an expansive view of a highly valued landscape or scenic vista and it would not interfere with views of an existing scenic vista. The development of the Project would not contrast with surrounding land uses or with the existing visual landscape. Impacts to scenic vistas would be **less than significant**	No mitigation required.	Less than significant impact.
Threshold b: The Project Site is located over 30 miles from the State Scenic Highway sections designated by Caltrans within the County. Caltrans has listed I-5 and SR-76 as eligible for scenic designations; however, the Project Site is located approximately 3.3 miles east of I-5 and 3.5 miles south of SR-76. Further, no scenic resources, including trees, rock outcroppings, or historic buildings within a state scenic highway are present on or adjacent to the Project Site. **No impact** to scenic resources within a state scenic highway would occur.	No mitigation required.	No impact.
Threshold c: The Project is located in a primarily urbanized area and would be consistent with the existing CC zoning and General Plan designation of the Project Site. The existing visual character of the surrounding area is characterized by development; primarily containing commercial buildings and various residential developments including both medium- and high-density developments and a senior living facility. Overall, the Project area would remain developed similar to current conditions. Although the visual character of the Project Site would change with the addition of the CarMax Project, the development would not substantially degrade the existing visual character of the surrounding area and would appear as a continuation of existing development in Project vicinity. The Project is located in an urbanized area and would not conflict with applicable zoning and other regulations governing scenic quality, and impacts will be **less than significant**.	No mitigation required	Less than significant impact.
Threshold d: The Project would contain lighting in the parking lot areas and along the Project Site boundary. The Project would employ LED lamp technologies in lighting fixtures that would be full cut off with a flat lens, and downcast to reduce light spill onto adjacent properties. Proper shielding of lighting in parking areas would further prevent glare to adjacent properties. Light poles and associated pedestals would not exceed 25 feet per Section 3117 of the City of Oceanside Zoning Ordinance and exterior	No mitigation required.	Less than significant impact.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
lighting onsite would be reduced after operating hours. All outdoor lighting would comply with the standards of the Zoning Ordinance, Article 30, Section 3024 and Article 31 for parking lot lighting requirements. The Project would not create a new source of light or glare which would adversely affect day or nighttime views in the area, and impacts will be **less than significant.**		
Agriculture and Forestry Resources (See Section 4.3 for the complete analysis of Agriculture and Forestry Resources)		
Threshold a: An FMMP map was prepared for the project site and is classified as Urban and Built-Up Land (**Figure 10**). No prime farmland or unique farmland exist onsite. No prime farmland or unique farmland exist onsite. In addition, the Project Site is not located in an area rated "good" or "fair" for farming or in a general area of existing agriculture use as depicted in Figure ERM-7 in the Environmental Resource Management Element of the General Plan. The Project would not convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance to non-agricultural use, and therefore, **no impact** will occur.	No mitigation required.	No impact.
Threshold b: The Project Site is zoned as CC, which allows limited agricultural use with approval of an Administrative Use Permit. The Project does not require a zone change as part of the Project approvals. There are no areas designated as Williamson Act Contract lands located within the Project Site. The Project would not conflict with existing zoning for agricultural use or a Williamson Act Contract and, therefore, **no impact** will occur.	No mitigation required.	No impact.
Threshold c: The Project Site is zoned as CC and does not contain lands designated as forest land, timberland or timberland zoned Timberland Production as defined in the Public Resources Code Sections. Therefore, **no impact** to forest land or timberland will occur.	No mitigation required.	No impact.
Threshold d: The Project Site is vacant and located in a developed area surrounded by residential uses, commercial uses, and transportation corridors. The property is covered in non-native ruderal, iceplant, and ornamental vegetation with some native coastal sage scrub plants interspersed. The Project would not result in the loss of forest land or conversion of forest land to non-forest uses, and therefore, **no impact** will occur.	No mitigation required.	No impact.
Threshold e: The Project Site is vacant and located in a developed area surrounded by residential uses, commercial uses, and transportation corridors. No farmland or forest land exists onsite or in the surrounding area.	No mitigation required.	No impact.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
The Project would not result in the conversion of Farmland to non-agricultural use or forest land to non-forest uses, and therefore, **no impact** will occur.		
Air Quality (See Section 4.4 for the complete analysis of Air Quality)		
Threshold a: The Project Site is located in the CC zone pursuant to the Zoning Ordinance and corresponding General Plan land use designation. No change in the Zoning Ordinance or General Plan is required. A CUP is proposed to allow for the CarMax Project. Thus, the Project is consistent with the zoning and land use designations and meets the use that is anticipated in the local plan and SANDAG's growth projections and will not conflict with the SIP or RAAQS. As provided in the Air Quality Assessment, and further provided in **Table 4.4-6**, **Table 4.4-7** and **Table 4.4-8**, the Project will not exceed SDAPCD thresholds for any pollutant during construction or operation of the Project. The Project will not conflict with or obstruct implementation of the applicable air quality plan, and therefore, impacts will be **less than significant**.	No mitigation required.	Less than significant impact.
Threshold b: As displayed in **Table 4.4-6**, Project construction emissions would not exceed SDAPCD thresholds and therefore, no direct construction impacts related to air quality are expected. The Applicant has indicated that as a design feature all diesel equipment would be Tier 4, meaning that equipment would comply with the latest emission milestone established by the U.S. EPA and CARB, and that the grading contractor would follow BMPs for grading as it relates to minimizing air quality emissions and will comply with all SDAPCD rules and regulations. Project construction emissions will not exceed SDAPCD thresholds for any pollutant, and will not result in considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (PM_{10}, $PM_{2.5}$ or O_3). Impacts from Project construction emissions are **less than significant**. As shown in **Table 4.4-7** and **Table 4.4-8**, the Project operational emissions would not exceed SDAPCD thresholds for any pollutant, for which the project region is non-attainment under an applicable federal or state ambient air quality standard (PM_{10}, $PM_{2.5}$ or O_3). Impacts from operational emissions are **less than significant**. Project operational air quality emissions would not exceed SDAPCD's area, mobile or energy thresholds and therefore, the Project would have a less than significant cumulative operational impact. The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under applicable federal and state ambient air quality standards, and therefore impacts to air quality will be **less than significant**.	No mitigation required.	Less than significant impact.
Threshold c: As shown in **Figure 11,** sensitive receptors include residences and senior residences. The nearest sensitive receptors are the medium density residences directly to the east across Thunder Drive, the	No mitigation required.	Less than significant impact.

Summary of Impact	Mitigation Measure		Level of Significance After Mitigation
Brookdale senior living facility located directly south of Buena Vista Creek, an apartment complex located approximately 0.15 mile southwest of the Project Site and the Lil Jackson Senior Community located 0.19 mile southwest of the Project Site. The evaluation of air quality impacts to sensitive receptors is based on the potential to result in physical health issues. Worst case PM_{10} from exhaust emissions would cumulatively produce 0.00589 tons (over the total construction duration of 391 days) or an average of 0.000158 grams/second. The average emission rate over the grading area is $3.55x10^{-9}$ grams/m^2/second. The inhalation cancer risk for the closest residential receptor was found to be 7.97 which would not exceed SDAPCD 10 per one million exposed significance threshold. Based on the uses expected on the Project Site, potential long-term operational impacts associated with the release of TACs will be minimal and would not be expected to exceed the SDAPCD thresholds of significance presented in **Table 4.4-7** and **Tale 4.4-8.** The annual concentration yields a Health Hazard Index of 0.0072, which is less than one. Therefore, a less than significant health risk impact will occur. The Project would not expose sensitive receptors to substantial pollutant concentrations, and therefore impacts are **less than significant.**			
<u>Threshold d:</u> Construction odors would be considered short-term and would not affect a substantial number of people. The Project would be required to comply with the City's Public Nuisance Law, the SDAPCD Rule 51 and the California Health and Safety Code. Construction of the Project will not result in other emissions (such as those leading to odors) affecting a substantial number of people, and impacts are **less than significant.** The operation of the Project would not be expected to cause long-term odor impacts. The Project does not contain any active manufacturing activities and would not convert agricultural land to commercial land uses. Objectionable odors would not be emitted by the commercial use. Operation of the Project will not result in other emissions (such as those leading to odors) affecting a substantial number of people, and impacts are **less than significant.**	No mitigation required.		Less than significant impact.
Biological Resources (See Section 4.5 for the complete analysis of Biological Resources)			
<u>Threshold a:</u> The Project has the potential to impact the following sensitive species: **San Diego Sagewort** Sensitive plant species such as the San Diego sagewort have the potential to occur onsite, and therefore, a **significant impact** will occur (**Impact BIO-1a).** **Sensitive *Brodiaea* Species**	**MM-BIO-1a**	**Pre-Construction Mitigation Measures** **Pre-Construction Meeting:** Prior to construction, a qualified biological monitor will attend the preconstruction meeting, discuss the Project's biological monitoring program with construction contractors, and arrange to perform any follow up mitigation measures and reporting for the proposed Project. **Resource Delineation and Protection Measures**: Prior to construction activities, a qualified biological monitor will supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other Project mitigation measures. This pre-	Mitigated below a level of significance.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
Project construction is anticipated to begin in November 2021 and therefore, the presence of sensitive *Brodiaea* species has the potential to occur within the Project area and represents a **significant impact** (**Impact BIO-2**). **Fairy Shrimp** Construction of the Project is anticipated to begin in November 2021, however, if Project construction has not been initiated prior to the 2022/2023 wet season, there is a potential for a **significant impact (Impact BIO-3)** to Fairy Shrimp**.** **Coastal California Gnatcatcher** Project construction is anticipated to begin in November 2021 and therefore construction will not be initiated prior to the 2021 breeding season, and there is a potential for a **significant impact (Impact BIO-4)** to Coastal California Gnatcatcher. **Least Bell's Vireo** Project construction is anticipated to begin in November 2021 and therefore construction will not be initiated prior to the 2021 breeding season, and there is a potential for a **significant impact (Impact BIO-5)** to Least Bell's vireo**.** **Migratory Bird Treaty Act-Covered Species** The Project would result in direct and indirect impacts to Cooper's hawk, yellow warbler and other MBTA-covered bird species that occur within and adjacent to the Project footprint, and therefore a **significant impact (Impact BIO-6)** will occur**.** Impacts to sensitive mammal species are **less than significant.** The Project will have a substantial adverse effect, either directly or through habitat modifications, on a wildlife species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.	construction phase will include flagging sensitive plant species and delineating buffers to protect sensitive biological resources (e.g., habitats, flora and fauna species, nesting birds) during construction activities. In addition, appropriate BMPs will be installed as applicable to provide fugitive dust control, minimize lighting and noise in adjacent habitats, and avoid the introduction of exotic and invasive plant and animal species into the area. Responsible construction practices as well as storm water and runoff management will also be included as part of the BMPs. **Contractor Environmental Awareness Training:** Prior to commencement of construction activities, a qualified biological monitor will meet with all construction contractors to conduct an on-site contractor environmental awareness training to discuss the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain construction limits flagging, discuss sensitive resource flagging, review wetland buffers, clarify acceptable access routes/methods and staging areas). **Sensitive *Brodiaea* Species (Impact BIO-2)** **MM-BIO-2** Prior to construction of the Project, focused sensitive plant species surveys of the Project Site shall include general rare plant surveys in addition to focused *Brodiaea* species surveys by a qualified biologist. Rare plant surveys shall be conducted twice, including one in early spring and one in late spring/early summer prior to Project construction in order to document any sensitive plant species that occur within the Project area. Six (6) focused *Brodiaea* species surveys shall be conducted in spring prior to construction with the timing based on the emergence of the species documented during reference site checks. If no sensitive plant species are documented within the Project survey area during focused surveys, no additional avoidance, minimization measures or mitigation measures would be required. If sensitive plant species are documented within the Project survey area, impacts to these species shall be avoided to the extent feasible. Unavoidable impacts shall be minimized and/or mitigated through compensatory measures (e.g., restoration, transplantation, habitat preservation) that will be determined based on the species present, population estimate and significance of the impacts. All significant unavoidable impacts shall require additional mitigation measures to reduce impacts to below a level of significance. **Fairy Shrimp (Impact BIO-3)** **MM-BIO-3** Prior to construction of the Project, if construction has not been initiated prior to the first rain event of the 2022/2023 rainy season, additional pre-construction surveys shall be conducted prior to construction initiation in order to update the status of the fairy shrimp species within the Project survey area. Pre-construction fairy shrimp surveys shall be conducted by a qualified biologist in accordance with current USFWS survey	

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
	guidelines. If sensitive fairy shrimp species are documented within the survey area, impacts to listed fairy shrimp shall be avoided to the extent feasible. Unavoidable impacts to these species would be considered significant and would require consultation with the USFWS under Section 10(a)(1)(B) of the ESA to develop project-specific minimization and mitigation measures to reduce these impacts to below a level of significance. **Coastal California Gnatcatcher (Impact BIO-4)** **MM-BIO-4** Prior to construction of the Project, if construction has not been initiated prior to the 2021 breeding season (February 1), additional pre-construction surveys shall be conducted prior to construction initiation to determine if coastal California gnatcatcher is present in the Project survey area. Focused coastal California gnatcatcher surveys shall be conducted by a qualified biologist in accordance with current USFWS survey guidelines. Impacts to coastal California gnatcatcher shall be avoided to the extent feasible. Unavoidable impacts to this species would be considered significant and would require consultation with the USFWS under Section 10(a)(1)(B) of the ESA to develop project-specific minimization and mitigation measures (e.g., construction outside of breeding season, habitat protection, noise attenuation) in order to reduce impacts to a level below significance. **Least Bell's Vireo (Impact BIO-5)** **MM-BIO-5** Prior to construction of the Project, if construction has not been initiation prior to the 2021 breeding season (February 1), additional pre-construction surveys shall be conducted prior to construction initiation to determine if least Bell's vireo is present in the Project survey area. Pre-construction focused least Bell's vireo surveys shall be conducted by a qualified biologist in accordance with current USFWS survey guidelines. Impacts to least Bell's vireo shall be avoided to the extent feasible. Unavoidable impacts to this species would be considered significant and would require consultation with the USFWS under Section 10(a)(1)(B) of the ESA to develop project-specific minimization and mitigation measures (e.g., construction outside of breeding season, habitat protection, noise attenuation) to reduce these impacts to below a level of significance. **MBTA-Covered Bird Species (Impact BIO-6)** **MM-BIO-6** During construction, all vegetation clearing will occur outside of the breeding season (February 1 to September 15) to avoid impacts to sensitive avian species (e.g., any species identified as a listed, candidate, sensitive, or special status species; any species covered by the MBTA). If vegetation clearing must occur during the breeding season, a qualified biological monitor will conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-	

Summary of Impact	Mitigation Measure		Level of Significance After Mitigation
		construction survey will be conducted no more than four (4) calendar days prior to the start of construction activities (including removal of vegetation). The results of the pre-construction nesting bird survey will be submitted to the City of Oceanside for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan will be prepared and will include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan will be submitted to the City of Oceanside for review and approval and will be implemented to the satisfaction of the City of Oceanside. The qualified biological monitor will verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.	
<u>Threshold b:</u> Unavoidable direct impacts to approximately 0.408 acre of disturbed Diegan coastal sage scrub will occur as a result of the Project and a **significant impact (Impact BIO-7)** will occur**.** The Project would encroach temporarily, approximately six (6) feet, into the 50-foot planning buffer during the proposed sewer realignment. As a result, temporary direct impacts will occur to approximately 0.008 acre (334 SF) of disturbed habitat within the planning buffer. These impacts are considered temporary as they would recover on their own within one growing season. Additionally, because these impacts are minimal and because they are located at least 94 feet from the riparian habitat, no direct impacts to riparian habitat will occur. The Project would result in temporary and permanent impacts to 0.007 acre of developed land. The Project would result in temporary and permanent impacts to disturbed land, iceplant, ornamental and ruderal land cover/vegetation communities. These land cover types are designated as habitat Group F which consists of lands that do not support natural vegetation. Impacts to this habitat group are not considered significant and do not require mitigation. Indirect impacts, including fugitive dust accumulation from adjacent construction activities could occur to a small patch of disturbed Diegan coastal sage scrub located approximately 15 feet south of the proposed sewer realignment footprint which has the potential to interfere with photosynthesis and germination of sensitive vegetation communities, and therefore a **significant impact** will occur (**Impact BIO-1b). N**o indirect impacts to riparian habitat would result from Project construction. No impacts to critical habitat are anticipated to occur from the Project. Critical habitat for the coastal California gnatcatcher has been designated within the Buena Vista Creek Mitigation Area. The Project, however, has been designed to include the 100-foot buffer on the riparian vegetation associated with Buena Vista Creek, which equates to an approximately 80- to 140-foot buffer on the designated coastal California gnatcatcher critical habitat. Impacts to critical habitat will be **less than significant.**	**Disturbed Diegan Coastal Sage Scrub (Impact BIO-7)** **MM-BIO-7** Prior to issuance of a building permit, the Project shall mitigate impacts to disturbed Diegan coastal sage scrub within the WCPZ or within a PAMA at a 3:1 ratio. As such, the Project shall preserve 1.224 acres of Diegan coastal sage scrub at an existing mitigation bank or within a PAMA which shall be determined and approved by the City of Oceanside Planning Department. **MM-BIO-1b** **Construction Measures** **Biological Monitoring:** During construction, all construction activities, including access and staging, will be restricted to areas previously identified and depicted on the approved Project plans. A qualified biological monitor will monitor construction activities as needed to verify that construction activities do not encroach into biologically sensitive areas and that, if applicable, the mitigation measures developed to accommodate any sensitive species located during the pre-construction surveys are being implemented. The qualified biological monitor will complete a Daily Biological Monitoring Form to document all construction and monitoring activities. **Subsequent Resource Identification:** During construction, the qualified biological monitor will note/act to prevent any new disturbances to habitat, flora, and/or fauna on-site (e.g., flag newly identified sensitive resources for avoidance during access). If active nests or other previously unknown sensitive resources are detected, all Project activities that directly impact the resource will be delayed until species-specific local, state, or federal regulations have been determined and applied by the qualified biological monitor.	Mitigated below a level of significance.
<u>Threshold c:</u> No impacts to potentially jurisdictional resources are expected to occur from implementation of the Project. The Project has been designed to include the mandatory 100-foot buffer from the riparian habitat boundary. This buffer includes a 50-foot biological buffer as well as a mandatory 50-foot planning buffer. Project design and implementation would include the 100-foot buffer and therefore	**MM-BIO-1c**	**Post-Construction Measures** Upon completion of Project construction, a post-construction report that summarizes the construction activities, actual Project impacts, and Project design/mitigation measures implemented before and during construction will be prepared for the Project. If Project impacts exceed the approved totals, additional impacts will be mitigated in	Mitigated below a level of significance.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
no impacts to riparian habitat will occur. However, due to the Project's close proximity to Buena Vista Creek, the Project has the potential to have a substantial adverse effect on state or federally protected wetlands and a **significant impact** (**Impact BIO-1c)** will occur.	accordance with the Subarea Plan and other applicable local, state, and federal laws. The qualified biological monitor will submit the post-construction report to the City of Oceanside within 30 days of construction completion.	
Threshold d: Due to the high level of disturbance within the Project Site, no impacts to wildlife corridors or native wildlife nursery sites are expected to occur from implementation of the Project. The Project is not located within the WCPZ, however, Buena Vista Creek and the associated riparian area along the southern boundary of the Project Site provides sufficient connectivity to be considered part of both a local and regional wildlife corridor. The Project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites, and impacts will be **less than significant.**	No mitigation required.	Less than significant impact.
Threshold e: The Project is in compliance with Land Use Element of the General Plan Policy 3.11A and 3.11C and would not conflict with policies 11B, 3.11D and 3.11E. The Project would comply with all applicable City regulations and requirements related to Landscaping including Section 3019 of the Zoning Ordinance, Landscape Development Manual and City of Oceanside Municipal Code. The Project has been designed to include the requisite 100-foot wetland buffer, which includes the required 50-foot biological buffer on the jurisdictional resources as well as the requisite 50-foot planning buffer. The planning buffer serves as an area of transition between the biological buffer and specified land uses on adjoining uplands. The riparian area and associated natural habitats within the 100-foot buffer will be designated as biological open space and incorporated into the Preserve per Section 5 of the Oceanside Subarea Plan. The Project will not conflict with any local policies or ordinances protecting biological resources, and impacts will be **less than significant.**	No mitigation required.	Less than significant impact.
Threshold f: Although the Project was designed to comply with the measures outlined in the MHCP and the Subarea Plan, the Project has the potential to result in significant impacts to sensitive plant species and vegetation communities (**Impact BIO-1a and Impact BIO-1b**), jurisdictional resources (**Impact BIO-1c**), *Brodiaea* species (**Impact BIO-2**), fairy shrimp (**Impact BIO-3**), coastal California gnatcatcher (**Impact BIO-4**), least Bell's vireo (**Impact BIO-5**), and other MBTA-covered species (**Impact BIO-6**). The Project would result in unavoidable direct impacts to disturbed Diegan coastal sage scrub (**Impact BIO-7**) and therefore, a **significant impact** will occur.	See mitigation measures MM-BIO-1a, MM-BIO-1b, MM-BIO-1c, MM-BIO-2, MM-BIO-3, MM-BIO-4, MM-BIO-5, MM-BIO-6 and MM-BIO-7 above.	Less than significant impact.
Cultural Resources (See Section 4.6 for the complete analysis of Cultural Resources)		
Threshold a: No historic or prehistoric cultural resources were noted during the survey or resurvey of the Project area. A records search was performed at the SCIC and found that 75 cultural resource studies have previously addressed the one-mile record search radius surrounding the Project area. Of these reports, none were recorded within the Project area. The SCIC records search also identified 26	No mitigation required.	Less than significant impact.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
cultural resources that were previously recorded within the one-mile record search radius. Of these resources, none were recorded within the Project area. No historical resources, as defined in Public Resources Code Section 15064.5 have been identified on the Project Site, nor have any cultural resources been previously recorded within the Project Site area. Based on these findings, there is a low potential for impacts to historical resources associated with the implementation of the Project. The Project would not cause a substantial adverse change in the significance of a historical resource pursuant to Public Resources Code Section 15064.5, and therefore, impacts are **less than significant.**		
<u>Threshold b:</u> No significant archaeological resources have been identified within the Project area and there is a low potential for impacts to archaeological resources. However, given the site's close proximity to Buena Vista Creek, there is potential for buried cultural resources within the alluvial deposits along the creek, and therefore a **significant impact** will occur (**Impact CUL-1**).	**Archaeological Resources (Impact CUL-1)** **MM-CUL-1a** Prior to issuance of a Grading Permit, the Applicant/Owner shall enter into a pre-excavation agreement, otherwise known as a Tribal Cultural Resources Treatment and Tribal Monitoring Agreement with the "Traditionally and Culturally Affiliated (TCA) Native American Monitor associated with a TCA Luiseño Tribe". A copy of the agreement shall be included in the Grading Plan Submittals for the Grading Permit. The purpose of this agreement shall be to formalize protocols and procedures between the Applicant/Owner and the "TCA Native American Monitor associated with a TCA Luiseño Tribe" for the protection and treatment of, including but not limited to, Native American human remains, funerary objects, cultural and religious landscapes, ceremonial items, traditional gathering areas and tribal cultural resources, located and/or discovered through a monitoring program in conjunction with the construction of the proposed Project, including additional archaeological surveys and/or studies, excavations, geotechnical investigations, grading, and all other ground disturbing activities. At the discretion of the Luiseño Native American Monitor, artifacts may be made available for #D scanning/printing, with scanned/printed materials to be curated at a local repository meeting the federal standards of 36CFR79. **MM-CUL-1b** Prior to the issuance of a Grading Permit, the Applicant/Owner or Grading Contractor shall provide a written and signed letter to the City of Oceanside Planning Division stating that a Qualified Archaeologist and Luiseño Native American Monitor have been retained at the Applicant/Owner or Grading Contractor's expense to implement the monitoring program, as described in the pre-excavation agreement. **MM-CUL-1c** The Qualified Archaeologist shall maintain ongoing collaborative consultation with the Luiseño Native American monitor during all ground disturbing activities. The requirement for the monitoring program shall be noted on all applicable construction documents, including Demolition Plans, Grading Plans, etc. The Applicant/Owner or Grading Contractor shall notify the City of Oceanside Planning Division of the start and end of all ground disturbing activities. **MM-CUL-1d** The Qualified Archaeologist and Luiseño Native American Monitor shall attend all applicable pre-construction meetings with the General Contractor and/or associated Subcontractors to present the archaeological monitoring program. The Qualified Archaeologist and Luiseño Native American Monitor shall be present onsite full-time	Mitigated below a level of significance.

Summary of Impact	Mitigation Measure		Level of Significance After Mitigation
		during grubbing, grading and/or other ground altering activities, including the placement of imported fill materials or fill used from other areas of the Project Site, to identify any evidence of potential archaeological or tribal cultural resources. All fill materials shall be absent of any and all tribal cultural resources.	
	MM-CUL-1e	In order for potentially significant archaeological artifact deposits and/or cultural resources to be readily detected during mitigation monitoring, a written "Controlled Grade Procedure" shall be prepared by a Qualified Archaeologist, in consultation with the Luiseño Native American monitor, other TCA Luiseño Tribes that have participated in the state-prescribed process for this Project, and the Applicant/Owner, subject to the approval of City representatives. The Controlled Grade Procedure shall establish requirements for any ground disturbing work with machinery occurring in and around areas the Qualified Archaeologist and Luiseño Native American monitor determine to be sensitive through the cultural resource mitigation monitoring process. The Controlled Grade Procedure shall include, but not be limited to, appropriate operating pace, increments of removal, weight and other characteristics of the earth disturbing equipment. A copy of the Controlled Grade Procedure shall be included in the Grading Plan Submittals for the Grading Permit.	
	MM-CUL-1f	The Qualified Archaeologist or the Luiseño Native American monitor may halt ground disturbing activities if unknown tribal cultural resources, archaeological artifact deposits or cultural features are discovered. Ground disturbing activities shall be directed away from these deposits to allow a determination of potential importance. Isolates and clearly non-significant deposits will be minimally documented in the field, and before grading proceeds these items shall be secured until they can be repatriated. If items cannot be securely stored on the Project Site, they may be stored in off-site facilities located in San Diego County. If the Qualified Archaeologist and Luiseño Native American monitor determine that the unearthed tribal cultural resource, artifact deposits or cultural features are considered potentially significant TCA Luiseño Tribes that have participated in the state-prescribed consultation process for this project shall be notified and consulted regarding the respectful and dignified treatment of those resources. The avoidance and protection of the significant tribal cultural resource and/or unique archaeological resource is the preferable mitigation. If, however, it is determined by the City that avoidance of the resource is infeasible, and it is determined that a data recovery plan is necessary by the City as the Lead Agency under CEQA, TCA Luiseño Tribes that have participated in the state-prescribed consultation process for this Project shall be notified and consulted regarding the drafting and finalization of any such recovery plan. For significant tribal cultural resources, artifact deposits or cultural features that are part of a data recovery plan, an adequate artifact sample to address research avenues previously identified for sites in the area will be collected using professional archaeological collection methods. The data recovery plan shall also incorporate and reflect the tribal values of the TCA Luiseño Tribes that have participated in the state-prescribed consultation process for this Project. If the Qualified Archaeologist collects such resources, the Luiseño Native American monitor must be present during any testing or cataloging of those resources. Moreover, if the Qualified Archaeologist does not collect the tribal cultural resources that are unearthed during	

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
	the ground disturbing activities, the Luiseño Native American monitor, may at their discretion, collect said resources and provide them to the appropriate TCA Luiseño Tribe, as determined through the appropriate process, for respectful and dignified treatment in accordance with the Tribe's cultural and spiritual traditions. Ground disturbing activities shall not resume until the Qualified Archaeologist, in consultation with the Luiseño Native American Monitor, deems the cultural resource or feature has been appropriately documented and/or protected. **MM-CUL-1g** The landowner shall relinquish ownership of all tribal cultural resources unearthed during the cultural resource mitigation monitoring conducted during all ground disturbing activities, and from any previous archaeological studies or excavations on the Project Site to the appropriate TCA Luiseño Tribe, as determined through the appropriate process, for respectful and dignified treatment and disposition, including reburial at a protected location onsite, in accordance with the Tribe's cultural and spiritual traditions. All cultural materials that are associated with burial and/or funerary goods will be repatriated to the Most Likely Descendant (MLD) as determined by the Native American Heritage Commission per California Public Resources Code Section 5097.98. No tribal cultural resources shall be subject to curation. **MM-CUL-1h** Prior to the release of the grading bond, a monitoring report and/or evaluation report, if appropriate, which describes the results, analysis and conclusions of the archaeological monitoring program (e.g., data recovery plan) shall be submitted by the Qualified Archaeologist, along with the Luiseño Native American monitor's notes and comments, to the City of Oceanside Planning Division for approval.	
Threshold c: No human remains were identified within the Project area during the pedestrian survey and resurvey of the Project Site. The Project Site has been graded in the past and therefore, the possibility of discovering human remains during construction is considered low. However, due to the fact that the Project involves ground disturbance, construction activities have the potential to disturb human remains, including those located outside of formal cemeteries, and therefore a **significant impact** will occur (**Impact CUL-2)**.	**Human Remains (Impact CUL-2)** **MM-CUL-2** As specified by California Health and Safety Code Section 7050.5, if human remains are found on the Project Site during construction or during archaeological work, the person responsible for the excavation, or his or her authorized representative, shall immediately notify the San Diego County Office of the Medical Examiner by telephone. No further excavation or disturbance of the Project Site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the Medical Examiner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.98. If such a discovery occurs, a temporary construction exclusion zone shall be established surrounding the area of the discovery so that the area would be protected, and consultation and treatment could occur as prescribed by law. If suspected Native American remains are discovered, the remains shall be kept in-situ, or in a secure location in close proximity to where they were found, and the analysis of the remains shall only occur onsite in the presence of a Luiseño Native American monitor. By law, the Medical Examiner will determine within two (2) working days of being notified if the remains are subject to his or her authority. If the Medical Examiner identifies the remains to be of Native American ancestry, he or she shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC shall make a determination as to the MLD.	Mitigated below a level of significance.
Energy (See Section 4.7 for the complete analysis of Energy)		
Threshold a:	No mitigation required.	Less than significant impact.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
Heavy-duty construction equipment associated with construction activities would rely on diesel fuel to power off-road construction vehicles and equipment as well as construction worker vehicles and delivery and haul trucks. Electricity associated with the conveyance of water would be used during Project construction for dust control and electricity used to power lighting, electronic equipment, or other construction activities necessitating electrical power. The Project would also result in electricity used in the production of construction materials such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass. Construction of the Project would not typically involve the consumption of natural gas. The Project is not expected to result in a significant use of transportation related energy resources. The Project would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during Project construction, and impacts are **less than significant**. Existing electrical services are provided in the Project vicinity. The Project would consume electricity similarly to that of the existing commercial developments to the west and northwest and would comply with all applicable 2019 Title 24 Part 6 Building Efficiency Standards. The Project would be designed and built to minimize electricity use so that existing and planned electricity capacity and supplies would be enough to support the Project's electricity demand. Operation of the Project would result in an increased consumption of natural gas compared to existing conditions. Project operation would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, and impacts are **less than significant.**		
Threshold b: The City CAP and ECAE of the General Plan provide goals, policies and measures to meet State GHG reduction goals and reduce energy consumption. **Table 4.7-2** displays the Project's consistency with applicable CAP policies. **Table 4.7-3** displays the Project's consistency with ECAE policies. Additionally, Project construction and operation would generate 308.36 metric tons of carbon dioxide (MT CO_2E) each year and would not exceed the City's screening threshold for GHG emissions and therefore would not conflict with the goals of the State. As provided in **Table 4.7-2** and **Table 4.7-3**, the Project would not conflict with or obstruct local plans for renewable energy or energy efficiency. Project-related impacts are **less than significant.**	No mitigation required.	Less than significant impact.
Geology and Soils (See Section 4.8 for the complete analysis of Geology and Soils)		
Threshold a: The Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving the rupture of a known earthquake fault, and impacts are **less than significant.** The Project Site is likely to be subjected to strong ground motion from seismic activity similar to that of the rest of the County and Southern California, due to seismic activity of the region as a whole and a **significant impact** (**Impact GEO-1a**) will occur. The Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving seismic-related ground failure including liquefaction and impacts are **less than significant**. The Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving landslides, and therefore impacts are **less than significant.**	**Strong Seismic Groundshaking (Impact GEO-1a)** **MM-GEO-1** Prior to and during construction, the construction contractor shall ensure that Project construction complies with all recommendations identified on pages 9 – 20 in the Geotechnical Evaluation prepared by EEI Engineering Solutions (2019). The construction contractor shall follow the specific guidelines within the Geotechnical Evaluation for Site preparation, earthwork and onsite improvements.	Mitigated below a level of significance.
Threshold b:	**MM-HYDRO-1** The Project shall incorporate permanent source control BMPS as identified in the Project SWQMP such as the following:	Mitigated below a level of significance.

<table>
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<td>The potential for soil erosion would increase during construction activities, including grading and demolition, as a result of vehicles and heavy equipment exposing soil surfaces to wind or water, and a significant impact (Impact GEO-2) will occur. However, prior to obtaining a grading permit the Project would be required to prepare a Storm Water Pollution Prevention Plan (SWPPP), which would describe and depict in detail the various grading and construction-related BMPs to be implemented onsite. The SWPPP would be prepared in conformance with City regulations and the NPDES SWRCB Construction General Permit. Sediment and erosion control BMPs described in the SWPPP may include, but are not limited to, straw mulch, soil binders, silt fencing, gravel bags, street sweeping and vacuuming and storm drain inlet protection.</td>
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<tr><td>Protect Trash Storage Areas From Rainfall, Run-On, Runoff and Wind Dispersal</td><td>Regularly</td><td>Ensure trash enclosure areas are fully contained (three walls, door and roof) and are provide with attached lids. Keep containers away from storm drain vicinity. Post signs on all enclosures and/or dumpsters informing users to keep lid closed and not to dispose of liquid or hazardous materials. Inspect trash storage areas to ensure integrity of containers and that area is kept clean. Replace leaking bins. Clean trash storage areas regularly.</td></tr>
<tr><td rowspan="4">Additional BMPS Based on Potential Sources of Runoff Pollutants</td><td rowspan="4">Regularly as Determined Necessary</td><td><u>OnSite Storm Drain Inlets:</u> Onsite inlets shall be protected from any illicit discharges and debris. Inlets shall have prohibitive signs where all inlets are marked with the words “NO DUMPING! DISCHARGES TO BAY” or similar. Inlet markings shall be maintained and periodically repainted on a regular basis to remove pollutants. Clean inlets regularly and remove sediments and debris, especially before start and end of wet season. Keep record of cleaning and disposal activities.</td></tr>
<tr><td><u>Need for Future Indoor and Structural Pest Control:</u> Building includes doors and windows with sealing that discourages entry of pests. Any pesticides shall be applied minimally in accordance with manufacturer’s specifications and City and State requirements.</td></tr>
<tr><td><u>Landscape/Outdoor Pesticide Use:</u> Final Landscape Plans shall preserve existing drought tolerant trees, shrubs, and ground cover to the maximum extent possible, and include landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to storm water pollution.</td></tr>
<tr><td><u>Fire Sprinkler Test Water:</u> Fire sprinkler test water shall be drained to sanitary sewer system. During a fire sprinkler</td></tr>
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Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
	test, the fire riser discharge shall be connected by a hose to the sewer cleanout. Miscellaneous Drain or Washwater: Boiler drains shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain. Plazas, Sidewalks, and Parking Lots: Sweep regularly to prevent accumulation of litter and debris, debris from pressure washing must be collected to prevent entry into the storm drain system. **MM-HYDRO-2** An onsite private underground proprietary BMP in the form of an underground detention system shall be designed and constructed per the Project SWQMP in accordance with the San Diego Water Board and City of Oceanside BMP Design Manual. Storm water shall be conveyed via underground pipes from various parts of the Site through water quality measures and into the underground detention system. **MM-HYDRO-3** Low Impact Development (LID) and Site Design BMPs shall be incorporated into the Project design to reduce impacts to water quality. The contractor shall construct the LID BMPs in accordance with the Project SWQMP and the engineer of work shall inspect that all LID BMPs have been constructed in compliance with the approved plans and all applicable specifications and permits. The widening of Plaza Drive shall be treated via a green streets approach with the construction of swales behind sidewalks to treat runoff for water quality and hydromodification purposes.	
Threshold c: The Project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse, and impacts are **less than significant**.	No mitigation required.	Less than significant impact.
Threshold d: The Project would be located on moderately expansive soil with areas of highly expansive soils, as defined in Table 18-I-B of the 1994 Uniform Building Code (International Conference of Building Officials, 1994), and a **significant impact** (**Impact GEO-1b**) will occur.	**Expansive Soils (Impact GEO-1b)** **MM-GEO-1** Prior to and during construction, the construction contractor shall ensure that Project construction complies with all recommendations identified on pages 9 – 20 in the Geotechnical Evaluation prepared by EEI Engineering Solutions (2019). The construction contractor shall follow the specific guidelines within the Geotechnical Evaluation for Site preparation, earthwork and onsite improvements.	Mitigated below a level of significance.
Threshold e: The Project would not have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal system, and therefore, **no impact** will occur.	No mitigation required.	Less than significant impact.
Threshold f: Although the Project Site has been previously graded, Project grading would include 12,500 CY of cut. Due to the high sensitivity of the Santiago Formation underlying the Site, the Project would have the potential to disturb a paleontological resource and a **significant impact** (**Impact GEO-3**) will occur.	**Paleontological Resources (Impact GEO-3)** **MM-GEO-3a** Prior to the issuance of a grading permit, the applicant shall submit a letter to the City from a qualified professional paleontologist or a California Registered Professional Geologist with appropriate paleontological expertise, as defined by the Society of Vertebrate Paleontology's guidelines, indicating that they have been retained by the	Mitigated below a level of significance.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
	applicant to prepare and implement a Paleontological Resources Impact Mitigation Program (PRIMP). The qualified paleontologist shall be available "on-call" to the City and the applicant throughout the duration of ground-disturbing activities. The PRIMP shall include preconstruction coordination; construction monitoring; emergency discovery procedures; sampling and data recovery, if needed; preparation, identification and analysis of the significance of fossil specimens salvaged, if any; museum storage of any specimens and data recovered; and reporting. Earth-moving construction activities shall be monitored wherever these activities will disturb previously undisturbed sediment. Monitoring will not need to be conducted in areas where sediments have been previously disturbed or in areas where exposed sediments will be buried but not otherwise disturbed. In such cases, spot-checking of the excavation Site is sufficient. This mitigation measure shall apply to all excavation activities within the Santiago Formation with high sensitivity and for any construction activities that involve excavation greater than three feet in depth within geologic units with low paleontological sensitivity (Qya). **MM-GEO-3b** Prior to the issuance of a grading permit, the City shall confirm the following measure is identified on the grading plan and will be implemented: Grading activities are subject to a Paleontological Resource Impact Mitigation Program (PRIMP). If potential fossils are discovered by construction crews or during monitoring by a qualified paleontologist, all earthwork or other types of ground disturbance within 50 feet of the discovery shall stop immediately until the qualified professional paleontologist can assess the nature and importance of the discovery. If a fossil of scientific value or uniqueness is identified by the paleontologist, the paleontologist shall record the find and allow work to continue or recommend salvage and recovery of the fossil. If treatment and salvage is required, recommendations shall be consistent with Society of Vertebrate Paleontology guidelines and currently accepted scientific practice and shall be subject to review and approval by the City. Work in the affected area may resume once the fossil has been assessed and/or salvaged and the City, in consultation with the professional paleontologist, has provided written approval to resume work.	
Greenhouse Gas Emissions (See Section 4.9 for the complete analysis of Greenhouse Gas Emissions)		
Threshold a: Construction of the Project would result in GHG emissions primarily associated with the use of off-road construction equipment, on-road hauling and vendor trucks and worker vehicles. Construction of the Project would entail site preparation, grading, paving, building construction and architectural coatings. Based on the results of **Table 4.9-3**, the 30-year average emissions would be 18.52 MT CO_2E. The Project would generate 308.26 MT CO_2E each year during a typical operational year. This includes the combined operational and construction GHG emissions over a 30-year period. The Project would serve up to approximately 237 customers per day, which would be considered the service population for the Project. Given this, the Project would generate approximately 1.3 MT CO_2E/SP, which is less than the 3.5 MT CO_2E/SP CAP threshold for projects that will be implemented prior to year 2025. Thus, the Project will not generate GHG emissions, either directly or indirectly, that	No mitigation required.	Less than significant impact.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
may have a significant impact on the environment and impacts are **less than significant.**		
Threshold b: The Project would be consistent with the policies set forth in the City General Plan Land Use Element and ECAE as provided in Section 4.9.2 that are designed to reduce the emissions of GHG, promote alternative transportation and other methods of efficiency. The Project would promote energy efficiency within buildings including energy efficient appliances. In accordance with the ECAE, the Project would be an infill Project surrounded by other commercial development to the west and northwest and residential developments to the east and south. Seven (7) EV charging spaces would be provided in the customer and employee parking lot in accordance with the California Green Building Standards. Project construction would comply with all construction waste diversion requirements. The Project would not conflict with the General Plan applicable goals and policies related to GHG emissions. The Project would not exceed the City's 900 MT CO_2E screening threshold for Projects that must assess Project-induced emissions against CAP-aligned thresholds of significance. Further, the Project would generate approximately 1.3 MT CO_2E/SP, which is less than the 3.5 MT CO_2E/SP CAP threshold for projects that will be implemented prior to year 2025. Therefore, the Project would be incompliance with the City's CAP and the Project would not generate a significant impact to GHG emissions. The Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG, and impacts are **less than significant**.	No mitigation required.	Less than significant impact.
Hazards and Hazardous Materials (See Section 4.10 for the complete analysis of Hazards and Hazardous Materials)		
Threshold a: Construction of the Project would entail routine transport of typical construction materials potentially hazardous to humans, wildlife, and sensitive environments. These materials could include gasoline, diesel fuel, used oil, solvents, cleaners, lead paint debris, lubricants, and other petroleum-based products used for the operation and maintenance of construction equipment and vehicles. Handling of these hazardous materials would be temporary in nature, and limited to quantities and concentrations consistent with a typical infill commercial use of this size. Thus, Project construction would not create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials, and impacts are **less than significant.** Only minor vehicle servicing will occur including routine maintenance, oil changes, tire rotations diagnostic and mileage services. No major mechanical work, body work or painting will occur within the service building. Operational activities including vehicle servicing, carwash, fueling and fuel storage, and other service related activities would comply with all applicable federal, state and local laws and regulations, would obtain all required DEH HMD permits and would prepare a Hazardous Materials Business Plan which would reduce potential impacts related to hazardous materials to a level below significance. Operational impacts related to the routine transport, use or disposal of hazardous materials will be	No mitigation required.	Less than significant impact.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
less than significant.		
Threshold b: Compliance with applicable state, local, and federal laws and preparation of a Hazardous Materials Business Plan would ensure all operational activities involving potentially hazardous materials would not result in the release of such materials into the environment. The Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and therefore, impacts are **less than significant**.	No mitigation required.	Less than significant impact.
Threshold c: The Project Site is not located within 0.25 mile of an existing or proposed school. Compliance with applicable state, local, and federal laws and preparation of a Hazardous Materials Business Plan would ensure all construction and operational activities involving potentially hazardous materials would not result in a significant hazard to the public or the environment. The Project would not exceed SDAPCD thresholds for any pollutant during construction and operation phases of the Project. There are no schools located within one-quarter mile of the Project area. Therefore, the Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter-mile of an existing or proposed school, and impacts are **less than significant.**	No mitigation required.	Less than significant impact.
Threshold d: A Cortese List Verification (**Appendix Q**) pursuant to Government Code Section 65962.5 was prepared and the Project Site. The Project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and as a result, would not create a significant hazard to the public or environment, and therefore, **no impact** will occur.	No mitigation required.	Less than significant impact.
Threshold e: The Oceanside Municipal Airport is located approximately 4.2 miles northwest of the Project Site. The Project Site is not located within the Oceanside Municipal Airport Influence Area or any of the safety zones as displayed in the Oceanside ALUCP. Therefore, the Project would not result in a safety hazard or excessive noise for people residing or working in the Project area, and impacts are **less than significant impact.**	No mitigation required.	Less than significant impact.
Threshold f: The adopted emergency plans applicable to the Project area consist of the Multi-Jurisdictional Hazard Mitigation Plan for San Diego County, the San Diego County Emergency Operations Plan, and City Emergency Plan. Compliance of all Fire Department requirements would ensure the Project would not impair an adopted emergency response plan or emergency evacuation plan, and impacts are **less than significant**.	No mitigation required.	Less than significant impact.
Threshold g: The Project Site is not located in a SRA as recognized by the Board of Forestry and Fire Protection as areas where California Department of Forestry and Fire Protection (CAL FIRE) is the primary emergency response agency responsible for fire suppression and prevention. The Project is not	No mitigation required.	Less than significant impact.

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<tr><td>located adjacent to wildland areas and therefore, would not exacerbate wildfire risks and thereby expose people or structures to a significant risk of loss, injury or death involving wildland fires and impacts are less than significant.</td><td></td><td></td></tr>
<tr><td colspan="3">Hydrology and Water Quality (See Section 4.11 for the complete analysis of Hydrology and Water Quality)</td></tr>
<tr><td><u>Threshold a:</u>

The project would violate a water quality standard or waste discharge requirement or otherwise substantially degrade surface or groundwater quality, and a significant impact (Impact HYDRO-1a) will occur. The potential for erosion and pollutant discharge would increase during construction as a result of vehicles, heavy equipment and general earth work accelerating the erosion process. Wind erosion has the potential to occur on bare soils or where vehicles and equipment cause dust. Fuels, oils, lubricants, or other hazardous substances and waste used and/or generated during construction have the potential to be released and further impact water quality. The Project would be required to prepare and implement a SWPPP to employ numerous erosion control, sediment control, tracking control, materials and waste management, and inspection and maintenance BMPs to minimize the potential for erosion, sedimentation and water quality impacts related to the grading and construction process. During construction the Project has the potential to violate a water quality standard or waste discharge requirement, and will have a significant impact (Impact HYDRO-1b).

Post-construction, the Project would introduce impervious surfaces and new sources of pollutants from urban runoff. Impervious site features consist of sales and administrative building, service building, private carwash, associated access drives, presentation area, staging area, sales display area, and a customer and employee parking lot. During operation the Project has the potential to violate a water quality standard or waste discharge requirement, and will have a significant impact (Impact HYDRO-1c).</td><td>Water Quality Standards (Impact HYDRO-1a, 1b, and 1c) and Potential for Erosion (Impact HYDRO-2)

MM-HYDRO-1 The Project shall incorporate permanent source control BMPs as identified in the Project SWQMP such as the following:

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</table>

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
	ground cover to the maximum extent possible, and include landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to storm water pollution. Fire Sprinkler Test Water: Fire sprinkler test water shall be drained to sanitary sewer system. During a fire sprinkler test, the fire riser discharge shall be connected by a hose to the sewer cleanout. Miscellaneous Drain or Washwater: Boiler drains shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain. Plazas, Sidewalks, and Parking Lots: Sweep regularly to prevent accumulation of litter and debris, debris from pressure washing must be collected to prevent entry into the storm drain system. **MM-HYDRO-2** An onsite private underground proprietary BMP in the form of an underground detention system shall be designed and constructed per the Project SWQMP in accordance with the RWQCB and City of Oceanside BMP Design Manual. Storm water shall be conveyed via underground pipes from various parts of the Project Site through water quality measures and into the underground detention system. **MM-HYDRO-3** Low Impact Development (LID) and Site Design BMPs shall be incorporated into the Project design to reduce impacts to water quality. The contractor shall construct the LID BMPs in accordance with the Project SWQMP and the engineer of work shall inspect that all LID BMPs have been constructed in compliance with the approved plans and all applicable specifications and permits. The widening of Plaza Drive shall be treated via a green streets approach with the construction of swales behind sidewalks to treat runoff for water quality and hydromodification purposes.	
Threshold b: Due to the depth of groundwater and the proposed use and development of the Project, the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge, such that the Project may impede sustainable groundwater management of the basin, and impacts are **less than significant impact.**	No mitigation required.	Less than significant impact.
Threshold c: The Project has the potential to result in exposed soils or changes in runoff that could result in erosion or siltation during the construction phase of the Project, and will have a **significant impact (Impact HYDRO-2)**. The Project would not alter existing drainage patterns onsite or increase net runoff after development. The Project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, and impacts are **less than significant.** Additionally, the ultimate discharge points would remain the same. The Project would comply with all recommendations set forth in the Project SWQMP and Drainage Study which are designed in	See mitigation measures MM-HYDRO-1, MM-HYDRO-2, and MM-HYDRO-3 above.	Mitigated below a level of significance.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
compliance with the San Diego Water Board and City BMP Design Manual. The Project would not create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff, and impacts are **less than significant.** The total net reduction of peak flows to Buena Vista Creek from pre- to post-development conditions would be approximately 2.60 cfs. Therefore, the Project would not substantially alter the existing drainage pattern of the Project Site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would impede or redirect flood flows, and impacts are **less than significant.**		
Threshold d: The southern portion of the Project Site lies within Zone X of the FEMA 500-year floodplain and Zone AE of the 100-year floodplain (FEMA FIRM Panel 06073C0758G effective 5/16/19). The Project Site is not located immediately adjacent to any lakes or confined bodies of water and therefore, the potential for a seiche to affect the Project Site is considered low. In flood hazard, tsunami, or seiche zones, the Project would not risk release of pollutants due to Project inundation, and impacts are **less than significant.**	No mitigation required.	Less than significant impact.
Threshold e: The Project Site is not located within a basin that requires a designated groundwater sustainability plan. Thus, the Project would not conflict with a sustainable groundwater management plan. The Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan, and impacts are **less than significant.**	No mitigation required.	Less than significant impact.
Land Use and Planning (See Section 4.12 for the complete analysis of Land Use and Planning)		
Threshold a: The Project Site is located in a primarily developed, urbanized area. The Project proposes a concrete sidewalk along the Project frontage on both sides of Plaza Drive, where currently a dirt path is being used to cross the Project frontage from the existing commercial center to the west to the DMV to the east. The proposed sidewalk, associated landscaping, and proposed pedestrian ramps would assist in the safe movement connection for the existing established community. The Project would also provide bicycle lanes on both sides of Plaza Drive along the Project frontage to further allow for connections to the surrounding community. The Project would not physically divide an established community, and therefore **no impact** will occur.	No mitigation required.	No impact.
Threshold b: The Project does not require a change to the CC zoning designation. The Project will require issuance of a CUP in compliance with Section 1120 of the Zoning Ordinance in order to allow for the use of vehicle sales, service stations and automobile washing under the CC zone. The Project would not conflict with the City of Oceanside Zoning Ordinance.	See mitigation measures MM-BIO-1a through MM-BIO-7, above.	Mitigated below a level of significance.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
Table 4.12-1 provides the City's applicable General Plan Land Use Element objectives and policies followed by a land use consistency analysis with regard to each policy. The Project would not conflict with a General Plan Land Use Element Policy. Although the Project was designed to comply with the measures outlined in the MHCP and the Subarea Plan, the Project has the potential to result in significant impacts to sensitive plant species and vegetative communities, jurisdictional resources, *Brodiaea* species, fairy shrimp, coastal California gnatcatcher, least Bell's vireo, and other MBTA-covered species. The Project would result in unavoidable direct impacts to disturbed Diegan coastal sage scrub which will be considered a **significant impact** (**Impact LU-1)**. As shown in **Table 4.12-2**, the Project would not conflict with the applicable policy objectives of the Regional Plan. No significant impacts to air quality have been identified and no mitigation is required, and impacts related to a regional air quality plan will be **less than significant.**		
Noise (See Section 4.13 for the complete analysis of Noise)		
<u>Threshold a:</u> As displayed in **Table 14.4-3**, if all equipment were working in the same area, at a distance as close as 330 feet, at worst case scenario, Project construction would result in an eight-hour average of 66 dBA at the property line. Construction equipment for the Project would not operate any construction equipment at a level in excess of 85 dBA at 100 feet from the source in accordance with the City standard. In absence of a City standard for property line construction noise the City relies on the County of San Diego standard of 75 dBA L_{eq}. The Project would also meet the County's standard for construction activities at or beyond a property line not to exceed 75 dBA. Project construction would not generate a substantial temporary increase in ambient noise levels in excess of local standards, and impacts are **less than significant**. Based on the information in **Table 4.14-4**, property line noise levels would result in 41.3 dBA and would not exceed the City's property line noise standards for both commercial and residential uses. The Project would not generate substantial permanent increase in ambient noise levels in the vicinity of the Project in excess of local standards, and impacts related to operational noise are **less than significant.** The Project would result in an increase in the noise levels by less than 0.5 dBA. Therefore, the anticipated traffic volumes as a result of the Project would increase, but not in the amount resulting in an increase of 3 dBA or greater. Impacts related to off-site transportation impacts are **less than significant.** The Project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the General Plan or Noise Ordinance, or applicable standards of other agencies. Impacts are **less than significant.**	No mitigation required.	Less than significant impact.
<u>Threshold b:</u> Using the methodology prescribed by Caltrans, the ground vibration produced by a large bulldozer at the property line of the site to the nearest residence (330 feet) would produce a peak particle velocity	No mitigation required.	Less than significant impact.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
of 0.0019 ips PPV. Caltrans recommends a vibration velocity threshold of 0.2 ips PPV for assessing vibration impacts to occupants of residential structures. Therefore, the Project would not generate excessive groundborne vibration during construction activities. The Project would not generate excessive groundborne vibration or groundborne noise during construction, and impacts are **less than significant.** Once operational, the Project would include vibration and noise associated with used car sales, vehicle service work including a car wash, truck deliveries of vehicles parts and supplies and customer vehicle trips including customer test drives. Project operation would also include rooftop HVAC systems on the sales and service buildings. Operation activities related to the sales and service buildings and carwash are not uses typically associated with excessive groundborne vibrations. Impacts related to operational groundborne vibration and noise will be **less than significant.**		
Threshold c: No private airstrips are located within the vicinity of the Project Site. The Project is located approximately 4.2 miles southeast of the Oceanside Municipal Airport; however, the Project Site is not located within the Oceanside Municipal Airport Influence Area or any of the safety zones displayed in the Oceanside Municipal ALUCP. The Project is not located within the vicinity of a private airstrip or an airport land use plan and therefore would not expose people residing or working in the project area to excessive noise levels, and therefore, **no impact** will occur.	No mitigation required.	No impact.
Population and Housing (See Section 4.15 for the complete analysis of Population and Housing)		
Threshold a: The Project does not include the construction of any new residential development. The Project would serve existing residences in the region and is unlikely to cause significant growth due to the nature of the development. Therefore, implementation of the Project would not directly or indirectly induce substantial unplanned population growth in the area, and **no impact** will occur.	No mitigation required.	No impact.
Threshold b: The Project would construct a CarMax pre-owned automobile facility on a vacant parcel located in a developed area surrounded primarily by residential and commercial developments. The Project would not displace substantial numbers of existing housing or people necessitating the construction of replacement housing elsewhere, and **no impact** will occur.	No mitigation required.	No impact.
Public Services (See Section 4.16 for the complete analysis of Public Services)		
Threshold a: *Fire Protection* The Project would contribute to all required development impact fees in accordance with the City's current requirements, a portion of which would go towards funding fire protection services in the City. The Project will be reviewed by OFD to ensure that the Project meets all requirements related to access, fire hydrants and setbacks and would comply with all conditions set forth for Project approval. Existing fire protection services are adequate to serve the Project and the need for new or altered fire protection facilities is not expected. The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the	No mitigation required.	Less than significant impact.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
construction of which could cause significant environmental impacts, and impacts are **less than significant impact**. *Police Protection* OPD has existing staff levels adequate to meet current demands for police protection in this area and does not foresee any unique law enforcement problems associated with this Project, and OPD does not anticipate the need to hire additional officers in order to provide services for the Project (Armijo, 2020). Additionally, OPD anticipates that the Project would not have an impact on response times (Armijo, 2020). The Project is not anticipated to negatively impact OPD's ability to provide adequate services or OPD response time goals. Additionally, the Project would contribute to all required development impact fees in accordance with the City's current requirements, a portion of which go towards funding police services in the City. Existing police protection is adequate to serve the proposed automobile retail facility and the need for new or altered police protection facilities is not expected. The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, and impacts are **less than significant impact**. *Schools* The Project is a commercial development for a pre-owned automobile dealership and would not construct housing that is expected to result in the generation of additional school aged children which would require the provision of new or physically altered school facilities. Additionally, the Project would contribute to all required development impact fees for schools in accordance with the City's current requirements, which go towards funding school facilities in the City. The current impact fee for schools required for a commercial Project in the Carlsbad School District is $0.61 per square foot. The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, and **no impact** will occur. *Parks* The Project is a commercial development for a pre-owned automobile dealership and would not result in the addition of any residents that require the use of existing neighborhood or regional parks or other recreational facilities, nor would it require construction of new or physically altered park facilities. Therefore, the Project would not be subject to the payment of park land dedication fees. The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, and **no impact** will occur. *Other* There are no other public services, facilities, or infrastructure anticipated to be required or impacted due to the construction and operation of the Project, and **no impact** will occur.		
Recreation (See Section 4.17 for the complete analysis of Recreation)		
Threshold a:	No mitigation required.	Less than significant impact.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
The Project is a commercial facility and although the number of people visiting the site would increase compared to existing conditions, due to the nature of the development, and the fact it does not encourage population growth, the Project would not increase the use of existing neighborhood and regional parks or other recreational facilities. It is typically residential projects that result in an increase in demand on parks and recreation facilities. Additionally, the Project would pay all appropriate development fees, a portion of which would go towards funding of park and recreation facilities in the City. Therefore, the Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated, and the impacts are **less than significant.**		
Threshold b: The Project Site is currently vacant and does not include recreational facilities. The Project does not include residential development that would increase long-term populations in the Project vicinity leading to an increased use of recreational facilities. The development of the CarMax Project would not require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment, and **no impact** will occur as a result.	No mitigation required.	No impact.
Transportation (See Section 4.18 for the complete analysis of Transportation)		
Threshold a: Prior to issuance of occupancy permits, the following roadway improvements would be completed as part of the Project to the satisfaction of the City Engineer: • Widen Thunder Drive along the Project frontage into the Project Site. Parking shall be restricted along the Project frontage side of Thunder Drive between the two Project driveways. • Widen Plaza Drive along the Project frontage to the General Plan classification of a Secondary Collector. The Applicant shall stripe this segment with three (3) travel lanes (two eastbound lanes and one westbound lane). • Provide a center two-way left turn lane on Plaza Drive in order to match the existing westbound single travel lane configuration adjacent to the DMV. • Install sidewalks on both sides of Plaza Drive along the Project frontage. • Include striping for bike lanes on both sides of Plaza Drive along the Project frontage. **General Plan Consistency** **Table 4.18-2** provides the Project's consistency with applicable policies and implementation strategies provided in the Circulation Element Master Transportation Roadway Plan. The Project would not conflict with any applicable policies of the Circulation Element and impacts are **less than significant.** **Multi Modal Transportation** Existing pedestrian infrastructure from College Boulevard to Thunder Drive were analyzed and deficiencies were found on the north side of Plaza Drive from the Project Site east to Thunder Drive where the north side is missing sidewalk infrastructure. The Project would include widening	No mitigation required.	Less than significant.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
improvements along Plaza Drive and would include installation of sidewalks on both sides of Plaza Drive along the Project frontage, where sidewalks did not previously exist. The LTS bicycle analysis included the assessment of bicycle facilities in the vicinity of the Project. The Project would include widening improvements along Plaza Drive which would include bicycle lanes on both sides of the street along the Project frontage, where bicycle lanes did not previously exist. No transit improvements are required as part of the Project. Bus service operations and frequency are provided in **Table 4.18-5.** The Project would not conflict with the City's General Plan Circulation Element or other plans related to multi-modal transportation systems. The Project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, bicycle and pedestrian facilities and therefore will have a **less than significant impact.**		
Threshold b: The project will generate 475 ADT (18 AM peak hour trips (11 inbound and 7 outbound) and 50 PM peak hour trips (31 inbound and 19 outbound). The Project is designated as CC by the General Plan and no change to the General Plan designation is required. In accordance with screened out project type #20 provided in **Table 4.18-3**, the Project is consistent with the adopted General Plan and will generate less than 1,000 ADT, and is therefore screened out from a transportation VMT analysis. The Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3 subdivision (b), and therefore impacts are **less than significant.**	No mitigation required.	Less than significant impact.
Threshold c: Driveways proposed along Plaza Drive and Thunder Drive would be consistent with the City's Engineers Design and Processing Manual which includes driveway standards to provide safe geometric designs and line of sight for drivers, pedestrians and bicyclists. OFD has reviewed the Site Plan details to ensure that fire truck access roadways meet City standards. Fire lanes within the customer and employee and sales display parking lots have been designed and reviewed by OFD and provide adequate width, turn-around radius and access to the building. The Project would not substantially increase hazards due to a geometric design feature or incompatible use, and impacts will be **less than significant.**	No mitigation required.	Less than significant impact.
Threshold d: Emergency access to the Project Site would be provided by the two (2) driveways located off of Thunder Drive and the driveway off Plaza Drive. A Knox Box would be provided at the Plaza Drive security gate and control island as well as in the building lobby and would provide access to all gates and doors onsite. The Phase II sales display area would also have a Knox Box located at the security gate and control island. The OFD has reviewed the proposed Site Plan details to ensure that fire truck access roadways meet City standards and that access would be provided to all sides of the structure. The Project would comply with the CFC and the OMC requirements which are intended to ensure adequate emergency access. Project roadway improvements along Plaza Drive and Thunder Drive would improve circulation along the surrounding roadways of the Project Site and therefore would improve emergency access in the surrounding areas of the Project Site. The Project would meet or exceed such requirements and therefore, the Project would not result in inadequate emergency	No mitigation required.	Less than significant impact.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
access, and impacts will be **less than significant.**		
Tribal Cultural Resources (See Section 4.19 for the complete analysis of Tribal Cultural Resources)		
Threshold a: No cultural resources were identified in the Project area during the pedestrian survey and no cultural resources have been previously recorded within the Project area. The record search of the Sacred Lands File held by the NAHC had negative results. Based on the data and information obtained, there is a low potential for impacts to cultural resources associated with implementation of the Project. However, due to the Project's proximity to Buena Vista Creek the potential for buried cultural resources within alluvial deposits along the creek exists. Therefore, the Project will result in a **significant impact (Impact TCR-1a)**.	Mitigation measure MM-CUL-1a through MM-CUL-1h, identified above in this table, will reduce this impact to below a level of significance.	Mitigated below a level of significance.
Threshold b: Consultation and coordination has been initiated with the culturally-affiliated tribes to identify any potential tribal cultural resources located onsite or in the Project vicinity. Consultation coordination indicated that the Project is located in the territory of the Rincon Band of Luiseño Indians and is within the Bands specific Area of Historic Interest (AHI) and is therefore traditionally and culturally affiliated to the Project area. Embedded in the Luiseño territory are Rincon's history, culture and identity. Considering this information, there is potential for the discovery of unknown tribal cultural resources during Project grading activities, and therefore a **significant impact** will occur (**Impact TCR-1b**).	See mitigation measures MM-CUL-1a through MM-CUL-1h identified above in this table.	Mitigated below a level of significance.
Utilities and Service Systems (See Section 4.20 for the complete analysis of Utilities and Service Systems)		
Threshold a: **Water** As part of the proposed off-site improvements, the Project would connect to existing water infrastructure in the vicinity and the construction of onsite and off-site water infrastructure would be required to serve the Project. A new 2-inch domestic water service line would run east to west along the middle of the southern parcel of the Project Site. The Project would also include a 1-inch irrigation meter and 1-inch backflow on the south side of Plaza Drive, west of the test drive-only driveway and security gate. A ¾-inch irrigation meter and ¾-inch backflow would be provided on the north side of Plaza Drive east of the driveway and security gate. These onsite water infrastructure improvements are considered within the Project footprint, as described in the Project Description (Section 3.0 of this EIR). These onsite water infrastructure improvements do not result in any new Project-footprint related impacts beyond those already disclosed in this document. Off-site Project improvements would include the extension of the existing 10-inch water line west of the Project Site and would provide a 12-inch PVC water main along Plaza Drive that would run across the Project frontage and the DMV and would be looped to Thunder Drive. The construction related activities to install this infrastructure was included in the air quality, GHG and noise analysis of this EIR (see Section 4.4, Section 4.8 and Section 4.14) and construction related air quality and GHG emissions are less than significant. Similarly, construction related noise impacts are less than significant. These off-site improvements would be located within already disturbed/developed areas and would not result in impacts to sensitive resources. Impacts related to construction of these off-site water improvements are **less than significant.**	No mitigation required.	Less than significant impact.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
Further, as part of the entitlement application review process, the City of Oceanside Water Utilities Department has reviewed the Project and has provided a letter stating that: "As part of this [entitlement] process, any off-site improvements to the City's water and sewer systems that are necessary to accommodate the proposed Project must be identified and included as part of the development. Once the entitlement process is complete, the flow and capacity allowances will be set aside for the approved project." **Wastewater Treatment** The Project would connect to existing sewer infrastructure in the vicinity. The Project would realign the existing sewer mains and would construct a new 12-inch and new 21-inch PVC sewer main that would run along the southern portion of the site, south of the sales and staging and customer and employee parking lots, and would connect to existing sewer to the west and to the east in Thunder Drive. The existing 12-inch and 21-inch sewer mains located directly north of the proposed sewer mains would be abandoned. An existing sewer easement for the City runs east to west along the southern portion of the Project Site is to be relocated in line with the proposed sewer realignment. The existing sewer easement that runs north to south on the eastern portion of the site is to be vacated. The sewer realignment would encroach approximately six (6) feet into a small portion of the 50-foot planning buffer. This is a temporary impact and was analyzed in Chapter 4.5 *Biological Resources.* As detailed in Section 4.5.4, temporary direct impacts will occur to approximately 0.008 acre (334 SF) of disturbed habitat within the planning buffer. These impacts are considered temporary as they would recover on their own within one growing season. Additionally, because these impacts are minimal and occur to disturbed habitat, and because they are located at least 94 feet from the riparian habitat, no direct significant impacts will occur. As part of the Project review process, the City of Oceanside Wastewater Division of the Water Utilities Department reviewed the Project and has provided a letter stating that: "As part of this [entitlement] process, any off-site improvements to the City's water and sewer systems that are necessary to accommodate the proposed project must be identified and included as part of the development. Once the entitlement process is complete, the flow and capacity allowances will be set aside for the approved project." Impacts related to the construction or relocation of new or expanded wastewater facilities will be **less than significant.** **Storm Water Drainage** As discussed in Chapter 4.11 *Hydrology and Water Quality,* storm water drainage facilities would be located entirely onsite. The northern parcel would be constructed solely of permeable material and runoff from the southern parcel would be treated via an underground proprietary BMP. The Project would not create or contribute runoff which would exceed the capacity of an existing or planned storm water drainage system. The construction related activities to install this infrastructure was included in the air quality, GHG and noise analysis of this EIR (see Section 4.4, Section 4.8 and Section 4.14) and construction related air		

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
quality and GHG emissions are less than significant. Similarly, construction related noise impacts are less than significant. The environmental effects of installing these facilities have been evaluated within this EIR and these improvements are included within the Project development footprint. These onsite storm water infrastructure improvements are considered within the Project footprint, as described in the Project Description (Section 3.0 of this EIR). These onsite storm water infrastructure improvements do not result in any new project-footprint related impacts beyond those already disclosed in this document. Impacts related to the construction or relocation of new or expanded storm water drainage facilities will be **less than significant.** **Gas, Electric Power, and Telecommunication Facilities** The 8-inch fire water supply and gas and water services would run south of the sales and administration building through the customer and employee parking lot. New electrical services and telephone lines would run east to west through the customer and employee parking lot. The construction related activities to install this infrastructure was included in the air quality, GHG and noise analysis of this EIR (see Section 4.4, Section 4.8 and Section 4.14) and construction related air quality and GHG emissions are less than significant. Similarly, constriction related noise impacts are less than significant. The environmental effects of installing these facilities have been evaluated within this EIR and these improvements are included within the Project development footprint. These onsite gas, electric and telecommunications infrastructure improvements are considered within the Project footprint, as described in the Project Description (Section 3.0 of this EIR). These onsite energy and telecommunications infrastructure improvements do not result in any new Project-footprint related impacts beyond those already disclosed in this document. Impacts related to the construction or relocation of new or expanded gas, electric power, or telecommunication facilities will be **less than significant**.		
Threshold b: The anticipated water demand for the Project is 200,000 to 300,000 gallons per year based on the water usage of existing CarMax facilities in the region of similar size. A Water Supply Assessment pursuant to SB 610 is not required for the Project as it does not propose the construction of 500 residential units, or development with an equivalent water demand. The UWMP considered the City's planning documents (e.g., General Plan), regional planning documents, and the SANDAG Series 13 Growth Forecast in determining future water demand. Water demand assumptions for the Project Site in the 2015 UWMP would have been based on a commercial land use, since that was the land use designation at the time the UWMP was prepared. The Project Site still has a commercial land use designation and no change in land use or zoning is required as part of the Project. The Project would be in compliance with the Zoning Code and General Plan designations and therefore water demand for the Project has been planned for in the City and regional water supply documents that are based on the buildout of the City. There would be sufficient water supplies available from the City Water Utilities Department to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Impacts will be **less than significant**.	No mitigation required.	Less than significant impact.
Threshold c:	No mitigation required.	Less than significant impact.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
The Project would be anticipated to generate approximately 11,700 gpd of wastewater. The 2015 SMP considers existing flow conditions as well as future growth projected by a number of specific near-term development projects and SANDAG's long-term (2050) regional growth projections. Wastewater demand assumptions for the Project Site in the SMP would have been based on a commercial land use, since that was the land use designation at the time the SMP was prepared. The Project Site still has a commercial land use designation, and no change in the land use or zoning is required as part of the Project. The Project is in compliance with the General Plan and Zoning Ordinance and therefore the Project's wastewater demand has been planned for in the City's wastewater system plans which are based on buildout of the City, as discussed above. Impacts related to adequate wastewater treatment capacity would be **less than significant**.		
<u>Threshold d:</u> The Project is estimated to generate a total of 37,603 pounds of solid waste annually. This estimate, however, does not account for landfill diversion that would result from recycling and waste reduction activities. Given the remaining lifespan of the El Sobrante Landfill and the Project's waste generation, the landfill would have sufficient permitted capacity remaining to serve the Project. Additionally, the Project would participate in the City's recycling programs which would further reduce solid waste being sent to the landfill. The Project would provide three (3) separate trash enclosures each properly labeled for solid waste, recyclable waste and organic waste as required by the City. The trash enclosures would contain a metal roof and would be placed behind corrugated metal panel gates. The Project is not expected to generate solid waste in excess of the capacity of local infrastructure or state or local standards, nor is it expected to impair the attainment of solid waste reduction goals, and impacts will **be less than significant**.	No mitigation required.	Less than significant impact.
<u>Threshold e:</u> In accordance with the City's adoption of the CALGreen Building Standards Code, a Waste Management Plan would be submitted to the City prior to the issuance of building permits. This Waste Management Plan would provide detail of how non-hazardous construction waste generated during the course of the Project would be recycled or salvaged for re-use at a minimum rate of 65%. Compliance with the City waste requirements would ensure compliance with all federal, state and local management and reduction statutes and regulations for solid waste, and impacts will be **less than significant**.	No mitigation required.	Less than significant impact.
Wildfire (See Section 4.21 for the complete analysis of Wildfire)		
<u>Threshold a:</u> The Project Site is not located in a very high fire hazard severity zone within the Oceanside Local Responsibility Area as mapped by CAL FIRE, and is not located within a SRA where CAL FIRE is the	No mitigation required.	Less than significant impact.

Summary of Impact	Mitigation Measure	Level of Significance After Mitigation
primary emergency response agency responsible for fire suppression and prevention. The Project would provide all required setbacks, fire truck access, fire hydrants, address numbers, sprinklers and an OPTICOM system on all gates in accordance with the OFD requirements. As provided in the Public Safety Element of the General Plan (Figure PS-11), SR-78 to the north, College Boulevard located to the west of the Project Site and Lake Boulevard to the south are the nearest evacuation routes. El Camino High School would be the nearest refuge center as provided in the Public Safety Element of the General Plan. With compliance of all Fire Department requirements, the Project would not impair an adopted emergency response plan or emergency evacuation plan, and impacts are **less than significant**.		
Threshold b: The Project Site is relatively flat and slopes gently south toward Buena Vista Creek. Elevations range from approximately 180 to 220 feet amsl. The Project Site is not located in a very high fire hazard severity zone within the Oceanside Local Responsibility Area as mapped by CAL FIRE, nor is the site located within a SRA where CAL FIRE is the primary emergency response agency responsible for fire suppression and prevention. Therefore, the Project would not exacerbate wildfire risks due to slope, prevailing winds and other factors and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire, and impacts are **less than significant**.	No mitigation required.	Less than significant impact.
Threshold c: No installation or maintenance of associated infrastructure such as roads, fuel breaks or emergency water sources, power lines or other utilities would be required for the Project that would exacerbate fire risk or that would result in temporary or ongoing impacts to the environment, and impacts are **less than significant**.	No mitigation required.	Less than significant impact.
Threshold d: FEMA Flood Insurance Rate Map (FIRM) panel 06073C0766G was also reviewed to determine if the site was located within an area designated as a Flood Hazard Zone. The southern portion of the Project Site lies within Zone X of the FEMA 500-year floodplain and Zone AE of the 100-year floodplain. Therefore, the Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability or drainage changes, and impacts are **less than significant**.	No mitigation required.	Less than significant impact.

CHAPTER 1.0 INTRODUCTION

1.1 Project Overview

This Draft Environmental Impact Report (EIR) is an informational document intended to inform public agency decision-makers and the general public of the significant environmental effects of implementation of the CarMax Auto Superstore project (Project), identify possible ways to minimize the significant impacts, and describe reasonable alternatives to the Project. The public agency decision-makers shall consider the information in the EIR, along with other information, which may be presented to the agency as part of the administrative record for informational purposes.

The Project would construct a CarMax pre-owned automobile dealership facility on an approximately 10.54-acre site located on two vacant parcels within the City of Oceanside, in San Diego County (Project Site). The northern parcel is bounded to the north by the east-bound lanes of State Route (SR) 78 and to the south by Plaza Drive on Assessor's Parcel Number (APN) 168-012-42-00. The southern parcel is located south of Plaza Drive and west of Thunder Drive on APN 168-012-43-00. The Project would include a sales building, service building, non-public carwash, presentation area, staging area, sales display area, customer and employee parking lot, landscaped areas, and associated access drives. The northern parcel would be used as an additional sales display area.

1.2 Purpose of the California Environmental Quality Act and the Environmental Impact Report

The California Environmental Quality Act of 1970 (Public Resources Code [PRC] Sections 1500 *et seq.) (*CEQA) was enacted by the California Legislature in 1970. As noted under State CEQA Guidelines Section 15002[1], CEQA has four basic purposes.

1. Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
2. Identify the ways that environmental damage can be avoided or significantly reduced.
3. Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
4. Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The purpose of this EIR is to publicly disclose the significant effects of the proposed CarMax Project on the environment, to identify alternatives that would avoid or substantially lessen a significant effect, and to indicate the manner in which those significant effects can be mitigated or avoided, pursuant to CEQA Guidelines Section 15021, which requires a public agency to avoid or mitigate significant environmental impacts of projects it carries out or approves whenever it is feasible to do so. In instances where significant impacts cannot be avoided or mitigated, a project may nonetheless be carried out or approved if the approving agency finds, through a Statement of Overriding Considerations, that

[1] All references to CEQA Guidelines herein shall mean California Code of Regulations, Title 14, sections 1 5000 *et seq*.

economic, legal, social, technical, or other benefits outweigh the unavoidable significant environmental impacts.

1.3 Intended Uses of the Environmental Impact Report

This EIR has been prepared in conformance with the requirements of the CEQA Guidelines; and the rules, regulations, and procedures adopted by the City of Oceanside (City). As stated above, the purpose of the EIR is to evaluate potential environmental impacts associated with the development of the proposed CarMax Project. The City, in its role as Lead Agency, as defined by CEQA Guidelines Section 15051, has determined that an EIR is the appropriate environmental document for the proposed CarMax Project.

This EIR has been prepared as a "Project EIR", as defined in Section 15161 of the CEQA Guidelines. In accordance with CEQA, this EIR examines the environmental impacts of a specific development project, the proposed Project, and focuses on the physical changes in the environment that would result from the development of the Project. The EIR examines all phases of the Project including planning, construction, and operation.

In the event that any future Project-related actions require discretionary review, in accordance with CEQA Guidelines Sections 15162 through 15164, those actions would be examined in light of this EIR using a written checklist or similar device to determine whether the action is within the scope of the EIR, requiring no subsequent environmental documentation, or whether preparation of an additional CEQA document is required.

1.4 Scope and Content of the Environmental Impact Report

As the Lead Agency, the City is responsible for determining the scope and content of this EIR, a process referred to as "scoping." As part of the scoping process, the City considered the environmental resources present on the Project Site and in the surrounding area and identified the probable environmental effects of the proposed CarMax Project. On August 11, 2020 the City posted a Notice of Preparation (NOP) with the San Diego County (County) Clerk in accordance with Section 15082 of the CEQA Guidelines. The NOP was mailed to public agencies, organizations, and other interested individuals to solicit their comments on the scope and content of the environmental analysis. The NOP provided a general description of the proposed actions, a description of the Project area, and a preliminary list of potential environmental impacts.

In accordance with State-mandated pandemic regulations, a virtual public scoping meeting was held on August 26, 2020 at 6:00 p.m. to gather additional public input. The purpose of the meeting was to present the Project to the public through use of display maps, diagrams, and a presentation describing the Project components and potential environmental impacts. City staff and members of the local community attended the scoping meeting and/or submitted written comment during the public comment period. Scoping meeting attendees were provided an opportunity to voice comments or concerns regarding the potential effects of the Project. The NOP and comments received during the NOP comment period are included as **Appendix A** of this EIR and were considered as part of the preparation of this EIR. Comments received covered numerous topics including aesthetics, air quality, biological resources, energy, greenhouse gas emissions, hazardous materials, land use and planning, noise, public services, transportation and traffic, tribal cultural resources and vector control. The initial 30-day public scoping period concluded on September 10, 2020.

This EIR evaluates all subject areas listed in Appendix G of the CEQA Guidelines, which include the following: Aesthetics, Agriculture and Forestry Resources, Air Quality, Biological Resources, Cultural Resources, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, Tribal Cultural Resources, Utilities and Service Systems and Wildfire.

Based on preliminary evaluation of the probable effects of the Project and a thorough review of the comments on the NOP, the EIR analyzes effects having potentially significant impacts related to the following:

- Biological Resources
- Cultural Resources
- Geology and Soils
- Hydrology and Water Quality
- Land Use and Planning
- Tribal Cultural Resources

During the scoping process, it was determined that there would be no impact or less than significant impacts to: Aesthetics, Agricultural and Forestry Resources, Air Quality, Energy, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Mineral Resources, Population and Housing, Public Services, Recreation, Transportation, Utilities and Service Systems and Wildfire. Although the environmental issue areas above were determined to have a less than significant impact or no impact, an analysis of each of these issue areas was provided for informational purposes. These topics are described in Chapter 4.0, *Environmental Analysis*, of this EIR and supported by analysis contained in the Project technical reports.

1.4.1 Draft EIR and Public Review

This Draft EIR was prepared under the direction and supervision of the City, as the Lead Agency. This draft EIR will be made available to members of the public, responsible agencies and interested parties for a 45-day public review period in accordance with CEQA Guidelines Section 15105.

Public review of the draft EIR is intended to focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the Project might be avoided or mitigated. The Notice of Completion (NOC) of the draft EIR will be filed with the State Clearinghouse as required by CEQA Guidelines Section 15085. In addition, the Notice of Availability of the draft EIR will be distributed pursuant to CEQA Guidelines Section 15087. Interested parties may provide comments on the EIR in written form. This EIR and related technical appendices are available for review during the 45-day public review period at the following locations:

City of Oceanside Planning Division Counter
Civic Center at 300 North Coast Highway, Oceanside, CA 92054

City of Oceanside website: https://www.ci.oceanside.ca.us/gov/dev/planning/ceqa/default.asp

Interested agencies and members of the public may submit written comments on the adequacy of the EIR to the City's Development Services Department at 300 North Coast Highway, Oceanside, California 92054, addressed to Richard Greenbauer, Principal Planner, or emailed to RGreenbauer@oceansideca.org. Comments on the Draft EIR must be received by the close of business on the last day of the 45-day public review period unless the City grants an extension.

1.4.2 Mitigation Monitoring and Reporting Program

CEQA requires that a lead agency adopt a reporting and mitigation monitoring program for changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. The City, as the Lead Agency, is responsible for enforcing and verifying that each mitigation measure is implemented as required by the Mitigation Monitoring and Reporting Program (MMRP).

1.5 Organization of Draft Environmental Impact Report

The content and format of this Draft EIR are designed to meet the requirements of CEQA and CEQA Guidelines Article 9. **Table 1.5-1** summarizes the organization and content of the EIR.

Table 1.5-1
Document Organization and CEQA Requirements

Draft EIR Chapter	Contents
Chapter ES Executive Summary	Includes a brief summary of the proposed Project; identifies each significant effect, including proposed mitigation measures and alternatives to reduce or avoid the effect; identifies the areas of controversy known to the Lead Agency, including issues raised by agencies and the public; and summarizes the issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects (CEQA Guidelines Section 15123).
Chapter 1 Introduction	Discusses the purpose of CEQA and this EIR, the scope and content of this Draft EIR, the organization of this EIR, and the intended uses for this EIR (CEQA Guidelines Section 15124 (d)).
Chapter 2 Environmental Setting	Describes the overall existing physical conditions in the vicinity of the Project when the analysis was initiated. In addition, the specific existing conditions for each resource area are described in the applicable resource section in Chapter 4.0, *Environmental Analysis* (CEQA Guidelines Section 15124 (a), (b), and (c)).
Chapter 3 Project Description	Contains both a map of the precise location and boundaries of the Project and its location relative to the region, lists the Project's central objectives and underlying purpose, and provides a detailed description of the proposed project's characteristics (CEQA Guidelines Section 15124 (a), (b), and (c)).

Draft EIR Chapter	Contents
Chapter 4 Environmental Analysis	Describes the existing physical conditions for each resource category, lists the applicable laws and regulations relative to the specific resource, describes the impact assessment methodology, lists the criteria for determining whether an impact is significant, identifies the direct and indirect significant impacts that would result from implementation of the Project, and lists feasible mitigation measures that would eliminate or reduce the identified significant impacts.
Chapter 5 Cumulative Impacts	Describes the potential cumulative effects of the Project, defines the cumulative study area for each resource category, determines the effects of past, present, and reasonably foreseeable future projects within each study area if the cumulative study area is cumulatively significant, and evaluates the contribution of the proposed CarMax Project to contribute to a cumulatively significant impact (CEQA Guidelines Sections 15125-15126.4 and 15130). Cumulative impact refers to two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts.
Chapter 6 Other CEQA Considerations	Addresses the Project's potential growth-inducing impacts, which could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment; describes the significant irreversible changes associated with the Project's implementation; and addresses potential significant and unavoidable impacts associated with the Project.
Chapter 7 Alternatives to the Proposed Project	Describes a reasonable range of alternatives to the Project including the No Project Alternative, compares and contrasts the significant environmental impacts of alternatives to the Project, and identifies the environmentally superior alternative (CEQA Guidelines Section 15126.6).
Chapter 8 List of Preparers and Agencies Consulted	Lists the individuals and agencies involved in preparing the EIR (CEQA Guidelines Section 15129).
Chapter 9 References	Provides a comprehensive listing of all references cited in the EIR (CEQA Guidelines Section 15129).
Appendices	Presents additional background information and technical detail for several of the resource categories.
Figures and Tables	Displays important project information; figures include the precise location and boundaries of the proposed project along with the regional location. The Figures and Tables are located throughout the EIR.
List of Abbreviated Terms	A list of acronyms and abbreviations provided for the reader's reference,

Draft EIR Chapter	Contents
	provided in the Table of Contents of the EIR.

CHAPTER 2.0 ENVIRONMENTAL SETTING

2.1 Introduction

As required by Section 15125 of the CEQA Guidelines, this chapter of the EIR provides a description of the overall physical environmental conditions in the vicinity of the Project Site from both a local and regional perspective, as they existed at the time the NOP was published. This section also discusses the cumulative condition baseline consistent with Section 15130(b)(1)(B) of the CEQA Guidelines. Resource-specific existing conditions are provided within each individual resource section of Chapter 4.0 *Environmental Analysis* and Chapter 5.0 *Cumulative Analysis.* Chapters 4.0 and 5.0 also contain a Project consistency analysis with all applicable plans and policies.

2.2 Project Setting

2.2.1 Regional Setting

The Project is located within the City, which is located in the coastal zone of the northern portion of the County (**Figure 1**). The City is bound by the Pacific Ocean to the west, Camp Pendleton to the north, the City of Vista and unincorporated portions of the County to the east, and the City of Carlsbad to the south. Unlike the growing urban County region to the south, northern County has remained suburban and semi-rural over the years. Major features of the area include the beaches, Buena Vista Lagoon, the San Luis Rey River, and the open areas of Camp Pendleton. Regional access is provided from SR-78, College Boulevard and Plaza Drive.

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Regional Location

Miles 0 3 6

FIGURE 1

R·E·C Consultants, Inc. | CARMAX AUTO SUPERSTORE OCEANSIDE EIR

Source: SANGIS GIS Data, 2019. | October 2020

Climate

The local climate within the Project area is characterized as semi-arid with consistently mild, warmer temperatures throughout the year. The average summertime high temperature in the region is approximately 69 degrees Fahrenheit (˚F), with highs reaching 71˚F during the months of July through September. The average wintertime low temperature is approximately 46˚F, reaching as low as 45˚F during November through January. Average precipitation in the local area is approximately 10.28 inches per year with the majority of the precipitation falling December through March[2].

Air Basin

The Project Site is located within the San Diego Air Basin (SDAB) and is subject to San Diego Air Pollution Control District (APCD) guidelines and regulations. The SDAB is one of 15 air basins that geographically divide California. The SDAB lies in the southwest corner of California, comprises the entire San Diego region and covers approximately 4,260 square miles.

The climate of the County, as in most of Southern California, is influenced by the strength and position of the semi-permanent high-pressure system over the Pacific Ocean, known as the Pacific High. This high-pressure ridge over the West Coast often creates a pattern of late-night and early-morning low clouds, hazy afternoon sunshine, daytime onshore breezes, and little temperature variation year-round. The SDAB is characterized as a Mediterranean climate with dry, warm summers and mild, occasionally wet winters. Average temperature ranges (in ˚F) from the mid-40s to the high 90s, with an average of 201 days of warmer than 70˚F. The SDAB experiences 9 to 13 inches of rainfall annually, with most of the region's precipitation falling from November through March, with infrequent (approximately 10%) precipitation during the summer. El Niño and La Niña patterns have larger effects on the annual rainfall received in the County, where the County receives less than normal rainfall during La Niña years.

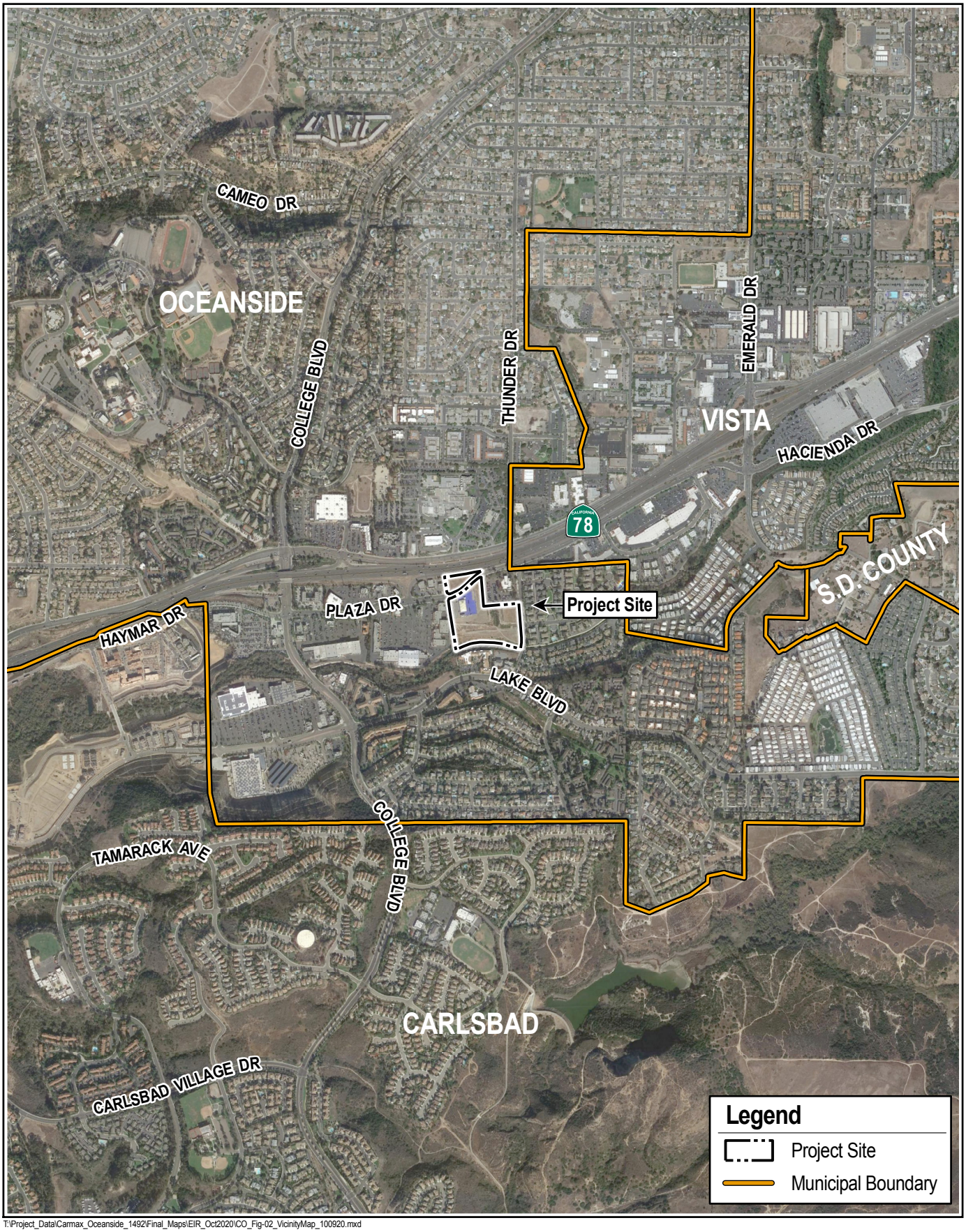
Air quality standards have been set pursuant to the federal and state Clean Air Acts, which are referred to as the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). The favorable climate of the County also works to create air pollution problems. The SDAB has been determined to be in non-attainment of the federal and state ozone (O_3) air quality standards. In the fall months, the SDAB is often impacted by Santa Ana winds, which can transport air pollution from the South Coast Air Basin and increase O_3 concentrations in the County. Under certain conditions, atmospheric oscillation results in the offshore transport of air from the Los Angeles region to the County that also raises the O_3 concentrations within the SDAB. Due to this condition and the associated Clean Air Act requirements, Regional Air Quality Strategies have been developed to address the reduction of O_3 in the SDAB. Refer to Section 4.4 *Air Quality* for additional information regarding air quality in the SDAB.

[2] Western Regional Climate Center (WRCC). 2020. "Historical Climate Information". Accessed February 2020. https://wrcc.dri.edu/

2.2.2 Project Location

The Project Site is located in the southeastern portion of the City of Oceanside approximately seven (7) miles east of downtown Oceanside, south of SR-78, east of College Boulevard, and west of Thunder Drive (**Figure 2 and Figure 3**). The Project boundary encompasses approximately 10.54 acres on APNs 168-012-42-00 and 168-012-43-00. The Project Site is situated on two (2) vacant and undeveloped parcels. The northern parcel is approximately 1.12 acres and is bounded to the north by the east-bound lanes of SR-78 and to the south by Plaza Drive. An existing billboard is located on the eastern portion of this parcel. The southern parcel is approximately 9.42 acres and is located south of Plaza Drive and west of Thunder Drive. Direct access to the Project Site would be provided from two (2) access points on Thunder Drive. The proposed driveway off of Plaza Drive would be for test drives only and would not be accessible to the public.

The Project Site has been previously graded but no structures, roads or other improvements are located onsite. The southern parcel has occasionally been used for temporary seasonal purposes such as Christmas tree sales lot, Halloween pumpkin patch, dairy product sales and kids play land. Two (2) rectangular-shaped mounds of fill soil appear to have been placed on the eastern portion of the Project Site adjacent to Thunder Drive.



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R·E·C Consultants, Inc.

Vicinity Map

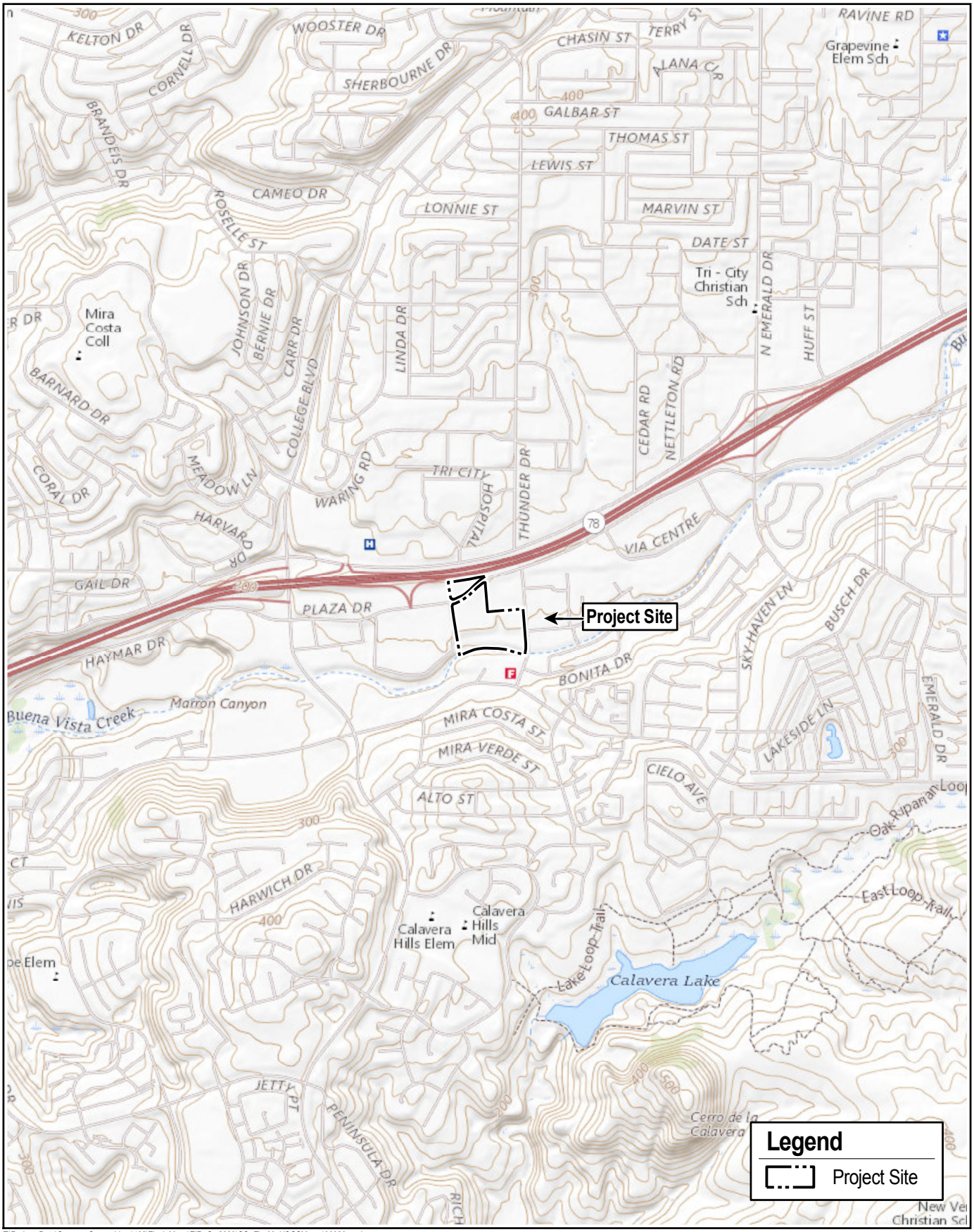
CARMAX AUTO SUPERSTORE OCEANSIDE EIR

0 760 1,520 Feet

Aerial Source: Google Earth, August 2018.

FIGURE 2

October 2020



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R·E·C Consultants, Inc.

USGS Topographic Map

CARMAX AUTO SUPERSTORE OCEANSIDE EIR

0 760 1,520 Feet

Aerial Source: ESRI USGS Basemap, 2020.

FIGURE 3

October 2020

2.2.3 Existing Conditions

Aerial Photographs

A Phase I Environmental Site Assessment was prepared by EnviroApplications, Inc. and is provided in **Appendix B**. As part of the site assessment, aerial photographs of the subject property and surrounding area were analyzed from 1928 to 2016. Photographs from 1928 to 1953 show the Project Site and surrounding areas appear to be open, hilly land in a rural ranching setting. The currently existing roadways are not yet present and appear to be covered with brush. Buena Vista Creek is clearly visible to the south in its natural channel. From 1964 to 1970 the subject property still appears to be open, brush-covered land. During this timeframe SR-78 has been constructed to the north. Further to the north beyond the freeway are what appear to be a hospital campus and a drive-in movie theater. Thunder Drive is present along the eastern boundary of the site and is unpaved. By 1967, the Project Site and properties to the east appear to have been graded. From 1979 to 1985 the Project Site appears to be vacant, graded with several trails crossing the Project Site. The homes in the residential neighborhood to the east across Thunder Drive have been constructed. Land along Buena Vista Creek to the south appears to have been graded to control flooding. The land to the west is still vacant and by 1985 the existing California Department of Motor Vehicles (DMV) facility is present. Aerial photographs from 1989 to 2016 show that the subject property and surrounding areas appear to be similar to the way they did during the site visit conducted by EnviroApplications, Inc. on July 29, 2019.

Topography

The topography of the subject property area is hilly. The land to the north of the Project Site is higher in elevation while the land to the south slopes downward toward Buena Vista Creek. Land to the east and west are similar in elevation. The Project Site has an approximate surface elevation of 194 feet above mean sea level (amsl) with elevations ranging from 180 feet to 220 feet amsl.

Surrounding Land Uses

The Project Site is located in a primarily developed area and is surrounded by commercial uses to the west, including the Tri-City Crossroads shopping center and auto services and part shops. To the east are medium density residential uses as well as a DMV facility at the corner of Plaza Drive and Thunder Drive. To the north is SR-78 and further north are professional commercial uses. To the south are Buena Vista Creek, high density and residential estate uses including a senior living facility, and commercial and public/semipublic uses including a City of Oceanside Fire Department (OFD) station.

Biological Resources

As stated in the Biological Technical Report prepared by Busby Biological Services (**Appendix D**), vegetation can primarily be categorized as Disturbed Land, characterized by maintaining a soil substrate but physically disturbed by human activity with little vegetation present. Small patches of disturbed Diegan coastal sage scrub are dispersed around the southern parcel of the Project Site, containing native plant species such as California sagebrush, black sage, and California buckwheat, but also a high proportion of non-native plant species such as black mustard, sweet fennel, and Russian thistle. Southern riparian forest vegetation, containing arroyo willow, mulefat, cattail, and various non-native species occurs along Buena Vista Creek in the southern portion of the Project Site. San Diego sagewort, a

sensitive plant species, was found adjacent to the site on the southern stream bank of Buena Vista Creek. Iceplant, ornamental trees, and ruderal vegetation are also found onsite. **Table 2.2-1** provides the existing vegetation communities and land cover types within the Project Site.

Table 2.2-1
Existing Vegetation Communities and Land Cover Types within the Project Area

Vegetation Community/ Land Cover Type	Subarea Plan Habitat Group	Within Parcels (acres*)	Within 50-foot Survey Buffer (acres*)	Total (acres*)
Disturbed Diegan Coastal Sage Scrub	C	0.448	0.003	0.451
Southern Riparian Forest	A	0.518	0.868	1.386
Open Water	A	0.018	0.035	0.054
Developed Land	-	0.455	2.184	2.639
Disturbed Land	F	8.109	0.542	8.650
Iceplant	F	0.454	--	0.454
Ornamental	F	0.138	0.302	0.440
Ruderal	F	0.841	--	0.841
TOTAL		**10.981***	**3.935****	**14.915****

*Acreages are approximate and rounded to the nearest thousandth of an acre.
** Total acreages represent the actual acreages without the rounded error.
Source: Biological Technical Report (Appendix D)

A total of 17 wildlife species were detected within the area surveyed during the biological resources survey conducted on July 22, 2019. Species detected are representative of the habitats within and adjacent to the survey area, and include cabbage white butterfly (*Pieris rapae*), western fence lizard (*Sceloporus occidentalis*), Anna's hummingbird (*Calypte anna*), western scrub-jay (*Aphelocoma californica*), spotted towhee (*Pipilo macalatus)*, house finch (*Carpodacus mexicanus frontalis*) and California ground squirrel (*Spermophilus beecheyi*). A list of wildlife species detected within the survey area is provided in the Biological Constraints Report (**Appendix E**).

Geology and Soils

The property lies within the Peninsular Ranges Geomorphic Province of Southern California. This province consists of a series of ranges separated by northwest trending valleys, subparallel to branches of the San Andreas Fault. The Peninsular Ranges geomorphic province, one of the largest geomorphic units in western North America, extends from the Transverse Ranges geomorphic province and the Los Angeles Basin, south to Baja California. It is bound to the west by the Pacific Ocean, to the south by the Gulf of California and on the east by the Colorado Desert Province. Regional geologic maps of the Project Site and vicinity indicate that the Project Site is underlain by late Pleistocene to Holocene Young Alluvial Flood Plain deposits. These deposits consist of poorly sorted sands, gravels, silts and clay that were deposited by the San Luis Rey River.

Subsurface materials encountered during a subsurface investigation conducted by EEI in September 2019 included artificial fill, Quaternary-aged alluvium, and Eocene-aged Santiago formation as discussed in the Geotechnical Evaluation prepared by EEI and provided as **Appendix H** of this document.

The Project Site is located within the coastal plain of Southern California. The Project vicinity is underlain by two intermixed formations, the Tujunga, consisting of old lacustrine beach and estuarine deposits of fine-grained silt, sand and clay and Tertiary age Terrace Escarpments consisting primarily of sandstone and conglomerate. Both formations are overlain with recent alluvium (sand, silt and clay) and deposited by Buena Vista Creek.

Drainage and Hydrology

Existing runoff from the northern parcel drains via overland flow to the southwest corner of the Project Site where it sheet flows over the existing berm and onto Plaza Drive. Runoff from the southern parcel drains south towards Buena Vista Creek with a small portion draining east over the sidewalk and curb and onto Thunder Drive. The Drainage Study prepared by REC Consultants, Inc. (**Appendix J**) analyzes existing and developed conditions for 100-year flowrates from the development to the existing points of discharge. The southern portion of the Project Site lies within Zone X of the Federal Emergency Management Agency (FEMA) 100-year floodplain (FEMA FIRM Panel 06073C0758G effective 5/16/19).

Buena Vista Creek runs along the southern portion of the Project Site from east to west, eventually connecting to Buena Vista Lagoon and the Pacific Ocean approximately four (4) miles west of the Project Site. Buena Vista Creek is classified as a freshwater forested/shrub wetland by the U.S. Fish and Wildlife Service's (USFWS) National Wetlands Inventory[3]. It is located within the Carlsbad Hydrologic Unit as identified by the San Diego Regional Water Quality Control Board (San Diego Water Board).

Storm water onsite appears to soak into the surface of the Project Site. No ditches or swales were observed onsite.

Groundwater was not encountered in any trenches at the time of a subsurface exploration to a depth of 15.5 feet below-ground-surface conducted by EEI in September 2019 (**Appendix H**).

Utilities

The City's Water Utilities Department provides sewer services the surrounding Project area. However, no laterals have been installed onsite. The Water Utilities Department also provides water supply services to the Project area. However, no landscaping or sprinklers were observed onsite. San Diego Gas and Electric (SDG&E) provides gas and electric services to the surrounding Project area but no utilities were observed onsite. Both the City and City of Vista sewer manholes and sewer mains are located at the southern portion of the Project Site.

2.3 Cumulative Project Setting

The study area for the cumulative impact analysis is based on existing projects under review, recently approved projects, and projects under construction and within an approximate two-mile radius from the Project Site. Due to the location of the Project Site at the southeast portion of the City, cumulative projects within the jurisdictions of the City of Carlsbad and City of Vista are also included. The cumulative projects analyzed are within the following geographic limits:

[3] U.S. Fish and Wildlife Service. October 2019. *National Wetlands Inventory Mapper.*

- Northern Boundary: Mesa Drive (between El Camino Real and College Boulevard)
- Eastern Boundary: Melrose Avenue (from Olive Lane to Cannon Road)
- Southern Boundary: Cannon Road (from El Camino Real to S Melrose Avenue)
- Western Boundary: S El Camino Real (from Mesa Drive to SR-78)

Pursuant to CEQA Guidelines Section 15130(b)(1)(A), and based on information provided by the City of Oceanside, City of Vista and the City of Carlsbad, a list of cumulative projects under consideration for this analysis is presented in **Table 2.3-1** and displayed in **Figure 4**. For the purposes of this Project cumulative analysis, projects which have been approved through the discretionary or building permit process, projects currently under City review and projects currently under construction are considered and are provided below.

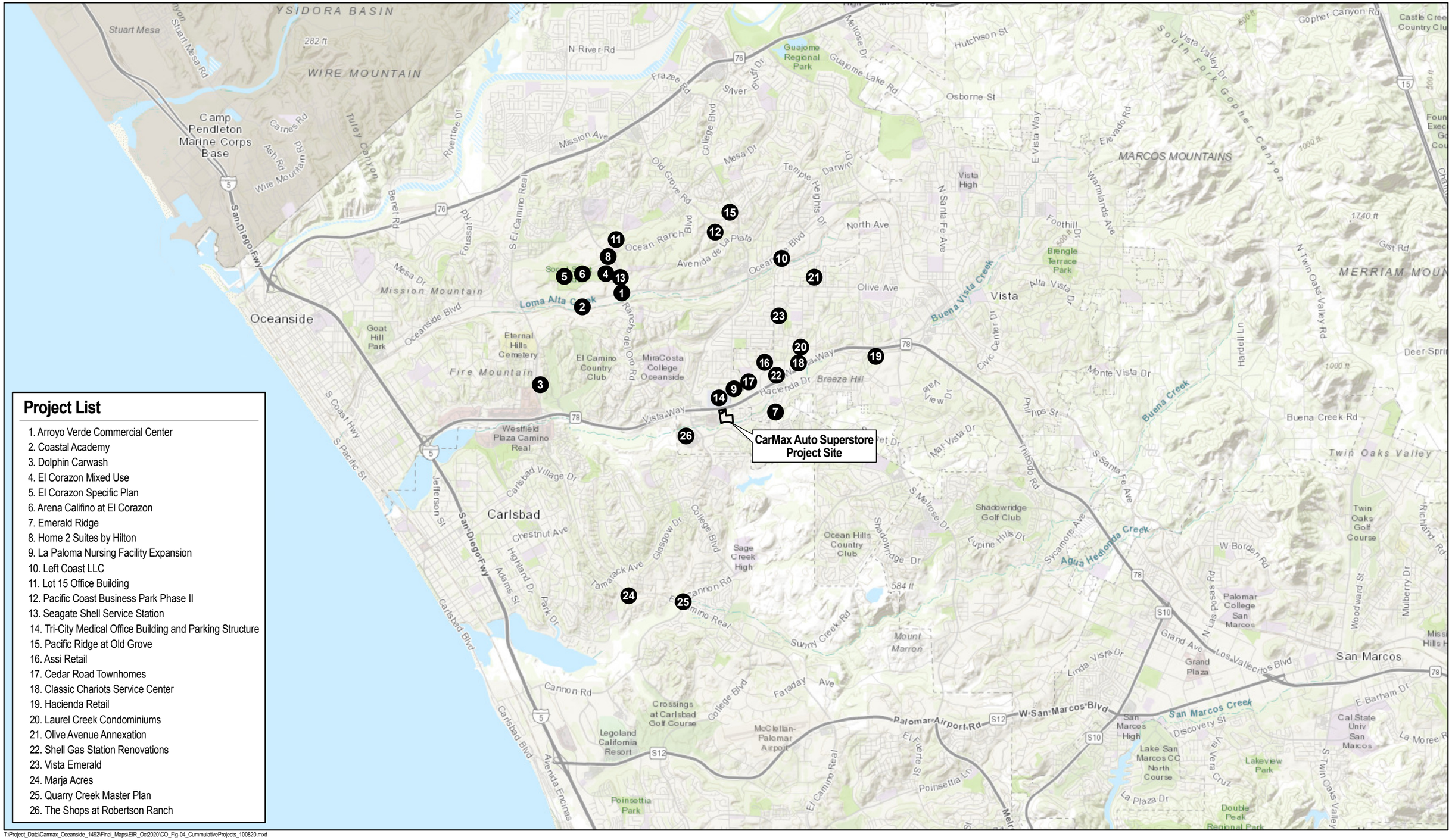
Table 2.3-1
Cumulative Projects

#	Project Name	Location	Description	Status
City of Oceanside				
1	Arroyo Verde Commercial Center	North of Oceanside Boulevard and east of Rancho Del Oro Road	A 27,200-square foot commercial retail center	Under Construction
2	Coastal Academy	South of Oceanside Boulevard between El Camino Real and Rancho Del Oro Road	Development of a Junior and Senior High School Campus on a 9.68-acre site formerly occupied by the Evergreen Nursery	Under Review
3	Dolphin Carwash	East of El Camino Real and north of Via Las Rosas	Development plan for carwash and smog check facility on a 1.2-acre site	Under Review
4	El Corazon Mixed Use	North of Oceanside Boulevard between El Camino Real and Rancho Del Oro Road	Development Plan for 268 residential units and 4,756 SF of commercial space.	Under Review
5	El Corazon Specific Plan	North of Oceanside Boulevard between El Camino Real and Rancho Del Oro Road	Subdivision of the property into four lots including a Zone Amendment and Specific Plan Amendment.	Approved*
6	Arena Califino at El Corazon	North of Oceanside Boulevard between El Camino Real and Rancho Del Oro Road	A 170,000 SF multi-purpose sports arena, event facility within the El Corazon Specific Plan Area.	Under Review
7	Emerald Ridge	Southeast corner of Sky Haven Lane and Sunset Drive within the City of Oceanside; Emerald Drive and Sunset Drive located within the City of Vista	A 48-unit condominium project on a 7.78-acre site. The project would include nine townhome buildings, open space recreation areas and a sewer lift station. The project would install a storm drain in Sunset Drive/Emerald Drive within the City of	Approved*

#	Project Name	Location	Description	Status
			Vista jurisdiction.	
8	Home 2 Suites by Hilton	Rancho Del Oro Drive and El Corazon Drive	Development Plan for a four story, 137-unit hotel facility	Approved*
9	La Paloma Nursing Facility Expansion	East of Thunder Drive and south of Waring Road	A 1,780-square foot addition to the La Paloma Nursing Facility	Approved*
10	Left Coast LLC	Southwest corner of Oceanside Boulevard and Ord Way	A Conditional Use Permit for the operation of a medical cannabis manufacturing facility	Approved
11	Lot 15 Office Building	North of Ocean Ranch Boulevard off of Maritime Way	Development Plan for a 99,800-square foot office building with site improvements on a 4.22-acre site	Approved *
12	Pacific Coast Business Park Phase II	West of College Boulevard, south of Old Grove Road and east of Avenida Del Oro	Construction of three industrial buildings totaling 278,127 square feet on 17.57 acres	Under Construction
13	Seagate Shell Service Station	North of Oceanside Boulevard and east of Rancho Del Oro Road	A proposed gas station with convenience store, manager's office and carwash	Under Review
14	Tri-City Medical Office Building and Parking Structure	North of Vista Way and west of Thunder Drive	A three-story parking structure within the existing Tri-City Hospital property. The project includes a 60,000 SF medical office building. As provided in the Local Transportation Study (**Appendix O**), the building construction is completed however; the building was not occupied during the traffic data collection period. Therefore, it is included as a cumulative project.	Approved*
15	Pacific Ridge at Old Grove	Northwest corner of College Boulevard and Old Grove Road	Development of 320 residential units on a 28.2-acre site.	Under Construction
City of Vista				
16	Assi Retail	North of West Drive West of Emerald Drive	Site Development Plan for a 9,790 square foot commercial building	Under Review
17	Cedar Road Townhomes	206 Cedar Road	35 attached residential condominiums on a 2-acre site	Under Review
18	Classic Chariots Service Center	129 Grapevine Road	14,522-square foot automobile service center and expansion of existing used car dealership on a 1.45-acre site.	Approved
19	Hacienda Retail	Southwest corner of Hacienda Drive and La Tortuga Drive	Site Development Plan for a 3,200-square foot retail building	Under Construction
20	Laurel Creek	North of Date Street,	68 detached condominium units on	Under

#	Project Name	Location	Description	Status
	Condominiums	east of Grapevine Road, and west of Durian Street	9.2 acres	Construction
21	Olive Avenue Annexation	1435 Olive Avenue	Annexation and Tentative Subdivision Map for 15 lots	Approved
22	Shell Gas Station Renovations	145 N. Emerald Drive	Building additions and renovations and for new services (smog check and car detail)	Under Review
23	Vista Emerald	729 N Emerald Road	27 detached single-family residences on 6.89 acres	Under Construction
City of Carlsbad				
24	Marja Acres	4901 El Camino real	State Density Bonus Residential for the development of 248 townhomes, 46 affordable units for seniors, and 10,000 SF of retail and restaurants with community recreation areas on 20.65 acres	Under Review
25	Quarry Creek Master Plan	South of Haymar Drive and west of College Boulevard	A master plan community with up 656 homes	Under Construction
26	The Shops at Robertson Ranch	El Camino Real and Cannon Road	Includes six retail buildings subdivided into five lots and would include banks, restaurants a private educational facility/ day care	Under Review
*Projects designated as Approved are approved through either the discretionary or building permit process.				

The cumulative setting is specific to each environmental resource because spatial boundaries and temporal timeframes can often vary by resource or issue area. For example, the cumulative impact analysis area for air quality would include the larger air basin, while environmental resources like biological and cultural resources tend to have localized cumulative impact analysis areas. A summary of cumulative setting related to each environmental resource is presented within the specific resource section in Chapter 4.0 *Environmental Analysis.*



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R·E·C Consultants, Inc.

Cummulative Projects

CARMAX AUTO SUPERSTORE OCEANSIDE EIR

Miles 0 0.5 1

Source: Esri Topographic Basemap

FIGURE 4

December 2020

2.4 Cumulative Methodology

According to Section 15130(b) of the State CEQA Guidelines, a cumulative impact analysis may be conducted using one of two methods. The List Method, which includes "a list of past, present, and probable activities producing related or cumulative impacts"; or the Summary-of-Projections Method, which uses "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact." The cumulative analysis for the Project will utilize the List Method. Cumulative Impacts are further analyzed and discussed in Chapter 5.0 *Cumulative Analysis*.

CHAPTER 3.0 PROJECT DESCRIPTION

3.1 Introduction

The Project proposes the construction of a CarMax pre-owned automobile dealership on a vacant, approximately 10.54-acre site, situated on two (2) parcels (APNs 168-012-42-00 and 168-012-43-00). Phase I of the Project would consist of a sales and administrative building, service building, private carwash, associated access drives, landscaped areas, presentation area, staging area, sales display area, and a customer and employee parking lot on the southern parcel. The northern parcel would be used as an additional sales display area with a security gate and control island and would be developed as part of Phase II of the Project. **Table 3.1-1** below displays all proposed building areas and square footages.

Table 3.1-1
Proposed Building Areas

Building Area	Square Footage (SF)
Sales and Administration	5,005 SF
Presentation	1,197 SF
Service	4,309 SF
Carwash	936 SF
Total	**11,447 SF**

This chapter provides the project background, objectives, and characteristics and necessary Project approvals.

3.2 Project Site Characteristics

Based on reviews of historical records and aerial photographs beginning in 1938 conducted by ASM Affiliates as part of the Archaeological Survey Report **(Appendix G**), the property was left undisturbed besides a road running along its western portion until 1964, at which time a road running east-west appeared along the southern portion of the Project Site parallel to Buena Vista Creek. A 1967 photograph shows the Project Site was graded in conjunction with the construction of SR-78. The 1990 photograph shows the Project Site in a similar condition as it is currently.

Both parcels that comprise the Project Site are vacant and undeveloped. The northern parcel contains an existing billboard located at the eastern corner of the parcel, which will remain in place during construction and operation of the Project. No existing structures or roads are located onsite. The Project Site is located in a primarily developed area and is surrounded by commercial uses to the west, including a shopping center and auto repair shops. To the east are medium density residential uses as well as a DMV facility at the corner of Plaza Drive and Thunder Drive. To the north is SR-78 and further north are professional commercial uses. To the south are Buena Vista Creek, high density and residential estate uses including a senior living facility, and commercial and public/semipublic uses including an OFD station.

As stated in the Biological Resources and Constraints Report prepared by Busby Biological Services and included in this EIR as **Appendix E,** vegetation can primarily be categorized as disturbed land, characterized by maintaining a soil substrate but physically disturbed by human activity with little

vegetation present. Small patches of disturbed Diegan coastal sage scrub are dispersed around the southern parcel of the Project Site, containing native plant species such as California sagebrush, black sage, and California buckwheat, but also a high proportion of non-native plant species such as black mustard, sweet fennel, and Russian thistle. Southern riparian forest vegetation, containing arroyo willow, mulefat, cattail, and various non-native species occurs along Buena Vista Creek in the southern portion of the Project Site. San Diego sagewort, a sensitive plant species, was found adjacent to the site on the southern stream bank of Buena Vista Creek. Iceplant, ornamental trees, and ruderal vegetation are also found onsite.

The southern portion of the Project Site lies within Zone X of the FEMA 500-year floodplain and Zone AE of the 100-year floodplain (FEMA FIRM Panel 06073C0758G effective 5/16/19). A 100-foot riparian buffer runs east to west along the southern portion of the Project Site and includes a 50-foot biological buffer as well as a mandatory 50-foot planning buffer.

The Project is anticipated to encroach approximately six feet into a small portion of the 50-foot planning buffer for the sewer realignment. Temporary impacts will occur to approximately 0.0008 acre (344 SF) of disturbed habitat within the planning buffer. Due to the small size of the impacts and the distance from the riparian habitat (94 feet), no direct impact to riparian habitat is anticipated.

The Project Site has a zoning and land use designation of Community Commercial (CC) as identified in the City of Oceanside Zoning Ordinance (Zoning Ordinance) and City of Oceanside General Plan (General Plan). No change to the Zoning Ordinance or General Plan is required.

3.3 Project Objectives

CEQA Guidelines (Section 15124 (b)) require that the project description shall contain a statement of the objectives sought by the project and should include the underlying purpose of the project.

The primary objectives of the Project are as follows:

4. Construct and operate a retail commercial facility providing local residents with convenient access to an automobile sales center and related services.

5. Develop a thoughtfully designed, visually appealing automobile sales facility that is aesthetically compatible with surrounding development.

6. Positively impact local economy by creating employment opportunities and generating tax revenue.

3.4 Project Characteristics

Project Overview

The Project requires approval of a Development Plan and Conditional Use Permit (CUP) to allow for the proposed CarMax Auto Superstore Project. The proposed development consists of the construction of a CarMax pre-owned automobile dealership, including a sales and administration building, service building, private carwash, associated access drives, landscaped areas, presentation area, staging area,

sales display area and a customer and employee parking lot on the southern parcel. An additional sales display area would be provided on the northern parcel with a security gate and control island.

Deliveries of vehicles, parts and supplies would be made onsite. Vehicle carriers would enter the Project Site through the main access on Thunder Drive and load and unload vehicles in the designated area on the southeast side of the customer and employee parking lot. Unloaded vehicles would be driven by employees from the parking lot into the staging area to await preparation for resale or potentially for disposition through the wholesale auction process.

The Project is projected to have a total of 60 to 80 employees with approximately 30 to 40 employees present per shift. Anticipated hours of operation for the sales building are Monday through Friday from 10:00 a.m. to 9:00 p.m., Saturday from 9:00 a.m. to 9:00 p.m. and Sunday from 11:00 a.m. to 7:00 p.m. The anticipated hours of the vehicle service operations are Monday through Friday from 7:30 a.m. to 6:00 p.m. Service operations are not open on Saturday and Sunday. CarMax associates would be present at the store several hours before and after the public operating hours.

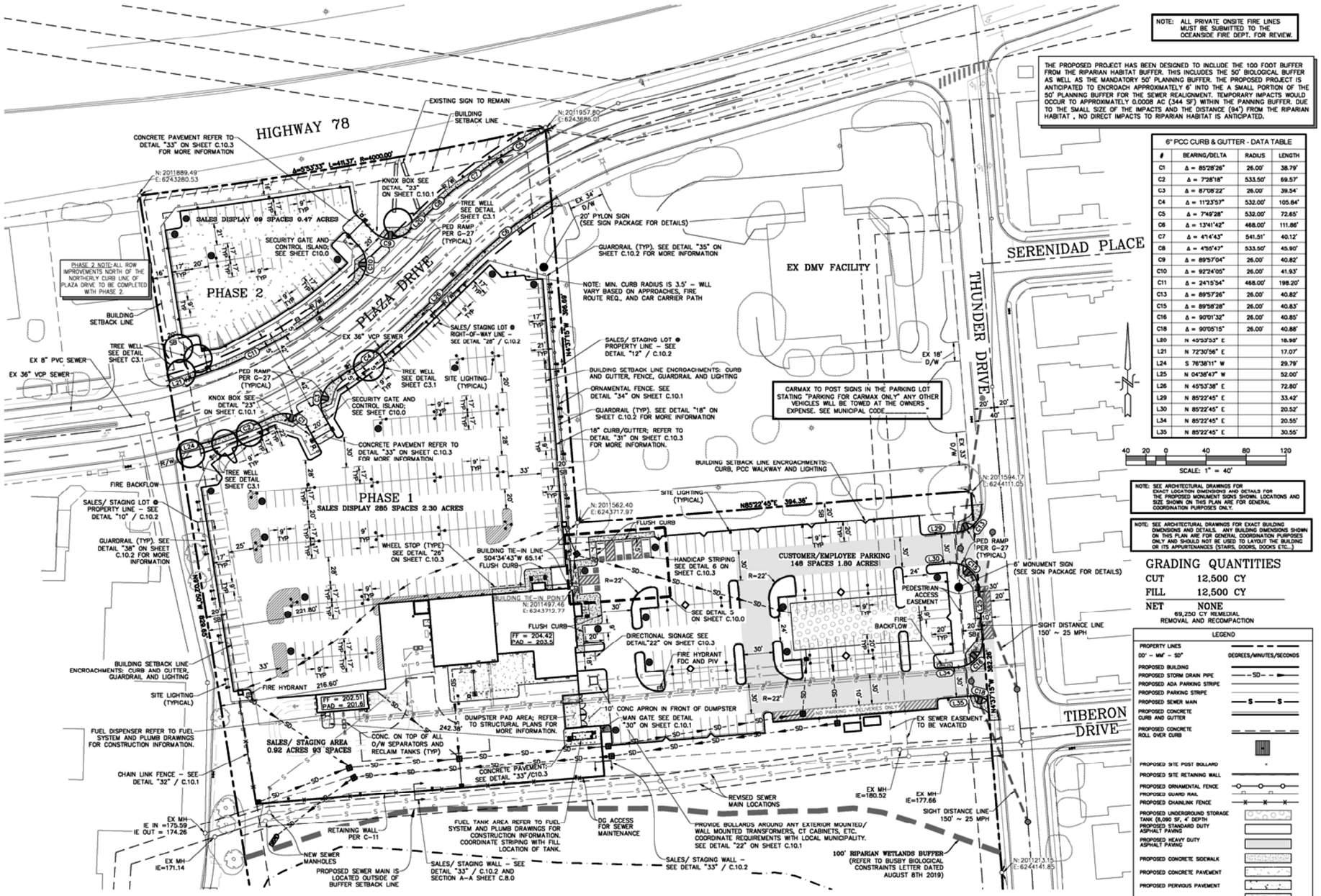
All vehicle service work is to be performed inside fully-conditioned buildings equipped with rollup doors. Retail service vehicles and vehicles awaiting disposition off-site are stored in the secured non-public staging area located southwest of the building on a temporary basis. Vehicular access to that area would be strictly controlled through the use of embassy-style security gates. Parking spaces are not designated in this area on the plan due to the change of staging and storage of vehicles within this area on a daily basis. The non-public carwash is located in the secured staging area. An aboveground fuel storage tank with a capacity of 4,000 gallons would be located south of the sales building with a non-public fuel pump adjacent to the carwash within the secured staging area to fuel inventory vehicles as needed.

Project Site Layout

The sales inventory display area would be located at the front of the property along Plaza Drive and would be secured by highway guardrail on the west, north and eastern edges with an embassy-style security gate on the northern side providing access to Plaza Drive for test drives. The sales inventory display area would be physically separated from the DMV parking lot by ornamental fencing and guardrail. The sales display area is fully secured and can only be accessed by customers through the sales building and out the sales vestibule located on the north side of the building. This area is considered a pedestrian display area where customers can walk around to browse through the inventory vehicles.

The sales and presentation buildings would be located south of the sales display area with customer access from the parking lot to the east. The main sales staging area would be located south of the service building and surrounded by chain link fencing with privacy slats and a highway guardrail for security purposes. The private carwash would be located within the staging area. The staging area would also be secured with embassy-style security gates and a man gate. Customer and employee parking would be located east of the sales building and access would be provided from Thunder Drive. The northern parcel would consist of an additional sales display area and would contain a security gate and control island and would be developed as part of Phase II of the Project.

A 100-foot riparian buffer would run east to west on the southern portion of the Project Site. This 100-foot buffer would include a 50-foot biological buffer as well as a mandatory 50-foot planning buffer. **Figure 5** displays the layout of the Project Site area.



6" PCC CURB & GUTTER - DATA TABLE

#	BEARING/DELTA	RADIUS	LENGTH
C1	Δ = 85°28'26"	26.00'	38.79'
C2	Δ = 7°28'18"	533.50'	69.57'
C3	Δ = 87°08'22"	26.00'	39.54'
C4	Δ = 11°23'57"	532.00'	105.84'
C5	Δ = 7°49'28"	532.00'	72.65'
C6	Δ = 13°41'42"	468.00'	111.86'
C7	Δ = 4°14'43"	541.51'	40.12'
C8	Δ = 4°55'47"	533.50'	45.90'
C9	Δ = 89°57'04"	26.00'	40.82'
C10	Δ = 92°24'05"	26.00'	41.93'
C11	Δ = 24°15'54"	468.00'	198.20'
C13	Δ = 89°57'26"	26.00'	40.82'
C15	Δ = 89°58'28"	26.00'	40.83'
C16	Δ = 90°01'32"	26.00'	40.85'
C18	Δ = 90°05'15"	26.00'	40.88'
L20	N 45°53'53" E		16.98'
L21	N 72°30'56" E		17.07'
L24	S 76°38'11" W		29.79'
L25	N 04°38'47" W		52.00'
L26	N 45°53'38" E		72.80'
L29	N 85°22'45" E		33.42'
L30	N 85°22'45" E		20.52'
L34	N 85°22'45" E		20.55'
L35	N 85°22'45" E		30.55'

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Site Layout

NOT TO SCALE

FIGURE 5

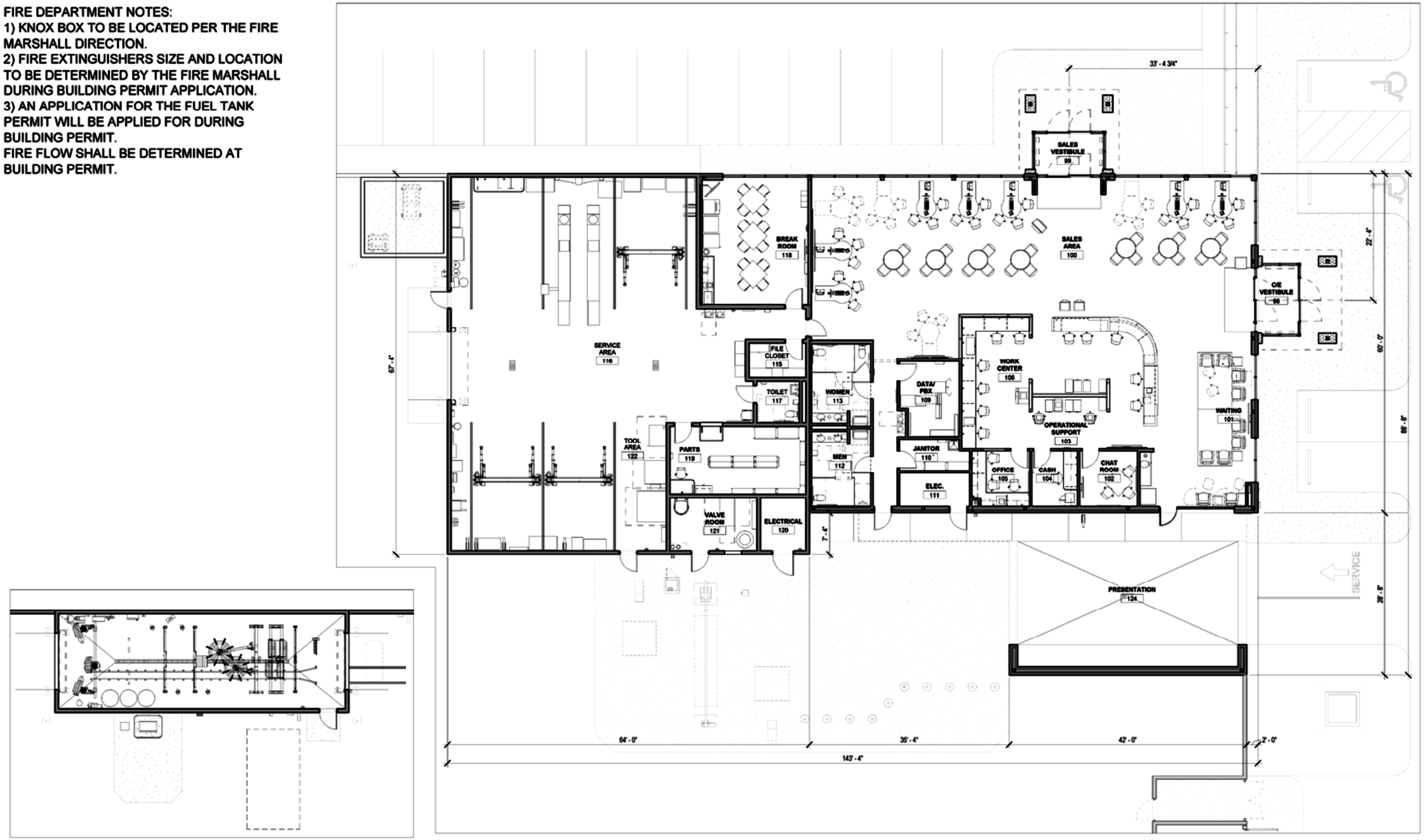
REC Consultants, Inc. | CARMAX AUTO SUPERSTORE OCEANSIDE EIR

Source: REC Consultants, Inc. (03/06/2020) | October 2020

Floor Plan

The sales area floor plan would include a front vestibule and a sales vestibule, waiting area, main sales area, work center, operational support area, chat room, cash room, office, data room, janitor room, electrical room and restrooms. A door at the west end of the sales building would lead into the service building. The service building would include a break room, file closet, restroom, a room for parts, valve room, electrical room, tool area and a main service area. The proposed Floor Plans are provided as **Figure 6**.

FIRE DEPARTMENT NOTES:
1) KNOX BOX TO BE LOCATED PER THE FIRE MARSHALL DIRECTION.
2) FIRE EXTINGUISHERS SIZE AND LOCATION TO BE DETERMINED BY THE FIRE MARSHALL DURING BUILDING PERMIT APPLICATION.
3) AN APPLICATION FOR THE FUEL TANK PERMIT WILL BE APPLIED FOR DURING BUILDING PERMIT.
FIRE FLOW SHALL BE DETERMINED AT BUILDING PERMIT.



2 A2.0 **CARWASH FLOOR PLAN** 1/8" = 1'-0"

1 A2.0 **SALES & SERVICE FLOOR PLAN** 1/8" = 1'-0"

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R·E·C Consultants, Inc.

Floor Plans

CARMAX AUTO SUPERSTORE OCEANSIDE EIR

NOT TO SCALE

Source: Charles J O'Brian (12/17/2019)

FIGURE 6

October 2020

Open Space

The Project Site would include 1.50 acres of open space on the southern portion of the Project Site which includes the 100-foot riparian buffer. The buffer includes a 50-foot biological buffer as well as a mandatory 50-foot planning buffer. In accordance with the Oceanside Subarea Plan, a minimum 50-foot biological buffer plus a minimum 50-foot planning buffer (total width of both equals 100 feet) shall be established for upland habitats, beginning at the outer edge of riparian vegetation. The planning buffer serves as an area of transition between the biological buffer and specified land uses on adjoining uplands. Foot paths, bikeways, and passing recreational uses may be incorporated into the planning buffer, but buildings, roads and other intensive uses are prohibited. The following uses are prohibited in the 50-foot biological buffer: new development, foot paths, bikeways, passive recreational uses not already planned, and fuel modification activities for new development.

As discussed in the Biological Technical Report prepared by Busby Biological Services and included in this EIR as **Appendix D**, for proposed projects that include development or other discretionary actions that are proposed in or adjacent to riparian habitats, the riparian area and other wetland habitats shall be designated as biological open space. As discussed above, the Project is anticipated to encroach approximately six feet into the 50-foot planning buffer for the sewer realignment. Temporary impacts will occur to approximately 0.0008 acre (344 SF) within the planning buffer. Due to the small size of the impacts, the limited duration, and the distance from the riparian habitat (94 feet), no direct impacts to riparian habitat are anticipated.

Transportation

Access and Parking

The Project Site includes two (2) main access points off Thunder Drive and would include the necessary striping for the proposed improvements on Plaza Drive. An access point would be located off Plaza Drive for test drives only and would not be accessible to the public. The customer and employee parking lot would contain approximately 148 parking spaces (9’ x 20’), the sales display area would provide approximately 285 spaces (9’ x 17’), the sales and staging area would provide approximately 93 spaces, however, parking spaces are not designated in this area on the plan due to the change of staging and storage of vehicles within this area on a daily basis. Parking within the sales display area is fully secured and provides a pedestrian display area where customers can walk around to browse through the inventory vehicles. The additional sales display area on the northern parcel would provide 69 spaces (9’ x 17’). Customer access to the sales and presentation buildings would be from the parking lot on the east. Six (6) handicap spaces would be provided in the customer and employee lot adjacent to the sales building. In accordance with the California Green Building Standards Code Table 5.106.5.3.3, seven (7) electric vehicle (EV) charging spaces would be provided.

Project Trip Generation

A Local Transportation Study (LTS) has been prepared for the Project to determine if there are any traffic effects caused by Project traffic that would result in the need for roadway improvements or fair share participation. The LTS is provided as **Appendix O** of this EIR. The LTS analyzes the level of service (LOS) of nearby roadway segments and intersections for six (6) scenarios as a result of Project traffic. Based on the City’s new requirements for vehicle miles traveled (VMT), LOS discussions have been omitted from this EIR.

Project traffic generation was calculated using a trip generation rate based on a survey of three (3) open and operating CarMax locations of similar size. The data from these CarMax locations was collected by placing tube counters across all site driveways which recorded all vehicles entering the site, including employees, customers, test drives, mail carriers, garbage trucks, maintenance vehicles and any other vehicle that entered the facility. This data documented a trip rate of 41.48 average daily trips (ADT) per 1,000 SF of buildings (ADT/ksf). Using this trip generation rate, the Project is forecasted to generate 475 ADT, 18 AM peak hour trips (11 inbound and 7 outbound) and 50 PM peak hour trips (31 inbound and 19 outbound), as shown in **Table 3.4-1**, below.

Table 3.4-1
Project Trip Generation

Proposed Land Use	Rate & Size (/ksf)	ADT	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
CarMax Used Auto Sales	Rate: 41.48 Size: 11,447	475	0.91 11	0.65 7	1.56 18	2.74 31	1.63 19	4.37 50
KSF: 1,000 SF Source: Local Transportation Study prepared by LOS Engineering, Inc. (Appendix O)								

Roadway Improvements

Prior to issuance of occupancy permits, the following roadway improvements would be completed as part of the Project to the satisfaction of the City Engineer:

- Widen Thunder Drive along the Project frontage into the Project Site. Parking shall be restricted along the Project frontage side of Thunder Drive between the two Project driveways.
- Widen Plaza Drive along the Project frontage to the General Plan classification of a Secondary Collector. The Applicant shall stripe this segment with three (3) travel lanes (two eastbound lanes and one westbound lane).
- Provide a center two-way left turn lane on Plaza Drive in order to match the existing westbound single travel lane configuration adjacent to the DMV.
- Install sidewalks on both sides of Plaza Drive along the Project frontage.
- Include striping for bike lanes on both sides of Plaza Drive along the Project frontage.

Test Drives

The Project would include vehicle test drives for customers interested in purchasing a vehicle. The proposed test drive route is approximately 1.6 miles round trip and lasts approximately five (5) minutes. Designated routes for all test drives will not include residential streets. The proposed test drive route is as follows:

- Customers would turn left on Plaza Drive out of the test drive-only driveway, to enter the SR-78 freeway entrance;
- Customers would make a right to gain access to SR-78 freeway;

- Customers would take the SR-78 exit for Emerald Drive and make a right on Emerald Drive and an immediate right on Hacienda Drive;
- Hacienda Drive becomes Plaza Drive, which would take customers back to the store location;
- Customers would enter the Site through the test drive-only driveway by making a left from Plaza Drive into the Site.

Retaining Walls and Fencing

Guard rail would be provided along the western and northern boundaries of the site as well as the eastern boundary between the sales display area and DMV parking area. A 4-foot ornamental picket fence would be provided at the eastern boundary of the sales display area between the DMV parking area and guard rail. A 6-foot chain link fence would be provided along the western and southern boundaries of the sales and staging area located at the southwest portion of the Project Site. This fence would include vision slats which provide additional privacy and security elements. A retaining wall would also be located at the southwestern portion of the Project Site from the western boundary of the sales and staging area extending to the dumpster pad. This area would also be enclosed with a man gate. The retaining wall height varies from approximately 13 to 15 feet in vertical height from the finished grade with an additional 6-foot chain link fence along top of the retaining wall. Retaining wall and structural specifications will be determined on the Project Grading Plans. Climbing vines and a split face wall would be provided to soften the look of the retaining wall. The Conceptual Landscape Plan provides details of the retaining wall with climbing vines. The intent is to merge the pattern of the planted wall with views of the creek from the south. Views of the retaining wall from neighboring properties to the south of the Project site would not be visible due to existing vegetation of the creek, intervening topography, and site design of existing properties.

Utilities

Water and sewer service would be provided by the City of Oceanside and the Project would connect to existing infrastructure in the vicinity of the Project Site. For sewer service, the Project would realign the existing sewer mains and would construct a new 12-inch and new 21-inch polyvinyl chloride (PVC) sewer main that would run along the southern portion of the Project Site, south of the sales and staging and customer and employee parking lots, and would connect to existing sewer to the west and to the east in Thunder Drive. The existing 12-inch and 21-inch sewer mains located directly north of the proposed sewer mains will be abandoned.

An existing sewer easement for the City of Oceanside runs east to west along the southern portion of the Project Site then runs north to south on the eastern portion of the Project Site. The existing sewer easement along the southern portion of the Project Site is not located within the 100-foot riparian buffer. The existing sewer easement along the southern portion of the Project Site from east to west is to be relocated in line with the proposed sewer realignment. As discussed above, the Project is anticipated to encroach approximately six feet into the 50-foot planning buffer for the sewer realignment. However, the proposed sewer easement associated with the sewer realignment would not encroach into the 100-foot riparian buffer. The sewer easement running north to south is to be vacated.

For water service the project would construct a 2-inch domestic water service line as well as off-site improvements that are further described in the next section.

The 8-inch fire supply and gas and water services would run south of the sales and service buildings through the customer and employee parking lot. New electrical services and telephone lines would run east to west through the customer and employee parking lot.

Off-Site Improvements

Additional off-site improvements would be required by the City and would include the extension of the 12-inch PVC water main along Plaza Drive across the Project frontage and the DMV to be looped to Thunder Drive.

Full width improvements on Plaza Drive would construct an 80-foot curb to curb width across the Project frontage. This would include curb, gutter, 5-foot sidewalks and 8-foot bicycle lanes on both sides of Plaza Drive. Striping would include two (2) eastbound lanes and one (1) westbound lane with a center two-way left turn lane. Improvements to the north side of Plaza Drive would occur at the time the northern parcel is developed. On Thunder Drive, a 10-foot street widening would occur between the two (2) proposed driveways and would be striped with "No Parking".

Drainage and Hydrology

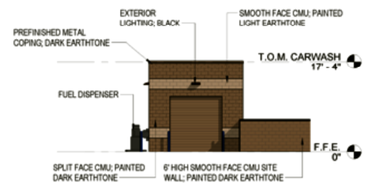
A Drainage Study was prepared by REC Consultants, Inc. and is included in this EIR as **Appendix J**. Once fully developed, the Project Site will have an impervious footprint of approximately 6.28 acres. As stated in the Drainage Study, pre-and post-development runoff would remain constant on the northern parcel as the Project Site would be constructed solely of permeable pavement. Runoff from the southern parcel would drain to an underground detention system near the southeast corner of the Project Site, within the customer and employee parking lot. Mitigated peak flows would then drain from the detention facility by a 24-inch PVC storm drain to Point of Compliance (POC) 3 at the southwest corner of the Project Site where it drains to the same point as in existing conditions. Runoff from surrounding landscape areas to the north will be intercepted by a concrete brow ditch and released at POC-4, effectively bypassing detention. Prior to discharging from the Project Site, first flush runoff would be treated via an underground proprietary Best Management Practice (BMP) in accordance with standards set forth by the San Diego Water Board and the County of San Diego's BMP Design Manual. Runoff from the developed Project Site would drain to a single onsite underground detention system. Peak flows would be mitigated via this facility prior to discharging to the proprietary underground water quality system. Once through the proprietary underground water quality system, runoff will discharge to POC-1, or the existing point of discharge from the Project Site.

Developed and existing condition drainage areas and 100-year peak flow rates were analyzed at the receiving discharge location from the Project Site. The Project would reduce peak flows for the majority of the Project Site. Discharge locations POC-1 and POC-2 at Plaza Drive would increase slightly due to the widening and expansion of Plaza Drive. Runoff discharging at these locations would move west toward the intersection of SR-78 and Plaza Drive where said runoff would enter curb inlets on the north and south sides of Plaza Drive respectively. Flows at discharge location POC-3 would be reduced and POC-4 peak flows would increase slightly, however, POC-3 and POC-4 confluence at POC-3 in Buena Vista Creek therefore reducing total net peak flows to Buena Vista Creek from pre-development to post-development conditions. The Project would not alter existing drainage patters onsite or increase net runoff after development.

A Storm Water Quality Management Plan (SWQMP), prepared by REC Consultants, Inc. and included in this EIR as **Appendix K**, and describes the treatment of storm water for the proposed Project. As stated in the SWQMP the northern parcel would be constructed solely of permeable materials and therefore, no storm water mitigation or water quality treatment is necessary. Storm water from the southern parcel would be conveyed via underground pipe from various parts of the Project Site through proprietary water quality measures and into an underground detention system, where storm water would then be released to discharge location POC-2. The underground detention system has been designed to drain within 72 hours in order to avoid standing water and mosquito breeding.

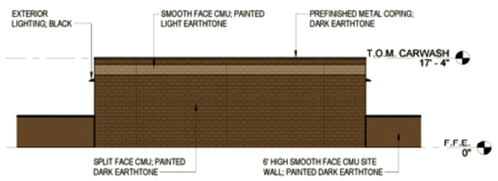
Architectural Details

The CarMax Project would consist of an aluminum storefront framing system, windows with blue tinted glazing and an entrance which would be accented by a blue standing seam metal roof. The conceptual CarMax sign would sit below this roof feature. Below the roof line a metal roof top unit screen would be painted in dark earth tones. The sides of the building would consist of split face concrete masonry units (CMU) painted in dark earth tones with accents of smooth face CMU in light earth tones. Onsite signage would be processed under a separate permit. Conceptual onsite signage would include the following: A 6-foot monument sign would be placed at the Thunder Drive frontage between the two (2) driveways and a 20-foot pylon sign would be placed at the northeast corner of the Project Site, south of Plaza Drive and west of the DMV. Project signage would not be illuminated. The proposed building height would be 28 feet, 8 inches and would comply with the 50-foot maximum allowable height for buildings in the CC zone as stated in the City Zoning Ordinance Section 1130. Conceptual elevations of the proposed buildings are displayed in **Figure 7**.

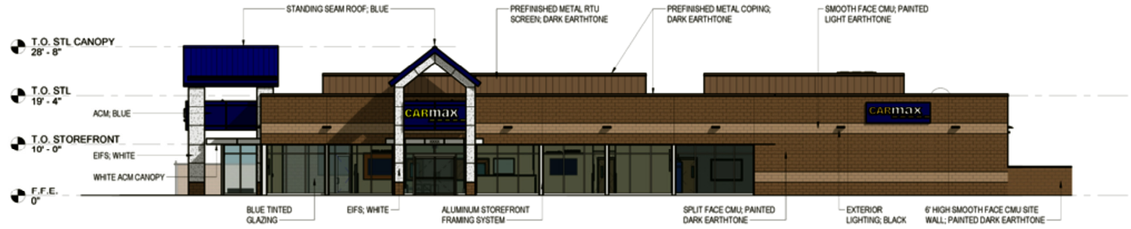


5 A3.0 **EAST ELEVATION - CARWASH**
3/32" = 1'-0"

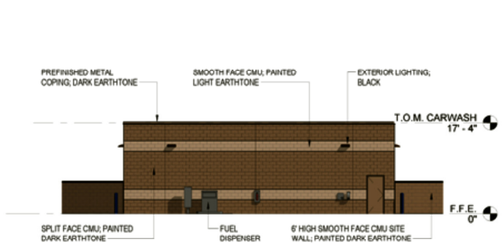
1 A3.0 **EAST ELEVATION**
3/32" = 1'-0"



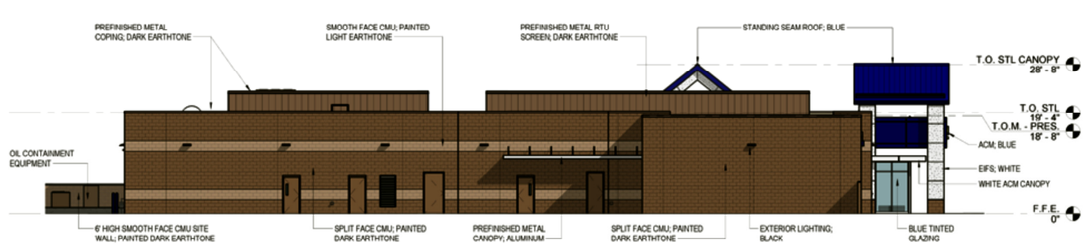
6 A3.0 **NORTH ELEVATION - CARWASH**
3/32" = 1'-0"



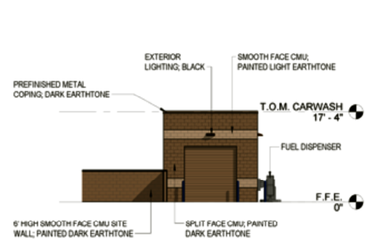
2 A3.0 **NORTH ELEVATION**
3/32" = 1'-0"



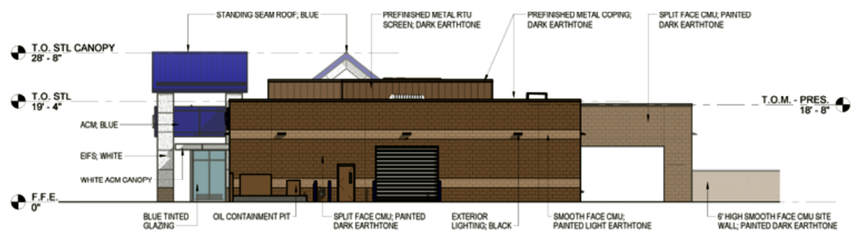
7 A3.0 **SOUTH ELEVATION - CARWASH**
3/32" = 1'-0"



3 A3.0 **SOUTH ELEVATION**
3/32" = 1'-0"



8 A3.0 **WEST ELEVATION - CARWASH**
3/32" = 1'-0"



4 A3.0 **WEST ELEVATION**
3/32" = 1'-0"

CARmax
THE AUTO SUPERSTORE

ENTITLEMENTS
NOT RELEASED FOR CONSTRUCTION

OCEANSIDE, CA
20-19010.00
SW CORNER OF PLAZA DR. & THUNDER DR.

CONCEPTUAL ELEVATIONS

SP-07

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R·E·C Consultants, Inc.

Elevations

NOT TO SCALE

FIGURE 7

CARMAX AUTO SUPERSTORE OCEANSIDE EIR

Source: Charles J O'Brian (12/17/2019)

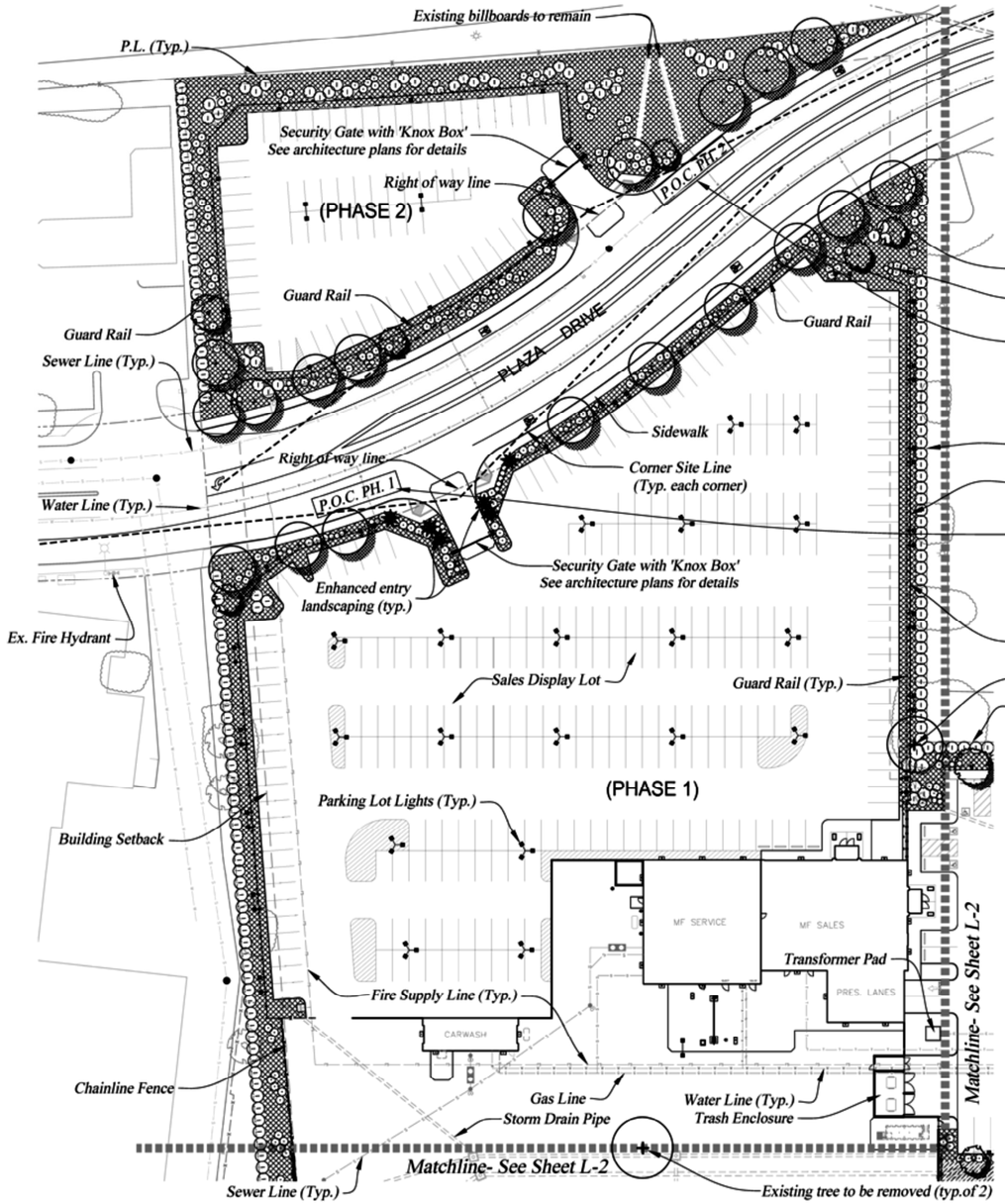
October 2020

Landscape

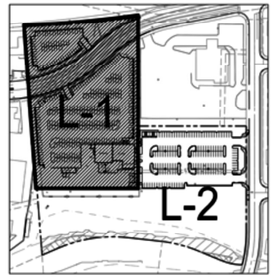
Landscaping would be provided along the Project frontage at Plaza Drive and would contain Blended Fescue Sod ground cover and deciduous trees such as Imperial Honeylocust and Oregon Ash. Native seed ground cover would also be provided on the northern parcel sales display area along the western edge and northern edge adjacent to SR-78. Rock mulch and native seed would be planted along the eastern edge of the southern parcel adjacent to the DMV parking lot. The customer and employee parking lot islands would consist of deciduous trees, palm trees, evergreen shrubs and grasses. Landscaping would be designed to minimize irrigation and runoff and would be designed with native and/or drought tolerant species. Landscaping would be in compliance with the City of Oceanside Zoning Ordinance Section 1130 for minimum landscaping requirements and Section 3019 – Landscaping, Irrigation, and Hydroseeding for parking lot requirements and street tree and parking lot tree requirements. Landscaping would cover approximately 13.6% of the Project Site. The Conceptual Landscape Plan is provided as **Figure 8** and **Figure 9**.

The proposed retaining wall located at the southwest portion of the Project Site is subject to Section 3040 of the Zoning Ordinance requiring retaining walls in excess of four (4) feet and visible from a residential district to be irrigated and plantable. Due to Project Site constraints of the creek buffer and proposed sewer line, the retaining wall is unable to be plantable. Therefore, the Project requests a Variance to provide climbing vines and a split face wall to soften the look of retaining wall. The Conceptual Landscape Plan provides details of the retaining wall with climbing vines.

Conceptual Landscape Plan



KEY MAP



Fire Hydrant

20' Pylon sign (typ.) See architecture plans

Phase 2 designated irrigation potable water meter Point of Connection (P.O.C.) with reduced pressure backflow preventer. 3/4" Meter with 3/4" Backflow- peak irrigation flow 20 gpm

P. L. (typ.)

Ornamental Picket Fence- See sheet L-4 for detail

Phase 1 designated irrigation potable water meter Point of Connection (P.O.C.) with reduced pressure backflow preventer. 1" Meter with 1" Backflow- peak irrigation flow 30 gpm

Parking Lot Lights (Typ.)

Existing tree to be removed (typ.of 2)

P. L. (typ.)

NOTES: NO BIO-FILTRATION BASINS ARE PROPOSED. SEE SHEET L-2 FOR LOCATION OF UNDERGROUND DETENTION VAULT.

SEE SHEET L-4 FOR EXISTING TREE SURVEY. THERE ARE NO EXISTING TREES ON THE SITE WHICH ARE TO REMAIN

Plant Legend

SYMBOL	BOTANICAL NAME	COMMON NAME	ZONE 5 H/COLD
Trees:			
	Street Trees: (24" Box Min.)		
	BAUHINIA VARIEGATA	VARIEGATA ORCHID TREE	M
	METROSIDEROS EXCELSA	NEW Z. CHRISTMAS TREE	M
	Theme and Screening Trees: (24" Box Min.)		
	TRISTANIA CONFERTA	BRISBANE BOX	M
	GELERA PARVIFLORA	AUSTRALIAN WILLOW	L
	PODOCARPUS GRACILIOR	FERN PINE	M
	Parking Area Shade Trees: (24" Box Min.)		
	TIPUANA TIPU	TIPU TREE	L
	KOELREUTERIA PANICULATA	GOLDENRAIN TREE	L
	ULMUS P. 'TRUE GREEN'	EVERGREEN ELM	M
	Accent Trees: (24" Box Min.)		
	SYAGRUS ROMANZOFFIANUM	QUEEN PALM (15' BTH)	M
	PLATANUS MEXICANA 'ALAMO'	MEXICAN SYCAMORE	M
	QUERCUS VIRGINIANA	SOUTHERN LIVE OAK	M
	Existing Trees to be removed - see Tree Survey Sheet L-4		
Ornamental Shrubs & Groundcovers:			
	Hedge Shrubs: (5 gal. @ 24"-36" o.c.)		
	LIGUSTRUM J. TEXANUM	TEXAS PRIVET	M
	RHAPHIOLEPIS INDICA	INDIA HAWTHORN	L
	WESTRINGIA FRUTICOSA	AUSTRALIAN ROSEMARY	L
	LEUCOPHYLUM 'GREEN CLOUD'	TEXAS RANGER	L
	Massing Shrubs: (1-5 gal. @ 24"-48" o.c.)		
	DIETES BICOLOR	FORTNIGHT LILY	L
	BACCHARIS CENTENNIAL	COYOTE BRUSH	L
	CALLISTEMON LITTLE JOHN	LITTLE JOHN BOTTLEBRUSH	L
	LANTANA GOLD MOUND	GOLD MOUND LANTANA	L
	HESPERALOE PARVIFLORA	RED YUCCA	L
	Accent Shrubs (1 gal. @ 18"-24" o.c.)		
	DIANELLA REVOLUTA	LITTLE REV FLAX LILY	L
	AGAVE 'BLUE FLAME'	BLUE FLAME AGAVE	L
	CARISSA 'GREEN CARPET'	NATAL PLUM	L
	BOUGAINVILLEA 'ROSENKA'	BOUGAINVILLEA	L
	ALOE SPP.	ALOE	L
	Ground Covers (flats @ 12" o.c.):		
	HYGROPHILA 'PUTAH CREEK'	PROSTRATE HYGROPHILA	L
	SENECIO MANDRALISCAE	BLUE CHALKSTICKS	L
	ROSMARINUS PROSTRATUS	CREEPING ROSEMARY	L
	Hyroseed Mix- Basic Native Erosion Control Mix (S & S Seeds):		
	BROMUS CARINATUS 'CUCAMONGA'	CUCAMONGA BROME	L
	FESTUCA MICROSTACHYS	SMALL FESCUE	L
	TRIFOLIUM GILIOLATUM	TREE CLOVER	L
	Screening Vines (1 gal. @ 8' O.C.)		
	MACFADYENA UNGUIS-CATI	CAT'S CLAW VINE	L

Landscape Requirements

Overall Landscape Requirement	Requirement	Total Area (sq.ft.)	Required Area (sq.ft.)	Provided Area (sq. ft.)	Total Percentage
Landscape Requirement*	15% min	478,202	71,730	204,601	43%
Interior Parking Lot Landscape Requirement	**Requirement**	**Total Area (sq.ft.)**	**Required Area (sq.ft.)**	**Provided Area (sq. ft.)**	**Total Percentage**
Landscape Requirement	5% min	72,159	3,608.0	7,064	10%
Parking Lot Tree Requirement	**Requirement**	**Total Parking Stalls**	**Required Trees**	**Provided Trees**	
Tree Requirement **	1 tree per 6 stalls	148	25	35**	
Street Tree Requirement	**Requirement**	**Total Linear Feet**	**Required Trees**	**Provided Trees**	
Tree Requirement	1 tree per 30 feet	832	27	27	

* Wetlands area (57,920 sf) is included in the overall landscape requirement.
** Some required parking lot trees have been transferred to the perimeter of the parking lot due to the utility layout.

rla 2681
HOWARD ASSOCIATES
landscape architecture
5333 mission center road suite 390
san diego ca 92108 619 718 9660

REGISTERED LANDSCAPE ARCHITECT — JAY K. HOWARD LIC. NO. 2681 — SIGNATURE — DATE OBTAINED — EXP. DATE — STATE OF CALIFORNIA

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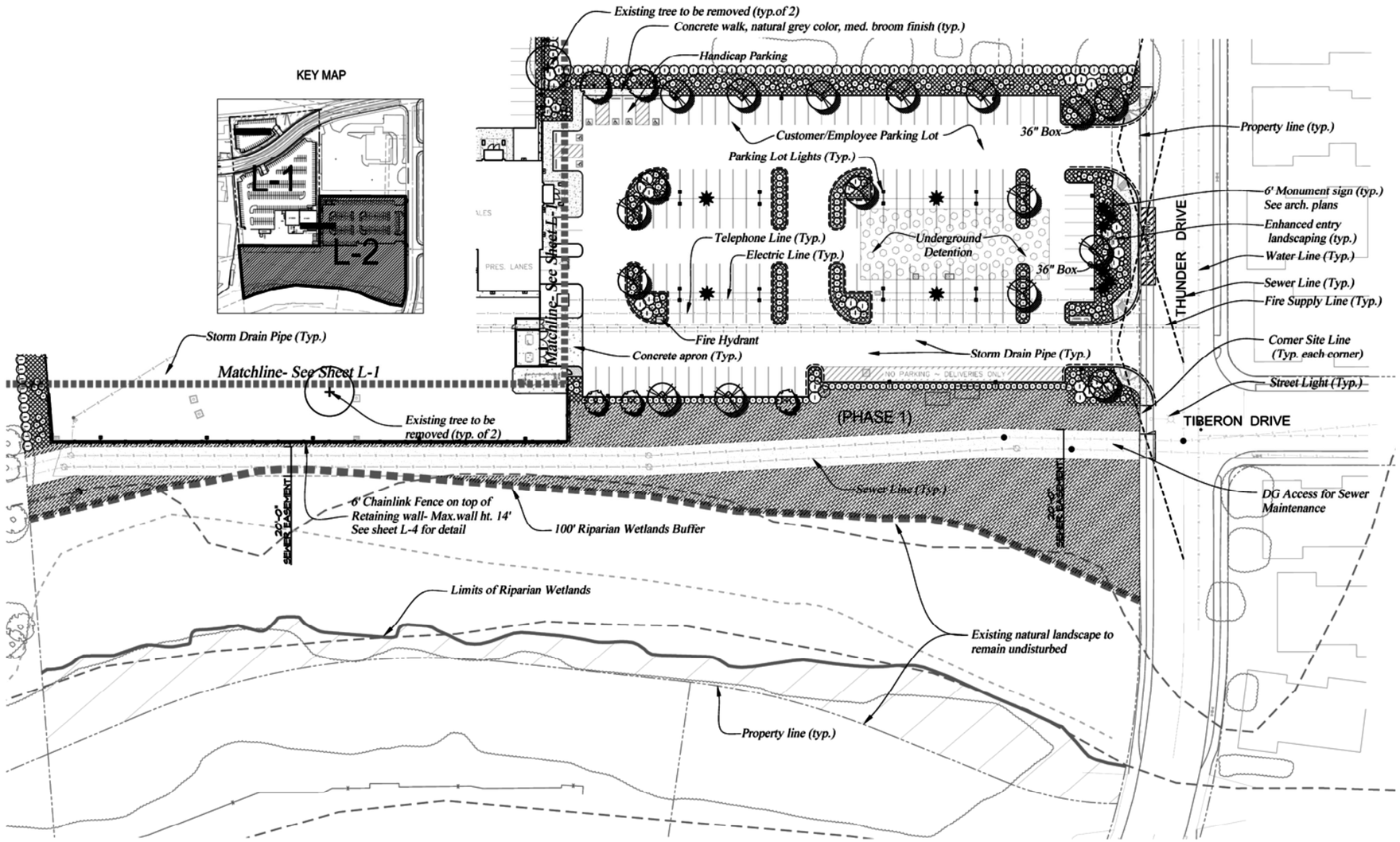

::HOWARD:: ASSOCIATES
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san diego ca 92108 619 718 9660

REGISTERED LANDSCAPE ARCHITECT
JACK R. HOWARD LIC. NO. 2681
SIGNATURE
DATE
OFFICIAL SEAL
EXP. DATE
STATE OF CALIFORNIA

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R·E·C Consultants, Inc.

Conceptual Landscape Plan - East

CARMAX AUTO SUPERSTORE OCEANSIDE EIR

NOT TO SCALE

Source: Howard Associates (08/06/2020)

FIGURE 9

October 2020

Lighting

Light-emitting diode (LED) lamp technologies in lighting fixtures are to be full cut off with a flat lens and downcast to reduce light spill onto adjacent properties are proposed onsite. Exterior lighting would be reduced after operation hours to reduce light spill onto neighboring properties. The lighting within the sales display area would be reduced after the store closes to the public and is further reduced after employees exit the facility to the minimum level that still allows security cameras to operate. Lighting in the customer and employee parking lot is reduced to the maximum extent possible while maintaining safety for customers and employees to reach their cars safely.

Light poles would have a 26-foot total mounting height with 24-foot poles mounted on concrete pedestals, two (2) feet above grade. All proposed lighting including light pole heights, shielding and glare reduction measures would be in compliance with the Zoning Ordinance Article 30, Section 3024 and Article 31 for parking lot lighting requirements.

Safety Features

The Project would utilize interior and exterior surveillance cameras that are monitored 24 hours a day, seven (7) days a week for safety and loss prevention purposes. The sales display and staging area entrances are secured by embassy style gates which are designed to be impenetrable and are used to secure and prevent vehicle theft. Guardrail is also used around the perimeter of the sales lot to further prevent vehicle theft.

A Knox Box will be provided at the security gate and control island on the northern parcel sales display area as well as at the security gate and control island located at the test drive-only driveway. A Knox Box is a small, wall-mounted safe that holds building keys in order for fire departments, emergency medical services and police to gain access into buildings in emergency situations.

Demolition and Grading

No demolition would be required as part of Project construction as no existing structures are located on the vacant parcels. The Project grading quantities include 12,500 cubic yards (CY) of cut and 12,500 CY of fill and no import or export would be required.

Phase II

Phase II of the Project has the potential to develop the northern parcel as an additional sales display area for the Phase I CarMax facilities. The sales display area would be guarded with a security gate and control island. This area would hold approximately 69 vehicles. Phase II of the Project would also include landscaping and sidewalk improvements along the northerly side of Plaza Drive.

Construction Phasing

Table 3.4-2 below lists the tentative construction schedule for the proposed Project.

Table 3.4-2
Tentative Project Construction Schedule

Phase Number	Phase Name	Phase Type	Start Date	End Date	Number Days
1	Site Preparation	Site Preparation	11/9/2021	11/23/2021	10
2	Grading	Grading	11/24/2021	12/23/2021	20
3	Paving	Paving	12/24/2021	1/25/2022	20
4	Building Construction	Building Construction	1/26/2022	12/27/2022	230
5	Architectural Coating	Architectural Coating	12/28/2022	1/26/2023	20

3.5 Project Approvals

This EIR is intended to provide documentation pursuant to CEQA to cover the discretionary approvals that are required to implement the CarMax Project. The City, as the Lead Agency under CEQA, is responsible for permitting and carrying out the Project. The following discretionary permits and approvals would be required to implement the Project as analyzed in this EIR:

1. **Conditional Use Permit (CUP19-00029).** Pursuant to Zoning Ordinance Section 1120, vehicle sales, automobile washing and service stations are allowed in the CC zone with the approval of a CUP.

2. **Development Plan (D19-00021).** Development plans are required for development projects to ensure that new development complies with all applicable requirements of the Zoning Ordinance.

3. **Variance (V20-00005).** A variance is required to allow for climbing vines to be provided on the proposed retaining wall as opposed to a plantable retaining wall required by Section 3040 of the Zoning Ordinance.

4. **Sewer Easement Vacation.** The Project would vacate the existing City sewer easement which runs north to south on the eastern portion of the Project Site.

The following ministerial permits and approvals would be required to implement the Project as analyzed in this EIR:

1. **Grading Permit.** The Project involves grading, clearing and removal of natural vegetation and therefore requires a grading permit. Proposed grading activities must meet requirements of the City of Oceanside Grading Regulations Manual.

2. **Building Permits.** The building of structures would require a building permit. Although this is a ministerial permit, the applicant must adhere to all applicable regulations.

3. **Sign Permit.** All onsite signage would require a permit from the City of Oceanside and would adhere to all applicable requirements and regulations.

4. **Aboveground Storage Tank.** The onsite aboveground storage tank would require a permit and approval from the County of San Diego Department of Environmental Health Hazardous Materials Division.

CHAPTER 4.0 ENVIRONMENTAL ANALYSIS

This Chapter provides information on the existing environmental conditions, evaluates the potential environmental consequences of the Project, and recommends mitigation measures for each environmental category, if necessary. Based on preliminary evaluation of the probable effects of the project and thorough review of the comments submitted in response to the NOP and testimony received at the public scoping meeting, each of which are included in this EIR as **Appendix A,** it is determined that the Project could result in significant impacts to the following resource categories:

- Biological Resources
- Cultural Resources
- Geology and Soils
- Hydrology and Water Quality
- Land Use and Planning
- Tribal Cultural Resources

Therefore, this EIR evaluates the potential impacts for these resource categories from construction and operation of the Project. The potential cumulative impacts for the resource categories are addressed in Chapter 5.0 *Cumulative Impacts.*

Chapter 4.1 ENVIRONMENTAL ANALYSIS INTRODUCTION

The following Chapters provide information on the existing environmental conditions, analyzes the potential environmental impacts that may occur as a result of Project construction and operation, and recommends mitigation measures for each environmental category if the Project would result in a significant impact. The assessment of each environmental resource category analyzed herein includes the following:

- Environmental Setting
- Regulatory Setting
- Thresholds of Significance
- Project Impact Analysis
- Mitigation Implementation and Monitoring
- Level of Significance after Mitigation

Chapter 4.2 AESTHETICS

4.2.1 Environmental Setting

Regional Setting

San Diego County encompasses 4,261 square miles and is characterized by varied topography including ocean, lagoons, mountains and desert. The western side of the County is bordered by the Pacific Ocean and is primarily urban while the eastern side of the County is composed of mountains, desert and undeveloped backcountry.

The City of Oceanside is located in coastal northern portion of the County. The City encompasses approximately 42 square miles and is bound by Camp Pendleton to the north, the City of Carlsbad to the south, the Pacific Ocean to the West, and the City of Vista and unincorporated portions of the County to the east. In contrast to urban growth in the southern part of the County, northern portions of the County have remained suburban and semi-rural over the years. Major features of the area include the beaches, the San Luis Rey River, Buena Vista Lagoon, and the open areas of Camp Pendleton. The City has approximately four (4) miles of shoreline, including a public marina, a 2,000-foot pier, and public beaches. Most of the City is developed, with the eastern portion of the City characterized by single-family houses on curving streets and cul-de-sacs, intermixed with canyon and hillside open spaces. Park, commercial and institutional uses occur within and around the residential uses. The western portion of the City along the coast is characterized by a grid pattern of streets with single-family houses adjacent to major commercial and mixed-use areas.

Existing Character

The Project Site contains mainly disturbed land, ornamental trees, iceplant, and ruderal vegetation. Small patches of native vegetation are interspersed around the Project Site. Several native trees and shrubs as well as non-native species line the southern portion of the Project Site adjacent to the Buena Vista Creek. The elevation of the property ranges from approximately 180 to 220 feet amsl.

The Project area is primarily developed and surrounding land uses consist of residential and commercial development. The Project Site is visible from adjacent residential developments, commercial developments, as well as adjacent roadways from Plaza Drive, Thunder Drive and SR-78. To viewers from adjacent properties and roadways, the Project Site appears as a set of vacant, disturbed lots dominated by non-native plant species with a few introduced tree species along the Project Site boundary. Long-distance views are generally constrained by intervening development and urban landscaping. From within the southern parcel, Plaza Drive and SR-78 are visible to the north, residential development and Thunder Drive are visible to the east, the Tri-City Crossroads commercial center is visible to the west, and Buena Vista Creek and residential development are visible to the south. From within the northern parcel, SR-78 and the medical facilities on the other side of the highway are visible to the north, Plaza Drive, Buena Vista Creek and residential development are visible to the south, the Tri-City Crossroads commercial center is visible to the west, and Plaza Drive and the peaks of the San Luis Rey valley are visible to the east. There are no parks or scenic highways in the vicinity of the Project Site.

Scenic Resources

Currently there is no Citywide inventory of scenic views. However, the City's Local Coastal Program (LCP) states that the City's important aesthetic resources include views of the Pacific Ocean, San Luis Rey River, Buena Vista Lagoon, Oceanside Harbor and Oceanside Pier. The Project is located 3.5 miles east of Buena Vista Lagoon, over four (4) miles east of the Pacific Ocean, 5.5 miles southeast of Oceanside Pier and over six (6) miles southeast of Oceanside Harbor, and is therefore not in close proximity to these aesthetic resources.

Scenic Highways

Currently the California Department of Transportation (Caltrans) has officially designated six (6) State Scenic Highway sections within the County: (i) Highway 52 in the City of Santee; (ii) Highway 75 along the Silver Strand in the City of Coronado; (iii) Highway 75 along the San Diego-Coronado Bridge; (iv) Highway 78 in Anza Borrego Desert State Park; (v) Highway 125 in the City of La Mesa; and (vi) Highway 163 in Balboa Park (Caltrans, 2017). All of these highways are over 30 miles from the Project Site. Caltrans has also listed Interstate 5 (I-5) and SR-76 as eligible for scenic designations. The Project Site is located approximately 3.3 miles east of I-5 and 3.5 miles south of SR-76.

Light and Glare

Light introduction can be a nuisance to adjacent residential areas, diminish the view of the clear night sky and if uncontrolled, can cause disturbances for motorists traveling in the area. Light spill is typically defined as the presence of unwanted light on properties adjacent to a property being illuminated. Existing sources of light are present in the Project area including lights and illuminated signs from the commercial center to the west and the DMV to the east, highway lights and vehicle headlights from SR-78 to north and street lighting on Thunder Drive and Plaza Drive.

Glare is caused by the reflection of sunlight or artificial light by highly polished surfaces such as window glass or reflective materials and from broad expanses of light-colored surfaces or vehicle headlights. Perceived glare is the unwanted and potentially objectionable sensation experienced by a person looking directly or indirectly into the light source of a luminaire. Existing sources of glare in the Project area include reflective building materials (e.g., windows) and passing cars along SR-78 and the adjacent Plaza Drive and Thunder Drive roadways.

<u>Palomar Observatory</u>

The Palomar Observatory, located atop Palomar Mountain, is located approximately 27 miles north east of the Project Site. The Observatory is a center of astronomical research and is home to three (3) active research telescopes. Light pollution is an increasing problem for Palomar Observatory as rapid urbanization has resulted in a significant increase in the amount of sky glow and directly impacting the effectiveness of the Palomar Observatory. The Palomar Observatory has extensively worked with the surrounding communities to minimize the impacts of light pollution and continue to work with City, County and Tribal governments to mitigate the effects of local light pollution. The Project Site is not located within a 15-mile radius of Palomar Mountain, as identified in the County of San Diego Outdoor Light Control Ordinance Zone Map.

4.2.2 Regulatory Setting

City of Oceanside Municipal Code

Chapter 39 of the City of Oceanside Municipal Code (OMC) establishes light pollution regulations to restrict the use of certain light fixtures that could emit undesirable light rays into the night sky, having a detrimental effect on regional astronomical observation and research. OMC Chapter 39 identifies lighting-related standards including lamp types allowed, shielding requirements and hours of operation for certain lighting types. The requirements for lamp source and shielding of light emissions for outdoor light fixtures are included in **Table 4.2-1** below.

Table 4.2-1
City of Oceanside Lighting Standards

Class I – Color Rendition Important	
Lamp Type	***Requirement***
Low pressure sodium	Permitted
Other lights above 4050 lumens	Permitted
Other lights 4050 lumens or less	Permitted
Class II – Parking Lots, Roadways, Security	
Low pressure sodium	Permitted
Other lights above 4050 lumens	Prohibited
Other lights 4050 lumens or less	Permitted
Class III – Decorative	
Low pressure sodium	Permitted
Other lights above 4050 lumens	Prohibited
Other lights 4050 lumens or less	Permitted

City of Oceanside General Plan

The General Plan serves as a policy guide for determining the appropriate physical development and character of the City.

Land Use Element

The objectives and policies in the Land Use Element of the General Plan provide guidance for the protection of visual resources within the City. The following goals and policies of the Land Use Element are relevant to the Project:

1.11 Balanced Land Use

Objective: To develop and use lands for the long-term provision of a balanced, self-sufficient and efficient community.

Policy A: The City shall establish and enforce a balanced distribution of land uses to organize the City in a hierarchy of activity centers and land use so as to foster a sense of neighborhood, community and regional identity.

Policy B: The City shall analyze proposed land uses for assurance that the land use will contribute to the proper balance of land uses within the community or provide a significant benefit to the community.

1.12 Land Use Compatibility

Objective: To minimize conflicts with adjacent or related land uses.

Policy A: Adequate setbacks, buffering, and/or innovative site design shall be required for land uses that are contiguous to and incompatible with existing land uses.

Policy B: The use of land shall not create negative visual impacts to surrounding land uses.

Policy C: The use of land shall not subject people to potential sources of objectionable noise, light, odors, and other emissions nor the exposure of toxic, radioactive, or other dangerous materials.

1.2 Site Design

Objective: To provide high-quality site design, all proposed land development projects shall take advantage of natural or manmade environments to maximize energy conservation, natural air circulation, public safety, visual aesthetics, private and common open spaces, privacy and land use compatibility.

Policy A: The Placement of proposed structural components, landscaping, access ways, etc. shall be oriented on the site in such a manner to maximize:

- The quality of view and vistas from the site to the surrounding environment;
- The quality of views and vistas of the site from surrounding land uses.

1.23 Architecture

Objective: The architectural quality of all proposed projects shall enhance neighborhood and community values and City image.

Policy A: Architectural form, treatments and materials shall serve to significantly improve on the visual image of the surrounding neighborhood.

Policy B: Structures shall work in harmony with landscaping and adjacent urban and/or topographic form to create an attractive line, dimension, scale and/or pattern.

2.27 Commercial Design

Policy A: Commercial architecture shall emphasize establishing prominence and identity to businesses while presenting tasteful, dignified, and visually appealing designs compatible with their surroundings.

3.21 Scenic Open Areas

Policy A: The City shall encourage the preservation of significant visual open areas.

Environmental Resource Management Element

The Environmental Resource Management Element of the General Plan outlines recommended action programs to implement and achieve long-range planning objectives. The City Implementation Program actions related to visual resources and scenic areas include:

Objectives: Recreation and Scenic Areas – Encourage the preservation of significant visual open spaces when such preservation is in the best interest of the public health, safety and welfare.

The City will:

1. Plan readily accessible recreation facilities close to population centers and education facilities utilizing public open space while protecting natural sites of significant scenic or ecological value.

4.2.3 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, impacts would be considered significant if the Project would:

a. Have a substantial adverse effect on a scenic vista;
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
c. Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from public accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality;
d. Create a new source of light or glare which would adversely affect day or nighttime views in the area?

4.2.4 Project Impact Analysis

This section provides an assessment of potential aesthetics impacts related to Project implementation. Potential impacts addressed in this section include substantial adverse effects on scenic vistas, damage to scenic resources within a state scenic highway, degradation of existing visual character and creation of adverse sources of light or glare. Would the Project:

a. Have a substantial adverse effect on a scenic vista?

The Project is located in a primarily developed area surrounded by the Tri-City Crossroads commercial center to the west, the DMV and medium-density residential to the east, SR-78 directly north and Buena Vista Creek, high density residential, a senior living facility and OFD station to the south of the Project Site.

The CarMax Project would consist of an aluminum storefront framing system, windows with blue tinted glazing and an entrance which would be accented by a blue standing seam metal roof. The CarMax sign would sit below this roof feature. This sign is not illuminated and would not present additional light or glare to the Project area. Below the roof line a metal roof top unit screen would be painted in dark earth tones. The sides of the building would consist of split face CMU painted in dark earth tones with accents of smooth face CMU in light earth tones. A six-foot monument sign would be placed at the Thunder Drive frontage between the two (2) driveways and a 20-foot pylon sign would be placed at the northeast corner of the Project Site, south of Plaza Drive and west of the DMV. The proposed building height would be 28 feet, 8 inches measured from the top of the standing seam roof. Conceptual elevations of the proposed buildings are displayed in **Figure 7**.

The Project is not located in close proximity to important aesthetic resources as identified in the City's LCP including views of the Pacific Ocean, San Luis Rey River, Buena Vista Lagoon, Oceanside Harbor and Oceanside Pier. The Project is located 3.5 miles east of Buena Vista Lagoon, over four (4) miles east of the Pacific Ocean, 5.5 miles southeast of Oceanside Pier and over six (6) miles southeast of Oceanside Harbor. Buena Vista Creek is not identified as an aesthetic resource in the City's LCP, and therefore, the Project is not in close proximity to any identified aesthetic resources.

The Environmental Resource Management Element of the General Plan identifies existing open space areas including areas of visual open space. The nearest identified existing visual open space areas include Mira Costa College and a utility easement. The Project is located approximately one (1) mile southeast of both areas. Due to its location, the Project would not block any views of the resources described above. As the Project would be located in an already urbanized area and would be of similar massing and appearance to the existing commercial center to the west, the Project would not degrade views from a visual open space area. Further, the Project would not have an effect on public viewpoint locations that may include views of the Pacific Ocean due to the distance, topography and intervening developments.

The Project is consistent with the existing CC zoning and General Plan designations for the Project Site. In its present condition, the Project Site does not provide an expansive view of a highly valued landscape or scenic vista and it would not interfere with views of an existing scenic vista. The development of the Project would not contrast with surrounding land uses or with the existing visual landscape.

Therefore, the Project would not have a substantial adverse effect on a scenic vista, and related impacts will be **less than significant**.

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The Project Site is located directly south of SR-78. There are six (6) State Scenic Highway sections as designated by Caltrans within the County, as discussed above, the Project Site is located over 30 miles

from these designated highways. Caltrans has listed I-5 and SR-76 as eligible for scenic designations; however, the Project Site is located approximately 3.3 miles east of I-5 and 3.5 miles south of SR-76. Further, no scenic resources, including trees, rock outcroppings, or historic buildings within a state scenic highway are present on or adjacent to the Project Site.

Therefore, the Project would not damage a scenic resource within a state scenic highway, and **no impact** will occur**.**

c. *In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from public accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

The Project is located in a primarily urbanized area surrounded by a commercial center to the west, the DMV and medium-density residential to the east, SR-78 directly north and Buena Vista Creek, high density residential, a senior living facility and OFD station to the south.

The Project would be consistent with the existing CC zoning and General Plan designation of the Project Site. Development of the Project Site would construct a pre-owned automobile facility consisting of a sales and administration building, service building, private carwash, associated access drives, landscaped areas, presentation area, staging area, sales display area, and a customer and employee parking lot.

Landscaping would be provided along the Project frontage at Plaza Drive and would contain Blended Fescue Sod ground cover and deciduous trees such as Imperial Honeylocust and Oregon Ash. Native seed ground cover would also be provided on the northern sales display area along the western edge and northern edge adjacent to SR-78. Rock mulch and native seed would be planted along the eastern edge of the southern parcel adjacent to the DMV parking lot. The customer and employee parking lot islands would consist of deciduous trees, palm trees, evergreen shrubs and grasses. The Conceptual Landscape Plan is provided as **Figure 8** and **Figure 9**.

The CarMax Project would consist of an aluminum storefront framing system, windows with blue tinted glazing and an entrance which would be accented by a blue standing seam metal roof. The CarMax sign would sit below this roof feature. This sign is not illuminated and would not present additional light or glare to the Project area. Below the roof line a metal roof top unit screen would be painted in dark earth tones. The sides of the building would consist of split face CMU painted in dark earth tones with accents of smooth face CMU in light earth tones. Conceptual elevations of the proposed building and materials are shown in **Figure 7**.

The existing visual character of the surrounding area is characterized by development; primarily containing commercial buildings and various residential developments including both medium- and high-density developments and a senior living facility. Overall, the Project area would remain developed similar to current conditions. Although the visual character of the Project Site would change with the addition of the CarMax Project, the development would not substantially degrade the existing visual character of the surrounding area and would appear as a continuation of existing development in Project vicinity.

In addition, the Project would comply with the OMC and General Plan policies pertaining to visual character. The Project would also comply with the Zoning Ordinance for requirements related to

building height, scale, setbacks, landscaping and parking to further reduce potential impacts related to visual character. The proposed height of the building would be 28 feet, 8 inches from the top of the standing seam roof and would comply with the 50-foot maximum allowable height for buildings in the CC zone as stated in the Zoning Ordinance Section 1130. Additionally, the existing commercial buildings to the west have similar height and massing as they are also located in the CC zone.

The Project is located in an urbanized area and would not conflict with applicable zoning and other regulations governing scenic quality, and impacts will be **less than significant**.

d. Create a new source of light or glare which would adversely affect day or nighttime views in the area?

The Project would contain lighting in the parking lot areas and along the Project Site boundary. The Project would employ LED lamp technologies in lighting fixtures that would be full cut off with a flat lens, and downcast to reduce light spill onto adjacent properties. Proper shielding of lighting in parking areas would further prevent glare to adjacent properties. Light poles and associated pedestals would not exceed 25 feet per Section 3117 of the City of Oceanside Zoning Ordinance and exterior lighting onsite would be reduced after operating hours. The lighting within the sales display area would be reduced after the store closes to the public and is further reduced after employees exit the facility to the minimum level that still allows security cameras to operate. Lighting in the customer and employee parking lot is reduced to the maximum extent possible while maintaining safety for customers and employees to reach their cars safely.

The CarMax sign would sit below the blue standing seam metal roof and is not illuminated. The sign will not present additional light or glare to the Project area. All outdoor lighting would comply with the standards of the Zoning Ordinance, Article 30, Section 3024 and Article 31 for parking lot lighting requirements.

Existing sources of light and glare in the surrounding area of the Project Site include cars, streetlights, signs and reflective building materials. Development of the Project would not substantially add to the amount of light and glare present in the area. The proposed building siding would consist of split face CMU painted in dark earth tones with accents of smooth face CMU in light earth tones. The building would also have an aluminum storefront framing system, windows with blue tinted glazing and an entrance which would be accented by a blue standing seam metal roof. Blue tinted glazing is typically used to reduce glare and all other proposed building materials would not contain highly reflective materials. Compliance with Chapter 39 of the OMC for light pollution regulations and Article 30 of the Zoning Ordinance, in addition to the placement of fixtures and reduction of lighting after operating hours, potential impacts relating to new sources of light and glare would be reduced to less than significant levels.

The Palomar Observatory, located atop Palomar Mountain, is located approximately 27 miles north east of the Project Site. Light pollution is an increasing problem for Palomar Observatory as rapid urbanization has resulted in a significant increase in the amount of sky glow and directly impacting the effectiveness of the Palomar Observatory. The Project Site is not located within a 15-mile radius of Palomar Mountain, as identified in the County Outdoor Light Control Ordinance Zone Map. Additionally, the Project would comply with Chapter 39 of the Municipal Code related to light pollution regulations. Therefore, the Project would not have a significant increase in the amount of light pollution in the area and would not directly impact the effectiveness of the Palomar Observatory.

The Project would not create a new source of light or glare which would adversely affect day or nighttime views in the area, and impacts will be **less than significant.**

4.2.5 Mitigation Implementation and Monitoring

No significant impacts to aesthetics have been identified and therefore, no mitigation measures are required.

4.2.6 Level of Significance After Mitigation

Impacts related to aesthetics from the implementation of the Project will be less than significant.

Chapter 4.3 AGRICULTURE AND FORESTRY RESOURCES

The following document was used in the preparation of this section and is included in its entirety in **Appendix B**:

EnviroApplications, Inc. September 11, 2019. *Phase I Environmental Site Assessment for Proposed Oceanside CarMax Facility*.

4.3.1 Environmental Setting

Regional Setting

The County is the only county in California that qualifies as both a major urban county and is ranked among the top ten agricultural counties in the state in terms of agricultural value. It is estimated that of the County's approximately 2.73 million acres, 305,573 acres (2013) are in agriculture. The County is the southwestern most county in the State, enjoying a Mediterranean climate that optimizes production of a variety of crops that may be more difficult to produce elsewhere in the state. A variety of agricultural commodities make up the County's agriculture. In terms of total value, nursery and flower crops account for 62%; fruits and nuts account for 22%; field crops account for <1%; vegetables account for 9%; and livestock and poultry products (i.e. milk and eggs), livestock and poultry (i.e. cattle, chickens, hogs, rabbits, sheep), specialty crops and apiary products account for approximately 1% each.

The agriculture industry in the City is valued at approximately $12 million annually. This accounts for approximately 10% of the County's agriculture output. Major crops include avocados, tomatoes, citrus and nursery stock.

There are two (2) primary areas of significant agricultural production in the City as described in the Environmental Resource Management Element of the General Plan. The first, Morro Hills agricultural area, is located generally north of Mission Avenue and east of Vandegrift Boulevard. Avocados are the primary crop and production contributes to the northern portion of the County output of over 90% of all avocados in California. The second area is the Rancho del Oro property between Mission Avenue and Oceanside Boulevard. Rancho del Oro contains the largest lime grove in California, plus significant numbers of lemons, oranges, tangelos and avocados.

Prime Agricultural Land, Prime Farmland and Soils of Statewide Importance

Soils in the County region are generally considered poor, with only six percent of the region's soils considered prime agricultural land, as defined by Government Code Section 51201(c). In the County, prime agricultural land is sparsely scattered throughout the region and is often constrained by protected biological resources such as wetlands, restricting the feasibility of their use.

The California Department of Conservation's Farmland Mapping and Monitoring Program's (FMMP) farmland categories are based on local soil characteristics and irrigation status, with the best quality land identified as "Prime Farmland and Farmland of Statewide Importance". In the County, 44 local soils qualify for the Prime Farmland designation and 65 soils qualify for the Farmland of Statewide Importance designation.

According to the FMMP map prepared for the Project, the Project Site is designated as Urban and Built-Up Land. **Figure 10** provides the FMMP designation of the Project Site and its surroundings.

Onsite Agriculture

The approximately 10.54-acre Project Site is currently undeveloped, is relatively flat land and has been previously graded. The Project Site is covered in non-native ruderal, iceplant, and ornamental vegetation with some native coastal sage scrub plants interspersed. The southern parcel has occasionally been used for temporary seasonal purposes such as a Christmas tree sales lot, Halloween pumpkin patch and for dairy product sales. There are no current agricultural uses on the Project Site. Historical research for the subject property as described in the Phase I Environmental Site Assessment prepared by EnviroApplications, Inc. (**Appendix B**) does not indicate that it was ever used for agricultural purposes. Based on a review of California Land Conservation Act of 1965 (Williamson Act) data, there are no Williamson Act contract lands located within the Project Site, its zone of influence or its surrounding area[4].

Surrounding Agricultural Uses

The land surrounding the Project Site is also designated as "Urban" and "Built-Up Land" by the FMMP (**Figure 10**). There are no designated agricultural land uses or zones in the surrounding vicinity of the Project Site as demonstrated by the General Plan land use and City zoning map.

[4] California Department of Conservation (CDC). 2004. *Farmland Mapping and Monitoring Program Tool.*

T:\Project_Data\Carmax_Oceanside_1492\Final_Maps\EIR_Oct2020\CO_Fig-10_FMMP_10920.mxd

R·E·C Consultants, Inc.

Farmland Mapping and Monitoring Program Layer over Project Site

0 330 660 Feet

FIGURE 10

CARMAX AUTO SUPERSTORE OCEANSIDE EIR

Aerial Source: Google Earth, August 2018.

October 2020

4.3.2 Regulatory Setting

State

Farmland Mapping and Monitoring Program (FMMP)

The California Department of Conservation (CDC), FMMP was established in 1982 to provide consistent, timely, and accurate data for identifying California's agricultural land resources. Agricultural land is rated according to soil quality and irrigation status; the best quality land is identified as Prime Farmland. FMMP is used by both CEQA and the Right to Farm disclosure law as the official source for agricultural land data.

California Land Conservation Act of 1965 (Williamson Act)

The California Land Conservation Act of 1965, also known as the Williamson Act, gave the authority to local governments to sign contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners would receive tax relief for agreeing not to change the use of their open space or agricultural lands for a contract period of ten years.

California Code, Public Resources Code Section 12220(g), Section 4526 and Section 51104(g)

Public Resources Code Section 12220(g) defines forest land as land that can support 10% of native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation and other public benefits.

Public Resources Code Section 4526 defines timberland as land, other than land owned by the federal government and land designated by the board as experiment forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees.

Public Resources Code Section 51104(g) defines a timberland production zone (TPZ) as an area which has been zoned pursuant to Section 51112 or 5113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses.

Local

City of Oceanside General Plan

The General Plan Land Use Element has a goal for the continual long-term enhancement of the community through the development and use of land which is appropriate and orderly with respect to type, location, timing and intensity. The following objectives and policies provide guidance for the protection of agricultural resources within the City and are relevant to the Project:

2.03 Agricultural Subdivision

Policy A: The City shall assure in all actions that the legal parcels or interests in agricultural lands are of sufficient size to viably conduct agricultural practices.

2.5 Agricultural

Objective: To identify, conserve and enhance Oceanside's agricultural areas.

Policy A: Agricultural areas are characterized by their primary function that is to farm, graze, or conduct animal husbandry. Agricultural areas typically involve continuous tracts of agricultural land uses with only a very minor intrusion of non-agricultural land uses. These non-agricultural land uses are only of the type and size to service the special needs of the agricultural area.

Policy C: The City, in all proposed actions converting agricultural lands to other land uses, consider the loss of those lands to the potential agricultural productivity to the community; and shall assure that land use compatibility to agricultural lands is fully defined and assured.

Policy D: Land use compatibility is of primary importance to agricultural areas, since land use conflicts between agricultural and non-agricultural uses can force the economic non-viability of agricultural areas.

3.19 Agricultural Resources

Policy A: The City shall apply agricultural land use designations and zoning classifications to areas of significant productive agricultural use.

Policy B: Extension of City services to agricultural areas will be limited.

Policy C: The City shall encourage participation of agricultural property owners in Williamson Act contracts.

The Environmental Resource Management Element of the General Plan describes the main agricultural areas within the City and provides a map of areas rated "good" or "fair" for farming and general areas of existing agriculture use in Figure ERM-7 (Agricultural Land).

4.3.3 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, impacts would be considered significant if the Project would:

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract;
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g));

d. Result in the loss of forest land or conversion of forest land to non-forest use;
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

4.3.4 Project Impact Analysis

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) (LESA) prepared by the CDC as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board (CARB).

Would the Project:

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

The approximately 10.54-acre Project Site is currently undeveloped and relatively flat land. Historical research for the subject property as described in the Phase I Environmental Site Assessment prepared by EnviroApplications, Inc. (**Appendix B**) does not indicate that it was ever used for agricultural purposes. An FMMP map was prepared for the project site and is classified as Urban and Built-Up Land (**Figure 10**). No prime farmland or unique farmland exist onsite. In addition, the Project Site is not located in an area rated "good" or "fair" for farming or in a general area of existing agriculture use as depicted in Figure ERM-7 in the Environmental Resource Management Element of the General Plan.

The Project would not convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance to non-agricultural use, and therefore, **no impact** will occur.

b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?

The Project Site is zoned as CC, which allows limited agricultural use with approval of an Administrative Use Permit. The Project does not require a zone change as part of the Project approvals. There are no areas designated as Williamson Act Contract lands located within the Project Site.

The Project would not conflict with existing zoning for agricultural use or a Williamson Act Contract and, therefore, **no impact** will occur.

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

The Project Site is zoned as CC and does not contain lands designated as forest land, timberland or timberland zoned Timberland Production as defined in the Public Resources Code Sections. Therefore, **no impact** will occur.

d. Result in the loss of forest land or conversion of forest land to non-forest use?

The Project Site is vacant and located in a developed area surrounded by residential uses, commercial uses, and transportation corridors. The property is covered in non-native ruderal, iceplant, and ornamental vegetation with some native coastal sage scrub plants interspersed.

The Project would not result in the loss of forest land or conversion of forest land to non-forest uses, and therefore, **no impact** will occur.

e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

The Project Site is vacant and located in a developed area surrounded by residential uses, commercial uses, and transportation corridors. No farmland or forest land exists onsite or in the surrounding area.

The Project would not result in the conversion of Farmland to non-agricultural use or forest land to non-forest uses, and therefore, **no impact** will occur.

4.3.5 Mitigation Implementation and Monitoring

No impacts to agriculture and forestry resources have been identified, and therefore no mitigation measures are required.

4.3.6 Level of Significance After Mitigation

No impact related to agriculture and forestry resources will occur as a result of the Project.

Chapter 4.4 AIR QUALITY

The following document was used in the preparation of this section and is included in its entirety in **Appendix C**:

Ldn Consulting, Inc. October 1, 2020. *Air Quality Assessment CarMax Auto Store City of Oceanside, CA*.

4.4.1 Environmental Setting

The Project Site lies within the SDAB and is subject to the SDAPCD guidelines and regulations. The SDAB is one of 15 air basins that geographically divide California. The SDAB lies in the southwest corner of California and comprises the entire San Diego region and covers approximately 4,260 square miles, contiguous with the political boundaries of the County.

The primary factors that determine air quality are the locations of air pollutant sources and the amount of pollutants emitted. Meteorological and topographical conditions are also important factors. Factors such as wind speed and direction, air temperature gradients and sunlight, and precipitation and humidity interact with physical landscape features to determine the movement and dispersal of air pollutants. Meteorological and topographical factors that affect air quality in the SDAB are described below.

Climate and Meteorology

Climate within the SDAB area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing winds from the west heats up. Most of southern California is dominated by high-pressure systems for much of the year, which keeps the County mostly sunny and warm. Typically, during the winter months, the high pressure system drops to the south and brings cooler, moister weather from the north. It is common for inversion layers to develop within high-pressure areas, which mostly define pressure patterns over the SDAB. These inversions are caused when a thin layer of atmosphere increases in temperature with height. An inversion acts like a lid preventing vertical mixing of air through convective overturning. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce O_3, commonly known as smog.

Meteorological trends within the City produce daytime highs typically ranging between 65˚F in the winter to approximately 78˚F in the summer with August usually being the hottest month. Median temperatures range from approximately 55˚F in the winter to approximately 70˚F in the summer. The average humidity is approximately 64% in the winter and approximately 72% in the summer.

Air Pollution Climatology

Pursuant to the 1990 federal Clean Air Act amendments, the United States Environmental Protection Agency (U.S. EPA) classifies air basins (or portions thereof) as “attainment” or “nonattainment” for each criteria pollutant, based on whether the NAAQS have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as “attainment” for that pollutant. If an area exceeds the standard, the area is classified as “nonattainment” for the pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as “unclassified” or “unclassifiable”.

Areas that achieve the standards after a nonattainment designation are re-designated as maintenance areas and must have approved Maintenance Plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as "attainment" or "nonattainment" but based on CAAQS rather than the NAAQS.

During the fall and winter, air quality problems are created due to carbon monoxide (CO) and oxides of nitrogen (NO_x) emissions. CO concentrations are generally higher in the morning and late evening. In the morning, CO levels are elevated due to cold temperatures and the large number of motor vehicles traveling. Higher CO levels during the late evenings are a result of stagnant atmospheric conditions trapping CO in the area. Since CO is produced almost entirely from automobiles, the highest CO concentrations in the basin are associated with heavy traffic. Nitrogen dioxide (NO_2) levels are also generally higher during fall and winter days.

Under certain conditions, atmospheric oscillation results in the offshore transport of air from the Los Angeles region to the County. This often produces high O_3 concentrations, as measured at air pollutant monitoring stations within the County. The transport of air pollutants from Los Angeles to the County has also occurred within the stable layer of the elevated subsidence inversion, where high levels of O_3 are transported.

SDAB Attainment Designation

An area is designated in attainment when it is in compliance with the NAAQS and/or CAAQS. These standards are set by the EPA or CARB for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or public welfare.

The criteria pollutants of primary concern that are considered in this analysis are O_3, NO_2, CO_2, SO_2, PM_{10} and $PM_{2.5}$. Although there are no ambient standards for volatile organic compounds (VOCs) or nitrogen oxide (NOx), they are important as precursors to O_3. The portion of the SDAB where the proposed Project is located is designated as nonattainment for federal and state ozone (O_3), and for state particulate matter (PM_{10} and $PM_{2.5}$).

Local Air Quality

Criteria pollutants are measured continuously throughout the SDAB. This data is used to track ambient air quality patterns throughout the County and to determine attainment status when compared to the NAAQS and CAAQS. The SDAPCD is responsible for monitoring and reporting data. As of 2018, the district operated eight (8) monitoring sites, which collect data on criteria pollutants[5].

The closest monitoring locations to the Project Site are the Camp Pendleton monitoring location roughly nine (9) miles to the north, and the Camp Pendleton monitoring station roughly 12.9 miles to the east. **Table 4.4-1** identifies the criteria pollutants monitored at the aforementioned stations since 2015.

Table 4.4-1
Three-Year Ambient Air Quality Summary Near the Project Site

[5] San Diego Air Pollution Control District (SDAPCD). 2018. *Annual Air Quality Monitoring Network Plan 2018.*

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2015	2016	2017	Days Exceeded over 3 years
O_3	Camp Pendleton or Escondido Monitoring Station	1 Hour	0.09 ppm	No Standard	0.09	0.08	0.09	0
		8 Hour	0.070 ppm	0.070 ppm	0.08	0.07	0.08	10
* PM_{10} ($\mu g/m^3$)		24 Hour	50 $\mu g/m^3$	150 $\mu g/m^3$	30	-	-	N/A
		Annual Arithmetic Mean	20 $\mu g/m^3$	No Standard	19.4	-	-	N/A
* $PM_{2.5}$ ($\mu g/m^3$)		24 Hour	No Standard	35 $\mu g/m^3$	29.4	-	-	N/A
		Annual Arithmetic Mean	12 $\mu g/m^3$	15 $\mu g/m^3$	8.6	-	-	N/A
NO_2 (ppm)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.006	0.006	0.006	N/A
		1 Hour	0.18 ppm	0.100 ppm	0.060	0.072	0.0063	N/A
* CO (ppm)		1 Hour	20 ppm	35 ppm	3.1	-	-	N/A
		8 Hour	9 ppm	9 ppm	2.0	-	-	N/A

Notes:

1. Yearly maximums marked with "-" indicated data was not available for either monitoring station.
2. Days exceeded marked with "N/A" indicate no data available
3. * Data was selected from the Escondido Monitoring Station. All other data presented was collected at the Camp Pendleton Monitoring Station.
4. SO_2 is only monitored at the El Cajon Monitoring Station. Within the entire County of San Diego, SO_2 emissions within the County are essentially Zero for all metrics including the Average, Maximum 24 hour and 1-hour standards. The Highest 1-hr measurement identified is .004 ppm and the most restrictive standard (CAAQS for SO_2) is 0.25 ppm.

Source: Air Quality Assessment Prepared by Ldn Consulting, Inc. (Appendix C)

4.4.2 Regulatory Setting

Federal

Federal Standards and Definitions

The Federal Air Quality Standards were developed per the requirements of the Federal Clean Air Act, a federal law passed in 1970 and further amended in 1990. This law provides the basis for the national air pollution control effort. An important part of the Federal Clean Air Act was the development of NAAQS for major air pollutants.

The Federal Clean Air Act established two types of air quality standards otherwise known as primary and secondary standards. ***Primary Standards*** set limits for the intention of protecting public health, which includes sensitive populations such as people with asthma, children and elderly. ***Secondary Standards*** set limits to protect public welfare to include the protection against decreased visibility, damage to animals, crops, vegetation and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set NAAQS for principal "criteria" pollutants. These criteria pollutants are defined as:

1. Carbon Monoxide (CO) is a colorless, odorless gas that is produced from the partial combustion of carbon-containing compounds, usually in internal-combustion engines. Common sources of CO to outdoor air are cars, trucks, and other vehicles or machinery that burn fossil fuels. Breathing air with a high concentration of CO reduces the amount of oxygen that can be transported in the blood stream to the heart and brain, and can cause dizziness, confusion, and unconsciousness.
2. Lead (Pb) is a neurotoxin that distributes throughout the body in the blood and accumulates in the bones. It can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Elevated lead in the environment can result in decreased growth and reproductive rates in plants and animals. At the national level, major sources of lead in the air include ore and metals processing, piston-engine aircraft operation on leaded aviation fuel, waste incinerators, utilities, and lead-acid battery manufacturers.
3. Nitrogen Dioxide (NO_2) is a reactive, oxidizing gas that can irritate airways in the human respiratory system. Exposure can aggravate or develop respiratory diseases, particularly asthma. NO_2 and other nitrogen oxides interact with water, oxygen, and other chemicals in the atmosphere to form acid rain, harming sensitive ecosystems such as lakes and forests. Nitrogen oxides make the air hazy, affecting public views, and also contribute to nutrient pollution in coastal waters. NO_2 primarily enters the air from the burning of fuel from cars, trucks, buses, and power plants.
4. Particulate Matter (PM_{10} or $PM_{2.5}$) is a complex mixture of solid particles and liquid droplets found in the air. These particles vary in shape, size, and chemical composition, and can be made of metal, soot, soil, and dust. Some are emitted directly from a source, such as construction sites, unpaved roads, fields, or smokestacks, but most form in the atmosphere as a result of reactions of chemicals such as sulfur dioxide and nitrogen oxides – pollutants emitted from power plants, industries, and automobiles. These particles contribute significantly to regional haze and visibility reduction in California, and can also be inhaled and cause health problems.
5. Ozone (O_3) is a highly oxidative unstable gas that can trigger a variety of health problems when breathed, such as chest pain, coughing, throat irritation, and airway inflammation. It can reduce lung function and worsen bronchitis, emphysema, and asthma. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources.
6. Sulfur Dioxide (SO_2) is a gaseous compound of sulfur and oxygen that forms when sulfur-containing fuel is burned in locomotives, ships, and off-road diesel equipment. It is also emitted from industrial processes. Short-term exposures to sulfur dioxide can harm the respiratory system and make breathing difficult. People with asthma, children, and the elderly are sensitive to these effects. SO_2 can contribute to acid rain.

The EPA is responsible for implementing most aspects of the Federal Clean Air Act, including setting NAAQS for major pollutants; setting hazardous air pollutant (HAP) standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, atmospheric O_3 protection measures, and enforcement provisions.

The Federal Clean Air Act requires the EPA to reassess the NAAQS at least every five (5) years to determine whether adopted standards are adequate to protect public health based on current scientific

evidence. States with areas that exceed the NAAQS must prepare a (State Implementation Plan (SIP) that demonstrates how those areas will attain the standards within mandated time frames.

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and Conservation Act to serve the nation's energy demands and promote feasibly attainable conservation methods. This act established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration (NHTSA) is responsible for establishing additional vehicle standards. The Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The NHTSA and U.S. EPA jointly administer the CAFE standards. Congress has specified that CAFE standards must be set at the "maximum feasible level" with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.

In response to *Massachusetts v. Environmental Protection Agency*,[6] the George W. Bush administration issued Executive Order 13432 in 2007, directing USEPA, the U.S. Department of Transportation (USDOT), and the U.S. Department of Energy (USDOE) to establish regulations that reduce emissions from motor vehicles, non-road vehicles, and non-road engines by 2008.[7] In 2009, the NHTSA issued a final rule regulating fuel efficiency for and GHG emissions from cars and light-duty trucks for model year 2011; in 2010, the U.S. EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.[8]

In 2010, President Obama issued a memorandum directing the U.S. EPA, USDOT, USDOE, and NHTSA to establish additional standards regarding fuel efficiency and emission reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the U.S. EPA and NHTSA proposed stringent, coordinated federal emission and fuel economy standards for model years 2017–2025 light-duty vehicles.[9] The final rule was adopted in 2012 for model years 2017–2021, and the U.S. EPA issued augural standards for model year 2022 through 2025 following direction from the Obama Administration.[10]

In August 2018, the Trump Administration released a notice of proposed rulemaking, the *Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks* (SAFE Vehicles Rule), which proposed freezing fuel-efficiency requirements and lock in model

6 *Massachusetts v. Environmental Protection Agency* (2007) 127 S.Ct. 1438.

7 US Government Publishing Office, Administration of George W. Bush, Accessed May 2020, https://www.gpo.gov/fdsys/pkg/WCPD-2007-05-21/pdf/WCPD-2007-05-21-Pg631.pdf.

8 U.S. EPA, Regulations for Greenhouse Gas Emissions from Commercial Trucks & Buses, Accessed May 2020, https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-greenhouse-gas-emissions-commercial-trucks.

9 U.S. EPA, Presidential Announcements and Letters of Support related to Greenhouse Gas Emissions, Accessed May 2020, https://www.epa.gov/regulations-emissions-vehicles-and-engines/presidential-announcements-and-letters-support-related.

10 U.S. EPA, *Final Rule for Model Year 2017 and Later Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards*, Accessed May 2020, https://www.gpo.gov/fdsys/pkg/FR-2012-10-15/pdf/2012-21972.pdf.

year 2020 standards through 2026.[11] In March 2020, the Trump Administration issued the SAFE Vehicles Rule, which sets fuel economy and carbon dioxide standards that increase 1.5 percent in stringency each year from model year 2021-2026 for both passenger cars and light trucks.[12]

In addition to the regulations applicable to cars and light-duty trucks described above, in 2016, the U.S. EPA and NHTSA announced fuel economy and emissions standards for medium- and heavy-duty trucks for model years 2018–2027 (for certain trailers) and 2021–2027 (for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks). The final standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons, save vehicle owners fuels costs of about $170 billion, and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.[13]

Hazardous Air Pollutants

The 1997 federal Clean Air Act amendments required the EPA to identify National Emission Standards for Hazardous Air Pollutants to protect public health and welfare. Hazardous air pollutant include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 Clean Air Act amendments, which expanded the control program for hazardous air pollutants, 187 substances and chemical families were identified as hazardous air pollutants.

State

State Standards and Definitions

CARB sets the laws and regulations for air quality on the state level. Subsidiary responsibilities are assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the Federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB established CAAQS, which are generally the same as or more restrictive than the NAAQS and also limit four additional contaminants. **Table 4.4-2** identifies both the NAAQS and CAAQS, and the additional contaminants are defined below:

1. Visibility Reducing particles are particles in the air that obstruct visibility. Some are directly emitted to the air such as windblown dust and soot, while others form from the chemical transformation of gaseous pollutants emitted largely by fuel combustion.

11 U.S. EPA, *The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks*, Accessed May 2020, https://www.gpo.gov/fdsys/pkg/FR-2018-08-24/pdf/2018-16820.pdf.

12 National Highway Traffic Safety Administration, *SAFE*, Accessed May 2020, https://www.nhtsa.gov/corporate-average-fuel-economy/safe.

13 U.S. EPA, *Final Rule for Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles – Phase 2*, Accessed May 2020, https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-greenhouse-gas-emissions-and-fuel-efficiency.

2. Sulfates are salts of Sulfuric Acid which occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. They increase the acidity of the atmosphere and can form acid rain.
3. Hydrogen Sulfide (H_2S) is a colorless gas with the odor of rotten eggs or flatulence. It can induce irritation of the eyes and headache, nausea, or vomiting. The most common sources of H_2S emissions are oil and natural gas extraction and processing. It also forms from bacterial breakdown of organic matter.
4. Vinyl Chloride, a chlorinated hydrocarbon, is a toxic, colorless gas with a sweet odor. It is an industrial chemical used in the production of its polymer, polyvinyl chloride. It may be emitted from industrial processes, but today is mainly found near landfills, sewage treatment plants, and hazardous waste sites due to microbial breakdown of chlorinated solvents.

Table 4.4-2
Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	**Average Time**	**California Standards[1]**		**Federal Standards[2]**		
		Concentration[3]	**Method[4]**	**Primary[3,5]**	**Secondary[3,6]**	**Method[7]**
Ozone (O_3)[8]	1 hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM_{10})[9]	24 hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		-		
Fine Particulate Matter ($PM_{2.5}$)[9]	24 Hour	-	-	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	-	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9.0 ppm (10 mg/m^3)	-	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		-	-	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	-	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	-	Ultraviolet Flourescence: Spectrophotometry (Pararosanline Method)
	3 Hour	-		-	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	-	
	Annual Arithmetic Mean	-		0.030 ppm (for certain areas)[11]	-	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	-	-	High Volume Sample and Atomic Absorption
	Calendar Quarter	-		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month	-		0.15 µg/m^3		

Ambient Air Quality Standards						
Pollutant	**Average Time**	**California Standards[1]**		**Federal Standards[2]**		
		Concentration[3]	**Method[4]**	**Primary[3,5]**	**Secondary[3,6]**	**Method[7]**
	Average					
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	**No National Standards**		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM10, PM2.5, and visibility reducing articles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the EPA.
8 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m^3 were also retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and

Ambient Air Quality Standards						
Pollutant	Average Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Lake Tahoe Air Basin standards, respectively.						
Source: Air Quality Assessment Prepared by Ldn Consulting, Inc. (Appendix C)						

Toxic Air Contaminants

The State Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807. The California toxic air contaminants (TAC) list identifies more than 700 pollutants, of which carcinogenic and non-carcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state TAC list includes the (federal) hazardous air pollutants (HAPs). The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources. However, AB 2588 does not regulate air toxics emissions. TAC emissions from individual facilities are quantified and prioritized. "High priority" facilities are required to perform a health risk assessment (HRA), and if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. CARB classified "particulate emissions from diesel-fueled engines" as a TAC in August 1998. DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars, and off-road diesel engines including locomotives, marine vessels, and heavy-duty construction equipment, among others.

California Health and Safety Code Section 41700

Section 41700 of the Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any of those persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

Air Quality and Land Use Handbook

CARB published the *Air Quality and Land Use Handbook*[14] on April 28, 2005 to serve as a general guide for considering health effects associated with siting sensitive receptors proximate to sources of TAC emissions. The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions. Some examples of CARB's siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day; (2) avoid siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week); and (3) avoid siting sensitive receptors within 300 feet of any dry cleaning

[14] CARB, Air Quality and Land Use Handbook: A Community Perspective (April 2005), https://www.arb.ca.gov/ch/handbook.pdf.

operation using perchloroethylene and within 500 feet of operations with two (2) or more machines.

California Code of Regulations

The California Code of Regulations (CCR) is the official compilation and publication of regulations adopted, amended, or repealed by State agencies pursuant to the Administrative Procedure Act (APA). The CCR includes regulations that pertain to air quality emissions. Specifically, Section 2485 in Title 13 of the CCR, states that the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five (5) minutes at any location. In addition, Section 93115 in Title 17 of the CCR states that operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

Sierra Club v. County of Fresno

The California Supreme Court, in *Sierra Club v. County of Fresno* (2018) 6 Cal. 5th 502 ("*Friant Ranch*"), determined the air quality analysis in the EIR was inadequate for the significant and unavoidable impacts because it did not make "a reasonable effort to substantively connect the project's air quality impacts to likely health consequences." The State Supreme Court determined that, as it relates to significant and unavoidable impacts, "The EIR should be revised to relate the expected adverse air quality impacts to likely health consequences or explain in meaningful detail why it is not feasible at the time of drafting to provide such an analysis."

In April 2019, the Sacramento Metropolitan Air Quality Management District (SMAQMD) published an Interim Recommendation on implementing the *Friant Ranch* decision in the review and analysis of proposed projects under CEQA in Sacramento County.[15] To date, the SMAQMD is the only California air district to formally release, as guidance, an "Interim Recommendation" for lead agencies and practitioners preparing CEQA documents for projects within Sacramento County to comply with the *Friant Ranch* decision. Consistent with the expert opinions submitted to the Court in *Friant Ranch* by the San Joaquin Valley Air Pollution Control District (SJVAPCD) and the South Coast Air Quality Management District (SCAQMD), the SMAQMD guidance confirms the absence of an acceptable or reliable quantitative methodology that would correlate the expected criteria air pollutant emissions of projects to the likely health consequences to people of project-generated criteria air pollutant emissions. The SMAQMD guidance explains that while it is in the process of developing a methodology to assess these impacts, lead agencies should follow the advice in *Friant Ranch* to explain in meaningful detail why this analysis is not yet feasible. As such, it is currently not scientifically feasible to provide a reliable quantitative analysis directly correlating a project's significant pollutant emissions and human health.

Regional

The State of California has 35 air districts, which each hold responsibility for ensuring that the criteria pollutant levels are below the NAAQS and CAAQS. Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as "non-attainment" areas for that pollutant. Currently, there are 16 non-attainment areas for the federal ozone standard and four non-attainment areas for the $PM_{2.5}$ standard (CARB, 2018). The state therefore created the California SIP, which is designed to provide measures needed for California air basins to attain ambient air quality standards.

[15] SMAQMD, "*Friant Ranch* Interim Recommendation," April 25, 2019.

The SDAPCD is the government agency which regulates air pollution within the County. To try to achieve attainment status within the SDAB, the SDAPCD developed a Regional Air Quality Strategy (RAQS) outlining control measures. As noted above, the City is currently in "non-attainment" status for federal and state O_3 standards, and for state particulate matter (PM_{10} and $PM_{2.5}$) standards. However, an attainment plan is only available for O_3. The RAQS was adopted in 1992 and is revised periodically with the latest revision having occurred in 2016.

The 2016 update mostly summarizes how the 2009 update has lowered NO_X and VOCs emissions which reduces O_3 and clarifies and enhances emission reductions by introducing for discussion three (3) new VOC and four (4) new NO_X reduction measures. NO_X and VOCs are precursors to the formation of O_3 in the atmosphere. The criteria pollutant standards are generally attained when each monitor within the region has no exceedances during the previous three calendar years. A complete listing of the current attainment status for criteria pollutants with respect to both federal and state nonattainment status by pollutants for the County is shown in **Table 4.4-3** (SDAPCD, 2018).

SDAPCD reviews projects to ensure that they would not: (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay the timely attainment of any air quality standard or any required interim emission reductions or other milestones of any federal attainment plan.

The RAQS is largely based on population predictions by the San Diego Association of Governments (SANDAG). Projects that produce less growth than predicted by SANDAG would generally conform to the RAQS. Projects that create more growth than projected by SANDAG may create a significant impact if the project produces unmitigable air quality emissions or if the project produces cumulative impacts.

Table 4.4-3
San Diego County Air Basin Attainment Status by Pollutant

Criteria Pollutant	Federal Designation	State Designation
Ozone (8-hour)	Nonattainment	Nonattainment
Ozone (1-hour)	Attainment*	Nonattainment
Carbon Monoxide	Attainment	Attainment
PM_{10}	Unclassifiable **	Nonattainment
$PM_{2.5}$	Attainment	Nonattainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility	No Federal Standard	Unclassified

* The federal 1-hour standard of 12 pphm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans.
** At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable. (SDAPCD, 2018)
Source: Air Quality Assessment Prepared by Ldn Consulting, Inc. (Appendix C)

SDAPCD Rules and Regulations

As stated above, the SDAPCD is responsible for planning, implementing, and enforcing federal and state ambient standards in the SDAB. The following rules and regulations apply to all sources in the jurisdiction of SDAPCD and would apply to the proposed project.

Rule 20.2 – Air Quality Impact Assessment Screening Thresholds

The SDAPCD established screening level thresholds in Rule 20.2 for new or modified stationary sources of air pollutants. The County's Guidelines for Determining Significance and Report Format and Content Requirements incorporate screening level thresholds from Rule 20.2 for use in all County-related Air Quality Impact Assessments and for determining CEQA air quality impacts. These screening criteria can be used to demonstrate that a project's total emissions would not result in a significant impact as defined by CEQA. As provided in the Air Quality Assessment prepared by Ldn Consulting, Inc. and provided in this EIR as **Appendix C**, since the SDAPCD does not have air quality impact thresholds for VOCs, it is acceptable to use the SCAQMD thresholds, which generally has stricter emissions thresholds than the SDAPCD.

Rule 50 – Visible Emissions

This rule prohibits discharge into the atmosphere from any single source of emissions whatsoever of any air contaminant for a period or periods aggregating more than three minutes in any period of 60 consecutive minutes that is darker in shade than that designated as Number 1 Ringelmann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as Number 1 on the Ringelmann Chart (SDAPCD 1997).

Rule 51 – Nuisance

This rule prohibits the discharge, from any source, of such quantities or air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property (SDAPCD 1976).

Rule 55 – Fugitive Dust

Rule 55 regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project site (SDAPCD 2009b).

Rule 67.01 – Architectural Coatings

This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories (SDAPCD 2015a).

Rule 1200 – Toxic Air Contaminants (New Source Review)

This rule requires each stationary source that is required to prepare a public risk assessment to provide written public notice of risks at or above the following levels: maximum incremental cancer risks equal to or greater than 10 in 1 million, or cancer burden equal to or greater than 1.0, or total acute non-

cancer health hazard index equal to or greater than 1.0, or total chronic non-cancer, health hazard index equal to or greater than 1.0 (SDAPCD 2017b).

San Diego Association of Governments (SANDAG)

SANDAG is the regional planning agency for the County and serves as a forum for regional issues relating to transportation, the economy, community development and the environment. SANDAG serves as the federally-designated metropolitan planning organization for the County. SANDAG has prepared *San Diego Forward: The Regional Plan* (Regional Plan) for the San Diego region. The Regional Plan, including its Sustainable Communities Strategy (SCS), is built on an integrated set of public policies, strategies, and investments to maintain, mange, and improve the transportation system so that it meets the diverse needs of the San Diego region through 2050.

In regard to air quality, the Regional Plan sets the policy context in which SANDAG participates in and responds to the air district's air quality plans and builds off the air district's air quality plan processes that are designed to meet health-based criteria pollutant standards in several ways. First, it complements air quality plans by providing guidance and incentives for public agencies to consider best practices that support the technology-based control measures in air quality plans. Second, the Regional Plan emphasizes the need for better coordination of land use and transportation planning, which heavily influences the emissions inventory from the transportation sectors of the economy.

Local

City of Oceanside General Plan

Environmental Resource Management Element

The Environmental Resource Management Element of the General Plan outlines recommended action programs to implement and achieve long-range planning objectives. The City Implementation Program actions related to air quality include:

Objectives: Air Quality

1. Cooperate with County, State, and federal agencies in continuing programs of air quality improvement

Land Use Element

The Land Use Element of the General Plan provides guidance for protection of air quality. The following policies of the Land Use Element are relevant to the proposed project:

> **3.18 Air Quality**
>
> **Policy A:** The City shall cooperate with the San Diego County Air Pollution Control Board, and participate in the Regional Air Quality Control Strategy (RAQS).

4.4.3 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, impacts would be considered significant if the project would:

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

Appendix G of the CEQA Guidelines indicates that, where available, the significance criteria established by the applicable air quality management district or pollution control district may be relied upon to determine whether the proposed project would have a significant impact on air quality.

As part of its air quality permitting process, the SDAPCD and the County has established thresholds for permitted stationary sources. The SDAPCD sets forth quantitative emission thresholds below which a stationary source would not have a significant impact on ambient air quality. These levels may be used to evaluate the increased emissions which would be discharged to the SDAB from proposed land development projects. Project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in **Table 4.4-4** below, are exceeded.

Table 4.4-4
Screening Thresholds for Criteria Pollutants

Pollutant	Total Emissions (Pounds per Day)
Construction Emissions	
Respirable Particulate Matter (PM_{10} and $PM_{2.5}$)	100 and 55
Nitrogen Oxide (NO_x)	250
Sulfur Oxide (SO_x)	250
Carbon Monoxide (CO)	550
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75
Operational Emissions	
Respirable Particulate Matter (PM_{10} and $PM_{2.5}$)	100 and 55
Nitrogen Oxide (NO_x)	250
Sulfur Oxide (SO_x)	250
Carbon Monoxide (CO)	550
Lead and Lead Compounds	3.2
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75
Source: Air Quality Assessment Prepared by Ldn Consulting, Inc. (Appendix C)	

Methodology

Air quality impacts related to construction and daily operations of the CarMax Project were calculated using the latest CalEEMod Version 2016.3.2 air quality model, which was developed by BREEZE Software for the SCAQMD in 2017. The construction model in CalEEMod is used to calculate the emissions associated with the construction of the Project and uses methodologies presented in the U.S. EPA AP-42 document with emphases on Chapter 11.9. The CalEEMod input/output model is provided in

Attachment A of the Air Quality Assessment prepared by Ldn Consulting, Inc. and is included in this EIR as **Appendix C**.

The AERMOD dispersion model was used to determine the concentration for air pollutants at any location near the pollutant generator. Additionally, the model can predict the maximum exposure distance and concentrations. The notable TAC from constriction is diesel exhaust since exposure to diesel exhaust is known to cause cancer and acute and chronic health effects. Diesel exhaust emissions were estimated using the annual PM_{10} exhaust emissions from onsite construction operations obtained from the annual CalEEMod model output by summing each onsite source for the construction duration. The AERMOD files for the Project are provided in Attachment B of the Air Quality Assessment which is included in this EIR as **Appendix C**, which utilizes Tier 4 diesel equipment as a Project design feature.

Once the dispersed concentrations of diesel particulates are estimated in the surrounding air, they are used to evaluate estimated exposure to people. Exposure was evaluated by calculating the dose in milligrams per kilogram body weight per day (mg/kg/d). For residential exposure, the breathing rates are determined for specific age groups, so inhalation dose (Dose-air) is calculated for each of these age groups: 0<2, 2<9, 2<16, 16<30 and 16<70 years. The Air Quality Assessment (**Appendix C)** provides the in depth algorithms to calculate the dose for exposure and the worst-case cancer risk dose calculation.

Health risk calculations, in its entirety, are provided in Attachment C of the Air Quality Assessment which is included in this EIR as **Appendix C**. The sensitive receptors in close proximity to the Project Site are displayed in **Figure 11.**

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R·E·C Consultants, Inc.

Sensitive Receptors

0 325 650 Feet

FIGURE 11

CARMAX AUTO SUPERSTORE OCEANSIDE EIR

Aerial Source: Google Earth, August 2018.

October 2020

4.4.4 Project Impact Analysis

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the Project:

a. Conflict with or obstruct implementation of the applicable air quality plan?

The Federal Clean Air Act forms the basis for the national air pollution control effort. Pursuant to the Clean Air Act the U.S. EPA classifies air basins as "attainment" or "nonattainment" for each criteria air pollutant, based on whether the NAAQS have been achieved. The EPA set NAAQS for six (6) pollutants based on parts per million, parts per billion and micrograms per cubic meter. States with areas that exceed the NAAQS must prepare a SIP that demonstrates how those areas would attain the NAAQS within mandated timeframes. In addition, the 2016 RAQS were adopted on the local level to demonstrate how the region would comply with the federal standards.

The State of California has 35 air districts, which each hold responsibility for ensuring that the criteria pollutant levels are below the NAAQS and CAAQS. Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as "non-attainment" areas for that pollutant. Currently, there are 16 non-attainment areas for the federal O_3 standard and four (4) non-attainment areas for the $PM_{2.5}$ standard (CARB, 2018). The state therefore created the California SIP, which is designed to provide measures needed for California air basins to attain ambient air quality standards. Due to the SDAB nonattainment of the federal O_3 standard, RAQS have been established for O_3 and O_3 precursors (NO_x and VOCs).

If a project involves development that is greater than that anticipated in the local plan (Zoning Ordinance or General Plan) and SANDAG's growth projections, the project has the potential to be in conflict with the SIP and RAQS and may contribute to a potentially significant cumulative impact on air quality.

The Project Site is located in the CC zone pursuant to the Zoning Ordinance and corresponding General Plan land use designation. No change in the Zoning Ordinance or General Plan is required. A CUP is proposed to allow for the CarMax Project. Thus, the Project is consistent with the zoning and land use designations and meets the use that is anticipated in the local plan and SANDAG's growth projections and will not conflict with the SIP or RAAQS.

An Air Quality Assessment was prepared for the Project and is included as **Appendix C** of this EIR. As provided in the Air Quality Assessment, and further provided in **Table 4.4-6**, **Table 4.4-7** and **Table 4.4-8** below, the Project will not exceed SDAPCD thresholds for any pollutant during construction or operation of the Project. Compliance with SDAPCD thresholds for air pollutant emissions will assure protection of public health. Health risk as a result of air pollutants is further discussed in Section 4.4.4.c below.

The Project will not conflict with or obstruct implementation of the applicable air quality plan, and therefore, impacts will be **less than significant**.

b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

As discussed above, the SDAB is in nonattainment of the federal O_3 standard, as well as the state particulate matter (PM_{10} and $PM_{2.5}$) standard. Below is an analysis of the criteria pollutants, including O_3, O_3 precursors, and particulate matter.

Construction Emissions

Construction of the Project would result in the temporary addition of pollutants to the SDAB from onsite sources such as off-road construction equipment, soil disturbance, and VOC off-gassing and off-site sources including on-road haul trucks, vendor trucks and worker vehicle trips. The Project construction emissions were estimated using California Emissions Estimator Model (CalEEMod) Version 2016.3.2 for construction calculations. **Table 4.4-5** displays the expected timeframes for the construction processes for the entire Project including utility infrastructure, facilities, improvements and structures at the Site as well as the expected number of equipment required.

Table 4.4-5
Expected Construction Timing and Construction Equipment

Equipment Identification	Proposed Start	Proposed Completion	Quantity
Site Preparation	11/9/2021	11/23/2021	-
Rubber Tired Dozers			3
Tractors/Loaders/Backhoes			4
Grading	11/24/2021	12/23/2021	-
Excavators			1
Graders			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			3
Paving	12/24/2021	1/25/2022	-
Pavers			2
Paving Equipment			2
Rollers			2
Building Construction	1/26/2022	12/27/2022	-
Cranes			1
Forklifts			3
Generator Sets			1
Tractors/Loaders/Backhoes			3
Welders			1
Architectural Coating	12/28/2022	1/26/2023	--
Air Compressors			1

This equipment list is based upon equipment inventory within CalEEMod 2016.3.2. The quantity and types are based upon assumptions from projects of similar size and scopein the County of San Diego and the City of Oceanside.
Source: Air Quality Assessment Prepared by Ldn Consulting, Inc. (Appendix C)

Construction of the Project is expected to start in late 2021. The Project would be constructed in two (2) phases. Site preparation, remedial grading, and paving would last for approximately three (3) months and construction-related activities would last for approximately ten (10) months. Grading activities would have a net surplus of soil and would require an export of roughly 10,700 CY off-site. The Project's construction emissions as based on these assumptions are shown in **Table 4.4-6** below.

Table 4.4-6
Expected Construction Emissions Summary – Pounds per Day

Year	ROG	NOx	CO	SO_2	PM_{10} (Dust)	PM_{10} (Exhaust)	PM_{10} (Total)	$PM_{2.5}$ (Dust)	$PM_{2.5}$ (Exhaust)	$PM_{2.5}$ (Total)
2022	8.76	18.76	22.83	0.08	18.21	0.10	18.28	9.97	0.10	10.03
2023	8.74	5.75	22.59	0.05	1.05	0.06	1.11	0.28	0.06	0.34
Significance Threshold	75	250	550	250	-	-	100	-	-	55
Significant Impact?	**No**	**No**	**No**	**No**	-	-	**No**	-	-	**No**

The final numbers are all rounded within Excel and are reported as rounded numbers.
Source: Air Quality Assessment Prepared by Ldn Consulting, Inc. (Appendix C)

As displayed in **Table 4.4-6**, Project construction emissions would not exceed SDAPCD thresholds and therefore, no direct construction impacts related to air quality are expected. The Applicant has indicated that as a design feature all diesel equipment would be Tier 4, meaning that equipment would comply with the latest emission milestone established by the U.S. EPA and CARB, and that the grading contractor would follow BMPs for grading as it relates to minimizing air quality emissions and will comply with all SDAPCD rules and regulations.

Project construction emissions will not exceed SDAPCD thresholds for any pollutant, and will not result in considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (PM_{10}, $PM_{2.5}$ or O_3). Impacts from Project construction emissions are **less than significant**.

Operational Emissions

Once construction is completed, the Project would generate emissions from daily operations which would include sources such as area, energy, waste and water uses, which were also calculated within CalEEMod. Area sources include consumer products, landscaping and architectural coatings as part of regular maintenance. It was assumed that an average of 10% of the structural surface area will be re-painted with coatings compliant with SDAPCD Rule 67. Energy sources would be emitted from uses such as onsite natural gas use and electricity.

The Project would also generate emissions through the use of vehicles for transportation. The Project was estimated to generate 475 average daily trips (ADT) as identified within the Project Vehicle Miles Traveled Analysis prepared by LOS Engineering, Inc. (**Appendix N**). These daily trips were utilized within the CalEEMod analysis. The model was run on the assumption that the first full year of operations would be in 2024. Additionally, the model was run for the winter and summer scenarios to determine maximum daily operational impacts for operation. **Table 4.4-7** and **Table 4.4-8** below display the expected operational emissions for summer and winter scenarios.

Table 4.4-7
Expected Summer Daily Pollutant Generation – Pounds per Day

	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	0.36	0.00	0.05	0.00	0.00	0.00
Energy	0.00	0.04	0.03	0.00	0.00	0.00
Mobile	0.53	1.75	4.05	0.01	1.01	0.28
Total (Unmitigated)	**0.90**	**1.78**	**4.13**	**0.01**	**1.02**	**0.28**
SDAPCD Thresholds	75	250	550	250	100	55

Significant Impact?	No	No	No	No	No	No
Daily pollutant generation assumes trip distances within CalEEMod The final numbers are all rounded within Excel and are reported as rounded numbers Source: Air Quality Assessment Prepared by Ldn Consulting, Inc. (Appendix C)						

Table 4.4-8
Expected Winter Daily Pollutant Generation – Pounds per Day

	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	0.36	0.00	0.05	0.00	0.00	0.00
Energy	0.00	0.04	0.03	0.00	0.00	0.00
Mobile	0.51	1.77	4.27	0.01	1.01	0.28
Total (Unmitigated)	**0.88**	**1.80**	**4.35**	**0.01**	**1.02**	**0.28**
County Thresholds	75	250	550	250	100	55
Significant Impact?	**No**	**No**	**No**	**No**	**No**	**No**
Daily pollutant generation assumes trip distances within CalEEMod The final numbers are all rounded within Excel and are reported as rounded numbers. Source: Air Quality Assessment Prepared by Ldn Consulting, Inc. (Appendix C)						

As shown in **Table 4.4-7** and **Table 4.4-8**, the Project operational emissions would not exceed SDAPCD thresholds for any pollutant, for which the project region is non-attainment under an applicable federal or state ambient air quality standard (PM_{10}, $PM_{2.5}$ or O_3). Impacts from operational emissions are **less than significant**.

Cumulative Impacts

Air quality is largely a cumulative impact and is cumulatively evaluated based on the air basin. The nonattainment status of regional pollutants is a result of past and present development and SDAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality.

According to the SDAPCD, individual construction projects that exceed the SDAPCD's recommended daily thresholds for project-specific impacts would cause a cumulatively considerable increase in emissions for those pollutants for which the SDAB is in nonattainment.

As discussed above, the Project would not exceed SDAPCD's daily significance thresholds during construction or operation. Furthermore, the Project would not cause significant traffic impacts or add a significant number of vehicle trips to the off-site roadway network. The nearest cumulative construction projects would be two (2) housing projects located over 0.5 mile away and the Tri City Hospital located approximately 0.15 mile north, which is mostly constructed and operational. Therefore, the Project is expected to generate less than significant cumulative construction air quality impact.

Project operational air quality emissions would not exceed SDAPCD's area, mobile or energy thresholds, as displayed in **Table 4.4-7** and **Table 4.4-8** and therefore, the Project would have a less than significant cumulative operational impact. The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under applicable federal and state ambient air quality standards, and therefore impacts to air quality will be **less than significant**.

c. Expose sensitive receptors to substantial pollutant concentrations?

Some receptors to air quality are considered more sensitive to air pollutants than others, because of pre-existing health problems, proximity to the emissions source, or duration of exposure to air pollution. Land uses such as primary and secondary schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because they contain people who are very young, old, and in the infirm are more susceptible to respiratory infections and other air quality-related health problems than the general public.

Residential areas are also considered sensitive to poor air quality because people in residential areas are often at home for extended periods of time. Recreational land uses are moderately sensitive to air pollution because of the vigorous exercise associated with recreational land uses having a high demand on respiratory system functions. CARB has identified the following people as most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and those with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive population groups.

Sensitive receptors relative to the Project Site are shown in **Figure 11**. As shown in **Figure 11,** sensitive receptors include residences and senior residences. The nearest sensitive receptors are the medium density residences directly to the east across Thunder Drive, the Brookdale senior living facility located directly south of Buena Vista Creek, an apartment complex located approximately 0.15 mile southwest of the Project Site and the Lil Jackson Senior Community located 0.19 mile southwest of the Project Site. The evaluation of air quality impacts to sensitive receptors is based on the potential to result in physical health issues.

Based on the annual air quality modeling results provided in the Air Quality Assessment **(Appendix C**), worst case PM_{10} from exhaust emissions would cumulatively produce 0.00589 tons (over the total construction duration of 391 days) or an average of 0.000158 grams/second. The average emission rate over the grading area is $3.55x10^{-9}$ grams/m^2/second. The inhalation cancer risk for the closest residential receptor was found to be 7.97 which would not exceed SDAPCD 10 per one million exposed significance threshold.

Based on the uses expected on the Project Site, potential long-term operational impacts associated with the release of TACs will be minimal and would not be expected to exceed the SDAPCD thresholds of significance presented in **Table 4.4-7** and **Tale 4.4-8.**

There are known chronic health risks associated with diesel exhaust which are considered non-cancer risks. As provided in the Air Quality Assessment, included in this EIR as **Appendix C** the annual concentration yields a Health Hazard Index of 0.0072, which is less than one. Additionally, the Project would utilize Tier 4 diesel constriction equipment and the grading contractor would follow BMPs for grading as it relates to minimizing air quality emissions and would comply with all SDAPCD rules and regulations. Therefore, a less than significant health risk impact will occur. As discussed above, the Project would not exceed SDAPCD's daily significance thresholds during construction or operation.

The Project would not expose sensitive receptors to substantial pollutant concentrations, and therefore impacts are **less than significant.**

d. Result in other emissions (such as those leading to odors) affecting a substantial number of people?

The California Health and Safety Code, Division 26, Part 4, Chapter 3, Section 41700, SDAPCD Rule 51, and the OMC Section 13.16 (commonly referred to as the Public Nuisance Law) prohibits emissions from any source whatsoever in such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to the public health or damage to property. SDAPCD Rule 51 also regulates odor emissions.

Construction

Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment, architectural coatings, and asphalt pavement application, which would disperse rapidly from the Project Site and generally occur at magnitudes that would not affect substantial numbers of people. Construction odors would be considered short-term and would not affect a substantial number of people. The Project would be required to comply with the City's Public Nuisance Law, the SDAPCD Rule 51 and the California Health and Safety Code.

Construction of the Project will not result in other emissions (such as those leading to odors) affecting a substantial number of people, and impacts are **less than significant.**

Operation

The Project would operate as a CarMax pre-owned automobile dealership consisting of a sales and administration building, service building, private carwash, associated access drives, landscaped areas, presentation area, staging area, sales display area, and a customer and employee parking lot. The operation of the Project would not be expected to cause long-term odor impacts.

While almost any source may emit objectionable odors, some land uses are more likely to produce odors because of their operation. Land uses more likely to produce odors include agriculture, chemical plants, composting operations, dairies, fiberglass molding manufacturing, landfills, refineries, rendering plants, rail yards, and wastewater treatment plants. The Project does not contain any active manufacturing activities and would not convert agricultural land to commercial land uses. Objectionable odors would not be emitted by the commercial use.

Any unforeseen odors generated by the Project will be controlled in accordance with SDAPCD Rule 51 and the Public Nuisance Law, which would prohibit the discharge of air contaminants that harm, endanger, or annoy individuals or the public; endanger the comfort, health or safety of individuals or the public; or cause injury or damage to business or property. Failure to comply with these rules could subject the offending facility to possible fines and/or operational limitations in an approved odor control or odor abatement plan.

Operation of the Project will not result in other emissions (such as those leading to odors) affecting a substantial number of people, and impacts are **less than significant.**

4.4.5 Mitigation Implementation and Monitoring

No significant impacts to air quality have been identified and therefore no mitigation measures are required.

4.4.6 Level of Significance After Mitigation

Project impacts to air quality will be less than significant.

Chapter 4.5 BIOLOGICAL RESOURCES

The following documents were used in the preparation of this section and are included in its entirety in **Appendix D**, **Appendix E**, and **Appendix F**:

Busby Biological Services. September 29, 2020. *Biological Technical Report for Proposed CarMax Auto Superstore Project City of Oceanside, San Diego County, California.* **(Appendix D)**

Busby Biological Services. August 8, 2019. *Biological Constraints for the Proposed CarMax Auto Superstore on Assessor's Parcel Numbers 168-012-42 and 168-012-43 in the City of Oceanside, California.* **(Appendix E)**

Busby Biological Services. September 27, 2019. *Jurisdictional Delineation Report.* **(Appendix F)**

4.5.1 Environmental Setting

Regional Planning Context

The 10.54-acre Project Site is located in the southeastern portion of the City of Oceanside approximately seven miles east of downtown Oceanside, directly south of SR-78, east of College Boulevard, and west of Thunder Drive. The Project is subject to the North County Multiple Habitat Conservation Program (MHCP) and the draft Oceanside Subarea Plan (Subarea Plan) regional planning documents and regulations. These regulations guide the assessment of biological resources and therefore are discussed further below to provide regional planning context.

The MHCP is a long-term regional conservation plan established to protect sensitive species and habitats in northern San Diego County. The MHCP is divided into seven subarea plans – one for each jurisdiction within the MHCP – that are permitted and implemented separately from one another. The MHCP encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach and Vista. Each of the cities must adopt its own subarea plan that identifies city-specific regulations and policies pertaining to the sensitive resources found within that jurisdiction.

The Subarea Plan is a citywide conservation program which addresses how the City will conserve the biodiversity and ecosystem function in the City and surrounding areas while also allowing for continued economic development within its jurisdiction. While not formally, adopted or approved, this plan is used to provide guidance and policy direction regarding biological resources. Other local ordinances, codes and documents incorporating biological conservation programs and preservation of open spaces include the City's General Plan and Zoning Ordinances. The Subarea Plan is the overarching conservation document used by the City to incorporate all aspects of these documents. Within the Subarea Plan the Project Site is classified as disturbed land and is not located within a preserve area.

The Project is not located within the Coastal Zone and is not subject to the Local Coastal Program (LCP). The Project Site is not located within an area designated for preservation or designated as a Pre-Approved Mitigation Area (PAMA), Wildlife Corridor Planning Zone (WCPZ) or Ag Exclusion Zone as depicted in Figure 4-1 of the Subarea Plan.

Existing Biological Resources

An initial biological survey was conducted by Busby Biological Services, Inc., which included 14.91 acres of land, approximately 10.54 acres of which was within the two undeveloped parcels of the Project Site, and approximately 4.39 acres of a 50-foot survey buffer surrounding those parcels. Buena Vista Creek runs along the southern portion of the Project Site from east to west, eventually connecting to Buena Vista Lagoon and the Pacific Ocean approximately four miles west of the Project Site.

Topography and Soils

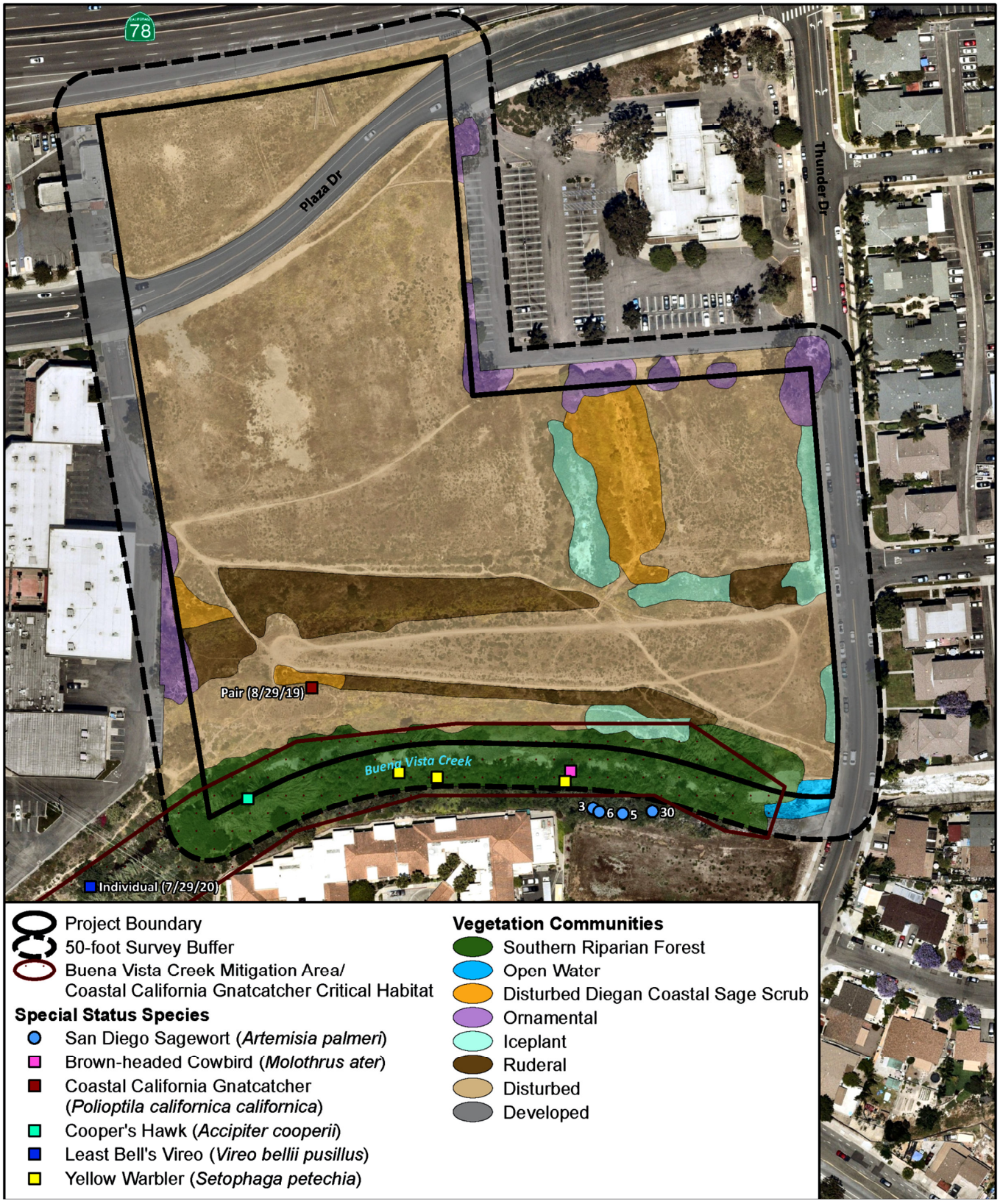
The site is relatively flat, dropping slightly in elevation to the south towards Buena Vista Creek, with elevations ranging from approximately 180 to 220 feet amsl.

The following soil types occur on the property: (1) Las Flores loamy fine sand, five to nine percent slopes, eroded, and (2) Visalia sandy loam, two to five percent slopes. Las Flores loamy fine sand covers the vast majority of the Project Site. These soils are derived from weathered marine sandstone and are moderately well-drained, have slow to medium runoff, and a slight to moderate erosion hazard. Visalia sandy loam occurs in and adjacent to Buena Vista Creek, in the southern portion of the Project Site. Visalia sandy loams are derived from granitic parent material and are rich in organic matter, are well-drained, and have a slight to moderate erosion hazard. Visalia sandy loams are listed as a hydric soil on the United States Department of Agriculture (USDA) Hydric Soils list.

Vegetation Communities and Land Cover Types

A total of 63 plant species were observed during the biological surveys of the site, including the general and focused surveys conducted between July 22, 2019 and July 29, 2020. Of these 63 species, 37 are considered non-native and or naturalized into the area, and 26 are considered native. One of the species, San Diego sagewort, found adjacent to and south of the survey area, is considered sensitive. A complete list of plant species observed onsite is included in within the Biological Technical Report **(Appendix D)**.

Eight vegetation communities and land cover types were found within the survey area and are displayed in **Table 4.5-1** below and are described in the following paragraphs. **Figure 12** displays the existing biological resources onsite. The majority of the survey area is dominated by disturbed land. Southern riparian forest within and adjacent to Buena Vista Creek and small scattered patches of disturbed Diegan coastal sage scrub in the southern half of the survey area are the only native vegetation communities that occur within the survey area. **Table 4.5-1** includes the designated habitat group for each vegetation community located onsite. These designations are established in the North County MHCP and further governed by the Subarea Plan to provide a sensitivity ranking. The habitat groups are ranked in order of sensitivity from highest (Group A) to lowest (Group E). Group F includes lands that do not support natural vegetation. Impacts to this habitat group do not require mitigation.



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Existing Biological Resources

NOT TO SCALE

FIGURE 12

R·E·C Consultants, Inc.

CARMAX AUTO SUPERSTORE OCEANSIDE EIR

Source: Busby Biological Services, (11/19/2019)

October 2020

Table 4.5-1
Vegetation Communities and Land Cover Types within the Project Area

Vegetation Community/ Land Cover Type	Subarea Plan Habitat Group	Within Parcels (acres*)	Within 50-foot Survey Buffer (acres*)	Total (acres*)
Disturbed Diegan Coastal Sage Scrub	C	0.448	0.003	0.451
Southern Riparian Forest	A	0.518	0.868	1.386
Open Water	A	0.018	0.035	0.054
Developed Land	-	0.455	2.184	2.639
Disturbed Land	F	8.109	0.542	8.650
Iceplant	F	0.454	--	0.454
Ornamental	F	0.138	0.302	0.440
Ruderal	F	0.841	--	0.841
TOTAL		**10.981***	**3.935****	**14.915****

*Acreages are approximate and rounded to the nearest thousandth of an acre.
** Total acreages represent the actual acreages without the rounded error.
Source: Biological Technical Report (Appendix D)

Disturbed Diegan Coastal Sage Scrub

Diegan coastal sage scrub is a vegetation community that consists mainly of low, soft-woody sub-shrubs that are most actively growing in winter and early spring. Many taxa of this community are facultatively drought-deciduous. Stem- and leaf-succulents are also often present but are usually not conspicuously dominant species. Diegan coastal sage scrub is typically found on dry sites, such as steep, south-facing slopes or clay-rich soils ranging from coastal Los Angeles County into northern Baja California, Mexico.

Disturbed Diegan coastal sage scrub is similar to Diegan coastal sage scrub, but it was classified as disturbed where mechanical or natural disturbance has reduced the overall cover of the community resulting in large areas colonized by herbaceous weedy species and/or bare ground. Types of disturbance include grading, clearing, scraping, off-road vehicle damage, or illegal trash disposal. Disturbed Diegan coastal sage scrub is designated as habitat group C due to the importance of this vegetation community to sensitive species including the California gnatcatcher and impacts to this habitat should be minimized as much as possible.

Diegan coastal sage scrub occurs in three small patches within the survey area. It is dominated by native plant species such as California sagebrush (*Artemisia californica)*, California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), but also contains a high proportion of non-native plant species, such as crown daisy (*Glebionis coronaria*), black mustard (*Brassica nigra*), short-pod mustard (*Hirschfeldia incana*), sweet fennel (*Foeniculum vulgare*), Russian thistle (*Salsola tragus*), and chess (*Bromus* spp.).

Southern Riparian Forest

Southern riparian forest is composed of winter-deciduous, broad-leaved tree species that require water near the soil surface and is most often found along stream courses. Typically this community contains a dense canopy of trees located within moist canyons and drainage bottoms.

This vegetation community is designated as Group A due to its association with wetland and riparian areas. Consistent with existing federal and state regulations, communities within Group A are subject to

the goal of no net loss in acreage, function and value. It is assumed that the highest priority would be given to impact avoidance and minimization and that replacement of habitat subject to unavoidable impact would occur through restoration or creation of substitute habitat areas, generally of the same kind and in the vicinity of the impacted habitat.

Southern riparian forest occurs along Buena Vista Creek in the southern portion of the area surveyed and within the 50-foot survey buffer. The community onsite contains a moderately dense canopy, ranging in height from 15 to 20 feet, and is dominated by native plant species such as various narrow-leaf willow (*Salix exigua*), arroyo willow (*Salix lasiolepis*), mulefat, cattail (*Typha* sp.), and wild grape, but also contains non-native species such as Brazilian pepper tree (*Schinus terebinthifolius*), giant reed (*Arundo donax*), and castor bean (*Ricinus communis*).

Open Water

Open Water is comprised of year-round bodies of fresh water with extremely low salinity that typically takes the form of lakes, streams, ponds, or rivers. Open water includes portions of water bodies that are usually covered by water and contain less than ten percent vegetative cover. Open water on the Project Site is associated with areas on the southeast corner of the Project Site as displayed in **Figure 12** which displays the existing biological resources onsite**.**

This land cover type is designated as Group A under the North County MHCP as it may be associated with wetland and riparian habitats.

Developed Land

Developed land is described as land that has been constructed upon or otherwise physically altered to the extent that native vegetation is no longer supported. Developed land contains permanent or semi-permanent structures, pavement, or hardscape, and landscaped areas. Within the survey area, developed land occurs as sidewalks, roadways, parking lots, and commercial buildings.

Disturbed Land

Disturbed land includes areas that retain a soil substrate but have been physically disturbed by previous human activity. These areas are no longer recognizable as a native or naturalized vegetation community. Vegetation, if present, is typically composed of predominately non-native species introduced and established through human action. These areas are not typically artificially irrigated but receive water from precipitation and runoff. Examples of disturbed land include areas that have been graded, cleared for fuel management purposes, graded construction pads, staging areas, off-road vehicle trails, and old home sites.

Disturbed land is designated as Group F under the North County MHCP as it does not support natural vegetation. Group F is also used to describe agricultural lands and are not typically subject to compensatory mitigation.

The majority of the site can be characterized as disturbed land. This land is within or adjacent to areas that appear to have been altered by regular human mechanical disturbance activities, such as grading or brush management. The disturbed land is dominated by bare ground and non-native plant species such as black mustard, tocalote (*Centaurea melitensis*), spotted spurge (*Chamaesyce maculate*), bur-clover (*Medicago polymorpha*), and chess, but also contains scattered native plant species, such as spreading

goldenbush (*Isocoma menziesii* var. *menziesii*), tarweed (*Deinandra fasciculate*), coyote brush (*Baccharis pilularis*), and dove weed (*Croton setigerus*).

Iceplant

Iceplant was designated as a land cover in the biological report to indicate areas of the Project Site that are dominated by iceplant (*Carpobrotus* ssp.), which has been introduced and established through human action. Areas mapped as iceplant are no longer recognizable as a native or naturalized vegetation community. These areas are not typically artificially irrigated but receive water from precipitation and runoff.

Iceplant is designated as Group F under the MHCP as it does not support natural vegetation and is not subject to compensatory mitigation.

Five small patches of iceplant occur within the survey area, all of which occur on the southeastern parcel boundaries. In addition to non-native iceplant, this land-cover type contains non-native grasses such as wild oat (*Avena fatua*) and chess.

Ornamental

Ornamental vegetation was designated as a land cover in the biological report to indicate areas consisting of non-native landscape and/or garden plantings that have been planted in association with buildings, roads, or other development. San Diego County supports more than 250 different types of ornamental trees and numerous other shrubs and herbs that decorate urban areas.

Ornamental land cover types are designated as Group F under the MHCP as it does not support natural vegetation and is not subject to compensatory mitigation. Group F is typically associated with disturbed land and eucalyptus.

Ornamental vegetation occurs in small, scattered patches along the perimeter of the survey area. It is composed of various non-native plant species used for landscaping such as Brazilian pepper tree, red gum (*Eucalyptus camaldulensis*), natal plum (*Carissa macrocarpa*), and Mexican fan palm (*Washingtonia robusta*).

Ruderal

Ruderal was designated as a land cover in the biological report to indicate areas dominated by non-native, weedy species that are no longer recognizable as a native or naturalized vegetation community. These areas are not typically artificially irrigated but receive water from precipitation and runoff. The species composition in ruderal areas can be similar to the species composition in disturbed areas; however, ruderal areas do not typically receive the frequent mechanical disturbance that occurs in disturbed areas.

Ruderal land cover type is designated as Group F under MHCP as it is associated with disturbed lands and is not subject to compensatory mitigation.

Ruderal vegetation occurs within four small patches in the area surveyed. These areas are dominated by non-native plant species, such as black mustard, short-pod mustard, tocalote, wild oat, and chess, but also contain scattered native plant species such as spreading goldenbush, tarweed, and coyote brush.

Zoological Resources

A total of 17 wildlife species were detected within the area surveyed during the biological resources survey conducted on July 22, 2019. Species detected are representative of the habitats within and adjacent to the survey area, and include cabbage white butterfly (*Pieris rapae*), western fence lizard (*Sceloporus occidentalis*), Anna's hummingbird (*Calypte anna*), western scrub-jay (*Aphelocoma californica*), spotted towhee (*Pipilo macalatus)*, house finch (*Carpodacus mexicanus frontalis*) and California ground squirrel (*Spermophilus beecheyi*). A list of wildlife species detected within the survey area is provided in the Biological Constraints Report (**Appendix E**).

Sensitive Biological Resources

Sensitive biological resources include sensitive vegetation communities, sensitive plant and wildlife species, wildlife movement corridors and nursery sites, and jurisdictional resources. For purposes of this EIR, sensitive species are defined as Subarea Plan-covered species; species considered rare, threatened, endangered, endemic, and/or sensitive by United States Fish and Wildlife Service (USFWS), California Native Plant Society (CNPS), and/or California Department of Fish and Wildlife (CDFW); and avian species covered by the Migratory Bird Treaty Act (MBTA) and/or California Fish and Game Code (CFGC) Section 3503.5.

Sensitive Vegetation Communities

Sensitive vegetation communities are vegetation assemblages, associations, or sub-associations that have cumulative losses throughout the region, have relatively limited distribution, support or potentially support sensitive species, or have particular value to other wildlife. Typically, sensitive vegetation communities are considered sensitive whether or not they have been disturbed. Sensitive vegetation communities are regulated by various local, state and federal resource agencies.

The sensitive vegetation communities that occur onsite include the following:

- Approximately 0.451 acres of disturbed Diegan coastal sage scrub
- Approximately 1.386 acres of southern riparian forest
- Approximately 0.054 acres of open water

Sensitive Plant Species

A sensitive plant species is one that is 1) listed as threatened or endangered or proposed for listing by federal or state agencies; 2) California Rare Plant Ranks (CRPR) List 1 or List 2; or 3) considered rare, endangered, or threatened by CDFW or other local conservation organizations or specialists. Noteworthy plant species are considered to be those that are CRPR List 3 or List 4.

Approximately 44 individual San Diego sagewort, a CRPR List 4.2 sensitive plant, were found adjacent to the survey area, on the stream bank just south of Buena Vista Creek.

Additionally, a literature review and database search resulted in a list of 56 sensitive plant species that have historically occurred within three miles of the survey area. Only one sensitive plant species – San

Diego sagewort – was observed onsite during the general and focused surveys conducted for the Project.

Focused sensitive plant species surveys were conducted for the Project. The results of these sensitive plant species surveys are summarized below. The fill sensitive plant species survey summary reports are included in the Biological Technical Report **(Appendix D).**

Focused Sensitive Plant Species Surveys

The focused sensitive plant species survey was conducted on May 15, 2020. A second survey was not conducted on the second survey date of June 8, 2020 as the site had been mowed. The results of the sensitive plant species surveys and focused *Brodiaea* species surveys were used to re-evaluate the potential for occurrence of the initial 56 sensitive plant species with potential for occurrence within the Project survey area. Of the 56 species, 52 are not expected to occur onsite based on the existing site conditions and the results of the May 2020 sensitive plant survey. Of the remaining for, only one – San Diego sagewort – was observed onsite. The other three – southern tarplant (*Centromadia parryi* ssp. *australis*), smooth tarplant (*Centromadia pungens* ssp. *laevis)*, and Del Mar Mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*) – were not observed during the May 2020 sensitive plant survey. However, the Site was mowed before the June 2020 sensitive plant survey could be completed, when these species would have been observable if onsite. Therefore, there is still a low to moderate potential for occurrence for each of these species to occur onsite.

San Diego Sagewort

San Diego sagewort is a CRPR 4.2 species designated as limited distribution and moderately threatened in California. It is a deciduous shrub in the Asteraceae family that typically blooms from May to September. This species is found in mesic, sandy soils along drainages in chaparral, coastal sage scrub, and riparian habitats. This species is threatened by development, flood control projects, and possibly by non-native plant species.

San Diego sagewort is present adjacent to and south of the survey area. It was observed along the southern bank of Buena Vista Creek during the 2019 general biological survey, 2019 jurisdictional delineation, and 2020 focused sensitive plant surveys. It is within the Project survey area, but located well outside the Project footprint.

Southern Tarplant

Southern tarplant is a CRPR 1B.1 species designated as rare, threatened, or endangered in California and elsewhere. It is an annual herb in the Asteraceae family that typically blooms from May to November. This species is found in vernal pools, along the margins of marshes, and in vernally mesic areas within grasslands. This species is threatened by habitat disturbance, population fragmentation, urbanization, development, illegal vehicle activity, foot traffic, grazing and competition from non-native plants.

Southern tarplant has a low to moderate potential to occur within the Project survey area. While no historical species occurrence records for southern tarplant exist within three miles of the survey area, marginally suitable habitat exists within the survey area. The survey area was mowed before the planned June 2020 survey, which would have been used to determine the species' presence onsite.

Smooth Tarplant

Smooth tarplant is a CRPR species 1B.1 designated as rare, threatened, or endangered in California and elsewhere. It is an annual herb in the Asteraceae family that typically blooms from April to September. This species is found in alkaline soils associated with chenopod scrub, meadows, and seeps, playas, riparian woodland, and grasslands. This species is threatened by foot traffic, agriculture, road maintenance, disking, urbanization, hydrological alterations, and flood control projects.

Smooth tarplant has a low to moderate potential to occur within the Project survey area. Historical species occurrence records for smooth tarplant exist within three miles of the survey area, but only marginally suitable habitat exists within the survey area. The survey area was mowed before the planned June 2020 survey, which would have been used to determine if this species is present onsite.

Del Mar Mesa Sand Aster

Del Mar Mesa sand aster is a CRPR 1B.1 species designated as rare, threatened, or endangered in California and elsewhere and a proposed Subarea Plan Narrow Endemic species. It is a perennial herb in the Asteraceae family that typically blooms from Map to September. This species is found in sandy soils in coastal bluff scrub, coastal sage scrub, and opening s in maritime chaparral. Del Mar Mesa sand aster is threatened by development, trampling, non-native plan species and road maintenance.

Del Mar Mesa sand aster has a low to moderate potential to occur within the Project survey area. Historical species occurrence records for this species exists within three miles of the survey area, but only marginally suitable habitat exists within the survey area. *Corethrogyne filaginifolia* was observed during the May 2020 sensitive plant survey, however, the survey area was mowed before the planned June 2020 survey, which would have been used to determine if the *Corethrogyne filaginifolia* present onsite is this variety or another more common variety.

Focused Brodiaea Species Surveys

Focused surveys for thread-leaved *Brodiaea* and Orcutt's *Brodiaea* were conducted and included site checks within suitable habitat identified within the Project survey area to document early emergent *Brodiaea* vegetation. Site checks occurred from February 14, 2020 to March 19, 2020. To determine when to initiate focused surveys Busby Biological Services, Inc. biologists coordinated with regional biologists monitoring reference sites during the 2020 survey window in order to determine when other *Brodiaea* populations within the vicinity of the Project had emerged and were observable.

Following observation of thread-leaved *Brodiaea* at the nearby reference population, focused, presence/absence surveys within the Project survey area began. Six surveys were conducted between May 14, 2020 and June 15, 2020. No thread-leaved *Brodiaea* or Orcutt's *Brodiaea* were observed during the first four focused species surveys conducted between May 14, 2020 and June 4, 2020. Between June 4, 2020 and June 8, 2020 the Project survey area was mowed. Busby Biological Services, Inc. biologists continued to survey the Project area for any sign of potential *Brodiaea* species, including two additional surveys on June 12, 2020 and June 15, 2020. No potential *Brodiaea* species were documented during these two visits.

The results of the 2020 *Brodiaea* species surveys are valid until spring 2021.

Sensitive Wildlife Species

A sensitive wildlife species is one that is 1) listed as threatened or endangered or proposed for listing by USFWS or CDFW; 2) designated as "fully protected" by CDFW, 3) considered "species of special concern" by CDFW, and/or 4) considered "taxa to watch" by CDFW. Species that are covered by the federal MBTA were also considered.

Additionally, a literature review and database search resulted in a list of 46 sensitive wildlife species that have historically occurred within three miles of the survey area. All 46 species along with their current status, habitat association, and potential for occurrence are included in the Biological Technical Report **(Appendix D)**.

Focused fairy shrimp, coastal California gnatcatcher, and least Bell's vireo surveys were conducted for the Project. The results of these sensitive wildlife species surveys are summarized below. Four sensitive wildlife species – Cooper's hawk (*Accipiter cooperii*), coastal California gnatcatcher, least Bell's vireo, and yellow warbler (*Setophaga petchia*) – were detected during the general and focused surveys conducted for the Project.

Focused Fairy Shrimp Surveys

Focused protocol-level fairy shrimp surveys were conducted in 2019 and 2020 for the Project and included both the wet and dry season fairy shrimp surveys. The 2019/2020 wet season surveys were initiated on December 3, 2019 following the first significant rain event in November/December 2019, and consisted of a total of seven sampling visits by USFWS-permitted biologist. Wet season surveys continued until March 19, 2020.

During the 2019/2020 wet season surveys, 12 basins within the Project area were identified and surveyed. Basins surveyed included road ruts, ditches, detention basins, and other depressions that became inundated at some point during the 2019/2020 wet season. The majority of the basins in the Project area appear to be continually impacted by foot traffic and vehicle activity. Fairy shrimp were not detected in any basins during the seven surveys that were conducted during the 2019/2020 wet season survey. Additionally, no other aquatic species were observed during these surveys.

The dry season survey consisted of soil sample collection and soil sample processing and analysis. Soil sample collection was performed by USFWS-permitted biologist on August 11, 2020. An appropriate amount of soil was collected from each of the basins identified during the wet season survey and was transferred to Alden Environmental, Inc. for processing and analysis.

Following the appropriate methods to separate fairy shrimp cysts from soil samples, it was determined that no cysts were present in the collected soil samples. Water fleas and seed shrimp, both common, non-sensitive invertebrate species that occur in ephemeral basins, were identified in two of the basins. No fairy shrimp cysts were extracted from any of the soil samples collected from the basins, and therefore fairy shrimp hydration, rearing, hatching, and identification were not necessary and were not performed.

The results of the focused fairy shrimp surveys are valid for three years, or until the beginning of the 2022/2023 rainy season.

Focused Coastal California Gnatcatcher Surveys

Focused protocol-level coastal California gnatcatcher surveys were conducted for the Project according to current USFWS survey protocol for this species. A habitat assessment was conducted on July 22, 2019. A total of 0.57 acre of potentially suitable coastal California gnatcatcher habitat was identified within the Project footprint and 300-foot survey buffer during this assessment.

Six focused protocol-level surveys were conducted between May 7, 2020 and June 12, 2020. All surveys were conducted during appropriate weather conditions. Although a gnatcatcher pair was detected by Busby Biological Services, Inc. biologist during the wetland delineation survey on August 10, 2019, coastal California gnatcatcher was not detected during the 2020 focused protocol-level surveys.

The results of the 2020 focused coastal California gnatcatcher surveys are valid until the beginning of breeding season 2021.

Focused Least Bell's Vireo Surveys

Focused protocol-level least Bell's vireo surveys were conducted for the Project according to current USFWS survey protocol for the species. A habitat assessment was conducted on July 22, 2019. A total of approximately 2.83 acres of potentially suitable least Bell's vireo habitat was identified within the Project footprint and 500-foot survey buffer during the assessment.

Eight focused protocol-level least Bell's vireo surveys were conducted between May 7, 2020 and July 29, 2020. All surveys were conducted during appropriate weather conditions. Although no breeding least Bell's vireo pairs were detected in the Project area, a single least Bell's vireo was detected during the eighth and final survey on July 29, 2020. The least Bell's vireo was detected within the 500-foot survey buffer area southwest of the Project area. After a relatively short observation time, the individual species disappeared downstream towards the west and was not detected again during the survey.

The results of the 2020 focused least Bell's vireo surveys are valid until the beginning of breeding season 2021 (February 2021).

Critical Habitat

Under the Endangered Species Act, USFWS designates certain areas as "critical habitat" if they determined that these geographic areas are essential for the conservation and/or recovery of a federally listed threatened or endangered species, whether or not the species currently occupies the area. Critical habitat areas often require special management and protection to assure they will remain suitable for the federally listed species for which they have been designated. Projects proposed within or adjacent to critical habitat must demonstrate that project implementation would not significantly impact or destroy the functions and values of the critical habitat.

Critical habitat for the coastal California gnatcatcher has been designated within the Buena Vista Creek Mitigation Area, located along the southern boundary of the Project survey area. No other critical habitat has been designated within the vicinity of the Project.

Wildlife Movement Corridors

Wildlife corridors are essential to maintain populations of healthy and genetically diverse plant and wildlife species. Wildlife corridors are considered sensitive by municipal, state, and federal resource conservation agencies. These corridors are undeveloped geographical linkages, that allow wildlife to

move between adjoining open space areas that are becoming increasingly isolated due to habitat fragmentation urbanization, rugged terrain, and/or changes in vegetation.

The Project Site is dominated by disturbed land and completely surrounded by commercial and residential development with the exception of Buena Vista Creek running along the southern boundary. Despite being surrounded by urban development, noise, and lighting, the riparian corridor provides a vital swath of undeveloped open space that appears to provide limited yet sufficient connectivity to be considered part of both a local and regional wildlife corridor. The Project Site, however, is outside of the City's WCPZ.

Jurisdictional Resources

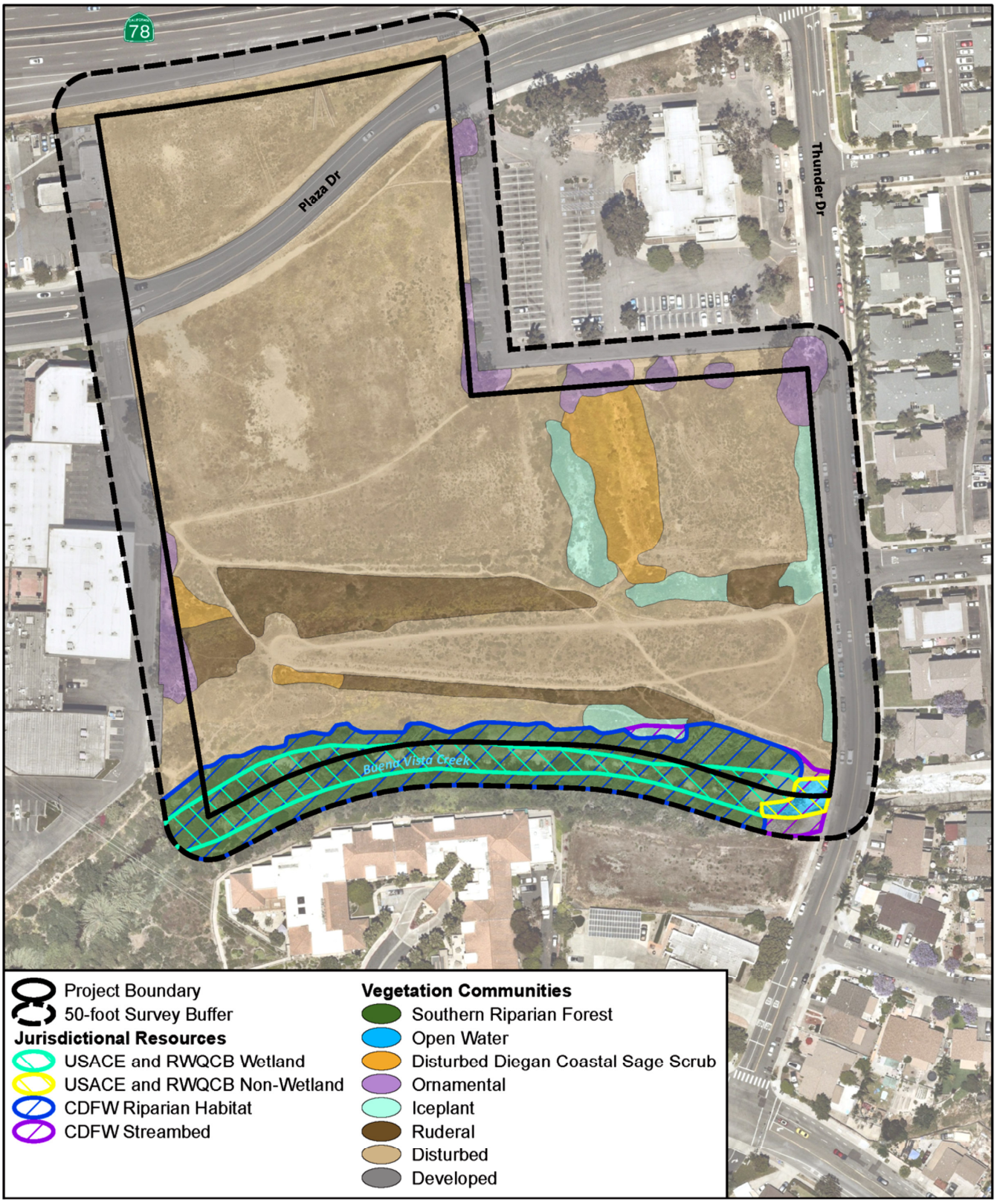
A Jurisdictional Delineation Report was prepared by Busby Biological Services, Inc. and is provided as **Appendix F**. Jurisdictional resources are considered sensitive biological resources and are regulated by the United States Army Corps of Engineers (USACE), CDFW, Regional Water Quality Control Board (RWQCB), and/or the City of Oceanside pursuant to federal, state, and local regulation and are outlined in Section 4.5.2 Regulatory Setting, below.

The wetlands and riparian area within and adjacent to Buena Vista Creek in the southern portion of the survey area were the only potential jurisdictional resources identified within the survey area. The southern riparian forest along Buena Vista Creek is a potentially jurisdictional USACE and RWQCB Wetland Water of the U.S. (WoUS) and Water of the State (WoS) and potentially jurisdictional CDFW Riparian. The open water in Buena Vista Creek is a potentially jurisdictional USACE and RWQCB Non-Wetland WoUS and WoS, and potentially jurisdictional CDFW Streambed. A portion of the disturbed land, developed land, and iceplant adjacent to Buena Vista Creek is a potentially jurisdictional CDFW Streambed. **Table 4.5-2** below displays the potentially jurisdictional resources within the survey area and **Figure 13** displays the jurisdictional resources onsite.

Table 4.5-2
Potentially Jurisdictional Resources within Survey Area

Regulatory Agency	Linear Feet	Acres*	Square Feet	Width Range (feet)
USACE/RWQCB				
Wetland WoUS/WoS	760	0.646	28,121	20-55
Non-Wetland WoUS/WoS	41	0.054	2,349	15-45
Total	**801**	**0.700**	**30,470**	**15-55**
CDFW				
Riparian	760	1.386	60,371	70-105
Streambed	212	0.122	5,270	82-90
Total	**972**	**1.508****	**65,640**	**70-105**

*Acreages are approximate and rounded to the nearest thousandth of an acre.
**Total acreages represent the actual acreages without the rounding error.
Source: Biological Technical Report (Appendix D)



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R·E·C Consultants, Inc.

Jurisdictional Resources

NOT TO SCALE

FIGURE 13

CARMAX AUTO SUPERSTORE OCEANSIDE EIR

Source: Busby Biological Services, (09/28/2020)

October 2020

4.5.2 Regulatory Setting

Federal

Endangered Species Act

The federal Endangered Species Act (ESA) provides the legal framework for the listing of species that are threatened and/or endangered with extinction as well as for the protection of listed species (threatened or endangered species) and their habitats. The ESA is administered by the USFWS. Project activities that jeopardize threatened or endangered species and the habitats upon which they relay are considered a "take" under the ESA. The ESA defines "take" as "to harass, harm, pursue, hunt shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct."

Clean Water Act

The Clean Water Act (CWA) provides guidance for the protection, restoration, and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 of the CWA requires that an applicant for a federal license or permit allowing activities that result in a discharge to jurisdictional WoUS obtain a state water quality certification that the discharge complies with other provisions of the CWA. The RWQCB administer the certification program in California.

Section 402 of the CWA is regulated by the U.S. Environmental Protection Agency (USEPA) and establishes a permitting system for the discharge of any pollutant (except dredge or fill material) into WoUS. It establishes a framework for regulating municipal and industrial storm water discharges under the National Pollutant Discharge Elimination System (NPDES) program. The RWQCB also administers the NPDES permits for construction activities and operations with oversight provided by the State Water Resources Control Board (SWRCB) and the USEPA.

Section 404 of the CWA establishes a permit program administered by the USACE regulating the discharge of dredge of fill material into navigable waters. Navigable waters are WoUS including territorial seas, which include navigable waters; perennial and intermittent streams, lakes, rivers, and ponds; and wetlands, marshes and wet meadows.

Migratory Bird Treaty Act

All migratory bird species that are native to the U.S. or its territories are protected under the federal MBTA, as amended under the Migratory Bird Treaty Reform Act of 2004. The MBTA permits the killing or transport of native migratory birds or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. No permit is issued under the MBTA, and the MBTA does not mandate specific protection measures. However, typical pre-construction requirements include nesting bird surveys during the avian breeding season and avoidance measures if nesting birds are discovered within or adjacent to a project. In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests.

State

California Endangered Species Act

The California Endangered Species Act (CESA) generally parallels the main principles and provisions of the federal ESA and is administered by CDFW. The CESA allows the "take" of listed plant and wildlife species either by concurring with a federal Incidental Take Permit under CFGC Section 2080.1 or, for species that are state-listed but not federally listed, issuing an Incidental Take Permit under CFGC Section 2081 if specific criteria are met. The Oceanside Subarea Plan is considered an Incidental Take Permit pursuant to CFGC Section 2081.

California Fish and Game Code

The California Fish and Game Code (CFGC) provides protection for several types of sensitive biological resources. CFGC Section 3503 and 3513 protects avian species, their nests, and their eggs from being "taken" unless authorized by CDFW through implementation of appropriate avoidance, minimization, and/or mitigation measures. CFGC Section 1600 through 1603 regulates project activities within rivers, streams, lakes, wetlands, and riparian habitat. CDFW can issue and Lake or Streambed Alteration (LSA) Agreement for projects affecting these jurisdictional resources. If the activity will not substantially affect any CDFW jurisdictional resources, the activity may be commenced without an LSA agreement.

Native Plant Protection Act

The Native Plant Protection Act (NPPA), under CFGC Sections 1900 through 1913, regulates collection, transport, and commerce in plants that are listed as rare or endangered.

Natural Community Conservation Planning Act

CDFW's Natural Community Conservation Planning (NCCP) Act is a combined effort by the State of California and both public and private partners to take an ecosystem approach to protecting and preserving biological diversity. CDFW and USFWS provide support, direction, and guidance to local agencies to develop an NCCP that identifies economic activity that is compatible with the long-term, regional protection of plants, wildlife, and their habitats.

The applicable NCCP for the proposed Project – the Subarea within the MHCP – is discussed in local Regulatory Setting, below.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act regulates water quality for project activities in California/ Pursuant to the Porter-Cologne Act, under Section 13000 et seq. of the California Water Code (CWC), the RWQCB issues Water Quality Certifications for project activities that fill or dredge within Wetland and Non-Wetland WoUS and WoS, including isolated waters such as vernal pools, and other waters showing lack of connectivity to a Traditional Navigable Water (TNW).

Local

North County Multiple Habitat Conservation Program

The MHCP is a comprehensive conservation planning process that was developed to create, manage, and monitor an ecosystem preserve in northwestern San Diego County. It is one of three sub-regional plans that will contribute to a regional preserve system in County. The MHCP is intended to conserve

not only habitat that is already in public ownership, but also other areas that will offer protection to rare, threatened, and endangered plants and wildlife.

The MHCP was adopted and certified by the San Diego Association of Governments (SANDAG) Board of Directors on March 28, 2003 and encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach and Vista. Each of these cities must adopt its own Subarea Plan that identifies city-specific regulations and policies pertaining to the sensitive resources found within the jurisdiction. The MHCP allows local jurisdictions to maintain land use control and development flexibility by planning a regional preserve system that can meet future public and private project mitigation needs.

Draft Oceanside Subarea Plan

The Subarea Plan is a draft Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) prepared pursuant to the ESA and the NCCP Act, which are described above. The Subarea Plan forms a part of the MHCP and addresses how the City will allow for continued economic development within its jurisdiction while conserving the biodiversity and ecosystem function of the area.

Approval and adoption of the Subarea Plan is intended to result in issuance of federal and state authorizations for the take of certain listed rare, threatened, or endangered species. These authorizations would be granted to the City by the USFWS and CDFW. The City, in turn, would then authorize the taking of natural habitats or associated species by projects within its jurisdiction, as long as those biological resources are adequately conserved by the Subarea Plan and the proposed projects are consistent with and covered by the provisions of the Subarea Plan. The draft Oceanside Subarea Plan has yet to be adopted by City Council, and implementing agreements with CDFW and USFWS have yet to be signed. Therefore, incidental take permits currently cannot be issued under the plan. However, the document provides guidance for project applicants to determine potential impacts to biological resources and to develop appropriate mitigation, avoidance, and minimization measures.

The Subarea Plan assigns all land within the City into one of four Preserve Planning Zones: Wildlife Corridor Planning Zone, Off-site Mitigation Zone, Coastal Zone, and Ag Exclusion Zone. Each of these has varying policies and standards that are applicable in addition to the City-wide standards.

City of Oceanside General Plan

Land Use Element

The Land Use Element of the General Plan contains environmental resource management objectives and policies pertaining to biological resources. Applicable objectives and policies include the following:

> **3.11 Vegetation and Wildlife Habitats Objective:** Recognition and preservation of significant areas with regard to vegetation and wildlife habitats.
>
> **Policies:**
>
> A. A biological survey report, including a field survey, shall be required for a proposed project site if the site is largely or totally in a natural state or if high interest species of plants or animals have been found on nearby properties.

B. Where appropriate, the City shall apply open space land use designations and open space zoning to areas of significant scenic, ecological, or recreational value.

C. In areas where vegetation or wildlife habitat modification is inevitable, mitigation and/or compensatory measures such as native plant restoration, land reclamation, habitat replacement, or land interest donation will be considered.

D. Areas containing unique vegetation or wildlife habitats shall receive a high priority for preservation.

E. Specific plans shall be developed in conjunction with regional and county agencies where appropriate, for areas where there is occurrence of endangered or threatened species.

Environmental Resource Management Element

The Environmental Resource Management Element of the General Plan contains long-range policy goals and objectives to evaluate and manage these biological resources including the following:

Vegetation and Wildlife Habitats Objective: Conserve and enhance vegetation and wildlife habitats, especially areas of rare, endangered, or threatened species.

4.5.3 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, impacts would be considered significant if the Project would:

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS);
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS;
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4.5.4 Project Impact Analysis

For the purposes of biological resources impact analysis, direct, indirect, permanent and temporary impacts are defined as the following:

Direct Impacts: Defined as any disturbance, alteration, or destruction of biological resources that could result from project related activities. Examples of direct impacts would include diverting surface water flows, encroaching into wetlands, clearing vegetation, and taking an individual species and/or its associated plan communities.

Indirect Impacts: Defined as any disturbance, alteration, or destruction of biological resources that could result from project related activities. Examples of indirect impacts include increased human activity, elevated noise and dust levels, decreased water quality, soil compaction, and the introduction of invasive wildlife and plants.

Permanent Impacts: Defined as those that result in the irreversible removal or destruction of biological resources. Examples of permanent impacts include constructing a building or permanent road on an area containing biological resources.

Temporary Impacts: Those impacts considered to have reversible effects on biological resources. Examples of temporary impacts include the removal of vegetation for construction activities and subsequently allowing the natural vegetation to recolonize the impact area, the accumulation of dust on adjacent vegetation during construction, or the increased noise levels that may interfere with the breeding behaviors of wildlife species.

Cumulative Impacts: Incremental impacts from two or more past, present, or probable future projects whose individual impacts can be individually minor but when combined are considerable.

Would the Project:

a. *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS)?*

The Project has the potential to result in potentially significant impacts to sensitive plant and wildlife species that may occur within and/or adjacent to the Project development footprint, including proposed off-site improvements.

The Project has been designed to include the requisite 100-foot wetland buffer, which includes the required 50-foot biological buffer on the jurisdictional resources as well as the requisite 50-foot planning buffer. The planning buffer serves as an area of transition between the biological buffer and specified land uses on adjoining uplands. Foot paths, bikeways, and passing recreational uses may be incorporated into the planning buffer, but buildings, roads and other intensive uses are prohibited. The following uses are prohibited in the 50-foot biological buffer: new development, foot paths, bikeways, passive recreational uses not already planned, and fuel modification activities for new development. The riparian area and associated natural habitats within the 100-foot buffer will be designated as biological open space and incorporated into the Preserve per Section 5 of the Oceanside Subarea Plan.

Sensitive Plant Species

Focused sensitive plant surveys were conducted for the Project by Busby Biological Services, Inc. including four (4) rounds of focused *Brodiaea* species surveys and one (1) round of focused sensitive plant surveys. Based on the data collected during the *Brodiaea* species surveys and focused sensitive

plant surveys, the potential for occurrence of the 56 sensitive plant species that were evaluated for their potential to occur within the survey area was determined. One (1) sensitive plant species, San Diego sagewort, was observed within the survey area. Of the remaining 55 species, 52 species are not expected to occur within the Project survey area, and three (3) species, southern tarplant, smooth tarplant, and Del Mar Mesa sand aster, have a low to moderate potential to occur within the Project survey area. Sensitive plant species such as the San Diego sagewort have the potential to occur onsite, and therefore, a **significant impact** will occur (**Impact BIO-1a).**

As provided in the Biological Technical Report (**Appendix D**), the results of the 2020 *Brodiaea* species surveys are valid until spring 2021 and the sensitive plant surveys were incomplete. Project construction is anticipated to begin in November 2021 and therefore, the presence of sensitive *Brodiaea* species has the potential to occur within the Project area and represents a **significant impact** (**Impact BIO-2**).

Therefore, the Project will have a substantial adverse effect, either directly or through habitat modifications, on a plant species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations or by CDFW or USFWS.

Sensitive Wildlife Species

Focused sensitive wildlife species surveys were conducted for fairy shrimp, coastal California gnatcatcher, least Bell's vireo and other MBTA-covered species.

Impacts to Sensitive Invertebrate Species

No fairy shrimp or other sensitive invertebrate species were documented during the general and focused wildlife species surveys conducted for the Project. The results of the 2019/2020 wet season fairy shrimp surveys combined with the 2020 dry season surveys are valid until the 2022/2023 rainy season. Construction of the Project is anticipated to begin in November 2021, however, if Project construction has not been initiated prior to the 2022/2023 wet season, a **significant impact (Impact BIO-3)** will occur**.**

Impacts to Sensitive Bird Species

No coastal California gnatcatchers were detected during the 2020 focused surveys; however, a pair of coastal California gnatcatchers was detected within the survey area, incidentally during the jurisdictional delineation prior to the 2020 focused survey. It is assumed that the pair was foraging but not breeding within the Project survey area. The presence of coastal California gnatcatcher has the potential to occur within the Project area. The results of the 2020 focused coastal California gnatcatcher surveys are valid until the beginning of breeding season of 2021 (February 2021). Project construction is anticipated to begin in November 2021 and therefore construction will not be initiated prior to the 2021 breeding season, and a **significant impact (Impact BIO-4)** will occur.

A single foraging least Bell's vireo was detected during the 2020 focused surveys within the 500-foot survey buffer area southwest of the Project Site. The results of the 2020 focused least Bell's vireo surveys are valid until the beginning of the breeding season 2021 (February 2021). Project construction is anticipated to begin in November 2021 and therefore construction will not be initiated prior to the 2021 breeding season, and a **significant impact (Impact BIO-5)** will occur**.**

Two other sensitive bird species, Cooper's hawk and yellow warbler, were detected during the general and focused surveys conducted for the Project. In addition, other sensitive MBTA-covered bird species have potential to occur onsite and within the Buena Vista Creek area. The Project would result in direct and indirect impacts to Cooper's hawk, yellow warbler and other MBTA-covered bird species that occur within and adjacent to the Project footprint, and therefore a **significant impact (Impact BIO-6)** will occur**.**

Impacts to Sensitive Mammal Species

No direct or indirect impacts to sensitive mammal species are expected to occur from implementation of the Project since no sensitive mammal species were located onsite. Therefore, no mitigation measures would be required for impacts to sensitive mammals. Impacts to sensitive mammal species are **less than significant.**

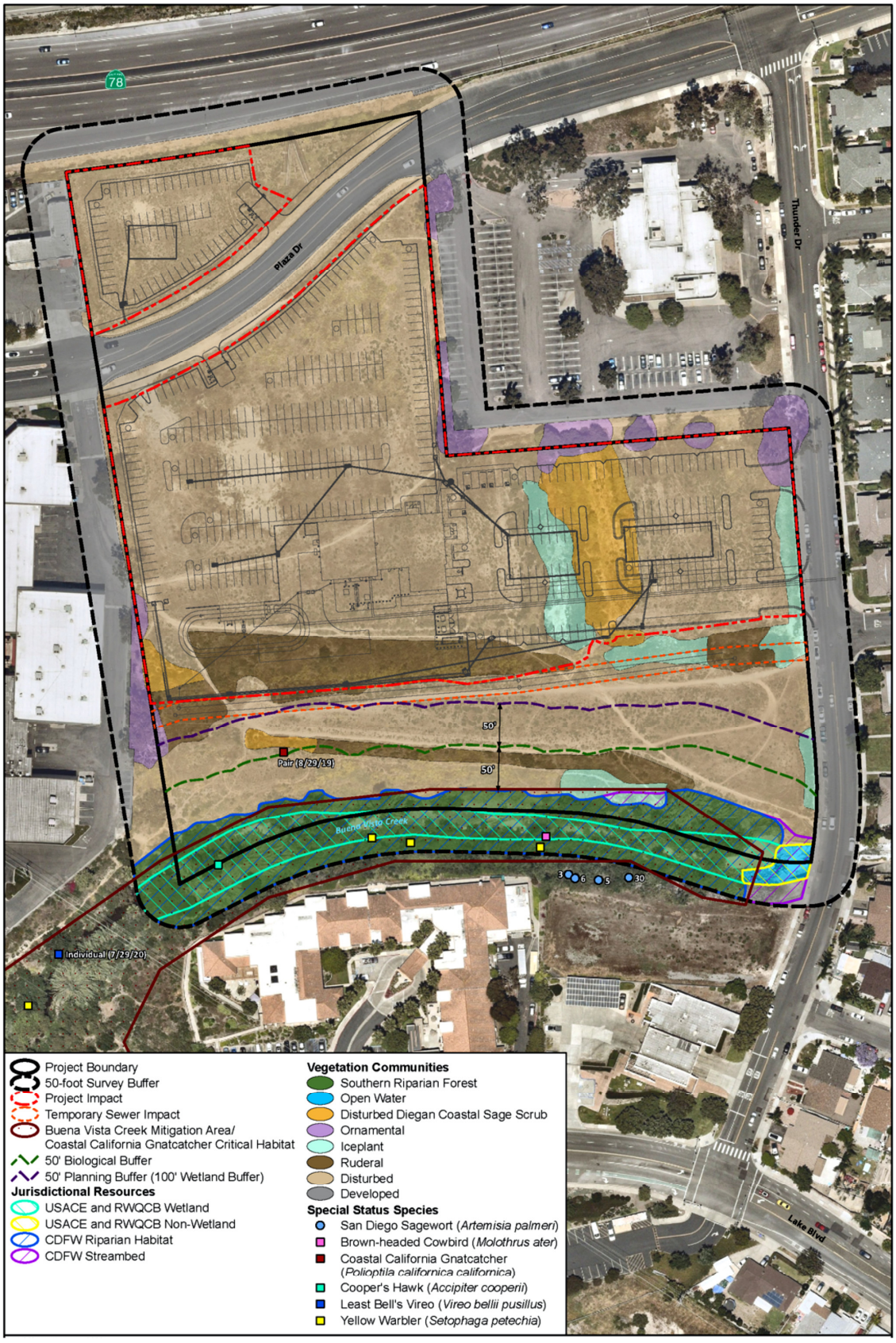
The Project will have a substantial adverse effect, either directly or through habitat modifications, on a wildlife species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS?

Eight vegetation communities occur onsite, three (3) of which are sensitive vegetation communities designated by the MHCP and Subarea Plan. Disturbed Diegan coastal sage scrub is designated as habitat Group C, southern riparian forest and open water are designated as Group A. Impacts to vegetation under Groups A and C would be considered significant and would require mitigation under the MHCP and Subarea Plan. The Project has the potential to result in significant impacts to sensitive vegetation communities that occur within and adjacent to the Project footprint.

Direct Impacts to Sensitive Vegetation Communities

The Project has the potential to result in direct impacts to approximately 7.041 acres of vegetation communities and land covers identified within the Project footprint including approximately 6.695 acres of permanent direct impacts and approximately 0.346 acre of temporary impacts within the proposed sewer realignment footprint. These direct impacts are summarized in **Table 4.5-3** below. Project impacts to biological resources are displayed in **Figure 14**.



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Biological Resources Impacts

NOT TO SCALE

FIGURE 14

R·E·C Consultants, Inc. | CARMAX AUTO SUPERSTORE OCEANSIDE EIR

Source: Busby Biological Services, (10/09/2020)

October 2020

Table 4.5-3
Impacts to Vegetation Communities/ Land Cover Types

Vegetation Community/ Land Cover Type	Subarea Plan Habitat Group	Permanent Direct Impacts (acres*)	Temporary Direct Impacts (acres*)	Total Direct Impacts (acres*)
Disturbed Diegan Coastal Sage Scrub	C	0.408	--	0.408
Southern Riparian Forest	A	--	--	--
Open Water	A	--	--	--
Developed Land	-	0.007	0.001	0.007
Disturbed Land	F	5.425	0.209	5.63
Iceplant	F	0.228	0.042	0.270
Ornamental	F	0.124	0.004	0.128
Ruderal	F	0.502	0.090	0.592
	TOTAL**	**6.695**	**0.346**	**7.041**

*Acreages are approximate and rounded to the nearest thousandths of an acre.
**Total acreages represent the actual acreages without the rounding error.
Source: Biological Technical Report (Appendix D)

Impacts to approximately 6.633 acres of non-sensitive habitats designated as Group F, including developed land, disturbed land, iceplant, ornamental and ruderal, would not be considered significant and would not require mitigation under the MHCP and Subarea Plan. Habitats under Group F are considered lands that do not support natural vegetation. Disturbed Diegan coastal sage scrub is designated as habitat group C due to the importance of this vegetation community to sensitive species including the California gnatcatcher. Unavoidable direct impacts to approximately 0.408 acre of disturbed Diegan coastal sage scrub will occur as a result of the Project and a **significant impact (Impact BIO-7)** will occur**.**

No direct impacts to riparian habitat would result from the Project. The Project has been designed to include the requisite 100-foot wetland buffer, which includes the required 50-foot biological buffer on the jurisdictional resources as well as the requisite 50-foot planning buffer. The Project would encroach temporarily, approximately six (6) feet, into the 50-foot planning buffer during the proposed sewer realignment. As a result, temporary direct impacts will occur to approximately 0.008 acre (334 SF) of disturbed habitat within the planning buffer. These impacts are considered temporary as they would recover on their own within one growing season. Additionally, because these impacts are minimal and because they are located at least 94 feet from the riparian habitat, no direct impacts to riparian habitat will occur.

The Project would result in temporary and permanent impacts to 0.007 acre of developed land. Developed land does not have a habitat group designation under the MHCP and Subarea Plan as it has been physically altered to the extent that native vegetation is no longer supported. Impacts to developed land are not significant and do not require mitigation. The Project would result in temporary and permanent impacts to disturbed land, iceplant, ornamental and ruderal land cover/vegetation communities. These land cover types are designated as habitat Group F which consists of lands that do not support natural vegetation. Impacts to this habitat group are not considered significant and do not require mitigation.

The Project will have a substantial adverse effect on a sensitive habitat community identified in local or regional plans, policies, regulations, or by CDFW or USFWS.

Indirect Impacts to Sensitive Vegetation Communities

Indirect impacts to sensitive vegetation (i.e. disturbed Diegan coastal sage scrub) will occur during Project construction. Indirect impacts, including fugitive dust accumulation from adjacent construction activities could occur to a small patch of disturbed Diegan coastal sage scrub located approximately 15 feet south of the proposed sewer realignment footprint which has the potential to interfere with photosynthesis and germination of sensitive vegetation communities, and therefore a **significant impact** will occur (**Impact BIO-1b).**

No indirect impacts to riparian habitat would result from Project construction. The Project has been designed to include the requisite 100-foot wetland buffer, which includes the required 50-foot biological buffer on the jurisdictional resources as well as the requisite 50-foot planning buffer. Presence of the 100-foot buffer ensures no indirect impacts to riparian habitat will occur.

The Project will have a substantial adverse effect on a sensitive natural communities identified in local or regional plans, policies, regulations, or by CDFW or USFWS.

Critical Habitat

No impacts to critical habitat are anticipated to occur from the Project. Critical habitat for the coastal California gnatcatcher has been designated within the Buena Vista Creek Mitigation Area. The Project, however, has been designed to include the 100-foot buffer on the riparian vegetation associated with Buena Vista Creek, which equates to an approximately 80- to 140-foot buffer on the designated coastal California gnatcatcher critical habitat. Impacts to critical habitat will be **less than significant.**

c. *Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

No impacts to potentially jurisdictional resources are expected to occur from implementation of the Project. The Project has been designed to include the mandatory 100-foot buffer from the riparian habitat boundary, as mapped during the formal Jurisdictional Delineation Report **(Appendix F)**. This buffer includes a 50-foot biological buffer as well as a mandatory 50-foot planning buffer. Project design and implementation would include the 100-foot buffer and therefore no impacts to riparian habitat will occur. However, due to the Project's close proximity to Buena Vista Creek, the Project has the potential to have a substantial adverse effect on state or federally protected wetlands and a **significant impact** (**Impact BIO-1c)** will occur.

d. *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Due to the high level of disturbance within the Project Site, no impacts to wildlife corridors or native wildlife nursery sites are expected to occur from implementation of the Project. The Project is not located within the WCPZ, however, Buena Vista Creek and the associated riparian area along the southern boundary of the Project Site provides sufficient connectivity to be considered part of both a local and regional wildlife corridor. The Project has been designed to include the 100-foot buffer on the riparian vegetation associated with Buena Vista Creek, and therefore no impacts to wildlife corridors are anticipated. The Project would not substantially interfere with the movement of any native resident or

migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites, and impacts will be **less than significant.**

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The City's General Plan policies related to vegetation and wildlife are provided in Section 4.5.2 Regulatory Setting, above.

In accordance with the Land Use Element of the General Plan Policy 3.11A, a Biological Technical Report (**Appendices D)**, Biological Constraints Report (**Appendix E)**, Jurisdictional Delineation Report (**Appendix F**) and associated focused species surveys as discussed above were completed for the Project by Busby Biological Services, Inc., and the results have been incorporated into this EIR. The biological reports include field surveys, focused surveys, jurisdictional delineation and literature review to assess potential impacts to sensitive biological resources that would result from implementation of the Project. The surveys conducted to identify biological resources were performed in accordance with applicable plans, policies and ordinances set forth by the federal and state wildlife agencies, and the City, as well as current industry and agency standards. Thus, the Project is in compliance with Land Use Element of the General Plan Policy 3.11A.

Land Use Element Policy 3.11C requires the preservation of biological resources, or where vegetation and habitat modification is inevitable, appropriate mitigation for potential impacts shall be incorporated. The Project would result in potentially significant impacts to sensitive biological resources including sensitive plant species and vegetation communities, jurisdictional resources, *Brodiaea* species, fairy shrimp, coastal California gnatcatcher, least Bell's vireo, other MBTA-covered species and disturbed Diegan coastal sage scrub. Appropriate mitigation measures in compliance with the Oceanside Subarea Plan and applicable federal, state, and local codes are required and are provided in Section 4.5.5 Mitigation Implementation and Monitoring of this EIR. Thus, the Project is in compliance with Land Use Element of the General Plan Policy 3.11C.

The Project Site does not constitute unique vegetation or wildlife habitats; or significant scenic, ecological or recreational value; or contain endangered or threatened species that are addressed in the Land Use Element of the General Plan Policies 3.11B, 3.11D and 3.11E. Thus, the Project will not conflict with these policies.

The Project would comply with all applicable City regulations and requirements related to Landscaping including Section 3019 of the Zoning Ordinance, Landscape Development Manual and City of Oceanside Municipal Code.

The Project has been designed to include the requisite 100-foot wetland buffer, which includes the required 50-foot biological buffer on the jurisdictional resources as well as the requisite 50-foot planning buffer. The planning buffer serves as an area of transition between the biological buffer and specified land uses on adjoining uplands. Foot paths, bikeways, and passing recreational uses may be incorporated into the planning buffer, but buildings, roads and other intensive uses are prohibited. The following uses are prohibited in the 50-foot biological buffer: new development, foot paths, bikeways, passive recreational uses not already planned, and fuel modification activities for new development. The riparian area and associated natural habitats within the 100-foot buffer will be designated as biological open space and incorporated into the Preserve per Section 5 of the Oceanside Subarea Plan.

The Project will not conflict with any local policies or ordinances protecting biological resources, and impacts will be **less than significant.**

f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The Project Site is located in the North County MHCP, which was adopted by SANDAG on March 28, 2003. The North County MHCP covers the City in addition to the cities of Carlsbad, Encinitas, Escondido, San Marcos, Solana Beach, and Vista. Each of these cities must adopt its own Subarea Plan that identifies city-specific regulations and policies pertaining to the sensitive resources found within the jurisdiction. The MHCP allows local jurisdictions to maintain land use control and development flexibility by planning a regional preserve system that can meet future public and private project mitigation needs.

The Project is located within the draft Oceanside Subarea Plan which is the Habitat Conservation Plan (HCP) utilized by the City to guide protection of biological resources. The Subarea Plan has yet to be adopted by City Council, and implementing agreements with CDFW and USFWS have yet to be signed. Therefore, incidental take permits currently cannot be issued under the plan. However, the document provides guidance for project applicants to determine potential impacts to biological resources and to develop appropriate mitigation, avoidance, and minimization measures.

Although the Project was designed to comply with the measures outlined in the MHCP and the Subarea Plan, the Project has the potential to result in significant impacts to sensitive plant species and vegetation communities (**Impact BIO-1a and Impact BIO-1b**), jurisdictional resources (**Impact BIO-1c**), *Brodiaea* species (**Impact BIO-2**), fairy shrimp (**Impact BIO-3**), coastal California gnatcatcher (**Impact BIO-4**), least Bell's vireo (**Impact BIO-5**), and other MBTA-covered species (**Impact BIO-6**). The Project would result in unavoidable direct impacts to disturbed Diegan coastal sage scrub (**Impact BIO-7**) and therefore, a **significant impact** will occur.

The Project has been designed to include the requisite 100-foot wetland buffer, which includes the required 50-foot biological buffer on the jurisdictional resources as well as the requisite 50-foot planning buffer. The riparian area and associated natural habitats within the 100-foot buffer will be designated as biological open space and incorporated into the Preserve per Section 5 of the Oceanside Subarea Plan. The Project would include mitigation measures consistent with the Subarea Plan to address potential direct, significant and unavoidable impacts to sensitive biological resources.

The Project would conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional, or state HCP.

4.5.5 Mitigation Implementation and Monitoring

Sensitive Plant Species and Vegetation Communities and Jurisdictional Resources (Impact BIO-1a, Impact BIO-1b, and Impact BIO-1c)

MM-BIO-1a Pre-Construction Mitigation Measures

Pre-Construction Meeting: Prior to construction, a qualified biological monitor will attend the preconstruction meeting, discuss the Project's biological monitoring program

with construction contractors, and arrange to perform any follow up mitigation measures and reporting for the proposed Project.

Resource Delineation and Protection Measures: Prior to construction activities, a qualified biological monitor will supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other Project mitigation measures. This pre-construction phase will include flagging sensitive plant species and delineating buffers to protect sensitive biological resources (e.g., habitats, flora and fauna species, nesting birds) during construction activities. In addition, appropriate BMPs will be installed as applicable to provide fugitive dust control, minimize lighting and noise in adjacent habitats, and avoid the introduction of exotic and invasive plant and animal species into the area. Responsible construction practices as well as storm water and runoff management will also be included as part of the BMPs.

Contractor Environmental Awareness Training: Prior to commencement of construction activities, a qualified biological monitor will meet with all construction contractors to conduct an on-site contractor environmental awareness training to discuss the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain construction limits flagging, discuss sensitive resource flagging, review wetland buffers, clarify acceptable access routes/methods and staging areas).

MM-BIO-1b Construction Measures

Biological Monitoring: During construction, all construction activities, including access and staging, will be restricted to areas previously identified and depicted on the approved Project plans. A qualified biological monitor will monitor construction activities as needed to verify that construction activities do not encroach into biologically sensitive areas and that, if applicable, the mitigation measures developed to accommodate any sensitive species located during the pre-construction surveys are being implemented. The qualified biological monitor will complete a Daily Biological Monitoring Form to document all construction and monitoring activities.

Subsequent Resource Identification: During construction, the qualified biological monitor will note/act to prevent any new disturbances to habitat, flora, and/or fauna on-site (e.g., flag newly identified sensitive resources for avoidance during access). If active nests or other previously unknown sensitive resources are detected, all Project activities that directly impact the resource will be delayed until species-specific local, state, or federal regulations have been determined and applied by the qualified biological monitor.

MM-BIO-1c Post-Construction Measures

Upon completion of Project construction, a post-construction report that summarizes the construction activities, actual Project impacts, and Project design/mitigation measures implemented before and during construction will be prepared for the Project. If Project impacts exceed the approved totals, additional impacts will be mitigated in accordance with the Subarea Plan and other applicable local, state, and federal laws.

The qualified biological monitor will submit the post-construction report to the City of Oceanside within 30 days of construction completion.

Sensitive *Brodiaea* Species (Impact BIO-2)

MM-BIO-2 Prior to construction of the Project, focused sensitive plant species surveys of the Project Site shall include general rare plant surveys in addition to focused *Brodiaea* species surveys by a qualified biologist. Rare plant surveys shall be conducted twice, including one in early spring and one in late spring/early summer prior to Project construction in order to document any sensitive plant species that occur within the Project area. Six (6) focused *Brodiaea* species surveys shall be conducted in spring prior to construction with the timing based on the emergence of the species documented during reference site checks.

If no sensitive plant species are documented within the Project survey area during focused surveys, no additional avoidance, minimization measures or mitigation measures would be required.

If sensitive plant species are documented within the Project survey area, impacts to these species shall be avoided to the extent feasible. Unavoidable impacts shall be minimized and/or mitigated through compensatory measures (e.g., restoration, transplantation, habitat preservation) that will be determined based on the species present, population estimate and significance of the impacts. All significant unavoidable impacts shall require additional mitigation measures to reduce impacts to below a level of significance.

Fairy Shrimp (Impact BIO-3)

MM-BIO-3 Prior to construction of the Project, if construction has not been initiated prior to the first rain event of the 2022/2023 rainy season, additional pre-construction surveys shall be conducted prior to construction initiation in order to update the status of the fairy shrimp species within the Project survey area. Pre-construction fairy shrimp surveys shall be conducted by a qualified biologist in accordance with current USFWS survey guidelines.

If sensitive fairy shrimp species are documented within the survey area, impacts to listed fairy shrimp shall be avoided to the extent feasible. Unavoidable impacts to these species would be considered significant and would require consultation with the USFWS under Section 10(a)(1)(B) of the ESA to develop project-specific minimization and mitigation measures to reduce these impacts to below a level of significance.

Coastal California Gnatcatcher (Impact BIO-4)

MM-BIO-4 Prior to construction of the Project, if construction has not been initiated prior to the 2021 breeding season (February 1), additional pre-construction surveys shall be conducted prior to construction initiation to determine if coastal California gnatcatcher is present in the Project survey area. Focused coastal California gnatcatcher surveys shall be conducted by a qualified biologist in accordance with current USFWS survey guidelines.

Impacts to coastal California gnatcatcher shall be avoided to the extent feasible. Unavoidable impacts to this species would be considered significant and would require consultation with the USFWS under Section 10(a)(1)(B) of the ESA to develop project-specific minimization and mitigation measures (e.g., construction outside of breeding season, habitat protection, noise attenuation) in order to reduce impacts to a level below significance.

Least Bell's Vireo (Impact BIO-5)

MM-BIO-5 Prior to construction of the Project, if construction has not been initiation prior to the 2021 breeding season (February 1), additional pre-construction surveys shall be conducted prior to construction initiation to determine if least Bell's vireo is present in the Project survey area. Pre-construction focused least Bell's vireo surveys shall be conducted by a qualified biologist in accordance with current USFWS survey guidelines.

Impacts to least Bell's vireo shall be avoided to the extent feasible. Unavoidable impacts to this species would be considered significant and would require consultation with the USFWS under Section 10(a)(1)(B) of the ESA to develop project-specific minimization and mitigation measures (e.g., construction outside of breeding season, habitat protection, noise attenuation) to reduce these impacts to below a level of significance.

MBTA-Covered Bird Species (Impact BIO-6)

MM-BIO-6 During construction, all vegetation clearing will occur outside of the breeding season (February 1 to September 15) to avoid impacts to sensitive avian species (e.g., any species identified as a listed, candidate, sensitive, or special status species; any species covered by the MBTA). If vegetation clearing must occur during the breeding season, a qualified biological monitor will conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey will be conducted no more than four (4) calendar days prior to the start of construction activities (including removal of vegetation). The results of the pre-construction nesting bird survey will be submitted to the City of Oceanside for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan will be prepared and will include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan will be submitted to the City of Oceanside for review and approval and will be implemented to the satisfaction of the City of Oceanside. The qualified biological monitor will verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.

Disturbed Diegan Coastal Sage Scrub (Impact BIO-7)

MM-BIO-7 Prior to issuance of a building permit, the Project shall mitigate impacts to disturbed Diegan coastal sage scrub within the WCPZ or within a PAMA at a 3:1 ratio. As such, the Project shall preserve 1.224 acres of Diegan coastal sage scrub at an existing mitigation bank or within a PAMA which shall be determined and approved by the City of Oceanside Planning Department.

4.5.6 Level of Significance After Mitigation

The analysis provided in Section 4.5.4 identified the potential for significant impacts related to sensitive plant species and vegetation communities, jurisdictional resources, *Brodiaea* species, fairy shrimp, coastal California gnatcatcher, least Bell's vireo, other MBTA-covered species and disturbed Diegan coastal sage scrub. Implementation of mitigation measure MM-BIO-1a through MM-BIO-1c requires specific pre-construction, construction and post-construction requirements for the provision of pre-construction meeting, resource delineation and protection measures, awareness training, biological monitoring, resource identification and post-construction reporting. Compliance with these mitigation measures would provide onsite construction personnel with further information and protocol in the event that sensitive biological resources are identified. Flagging of resources will provide a physical and visual barrier to these sensitive resources, and the presence of a biological monitor will further protect sensitive biological resources. Compliance with mitigation measure MM-BIO-1a through MM-BIO-1c will reduce impacts to sensitive plant species and vegetation communities and jurisdictional resources to level below significance.

Implementation of mitigation measure MM-BIO-2 would ensure focused sensitive plant species surveys, including *Brodiaea* species surveys are conducted prior to construction, once the 2020 focused surveys are no longer valid. Additional focused surveys will ensure that no new species are located onsite, reducing potential impacts to a less than significant level.

Implementation of mitigation measure MM-BIO-3 will require focused fairy shrimp surveys prior to construction of the Project upon expiration of the 2019/2020 surveys. Pre-construction surveys will ensure that no fairy shrimp species are present onsite before commencement of construction activities. With implementation of MM-BIO-2, impacts related to fairy shrimp will be reduced to levels below significance.

Implementation of mitigation measure MM-BIO-4 will require coastal California gnatcatcher surveys prior to construction, upon expiration of the 2020 focused surveys. Additional pre-construction surveys will ensure that coastal California gnatcatcher species are not present or have the likelihood to be present onsite during construction activities. With implementation of MM-BIO-3, impacts related to coastal California gnatcatcher would be reduced to less than significant levels.

Implementation of mitigation measure MM-BIO-5 will require least Bell's vireo surveys prior to construction of the Project, upon expiration of the 2020 focused surveys. Pre-construction least Bell's vireo surveys will ensure species are not present onsite or have the likelihood to be present onsite during construction activities. With implementation of MM-BIO-4, impacts related to least Bell's vireo would be reduced to a level below significance.

Implementation of mitigation measure MM-BIO-6 will require avoidance of vegetation clearing during the avian breeding season, in order to reduce impacts to sensitive avian species and MBTA-covered species such as Cooper's hawk and yellow warbler. Avoidance of clearing during the breeding season will reduce any impacts to sensitive avian and MBTA-covered species to a level below significance.

Implementation of mitigation measure MM-BIO-7 will require preservation of 1.224 acres of Diegan coastal sage scrub at an existing mitigation bank or Pre-Approved Mitigation Area. Off-site mitigation will offset impacts associated with the unavoidable direct impacts to Diegan coastal sage scrub in

accordance with the Subarea Plan. With implementation of mitigation measure MM-BIO-7, impacts to Diegan coastal sage scrub will be reduced to a level below significance.

Therefore, impacts to all biological resources impacts will be reduced to below a level of significance.

Chapter 4.6 CULTURAL RESOURCES

The following document was used in the preparation of this section and is included in its entirety in **Appendix G**:

ASM Affiliates. August 9, 2019. *Archaeological Survey Report for the CarMax Project, Oceanside, California.*

4.6.1 Environmental Setting

Regional Prehistoric and Historic Context

Prehistory

Archaeological study along the coast of southern California has documented a diverse range of human occupation extending from the early Holocene into the Ethnohistoric period. The prehistory of San Diego County is generally divided into three (3) major periods: Paleo-Indian, Archaic, and Late Prehistoric. These time periods are characterized by patterns in material culture that represent distinct regional trends in the economic/social organization of prehistoric groups.

Paleo-Indian Period

The most widely accepted model of antiquity of human occupation in the New World posits that humans first entered the western hemisphere between 12,000 and 15,000 years before present (B.P.) While there is no firm evidence of human occupation in coastal southern California prior to 12,000 B.P., dates as early as 23,000 B.P and even 48,000 B.P. have been reported. As in most of North America, the earliest recognized period of California prehistory is termed Paleo-Indian. In southern California, this period is usually considered to date from at least 10,000 B.P. until 8500 to 7200 B.P., and is represented by what is known as the San Dieguito complex. Within the local classificatory system, San Dieguito assemblages are composed almost entirely of flaked stone tools, including scrapers, choppers, and large projectile points.

Archaic Period

The Archaic period (also referred to as the Early Milling period) extends back at least 7,200 years, possibly as early as 9000 B.P. Archaic subsistence is generally considered to have differed from Paleo-Indian subsistence in two major ways. First, gathering activities were emphasized over hunting, with shellfish and seed collecting having a high importance. Second, milling technology, frequently employing portable ground stone slabs, was developed. Early archaic occupations in the County are most apparent along the coast and the major drainage systems that extend inland from the coastal plains. Coastal Archaic sites are characterized by cobble tools, basin metates, manos, discoidals, a small number of "Pinto" and "Elko" series dart points, and flexed burials. Together, these elements typify what is termed the La Jolla complex in the County, which appears as the early coastal manifestation of a more diversified way of life.

Late Prehistoric Period

Assemblages derived from the Late Prehistoric sites in the County differ in many ways from those in the Archaic tradition. The occurrence of small, pressure-flaked projectile points, the replacement of flexed inhumations with cremations, the introduction of ceramics and an emphasis on inland plant food collection, processing, and storage are cultural patterns that were well established by the second millennium Anno Domini (A.D.) Inland villages appeared along major watercourses in the foothills and in montane valleys where seasonal exploitation of acorns and piñon nuts was common, resulting in milling stations on bedrock outcrops. Mortars for acorn processing increased in frequency relative to seed-grinding basins.

Ethnohistoric Period

The Ethnohistoric period is that following the Late Prehistoric and is characterized by Luiseño occupation of the region surrounding the Project. In Ethnohistoric times, two main cultural groups occupied the County: the Uto-Aztecan speaking Luiseño in the north and the Kumeyaay, Ipai/Tipai or Diegueño in the south. Luiseño territory encompassed an area from roughly Batiquitos Lagoon on the coast, east to Lake Henshaw, north into Riverside County and west through San Juan Capistrano to the coast. The region inhabited by various groups of the Kumeyaay was much larger and extended from Batiquitos Lagoon eastward into the Imperial Valley and southward through much of northern Baja California. This period is characterized in greater detail in Chapter 4.19 *Tribal Cultural Resources*. Economic activities took place in the community and extended household levels, and varied significantly between coastal and inland areas. Community-wide efforts included fire management for game drives and systematic use of fire to facilitate grasslands and increase yields of key plants and animals. Acorns gathered in upland areas were considered the most important food source. Houses were dispersed throughout villages. Lowland village houses were conical structures covered with tule bundles, and other structures included sweathouses, ceremonial enclosures, ramadas, and acorn granaries. Domestic implements included wooden utensils, baskets, ceramic cooking and storage vessels, and milling tools.

Historic Period

The Historic Period began in the 1700's, when the Spanish began missionizing the indigenous peoples of California and includes the Spanish Colonial (1769-1821) and Mexican Republic (1821-1846) periods. The Mission San Luis Rey de Francia was constructed in the Oceanside area in 1798, and become known as the "King of Missions" due to its large scale and success. The effects of missionization and the introduction of Old World diseases greatly reduced the Native American population of Southern California.

Mexico won independence from Spain in 1821, and this began the Mexican Republic period of the area, a period in which the missions were secularized. The subsequent American period began in 1846 and witnessed the rapid dominance over Californio culture by Anglo-Victorian culture and the rise of urban centers and rural communities.

The region transformed from a feudal-like society to a capitalistic economy in which American entrepreneurs gained control of most large ranchos and transformed San Diego into a merchant-dominated market town. Between 1870 and 1930, urban development established many of the County's larger cities, including the City. The Army and Navy took an increased interest in the San Diego harbor between 1900 and 1940. The 1920s brought a land boom that stimulated development throughout the City and the County. Development stalled during the depression years of the 1930s, but World War II ushered in a period of growth based on expanding defense industries.

City of Oceanside Historic Context

In the late 1860s and 1870s, settlers began to arrive in the San Luis Rey Valley and a small townsite began to grow adjacent to the San Luis Rey Mission. The City experienced several booms and busts during its development linked to the proximity of railroad routes, land speculation, and the efforts of local businessmen. The Oceanside Pier and Palomar Theater were constructed in the 1920s and brought about a renaissance for Oceanside, drawing in residents. Following economic decline during the Great Depression, Camp Pendleton, the largest Marine Corps Base in the nation, was established just north of the City. This was the catalyst that transformed a small town into a modern city. Tourism also played an important role in the City's economy following the war years. In the 1980s, the City's downtown experienced a decline due to much of the development taking place in the suburban areas of the City. The City began a redevelopment program which has successfully revitalized the area. A new transit center was constructed in 1983, the pier, beachfront and parks were refurbished, and a new Civic Center was completed in the late 1980s.

City of Oceanside Historical Resources

The City of Oceanside's General Plan's Environmental Resource Management Element identifies several sites as being of particular historical significance within the City: the Mission San Luis Rey de Francia and the Rancho Guajome Adobe. Mission San Luis Rey de Francia is located in the north-central part of the City along Mission Avenue. The Rancho Guajome Adobe is a handsome 19th-century hacienda building built in 1852-1853, and is a well-preserved example of Spanish-Mexican colonial architecture. It is located off North Santa Fe Road just outside the eastern limit of the City. These sites are located 5.4 miles and 6.4 miles away from the Project Site, respectively.

Onsite Historical Resources

Based on reviews of available historical records and aerial photographs gathered by ASM Affiliates, Inc., the Project Site was left undisturbed with the exception of a road running along the western portion of the site until 1964, at which time an east-west oriented road running along Buena Vista Creek appeared. Around 1967, the Project Site was further disturbed by grading in conjunction with the construction of SR-78 to the north. Since this time, no improvements have been made to the site and it has remained vacant with the exception of seasonal uses (kid's playland, pumpkin patches, and Christmas tree patches). Starting in 1907, USGS Topographic maps show a building that was possibly within the Project area.

No historic resources were found onsite during a survey of the Project area. A records search of the South Coastal Information Center (SCIC) revealed that 75 cultural resource studies have previously addressed the one-mile record search radius surrounding the Project area. The records search identified that 26 cultural resources were previously recorded within the record search radius. None of these were recorded within the Project area. Six (6) previously recorded historic addresses were found within the record search radius.

4.6.2 Regulatory Setting

Federal

National Historic Preservation Act

The National Historic Preservation Act (NHPA) establishes the federal policy for preservation of historical resources, including archaeological sites, and sets in place a program for the preservation of historic properties by requiring federal agencies to consider effects to significant cultural resources prior to undertakings. Section 106 of the NHPA requires federal agencies to take into account the effects of projects on historic properties. It also gives the Advisory Council on Historic Preservation and the state historic preservation offices an opportunity to consult.

Executive Order 11593

Executive Order 11593 provides the following: (1) orders the protection and enhancement of the cultural environment through requiring federal agencies to administer the cultural properties under their control in a spirit of stewardship and trusteeship for future generations; (2) initiates measures necessary to direct their policies, plans, and programs in such a way that federally owned sites, structures, and objects of historical, architectural, or archaeological significance are preserved, restored, and maintained for the inspiration and benefit of the people; and (3) in consultation with the Advisory Council on Historic Preservation, institutes procedures to assure that federal plans and programs contribute to the preservation and enhancement of non-federally owned sites, structures, and objects of historical, architectural, or archaeological significance.

National Register of Historic Places

The National Register of Historic Places (NRHP) is the nation's official list of historic places. The register is overseen by the National Park Service and requires that a property or resource eligible for listing in the register meet one or more of the following four criteria at the national, state or local level to ensure integrity and obtain official designation:

- The property must be associated with events that have made a significant contribution to the broad patterns of our history.
- The property must be associated with the lives of persons significant in our past.
- The property must embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction.
- The property must show, or may be likely to yield, information important to history or prehistory.

Properties are nominated to the register by the state historic preservation officer of the state in which the property is located, by the federal preservation officer for properties under federal ownership or control, or by the tribal preservation officer if on tribal lands. Listing in the NRHP provides formal recognition of a property's historic, architectural, or archaeological significance based on the national standards used by every state. Once a property is listed in the NRHP, it becomes searchable in the NRHP database of research information.

State

California Code of Regulations Section 15064.5

CCR Section 15064.5 defines the term "historical resource" as including the following:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (CRHR).
2. A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant on a historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR (Public Resources Code Section 5024.1, Title 14, CCR, Section 4852) including the following:

    a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
    b. Is associated with the lives of persons important to our past;
    c. Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of an important creative individual, or possesses high artistic values; or
    d. Has yielded, or may be likely to yield, information important in prehistory or history.

California Public Resources Code Section 5097

California Public Resources Code Section 5097 (Native American Historic Resources Protection Act) identifies the unauthorized disturbance or removal of archaeological or historical resources located on public land as a misdemeanor. It prohibits the knowing destruction of objects of antiquity without a permit on public lands, and it provides for criminal sanctions. This section was further amended in 1987 to require consultation with the Native American Heritage Commission (NAHC) whenever Native American graves are found. California Public Resources Code Section 5097.5 states that "no person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historic feature situated on public lands, except with the express permission of the public agency having jurisdiction over the lands."

Assembly Bill 52

AB 52, in effect as of July 1, 2015, introduces the tribal cultural resource as a class of cultural resource and provides additional considerations relating to Native American consultation into CEQA. A tribal cultural resource is described as any of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

a. Included or determined to be eligible for inclusion in the CRHR.

b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3. A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

4. A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

Tribal Cultural Resources are further analyzed in Chapter 4.19 of this EIR.

California Health and Safety Code

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code (CHSC) Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the County coroner has examined the remains. If the coroner determines or has reason to believe that the remains are those of a Native American, the coroner must contact the NAHC within 24 hours. The NAHC will notify the most likely descendent (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 48 hours of the MLD being granted access to the site. The MLD may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

Local

City of Oceanside Municipal Code

Chapter 14 of the OMC, referred to as the Historic Preservation Ordinance, (Ordinance No. 82-14, Section 1, 9-8-82) established the criteria for which a property is eligible as an Oceanside Historical Site:

a. It exemplifies or reflects special elements of the City's cultural, social, economic, political, aesthetic, engineering, or architectural history; or
b. It is identified with persons or events significant in local, state, or national history; or
c. It embodies distinctive characteristics of a style, type, period, or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship; or
d. It is representative of the notable work of a builder, designer, or architect; or

e. It is found by the council to have significant characteristics which should come under the protection of this chapter.

City of Oceanside General Plan

Environmental Resource Management Element

The Environmental Resource Management Element of the General Plan outlines recommended action programs to implement and achieve long-range planning objectives. The City of Oceanside Implementation Program actions related to cultural resources include:

> **Objective: Cultural Sites** – Encourage the conservation and protection of significant cultural resources for future scientific, historic, and educational purposes
>
> In order to achieve this objective, the City will:
>
> 1. Encourage the use of "o" zoning and open space easements for the preservation of cultural sites.
>
> 2. Encourage private organizations to acquire, restore, and maintain significant historical sites.
>
> 3. Encourage investigation by the appropriate groups (i.e. museums, university students, etc.) to explore and record the significant archaeological sites in the area and to forward this information to appropriate County agencies for inclusion in the San Diego County Natural Resources Inventory (Section 2, Special Factors).

Land Use Element

The Land Use Element of the General Plan provides guidance for protection of cultural resources. The following policies of the Land Use Element are relevant to the Project:

> **3.2 Cultural Resources**
>
> **Policies:**
>
> A. The City shall encourage open space land use designations and open space zoning or open space easements for the preservation of cultural resources.
>
> B. The City shall encourage the acquisition, restoration, and/or maintenance of significant cultural resources by private organizations.
>
> C. Cultural resources that must remain in-site to preserve their significance shall be preserved intact and interpretive signage and protection shall be provided by project developers.
>
> D. An archaeological survey report shall be prepared by a SOPA (Society of Professional Archaeologists) certified archaeologist for a project proposed for grading or development if any of the following conditions are met:

1. The site is completely or largely in a natural state;
2. There are recorded sites on nearby properties;
3. The project site is near or overlooks a water body (creek, stream, lake, freshwater lagoon);
4. The project site includes large boulders and/or oak trees; or
5. The project site is located within a half-mile of Mission San Luis Rey.

E. The presence of agriculture on a potential project site shall not preclude the requirement for an archaeological survey report if any of the above listed conditions are established.

4.6.3 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, impacts would be considered significant if the Project would:

a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5;
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5;
c. Disturb any human remains, including those interred outside of formal cemeteries.

4.6.4 Project Impact Analysis

Would the Project:

a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

As stated in the Archaeological Survey Report (**Appendix G**), the Project Site was surveyed on January 12, 2018 and was resurveyed on July 29, 2019. No historic or prehistoric cultural resources were noted during the survey or resurvey of the Project area. A records search was performed at the SCIC and found that 75 cultural resource studies have previously addressed the one-mile record search radius surrounding the Project area. Of these reports, none were recorded within the Project area. The SCIC records search also identified 26 cultural resources that were previously recorded within the one-mile record search radius. Of these resources, none were recorded within the Project area. A search of the historic addresses on file at the SCIC identified six (6) previously recorded historic addresses within the one-mile record search radius. A record search of the Sacred Lands File held by the NAHC was requested. A response was received on January 10, 2018 with negative results.

No historical resources, as defined in Public Resources Code Section 15064.5 have been identified on the Project Site, nor have any cultural resources been previously recorded within the Project Site area. Based on these findings, there is a low potential for impacts to historical resources associated with the implementation of the Project.

The Project would not cause a substantial adverse change in the significance of a historical resource pursuant to Public Resources Code Section 15064.5, and therefore, impacts are **less than significant.**

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

As stated above, no historical resources have been previously recorded within the Project area and no archaeological resources were identified during the pedestrian archaeological survey and resurvey of the Project area. The records search of the Sacred Lands File also resulted in negative results. No significant archaeological resources have been identified within the Project area and there is a low potential for impacts to archaeological resources.

However, given the site's close proximity to Buena Vista Creek, there is potential for buried cultural resources within the alluvial deposits along the creek, and therefore a **significant impact** will occur (**Impact CUL-1**).

c. Disturb any human remains, including those interred outside of formal cemeteries?

No human remains were identified within the Project area during the pedestrian survey and resurvey of the Project Site. The Project Site has been graded in the past and therefore, the possibility of discovering human remains during construction is considered low. However, due to the fact that the Project involves ground disturbance, construction activities have the potential to disturb human remains, including those located outside of formal cemeteries, and therefore a **significant impact** will occur (**Impact CUL-2)**.

4.6.5 Mitigation Implementation and Monitoring

Archaeological Resources (Impact CUL-1)

MM-CUL-1a Prior to issuance of a Grading Permit, the Applicant/Owner shall enter into a pre-excavation agreement, otherwise known as a Tribal Cultural Resources Treatment and Tribal Monitoring Agreement with the "Traditionally and Culturally Affiliated (TCA) Native American Monitor associated with a TCA Luiseño Tribe". A copy of the agreement shall be included in the Grading Plan Submittals for the Grading Permit. The purpose of this agreement shall be to formalize protocols and procedures between the Applicant/Owner and the "TCA Native American Monitor associated with a TCA Luiseño Tribe" for the protection and treatment of, including but not limited to, Native American human remains, funerary objects, cultural and religious landscapes, ceremonial items, traditional gathering areas and tribal cultural resources, located and/or discovered through a monitoring program in conjunction with the construction of the proposed Project, including additional archaeological surveys and/or studies, excavations, geotechnical investigations, grading, and all other ground disturbing activities. At the discretion of the Luiseño Native American Monitor, artifacts may be made available for #D scanning/printing, with scanned/printed materials to be curated at a local repository meeting the federal standards of 36CFR79.

MM-CUL-1b Prior to the issuance of a Grading Permit, the Applicant/Owner or Grading Contractor shall provide a written and signed letter to the City of Oceanside Planning Division stating that a Qualified Archaeologist and Luiseño Native American Monitor have been retained at the Applicant/Owner or Grading Contractor's expense to implement the monitoring program, as described in the pre-excavation agreement.

MM-CUL-1c The Qualified Archaeologist shall maintain ongoing collaborative consultation with the Luiseño Native American monitor during all ground disturbing activities. The requirement for the monitoring program shall be noted on all applicable construction documents, including Demolition Plans, Grading Plans, etc. The Applicant/Owner or Grading Contractor shall notify the City of Oceanside Planning Division of the start and end of all ground disturbing activities.

MM-CUL-1d The Qualified Archaeologist and Luiseño Native American Monitor shall attend all applicable pre-construction meetings with the General Contractor and/or associated Subcontractors to present the archaeological monitoring program. The Qualified Archaeologist and Luiseño Native American Monitor shall be present onsite full-time during grubbing, grading and/or other ground altering activities, including the placement of imported fill materials or fill used from other areas of the Project Site, to identify any evidence of potential archaeological or tribal cultural resources. All fill materials shall be absent of any and all tribal cultural resources.

MM-CUL-1e In order for potentially significant archaeological artifact deposits and/or cultural resources to be readily detected during mitigation monitoring, a written "Controlled Grade Procedure" shall be prepared by a Qualified Archaeologist, in consultation with the Luiseño Native American monitor, other TCA Luiseño Tribes that have participated in the state-prescribed process for this Project, and the Applicant/Owner, subject to the approval of City representatives. The Controlled Grade Procedure shall establish requirements for any ground disturbing work with machinery occurring in and around areas the Qualified Archaeologist and Luiseño Native American monitor determine to be sensitive through the cultural resource mitigation monitoring process. The Controlled Grade Procedure shall include, but not be limited to, appropriate operating pace, increments of removal, weight and other characteristics of the earth disturbing equipment. A copy of the Controlled Grade Procedure shall be included in the Grading Plan Submittals for the Grading Permit.

MM-CUL-1f The Qualified Archaeologist or the Luiseño Native American monitor may halt ground disturbing activities if unknown tribal cultural resources, archaeological artifact deposits or cultural features are discovered. Ground disturbing activities shall be directed away from these deposits to allow a determination of potential importance. Isolates and clearly non-significant deposits will be minimally documented in the field, and before grading proceeds these items shall be secured until they can be repatriated. If items cannot be securely stored on the Project Site, they may be stored in off-site facilities located in San Diego County. If the Qualified Archaeologist and Luiseño Native American monitor determine that the unearthed tribal cultural resource, artifact deposits or cultural features are considered potentially significant TCA Luiseño Tribes that have participated in the state-prescribed consultation process for this project shall be notified and consulted regarding the respectful and dignified treatment of those resources. The avoidance and protection of the significant tribal cultural resource and/or unique archaeological resource is the preferable mitigation. If, however, it is determined by the City that avoidance of the resource is infeasible, and it is determined that a data recovery plan is necessary by the City as the Lead Agency under CEQA, TCA Luiseño Tribes that have participated in the state-prescribed consultation process for this Project shall be notified and consulted regarding the drafting and finalization of any such recovery plan. For significant tribal cultural resources, artifact deposits or cultural

features that are part of a data recovery plan, an adequate artifact sample to address research avenues previously identified for sites in the area will be collected using professional archaeological collection methods. The data recovery plan shall also incorporate and reflect the tribal values of the TCA Luiseño Tribes that have participated in the state-prescribed consultation process for this Project. If the Qualified Archaeologist collects such resources, the Luiseño Native American monitor must be present during any testing or cataloging of those resources. Moreover, if the Qualified Archaeologist does not collect the tribal cultural resources that are unearthed during the ground disturbing activities, the Luiseño Native American monitor, may at their discretion, collect said resources and provide them to the appropriate TCA Luiseño Tribe, as determined through the appropriate process, for respectful and dignified treatment in accordance with the Tribe's cultural and spiritual traditions. Ground disturbing activities shall not resume until the Qualified Archaeologist, in consultation with the Luiseño Native American Monitor, deems the cultural resource or feature has been appropriately documented and/or protected.

MM-CUL-1g The landowner shall relinquish ownership of all tribal cultural resources unearthed during the cultural resource mitigation monitoring conducted during all ground disturbing activities, and from any previous archaeological studies or excavations on the Project Site to the appropriate TCA Luiseño Tribe, as determined through the appropriate process, for respectful and dignified treatment and disposition, including reburial at a protected location onsite, in accordance with the Tribe's cultural and spiritual traditions. All cultural materials that are associated with burial and/or funerary goods will be repatriated to the Most Likely Descendant (MLD) as determined by the Native American Heritage Commission per California Public Resources Code Section 5097.98. No tribal cultural resources shall be subject to curation.

MM-CUL-1h Prior to the release of the grading bond, a monitoring report and/or evaluation report, if appropriate, which describes the results, analysis and conclusions of the archaeological monitoring program (e.g., data recovery plan) shall be submitted by the Qualified Archaeologist, along with the Luiseño Native American monitor's notes and comments, to the City of Oceanside Planning Division for approval.

Human Remains (Impact CUL-2)

MM-CUL-2 As specified by California Health and Safety Code Section 7050.5, if human remains are found on the Project Site during construction or during archaeological work, the person responsible for the excavation, or his or her authorized representative, shall immediately notify the San Diego County Office of the Medical Examiner by telephone. No further excavation or disturbance of the Project Site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the Medical Examiner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.98. If such a discovery occurs, a temporary construction exclusion zone shall be established surrounding the area of the discovery so that the area would be protected, and consultation and treatment could occur as prescribed by law. If suspected Native American remains are discovered, the remains shall be kept in-situ, or in a secure location in close proximity to where they were found, and the analysis of the remains shall only occur onsite in the presence of a Luiseño Native American monitor. By law, the Medical Examiner will determine within two (2) working days of being notified if the

remains are subject to his or her authority. If the Medical Examiner identifies the remains to be of Native American ancestry, he or she shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC shall make a determination as to the MLD.

4.6.6 Level of Significance After Mitigation

The analysis in Section 4.6.4 identified the potential for significant impacts related to archaeological resources and human remains. Implementation of mitigation measure MM-CUL-1a through MM-CUL-1h requires construction monitoring by a Qualified Archaeologist and Native American monitor and specific protocols for pre-construction, construction and post-construction activities, requirements for discovery of cultural resources and reporting of monitoring activities and evaluation of results. With implementation of mitigation measure MM-CUL-1a through MM-CUL-1h, Impact CUL-1 related to archaeological resources would be reduced to below a level of significance by requiring specific monitoring program protocols during construction which would allow for proper care of resources in the event of a discovery.

Mitigation measure MM-CUL-2 would reduce potential impacts related to the discovery of human remains by implementing specific protocol and methods for evaluation in the event that remains are discovered during construction, reducing potential for further disturbance. Therefore, impacts to cultural resources are reduced to less than significant.

Chapter 4.7 ENERGY

The following document was used in the preparation of this section and is included in its entirety in **Appendix I**:

Ldn Consulting, Inc. October 1, 2020. *CarMax Auto Store Development Greenhouse Gas Screening Letter – City of Oceanside*.

4.7.1 Environmental Setting

The section of the EIR addresses the energy implications of the Project and represents a summary of the Project's anticipated energy needs, impacts and conservation measures.

Local Service and Energy Use

Electricity

San Diego Gas & Electric (SDG&E) is the utility company which provides electric services in Southern Orange County and the County, including the City and the Project Site. Within its 4,100 square-mile service area are 3.6 million customers, 1.4 million electric meters, and 873,000 natural gas meters. According to the California Energy Commission (CEC), SDG&E consumed approximately 18,767 gigawatt hours of electricity in total in 2018 (CEC, 2018a). SDG&E produces electric power from a variety of sources, with 44% coming from renewable energy sources such as geothermal, solar, wind, and biomass/waste as of August 2019 (CPUC, 2019). As of 2018, approximately 19,749 gigawatt hours of electricity were consumed in the County, with 12,807 gigawatt hours consumed in the non-residential sector and 6,942 gigawatt hours consumed in the residential sector (CEC, 2018c).

Natural Gas

Most of the natural gas used in California comes from out-of-state basins located in the Southwest, Canada, and the Rocky Mountains. Less than one-tenth of state demand is produced in-state (EIA, 2018). Most of the gas transported from out-of-state, as well as some of what is produced in-state is delivered to regional transmission systems for Pacific Gas and Electric (PG&E) and SoCalGas natural gas transmission pipeline systems. SDG&E is a customer of SoCalGas and receives all of its natural gas from the SoCalGas system. The California Public Utilities Commission (CPUC) regulates natural gas utility service for customers that receive natural gas from various utilities throughout the state including SDG&E (CPUC, 2019). In 2019 (assumes January 2019 to December 2019), approximately 534 million British thermal units (Btu) of natural gas were consumed in the County, with the residential sector accounting for approximately 304 million Btu of consumption and non-residential accounting for approximately 230 million Btu of consumption (CEC, 2019d).

Petroleum

California has the fourth-largest share of the nation's crude oil reserves, and as such, is the nation's fourth-largest producer – accounting for about five percent of total U.S. production in 2017. Overall, crude oil production has declined in California over the past three (3) decades and more than half of crude oil refined in California is imported from foreign suppliers. California is the second largest consumer of petroleum products in the nation and the largest consumer of motor gasoline. The vast

majority of petroleum consumed in the stated is used in the transportation sector (EIA, 2018). As of 2015, there were 27.8 million light-duty vehicles in California. The annual gasoline consumption in 2017 was estimated to be 15.8 billion gallons (CEC, 2017). Gasoline and other vehicle fuels are a commercially provided commodity, and would be available to the Project and its users at nearby outlets.

4.7.2 Regulatory Setting

Federal

Federal Energy Policy and Conservation Act and Amendments

In 1975, minimum energy efficiency standards for many major appliances were established by the U.S. Congress with the Federal Energy Policy and Conservation Act. These standards have been amended in subsequent legislation, including the federal Energy Policy Act of 2005. The Department of Energy is required to set efficiency standards that achieve the maximum energy efficiency improvement that is still economically and technologically feasible.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 is an energy policy law adopted by Congress which established energy efficiency standards for several equipment types and appliances which were not already subject to a standard, and updated some existing standards. It established significant new standards for lightbulbs, requiring that by 2020, light bulbs must consume 60% less than the light bulbs of the time – effectively phasing out the incandescent light bulb.

State

Global Warming Solutions Act

AB 32, also known as the California Global Warming Solutions Act of 2006 enacted Sections 38500-38599 of the California Health and Safety Code. AB 32 establishes regulatory, reporting and market procedures to achieve quantifiable reductions in greenhouse gas (GHG) emissions and a cap on statewide GHG emissions. AB 32 requires reduction of statewide GHG emissions to 1990 levels by 2020. The procedures for reducing GHG emissions will relate to the generation and efficient use of energy. The California Air Resources Board (CARB) adopted the Climate Change Scoping Plan in 2008, with subsequent updates in 2014 and 2017, which is the state's plan to achieve the statewide GHG reductions required by AB 32. The most significant proposed GHG reductions are recommended through improving emission standards for light-duty vehicles, implementation of the Low-Carbon Fuel Standard, energy efficiency measures in buildings and appliances, and a Renewable Portfolio Standard (RPS) for electricity production.

Renewable Portfolio Standards

Executive Order S-14-08 was signed by Governor Arnold Schwarzenegger and is known as the RPS. It requires all retail sellers of electricity to serve 33% of their load with renewable energy by 2020. State government agencies were directed to take all appropriate actions to implement this target in all regulatory proceedings, including siting, permitting, and procurement for renewable energy power plants and transmission lines.

More recently, California Senate Bill (SB) 350 amends the RPS to require an annual increase in renewable energy generation by utility providers, equivalent to at least 50% by 2030.

California Energy Commission

The California Energy Commission's (CEC) Integrated Energy Policy Report set forth policies that would enable the state to meet its energy needs under the carbon constraints established in the 2006 Global Warming Solutions Act. The Integrated Energy Policy Report also provides a set of recommended actions to achieve these policies.

California Energy Storage Law

California's Energy Storage Law (AB 2514) requires the governing board of each publicly owned utility to "determine appropriate targets" if any, for the utility to procure viable and cost-effective energy storage systems (California Public Utilities Code Section 2836(b)(1)). AB 2514 also requires that "all procurement of energy storage systems" by a publicly owned utility "shall be cost-effective" (California Public Utilities Code Section 2836.6).

Title 24 Standards Code

Title 24, Part 6 of the CCR is also titled the Energy Efficiency Standards. The CEC has adopted changes to the Building Energy Efficiency Standards in order to accomplish the following:

- Respond to California's energy crisis to reduce energy bills, increase energy delivery system reliability, and contribute to an improved economic condition for the state.
- Respond to the AB 970 (Statutes of 2000) urgency legislation to adopt and implement updated and cost-effective building energy efficiency standards.
- Respond to various statues of 2001, which included urgency legislation to adopt energy efficiency building standards for outdoor lighting.
- Emphasize energy efficiency measures that save energy at peak periods and seasons, improve the quality of installation of energy efficiency measures, incorporate recent publicly funded building science research, and collaborate with California utilities to incorporate results of appropriate market incentives programs for specific technologies.

The 2019 Title 24 standards were approved and adopted by the California Building Standards Commission and became effective on January 1, 2020. These standards will further reduce energy used and associated GHG emissions. Nonresidential buildings built to the latest standards will use an estimated 30% less energy than those built to the previous standards.

In addition to these efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly known as CALGreen, and establishes minimum mandatory standards as well as voluntary standards for the planning and design of sustainable site planning and development, water efficiency and conservation, material conservation, and resource use efficiency. The CALGreen 2019 standards will become effective on January 1, 2020. The mandatory standards require the following:

- 20% mandatory reduction in indoor water use.

- Diversion of 50% of construction and demolition waste from landfills.
- Mandatory inspections of energy systems to ensure optimal working efficiency.

Local

SDG&E Long-Term Resource Plan

In 2004, SDG&E filed a long-term resource plan (LTRP) with the CPUC, identifying how it would meet the needs of customers in SDG&E's service area. The plan identifies energy demand reduction targets, goals for increasing renewable energy supplies and transmission capacity.

The LTRP set a standard for acquiring 33 percent of SDG&E's energy mix from renewables by 2020. SDG&E is currently ahead of schedule to achieve that target, procuring 44% of its energy mix from renewables as of August 2019 (CPUC, 2019).The plan calls for an increased usage of energy supplies from within the region, aiming to achieve and maintain the capacity to generate 75% of peak summer demand within County generation by 2020.

City of Oceanside Climate Action Plan

The City adopted a Climate Action Plan (CAP) in May of 2019. The purpose of the CAP is to align the City with state efforts to reduce GHG emissions while balancing a variety of community interests such as quality of life, economic development and social equity. It contains measures and strategies to reduce GHG emissions resulting from energy and buildings, water and wastewater, solid waste, transportation and land use, and agriculture and forestry. Electricity consumption and natural gas usage account for 26% and 16%t of community GHG emissions in the City, respectively. Measures and strategies developed to reduce GHG emissions produced from the energy use sector which are relevant to the Project include:

Measure W1: Implementation of the Water Conservation Plan

Strategies:

- Rotating Sprinkler Nozzle Rebates
- Commercial, Industrial and Institutional Rebates to Replace Inefficient Equipment
- Model Water Efficient Landscape Ordinance

Measure TL2: Electric Vehicle Promotion

Strategies:

- Consistent with state requirements for pre-wiring for level 2 charging circuits in commercial and industrial developments, require charging stations to be installed at half of all pre-wired spaces.

Measure TL3: Preferential Parking Spaces of Clean Air Vehicles

Strategies:

- Require commercial and industrial developments to incorporate 12% designated parking for clean air vehicles.

Measure TL4: Expand Complete Streets Programs

Strategies:

- Require new developments to provide connections and/or extensions of the bicycle and pedestrian networks where applicable.

Measure AF1: Urban Forestry Program

Strategies:

- Adopt a Green Streets Ordinance that requires all new development Projects to incorporate shade trees. Establish criteria for the number of shade trees. Criteria may be reasonably linked to metrics such as the number of residences, building area, or impervious area.

Energy Climate Action Element of the General Plan

The Energy Climate Action Element (ECAE) of the General Plan addresses energy consumption and other activities within the City that may contribute to adverse environmental impacts, with particular emphasis on those activities associated with human-induced climate change. The ECAE outlines goals and policies meant to incorporate the concept of sustainability into the City's decision-making process including development review protocols. The major themes and goals of the ECAE are related to energy efficiency and renewable energy, smart growth and multimodal transportation, zero waste, water conservation, urban greening, local agriculture, and sustainable consumption.

4.7.3 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, impacts would be considered significant if the Project would:

a. Result in potentially significant environmental impact due to wasteful, inefficient, unnecessary consumption of energy resources, during Project construction or operation;
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.7.4 Project Impact Analysis

Would the Project:

a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?

Construction Energy Use

During construction, the Project would result in an increase in energy consumption during the anticipated 13-month construction period. Construction phases anticipated to occur are site preparation, grading, paving, building construction, and architectural coating. Heavy-duty construction

equipment associated with construction activities would rely on diesel fuel to power off-road construction vehicles and equipment as well as construction worker vehicles and delivery and haul trucks. Electricity associated with the conveyance of water would be used during Project construction for dust control and electricity used to power lighting, electronic equipment, or other construction activities necessitating electrical power. The Project would also result in electricity used in the production of construction materials such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Construction Related Electricity

During construction of the Project electricity would be consumed to construct the proposed CarMax Project. Electricity would be supplied to the Project Site by SDG&E and would be obtained from the existing electrical lines in the vicinity of the Project Site. Electricity consumed during construction would vary throughout the construction phases based on the activities being performed. Construction activities include electricity associated with the conveyance of water that would be used for dust control and electricity to power necessary lighting, electronic equipment, and other construction activities necessitating electrical power.

The electricity used for such activities would be less than that required during operation of the Project, would be temporary and would have a minimal contribution to the Project's overall energy consumption. Construction activities associated with the development of the CarMax Project would require electricity consumption that would not be expected to have an adverse impact on available electricity supplies and infrastructure. Therefore, the use of electricity during Project construction would not be wasteful, inefficient, or unnecessary.

The Project proposes new infrastructure for electrical services that would run east to west through the customer and employee parking lot. Electrical services would be provided by SDG&E and would connect to existing service infrastructure in Thunder Drive. It is anticipated that the construction of the Project would require nominal improvements to existing SDG&E distribution lines and facilities. Where feasible, all new service installations and connections would be scheduled and implemented in a manner that would not result in electrical services interruptions to surrounding properties.

Project compliance with the Zoning Ordinance Section 3023 – Underground Utilities for guidelines and requirements related to installation of electrical lines would ensure that the Project fulfills its responsibilities related to infrastructure installation, coordination of any electrical infrastructure removals or relocations, and would limit impacts associated with grading, construction and development. Construction of the Project's electrical infrastructure is not anticipated to adversely affect the electrical infrastructure serving the surrounding uses or utility system capacity.

Project construction would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of electricity resources, and impacts are **less than significant.**

Construction Related Natural Gas

Construction of the Project would not typically involve the consumption of natural gas. Therefore, natural gas would not be supplied to support construction activities and there would be no demand generated by Project construction.

The Project proposes a gas service line that would run east to west through the customer and employee parking lot and would connect to existing services in Thunder Drive. Gas services would be provided by SDG&E. It is anticipated that the construction of the Project would require nominal improvements to existing SDG&E natural gas distribution lines and facilities. Construction related energy impacts associated with the installation of natural gas services and connections are expected to be confined to trenching to place the lines below the surface. The developer would be responsible for notifying and coordinating with SDG&E to identify proper locations and depth of all gas lines and connections to avoid disruption of services to the neighboring properties.

Project construction would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of natural gas resources, and impacts are **less than significant.**

Construction Related Transportation Energy

Petroleum-based fuel usage represents the highest amount of transportation energy to be consumed during construction, which would be utilized by off-road equipment, on-road automobiles transporting workers to and from the Project Site and on-road trucks transporting equipment and supplies to the construction site. Equipment proposed for Project construction would include rubber tired dozers, tractors, loaders, backhoes, excavators, graders, pavers, other paving equipment, rollers, cranes, forklifts, generator sets, welders and air compressors. The number of each type of equipment and the number of days per construction phase is displayed in **Table 4.7-1** below. These variables were input into CalEEMod to generate construction emissions and energy usage. The Project would generate approximately 149 worker trips overall all construction phases of the Project, spanning approximately 13 months (Greenhouse Gas Screening Letter, **Appendix I**). Worker trips would generate approximately 1,609 vehicle miles traveled (VMT). During the building construction phase the Project is expected to generate 33 vendor trips. Vendor trips are expected to generate approximately 241 VMT.

Table 4.7-1
Expected Construction Equipment

Equipment Identification	Number of Equipment
Site Preparation (10 Days)	
Rubber Tired Dozers	3
Tractors/Loaders/Backhoes	4
Grading (20 Days)	
Excavators	1
Graders	1
Rubber Tired Dozers	1
Tractors/Loaders/Backhoes	3
Paving (20 Days)	
Pavers	2
Paving Equipment	2
Rollers	2
Building Construction (230 Days)	
Cranes	1
Forklifts	3
Generator Sets	1
Tractors/Loaders/Backhoes	3
Welders	1
Architectural Coating (20 Days)	

Air Compressors	1
Source: Greenhouse Gas Screening Letter Prepared by Ldn Consulting, Inc. (Appendix I)	

The Project is not expected to result in a significant use of transportation related energy resources. The Project would adhere to all State and SDAPCD regulations for off-road equipment and on-road trucks related to clean engines to provided fuel efficiency.

Title 13 of the CCR Section 2485 regulates limitations for idling of vehicles and equipment. Idling requirements are for on-road and off-road diesel-powered equipment and is enforced by CARB. Section 2485 also regulates proper maintenance of equipment to result in fuel savings. Given the high cost of fuel, contractors and developers have a financial incentive to avoid wasteful, inefficient and unnecessary consumption of energy during construction.

The Project would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during Project construction, and impacts are **less than significant**.

Operational Energy Use

The Project would consist of a sale's and administrative building, service building, private carwash, associated access drives, landscaped areas, presentation area, staging area, sales display area, and a customer and employee parking lot. The long-term operation of the Project would require the use of electrical and natural gas energy sources for heating, ventilation, air conditioning (HVAC), lighting, appliances, electronics, office equipment, electric vehicle charging spaces, operation of the carwash and tools associated with automobile servicing. Energy would be consumed during operations related to water usage, solid waste disposal and vehicle trips.

Operational Related Electricity

Electricity associated with operation of the Project Site was calculated using CalEEMod Version2016.3.2. According to the CalEEMod model results provided in the Greenhouse Gas Screening Letter **(Appendix I)** prepared by Ldn Consulting, Inc., the Project would use approximately 161,790 kilowatt hours of electricity per year (kWh/year).

Electric services would be provided by SDG&E electric transmission and distribution lines and new electric services lines would connect to existing services in Thunder Drive. The Project is located in a developed area surrounded by commercial development to the west and northwest, and DMV facility and residential development to the east, and high density residential to the south. Existing electrical services are provided in the Project vicinity. The Project would consume electricity similarly to that of the existing commercial developments to the west and northwest and would comply with all applicable 2019 Title 24 Part 6 Building Efficiency Standards.

Conservation strategies to be used include the use of irrigation heads that provide maximum coverage of the landscaped areas. All landscaping would be native and drought tolerant and would comply with the Water Efficient Landscape Ordinance. The Project would incorporate low-flow plumbing fixtures throughout the restroom and break room areas of the sales and service buildings. The Project would be designed and built to minimize electricity use so that existing and planned electricity capacity and supplies would be enough to support the Project's electricity demand.

Project operation would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of electricity resources, and impacts are **less than significant.**

Operational Related Natural Gas

Operation of the Project would result in an increased consumption of natural gas compared to existing conditions. According to the CalEEMod model results provided in the Greenhouse Gas Screening Letter **(Appendix I)**, the Project would use 132,362 kilo British thermal units per year (kBTU/year) of natural gas. The Project would comply with the 2019 Title 24 Part 6 Building Efficiency Standards including enhanced insulation and the use of efficient natural gas appliances and HVAC units. It is anticipated that the Project would be designed and built to minimize natural gas use and that existing and planned natural gas facilities and supplies would be sufficient to support the Project's natural gas demand.

Project operation would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of natural gas resources, and impacts are **less than significant.**

Operational Related Transportation Energy

Operation of the Project would result in increased consumption of petroleum-based fuels related to vehicular travel to and from the Project Site. According to the Vehicle Miles Traveled Analysis prepared by LOS Engineering, Inc. **(Appendix N)**, the Project would generate 475 ADT and 473,135 VMT per year.

The Project would comply with the California Green Building Standards Code (Table 5.106.5.3.3) and would provide seven electric vehicle (EV) charging spaces within the customer and employee parking lot. The Project would be designed and constructed in accordance with all applicable and current City of Oceanside Building codes related to energy and transportation. Additionally, the Project would have a less than significant transportation impact.

Project operation would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, and impacts are **less than significant.**

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The City CAP and ECAE of the General Plan provide goals, policies and measures to meet State GHG reduction goals and reduce energy consumption. **Table 4.7-2** displays the Project's consistency with applicable CAP policies. **Table 4.7-3** displays the Project's consistency with ECAE policies.

Table 4.7-2
Project Consistency with CAP Measures

CAP Measure	CAP Strategy	Project Consistency
Measure W1: Implementation of the Water Conservation Plan	• Rotating Sprinkler Nozzle Rebates • Commercial, Industrial and Institutional Rebates to Replace Inefficient Equipment • Model Water Efficient Landscape Ordinance	The Project would implement irrigation systems with respect to water conservation. Irrigation heads would be chosen to provide maximum coverage of the landscaped areas. All landscaping would be native and drought tolerant and would comply

		with the Water Efficient Landscape Ordinance.
Measure TL2: Electric Vehicle Promotion	• Consistent with state requirements for pre-wiring for level 2 charging circuits in commercial and industrial developments, require charging stations to be installed at half of all pre-wired spaces.	Seven (7) EV charging spaces would be provided in the customer and employee parking lot in the amount required by CALGreen.
Measure TL3: Preferential Parking Spaces of Clean Air Vehicles	• Require commercial and industrial developments to incorporate 12% designated parking for clean air vehicles.	Designated clean air vehicle parking would be provided within the customer and employee parking lot.
Measure TL4: Expand Complete Streets Programs	• Require new developments to provide connections and/or extensions of the bicycle and pedestrian networks where applicable.	Project improvements on Plaza Drive along the Project frontage would include an 8-foot bicycle lane and a 5-foot sidewalk that would connect to the existing sidewalks to the east and west.
Measure AF1: Urban Forestry Program	• Adopt a Green Streets Ordinance that requires all new development projects to incorporate shade trees. Establish criteria for the number of shade trees. Criteria may be reasonably linked to metrics such as the number of residences, building area, or impervious area.	Shade trees would be provided within the customer and employee parking lot a lot the parking lot boundaries and within the parking islands. Shade trees have a minimum 24-inch box.

Table 4.7-3
Project Consistency with ECAE Policies

ECAE Policy	ECAE Policy Description	Project Consistency
Policy ECAE-1d-3	Encourage the use of locally-produced construction materials, including salvaged lumber.	The Project would use locally-produced construction materials to the extent feasible.
Policy ECAE-2a-2	In the City's commercial corridors, promote a mix of land uses that contributes to a sense of place, creates synergies between local businesses and affords residents the opportunity to live, work, and play within a walkable radius.	The Project site is located in an area surrounded by a commercial center and residential uses and would provide job opportunities within in walking distance of once another.
Policy ECAE-2b-2	In conjunction with infill and redevelopment projects, pursue opportunities to integrate public open space into the City's urbanized corridors.	Buena Vista Creek is located along the southern boundary of the Project site. The Project would provide a 100-foot riparian buffer which includes a 50-foot biological buffer and a 50-foot planning buffer. Restoration of this portion of Buena Vista Creek would be provided through the Urban Streams Restoration Grant Program, with the City of Oceanside and the Buena Vista Audubon Society. The Applicant would

		take part in coordination efforts as necessary. Restoration efforts would include stream and habitat improvements as well as providing trails, public access and signage.
Policy ECAE-2c-4	Ensure that capital improvements are consistent with the City's Complete Streets policies, as articulated in the Circulation Element.	Improvements along Plaza Drive would include widening of Plaza Drive to the classification designated in the Circulation Element as well as an 8-foot bicycle lane and a 5-foot sidewalk.
Policy ECAE-2f-1	Promote the installation of public electric vehicle charging facilities at convenient locations throughout the City.	EV charging parking spaces would be provided in the customer and employee parking lot in the amount required by CALGreen.
Policy ECAE-3a-2	Continue to enhance organics waste recycling opportunities for both the commercial and residential sector in accordance with the City's Zero Waste goals and State Organics mandates.	Trash enclosures would be located south of the sales and service building and would include separate enclosures labeled for recyclables, organic waste and solid waste.
Policy ECAE-3a-13	Improve monitoring and enforcement of the City's construction waste diversion requirements.	The Construction Contractor would ensure that construction waste would is properly diverted in accordance with the City's construction waste diversion requirements.
Policy ECAE-5b-3	In coordination with adjacent private property owners, identify hardscaped spaces within the public right-of-way that can be rendered permeable and plantable.	Plaza Drive and Thunder Drive along the Project frontages would include hedges and shrubs and street trees behind the proposed sidewalks.

Additionally, Project construction and operation would generate 308.36 metric tons of carbon dioxide (MT CO_2E) each year and would not exceed the City's screening threshold for GHG emissions and therefore would not conflict with the goals of the State. As provided in **Table 4.7-2** and **Table 4.7-3**, the Project would not conflict with or obstruct local plans for renewable energy or energy efficiency. Project-related impacts are **less than significant.**

4.7.5 Mitigation Implementation and Monitoring

No significant impacts to energy have been identified and therefore no mitigation measures are required.

4.7.6 Level of Significance After Mitigation

Based upon the analysis presented in Section 4.7.4, Project impacts to energy will be less than significant.

Chapter 4.8 GEOLOGY AND SOILS

The following documents were used in the preparation of this section and are included in their entirety in **Appendix G, Appendix H** and **Appendix J:**

ASM Affiliates. August 9, 2019. *Archaeological Survey Report for the CarMax Project, Oceanside, California.* **(Appendix G)**

EEI Engineering Solutions. September 6, 2019. *Geotechnical Evaluation for Proposed "CarMax" Commercial Development Plaza Drive and Hacienda Drive, City of Oceanside, County of San Diego, California.* **(Appendix H)**

REC Consultants, Inc. December 16, 2019. *Drainage Study for CarMax Oceanside.* **(Appendix J)**

4.8.1 Environmental Setting

Regional Geologic Setting

The Project Site lies within the Peninsular Ranges Geomorphic Province of Southern California, which consists of a series of ranges separated by northwest trending valleys; sub parallel to branches of the San Andreas Fault. The Peninsular Ranges Geomorphic Province, one of the largest geomorphic units in western North America, extends from the Transverse Ranges geomorphic province and the Los Angeles Basin south to Baja California. It is bound on the west by the Pacific Ocean, on the south by the Gulf of California and on the east by the Colorado Desert Province. The Peninsular Ranges are essentially a series of northwest-southeast oriented fault blocks. Major fault zones and subordinate fault zones found in the Peninsular Ranges Province typically trend in a northwest-southeast direction.

Site Geology

Regional geologic maps of the property and vicinity show that the property is underlain by late Pleistocene to Holocene Young Alluvial Flood Plain deposits which consist of poorly sorted sands, gravels, silts, and clay deposited by the San Luis Rey River.

Topography

The center of the Project Site is situated at approximately 33.1821˚ north latitude and 117.2890˚ west longitude. The Project Site is located in the 7.5-minute San Luis Rey Topographic Quadrangle. The elevation of the property ranges from approximately 180 to 220 feet amsl. The Project Site is relatively flat, sloping gently downwards south towards Buena Vista Creek, the nearest surface water to the property. Buena Vista Creek connects to Buena Vista Lagoon and eventually the Pacific Ocean approximately four (4) miles west of the Project Site.

Subsurface Conditions

Subsurface materials encountered during subsurface investigation determined that the Project Site is underlain by Artificial Fill, Quaternary Alluvial Flood Plain Deposits and Eocene Santiago Formation.

Artificial Fill

The surface of the Project Site is covered by artificial fill. The fill consists of silty to sandy clay, clayey sand, and clayey silt. Brick fragments and other detritus are common in the fill. The fill varies in depth across the property from two to 12 feet below ground surface (bgs), being shallowest in the northern part of the Project Site and increasing in thickness towards the south. The thickest deposits occur along the north-south trending channel cutting the central part of the Project Site, where mounds of fill were placed on either side.

Quaternary Alluvial Flood Plain Deposits

Quaternary-aged older alluvium was encountered in almost all of the trenches underlying the fill and consists of sandy clay. Caliche stringers are common and the alluvium also contains traces of fine-grained sand. The thickness varies from one to at least 11.5 feet bgs, with the thickest sections of alluvium being located in the central parts of the Project Site.

Eocene Santiago Formation

Eocene-aged Santiago Formation was encountered in 13 of the 21 trenches explored underlying the fill and alluvium. The Eocene Santiago Formation consists of clayey sandstone. The sandstone encountered was massive and friable and was found at depths of three to 11 feet bgs.

Soil Conditions

A Soil Type Map was generated as part of the Drainage Study **(Appendix J)**. The Area of Interest (AOI) of the Soil Type Map included the Project Site in addition to areas further south of the Project Site for a total AOI of 12.4 acres. The following soil types occur on the Project Site.

Las Flores Loamy Fine Sand, 5 to 9% Slopes, Eroded

This soil type covers 10.9 acres of the 12.4-acre AOI. These soils are derived from weathered marine sandstone and are moderately well-drained; have slow to medium runoff, and a slight to moderate erosion hazard.

Visalia Sandy Loam, 2 to 5% Slopes

This soil type covers 1.5 acres of the 12.4-acre AOI and occurs in and adjacent to Buena Vista Creek, in the southern portion of the Project Site. Visalia sandy loams are derived from granitic parent material and are rich in organic matter, well-drained, and have a slight to moderate erosion hazard.

Groundwater

Groundwater was not encountered in any trenches at the time of a subsurface exploration to a depth of 15.5 feet bgs conducted by EEI in September 2019. Nor was groundwater encountered in a separate geotechnical investigation conducted by Norcal Engineering in 2007 to a depth of 50 feet bgs (NorCal Engineering, 2007). In general, groundwater is often expected to follow the direction of surface topography. Based on Site topography, local groundwater flow is expected to be in a westerly direction.

Geologic Hazards

Seismic Hazards

The property is located within an area of California known to contain a number of active and potentially active faults. However, there are no known active faults crossing the property and the Project Site is not within a State of California Earthquake Fault Zone. The closest known active fault is the Newport-Inglewood Fault Zone located offshore approximately 8.34 miles west of the Project Site. The nearest active faults are displayed in **Table 4.8-1**.

Table 4.8-1
Nearby Active Faults

Fault	Distance in Miles (kilometers)[1]	Maximum Magnitude
Newport-Inglewood (offshore)	8.34 (13.42)	7.5
Rose Canyon	8.38 (13.49)	6.9
Elsinore	19.58 (31.51)	7.8
1 = USGS Online Fault Search (2008) Source: Geotechnical Evaluation (Appendix H)		

Landslides and Slope Stability

Susceptibility of slopes to landslides and other forms of slope failure depend on several factors usually present in combination and include, but are not limited to, steep slopes, condition of rock and soil materials, presence of water, formational contacts, geologic shear zones, and seismic activity. There are no published reports of landslides occurring within the City, nor is there evidence of any found in reconnaissance or aerial photographs. Minor slope movements are occurring throughout the City primarily as soils creep, slumping and sloughing along road cuts and where soils have accumulated on steep slopes. The Project Site and surrounding areas are generally relatively flat. Thus, the potential for landslides and slope instabilities to occur at the Site is negligible.

Liquefaction and Lateral Spreading

Liquefaction occurs when loose, saturated, generally cohesion-less fine sands and non-plastic silts are subjected to strong ground shaking. The soils lose shear strength and become liquid; potentially resulting in large total and differential ground surface settlements as well as possible lateral spreading during an earthquake. Seismically induced settlement can occur in response to liquefaction of saturated loose granular soils, as well as the reorientation of soil particles during strong shaking of loose, unsaturated sands.

Due to the lack of shallow groundwater at the Site, and the presence of bedrock at depths of three to 11 feet bgs, the probability of liquefaction, seismically induced settlement and lateral spreading at the Project Site is considered to be low.

Tsunamis, Flooding and Seiches

The Project Site is not located within a Tsunami Evacuation Area. Impacts due to tsunamis are considered low.

The southern portion of the Project Site lies within Zone X of the Federal Emergency Management Agency (FEMA) 500-year floodplain and Zone AE of the 100-year floodplain (FEMA FIRM Panel 06073C0758G effective 5/16/19). Zone X is an area that is outside of the 0.2% annual chance flood zone, whereas Zone AE is the area of one percent annual chance flood.

Seiches are periodic oscillations in large bodies of water such as lakes, harbors, bays or reservoirs generated by ground motion during an earthquake. The Project Site is not located immediately adjacent to any lakes or confined bodies of water and therefore, the potential for a seiche to affect the Site is considered low.

Paleontological Resource Setting

The City is located within the Coastal Plain Region which is an area characterized by interbedded marine and non-marine sedimentary rock units deposited over the last 75 million years. The sedimentary rocks overlie a buried topography of plutonic crystalline rocks composed of granite and granodiorite. Many of the level surfaces in the coastal region are elevated marine terraces and are characteristic features of the Coastal Plain Region.

The Project Site is underlain by late Pleistocene to Holocene Young Alluvial Flood Plain deposits (Qya) and Santiago Formation. These deposits consist of poorly sorted sands, gravels, silts and clay that were deposited by the San Luis Rey River. Pleistocene-age fossils in the northern portion of the Coastal Plain Region occur in marine and river terrace deposits. The former consist of well-preserved shells of estuarine and marine invertebrates such as mollusks (e.g., clams, oysters, scallops, snails, and scaphopods), crustaceans (e.g., ostracods, crabs, and barnacles) and echinoderms (e.g., sea urchins and sand dollars). Qya are considered to have a low sensitivity for paleontological resources due to the young age and loosely consolidated nature of these deposits. The Santiago Formation contains a diverse fossil record consisting of marine, estuarine and terrestrial fossils and fossil assemblages and has produced some of the best preserved assemblages of middle Eocene terrestrial mammals in California. The Santiago Formation is considered to have high paleontological sensitivity.

4.8.2 Regulatory Setting

Federal

International Building Code

The International Building Code (IBC) is a model building code developed by the International Code Council that provides the basis for the California Building Code (CBC). The purpose of the IBC is to provide minimum standards for building construction to ensure public safety, health and welfare. The IBC is updated every three (3) years.

Occupational Safety and Health Administration Regulations

Excavation and trenching are among the most hazardous construction activities. The Occupational Safety and Health Administration (OSHA) Excavation and Trenching Standard, Title 29 of the Code of Federal Regulations Part 1926.650, covers requirements for excavation and trenching operations. OSHA requires that excavations in which employees could potentially be exposed to cave-ins be protected by

sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area.

National Pollutant Discharge Elimination System Permits

In California, the State Water Resources Control Board (SWRCB) administers the Federal EPA regulations (55 CFR 47900) requiring the permitting of storm water generated pollution under the National Pollutant Discharge Elimination System (NPDES). Pursuant to these Federal regulations, two (2) separate NPDES permits must be complied with for all Projects. The SWRCB has oversight of the first, the General Permit which governs activities at construction sites of one acre or greater to eliminate soil erosion from leaving the Project Site and entering local waterways. The San Diego Water Board governs the second, the Municipal Storm Water permit, which governs all storm water related activities within the local jurisdiction. Both permits require the implementation of BMPs, both temporary and permanent, to reduce/eliminate pollutant loads, including eroded soils, into waters of the U.S. or waters of the State.

State

California Geologic Survey

The California Geologic Survey provides guidance with regard to seismic hazards. The California Geologic Survey's Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California, provides guidance for evaluation and mitigation of earthquake-related hazards for Projects within designated zones of required investigation.

State of California Division of Occupational Safety and Health, California Department of Industrial Relations

The State of California Division of Occupational Safety and Health Administration (CalOSHA) Excavations Standard (Subchapter 4, Article 6) provides detailed requirements for excavation operations. CalOSHA requires that all excavations in which employees could potentially be exposed to cave-ins be protected by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area.

California Building Code

The CBC is codified in the CCR as Title 24, Part 2 and is largely based on the IBC. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use, occupancy, location and maintenance of all building and structures within its jurisdiction. The CBC describes requirements for engineering geologic reports, supplemental ground-response reports, and geotechnical reports. It also contains specific provisions for structures located in seismic zones. Compliance with the CBC requires that structures be constructed to resist the effects of earthquake motions.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) was passed in 1972 to mitigate the hazard of surface faulting and occupied structures. The main purpose of the Alquist-Priolo Act is to prevent the construction of buildings used for human occupancy on the surface of traces of active faults.

Before a Project can be permitted, cities and counties must require a geologic investigation to demonstrate that potential buildings will not be constructed across active faults. A state registered geologist must prepare the geologic evaluation and written report for the specific Project Site. If an active fault is found, a structure for human occupancy must be set back from the fault trace. The Project Site is not identified on an Alquist-Priolo Earthquake Fault Zone Map.

Seismic Hazards Mapping Act

The 1990 Seismic Hazards Mapping Act (California Public Resources Code Chapter 7.8) (Seismic Mapping Act) and related regulations established a statewide minimum public safety standard for mitigation of earthquake hazards. The purpose of the Seismic Mapping Act is to protect public safety from the effects of strong ground shaking, liquefaction, landslides or other ground failure, and other hazards caused by earthquakes. It accomplishes this by specifying the minimum level of mitigation a Project must provide to reduce the risk of ground failure during an earthquake to a level that prevents collapse of buildings used for human occupancy. Under the Seismic Mapping Act, the Lead Agency can withhold permits until geologic investigations are conducted and mitigation measures are incorporated. The Seismic Mapping Act addresses not only seismically induced hazards but also expansive soils, settlement, and slope stability. The program and actions mandated by the Seismic Mapping Act closely resemble those of the Alquist-Priolo Act.

Local

City of Oceanside General Plan

Public Safety Element

The General Plan Public Safety Element specifically addresses seismic hazards and geologic conditions and includes the following objectives:

Seismic and Geologic Hazard Objectives

1. Consider seismic and geologic hazards when making land use decisions particularly in regard to critical structures.

2. Minimize the risk of occupancy of all structures from seismic and geologic occurrences.

3. Provide to the public all available information about existing seismic and geologic conditions.

The General Plan Public Safety Element includes the Public Safety Plan which includes definitions, maps and mitigation information for seismic and geologic hazards that exist within the City.

Environmental Resource Management Element

The Environmental Resource Management Element includes the following objective for Soil, Erosion and Drainage:

Soil, Erosion and Drainage Objective

1. Consider appropriate engineering and land use planning techniques to mitigate rapid weathering of the rocks, soil erosion, and the siltation of the lagoons.

The Environmental Resource Management Element also provides a general map of soil types within the City (Figure ERM-3 Soils and Land Forms).

Land Use Element

The General Plan Land Use Element contains the following objectives and policies regarding geology and soils:

1.152 Seismic and Geologic Hazards

A. The City shall consider seismic and geologic hazards when making land use decisions, particularly in regards to risk sensitive land uses as defined in the Public Safety Element.

B. High Risk land uses, as defined in the Public Safety Element, should be prohibited from areas of high seismic or geologic hazard.

C. The City shall regulate land uses within areas highly susceptible to seismic and geologic hazards.

D. The City shall require expanded soils and geologic testing and necessary engineering precautions when deemed necessary to reduce risks to acceptable levels. Wave action, erosion, and geotechnical reports shall be required as determined necessary.

3.14 Grading and Excavations

Objective: To provide mitigation recommendations for grading and excavations in the City.

Policies: Investigation and evaluation of currently affected areas will indicate the measures to be included, such as the following measures:

1. Keep grading to a minimum, leave vegetation and soils undisturbed wherever possible.

2. Plant bare slopes and cleared areas with appropriate vegetation immediately after grading.

3. Chemically treat soils to increase stability and resistance to erosion.

4. Install retaining structures where appropriate.

5. Construct drainage systems to direct and control rate of surface runoff.

6. Construct silt traps and settling basins in drainage systems.

7. Construct weirs and check dams on streams.

3.23 Paleontological Resources

Objective: Recovery, retention and evaluation of paleontological resources.

A. Paleontological survey reports shall be prepared by a qualified paleontologist approved by the City for all proposed projects that are located in the area designated as having a high potential for fossils on the City's natural resource management data base system.

City of Oceanside Building Code

Chapter 6 of the OMC, Building Construction Regulations outlines the regulations and requirements for construction of buildings within the City's jurisdiction, including seismic and geologic safety design standards. The City adopts the most recent CBC as the local building code and amends as needed.

City of Oceanside Grading Ordinance

The City of Oceanside Grading Ordinance (Ordinance No. 92-15), which provides the Grading Regulations Manual, requires that all grading, clearing, brushing or grubbing on natural or existing grade must have a grading permit from the City Engineer. A Landscape and Irrigation Plan is required for developments such as, but not limited to, commercial, grading permits, grading slopes, industrial, parking lots, planned residential developments, remodeling which requires a permit, and subdivisions. Section 1501(d) of the City's Grading Ordinance details the requirements and practices of the Erosion Control System to lessen the potential for sediment runoff and erosion.

4.8.3 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, impacts would be considered significant if the Project would:

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: (1) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; (2) strong seismic ground shaking; (3) seismic-related ground failure, including liquefaction; (4) landslides;
b. Result in substantial soil erosion or the loss of topsoil;
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property;
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water;
f. Directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

4.8.4 Project Impact Analysis

Would the Project:

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

The Project Site is located within an area of California known to contain a number of active and potentially active faults. However, there are no known active faults crossing the property and the Project Site is not within a State of California Earthquake Fault Zone or an Alquist-Priolo Earthquake Fault Zone (CDC, 2020). The potential for rupture is considered low. Therefore, the Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving the rupture of a known earthquake fault, and impacts are **less than significant.**

ii) Strong seismic ground shaking?

The nearest active faults in the vicinity of the Project Site are the active Newport-Inglewood offshore fault and the Rose Canyon fault; each located approximately 8.34 and 8.38 miles from the Project Site respectively. As provided in the Geotechnical Evaluation (EEI, 2019) the next nearest fault is the Elsinore fault, at a distance of 19.58 miles from the Project Site. The Project Site is likely to be subjected to strong ground motion from seismic activity similar to that of the rest of the County and Southern California, due to seismic activity of the region as a whole and a **significant impact** (**Impact GEO-1a**) will occur.

iii) Seismic-related ground failure, including liquefaction?

Liquefaction occurs when loose, saturated, generally cohesion-less fine sands and non-plastic silts are subjected to strong ground shaking. The majority of the soils onsite are Las Flores loamy fine sand, five to nine percent slopes, eroded soils. These soils are moderately well-drained; have slow to medium runoff, and a slight to moderate erosion hazard. Free groundwater was not encountered during separate subsurface investigations. Due to the lack of shallow groundwater onsite and the presence of firm bedrock at depths of three (3) to 11 feet bgs, the probability of liquefaction, seismically induced settlement and lateral spreading onsite is considered to be low as determined in the Geotechnical Evaluation (EEI, 2019). Therefore, the Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving seismic-related ground failure including liquefaction and impacts are **less than significant**.

iv) Landslides?

Susceptibility of slopes to landslides and other forms of slope failure depend on several factors usually present in combination and include, but are not limited to, steep slopes, condition of rock and soil materials, presence of water, formational contacts, geologic shear zones, and seismic activity. The Project Site is relatively flat, sloping gently downwards south towards Buena Vista Creek, the nearest surface water to the Project Site. As stated in the Geotechnical Evaluation which is provided as **Appendix H** of this EIR, the potential for landslides to occur onsite is negligible. Therefore, the Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving landslides, and therefore impacts are **less than significant.**

b. Result in substantial soil erosion or the loss of topsoil?

The potential for soil erosion would increase during construction activities, including grading and demolition, as a result of vehicles and heavy equipment exposing soil surfaces to wind or water, and a **significant impact** (**Impact GEO-2**) will occur. However, prior to obtaining a grading permit the Project would be required to prepare a Storm Water Pollution Prevention Plan (SWPPP), which would describe and depict in detail the various grading and construction-related BMPs to be implemented onsite. The SWPPP would be prepared in conformance with City regulations and the NPDES SWRCB Construction General Permit. Sediment and erosion control BMPs described in the SWPPP may include, but are not limited to, straw mulch, soil binders, silt fencing, gravel bags, street sweeping and vacuuming and storm drain inlet protection.

c. *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*

As detailed above, soils onsite are moderately well-drained, have slow to medium runoff, and a slight to moderate erosion hazard. Free groundwater was not encountered during separate subsurface investigations. The Project Site is relatively flat and the potential for landslides or slope instabilities to occur onsite are negligible. Due to the lack of shallow groundwater onsite and the presence of firm bedrock at depths of three (3) to 11 feet bgs, the probability of liquefaction, seismically induced settlement and lateral spreading onsite is considered to be low.

The Project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse, and impacts are **less than significant**.

d. *Be located on expansive soil, as defined in **Table 18-I-B** of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*

In general, soils onsite possess moderate expansive characteristics. However, there are localized areas of highly expansive soils present onsite. Expansive soil influence is considered to pose the greatest potential risk to the proposed improvements. The Project would be located on moderately expansive soil with areas of highly expansive soils, as defined in Table 18-I-B of the 1994 Uniform Building Code (International Conference of Building Officials, 1994), and a **significant impact** (**Impact GEO-1b**) will occur.

e. *Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?*

The Project does not propose the use of septic tanks or alternative waste water disposal systems. Water and sewer service would be provided by the City and the Project would connect to existing infrastructure in the Project vicinity. For sewer service, the Project would realign the existing sewer mains and would construct a new 12-inch and new 21-inch PVC sewer main that would run along the southern portion of the Project Site, south of the sales and staging and customer and employee parking lots, and would connect to existing sewer to the west and to the east in Thunder Drive. The existing 12-inch and 21-inch sewer mains located directly north of the proposed sewer mains would be abandoned.

The Project would not have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal system, and therefore, **no impact** will occur.

f. Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

The City is located within the Coastal Plain Region which is an area characterized by interbedded marine and non-marine sedimentary rock units deposited over the last 75 million years. The sedimentary rocks overlie a buried topography of plutonic crystalline rocks composed of granite and granodiorite. Many of the level surfaces in the coastal region are elevated marine terraces and are characteristic features of the Coastal Plain Region. The Project Site is underlain by artificial fill, late Pleistocene to Holocene Young Alluvial Flood Plain deposits (Qya) and Eocene Santiago Formation.

Artificial fill may contain fossils, but these fossils have been removed from their original locations and are thus out of stratigraphic context. Therefore, they are not considered important for scientific study and have no paleontological sensitivity. Alluvial Flood Plan Deposits (Qya) have a low sensitivity for paleontological resources due to the young age and loosely consolidated nature of these deposits. Any biological remains found are likely to be modern to sub-fossil. The Santiago Formation contains a diverse fossil record consisting of marine, estuarine and terrestrial fossils and fossil assemblages and has produced some of the best-preserved assemblages of middle Eocene terrestrial mammals in California. Due to the fact that the Santiago Formation is known to contain scientifically significant paleontological resources, this formation is considered to have high paleontological sensitivity. There are no unique geological features onsite.

Although the Project Site has been previously graded, Project grading would include 12,500 CY of cut. Due to the high sensitivity of the Santiago Formation underlying the Site, the Project would have the potential to disturb a paleontological resource and a **significant impact** (**Impact GEO-3**) will occur.

4.8.5 Mitigation Implementation and Monitoring

Strong Seismic Groundshaking (Impact GEO-1a) and Expansive Soils (Impact GEO-1b)

MM-GEO-1 Prior to and during construction, the construction contractor shall ensure that Project construction complies with all recommendations identified on pages 9 – 20 in the Geotechnical Evaluation prepared by EEI Engineering Solutions (2019). The construction contractor shall follow the specific guidelines within the Geotechnical Evaluation for Site preparation, earthwork and onsite improvements.

Soil Erosion (Impact GEO-2)

Mitigation measures MM-HYDRO-1, MM-HYDRO-2, and MM-HYDRO-3, which are presented in Section 4.11.5, will reduce this impact to below a level of significance.

MM-HYDRO-1 The Project shall incorporate permanent source control BMPS as identified in the Project SWQMP such as the following:

BMP Type	Inspection Frequency	Summary of Maintenance Activity
Prevention of Illicit Discharges Into MS4	Continuous	A grease trap has been incorporated into the Utility Plan and dumping of grease down the storm drain is prohibited. Other good housekeeping practices would be implemented to discourage discharges of non-storm water pollutants, including cleaning up food and grease with absorbents, discarding trash, and routine

BMP Type	Inspection Frequency	Summary of Maintenance Activity
		maintenance of grease trap.
Storm Drain Signage	Continuous	Labeling shall be provided for all storm water conveyance system inlets and catch basins within the Project area. Storm drain placards shall be used for signage (stenciling is prohibited by the City). Inspect and maintain placards as needed.
Protect Trash Storage Areas From Rainfall, Run-On, Runoff and Wind Dispersal	Regularly	Ensure trash enclosure areas are fully contained (three walls, door and roof) and are provide with attached lids. Keep containers away from storm drain vicinity. Post signs on all enclosures and/or dumpsters informing users to keep lid closed and not to dispose of liquid or hazardous materials. Inspect trash storage areas to ensure integrity of containers and that area is kept clean. Replace leaking bins. Clean trash storage areas regularly.
Additional BMPS Based on Potential Sources of Runoff Pollutants	Regularly as Determined Necessary	OnSite Storm Drain Inlets: Onsite inlets shall be protected from any illicit discharges and debris. Inlets shall have prohibitive signs where all inlets are marked with the words "NO DUMPING! DISCHARGES TO BAY" or similar. Inlet markings shall be maintained and periodically repainted on a regular basis to remove pollutants. Clean inlets regularly and remove sediments and debris, especially before start and end of wet season. Keep record of cleaning and disposal activities.
		Need for Future Indoor and Structural Pest Control: Building includes doors and windows with sealing that discourages entry of pests. Any pesticides shall be applied minimally in accordance with manufacturer's specifications and City and State requirements.
		Landscape/Outdoor Pesticide Use: Final Landscape Plans shall preserve existing drought tolerant trees, shrubs, and ground cover to the maximum extent possible, and include landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to storm water pollution.
		Fire Sprinkler Test Water: Fire sprinkler test water shall be drained to sanitary sewer system. During a fire sprinkler test, the fire riser discharge shall be connected by a hose to the sewer cleanout.
		Miscellaneous Drain or Washwater: Boiler drains shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain.
		Plazas, Sidewalks, and Parking Lots: Sweep regularly to prevent accumulation of litter and debris, debris from pressure washing must be collected to prevent entry into the storm drain system.

MM-HYDRO-2 An onsite private underground proprietary BMP in the form of an underground detention system shall be designed and constructed per the Project SWQMP in accordance with the San Diego Water Board and City of Oceanside BMP Design Manual. Storm water shall be conveyed via underground pipes from various parts of the Site through water quality measures and into the underground detention system.

MM-HYDRO-3 Low Impact Development (LID) and Site Design BMPs shall be incorporated into the Project design to reduce impacts to water quality. The contractor shall construct the LID BMPs in accordance with the Project SWQMP and the engineer of work shall inspect that all LID BMPs have been constructed in compliance with the approved plans and all applicable specifications and permits. The widening of Plaza Drive shall be treated via a green streets approach with the construction of swales behind sidewalks to treat runoff for water quality and hydromodification purposes.

Paleontological Resources (Impact GEO-3)

MM-GEO-3a Prior to the issuance of a grading permit, the applicant shall submit a letter to the City from a qualified professional paleontologist or a California Registered Professional Geologist with appropriate paleontological expertise, as defined by the Society of Vertebrate Paleontology's guidelines, indicating that they have been retained by the applicant to prepare and implement a Paleontological Resources Impact Mitigation Program (PRIMP). The qualified paleontologist shall be available "on-call" to the City and the applicant throughout the duration of ground-disturbing activities. The PRIMP shall include preconstruction coordination; construction monitoring; emergency discovery procedures; sampling and data recovery, if needed; preparation, identification and analysis of the significance of fossil specimens salvaged, if any; museum storage of any specimens and data recovered; and reporting. Earth-moving construction activities shall be monitored wherever these activities will disturb previously undisturbed sediment. Monitoring will not need to be conducted in areas where sediments have been previously disturbed or in areas where exposed sediments will be buried but not otherwise disturbed. In such cases, spot-checking of the excavation Site is sufficient. This mitigation measure shall apply to all excavation activities within the Santiago Formation with high sensitivity and for any construction activities that involve excavation greater than three feet in depth within geologic units with low paleontological sensitivity (Qya).

MM-GEO-3b Prior to the issuance of a grading permit, the City shall confirm the following measure is identified on the grading plan and will be implemented:

Grading activities are subject to a Paleontological Resource Impact Mitigation Program (PRIMP). If potential fossils are discovered by construction crews or during monitoring by a qualified paleontologist, all earthwork or other types of ground disturbance within 50 feet of the discovery shall stop immediately until the qualified professional paleontologist can assess the nature and importance of the discovery. If a fossil of scientific value or uniqueness is identified by the paleontologist, the paleontologist shall record the find and allow work to continue or recommend salvage and recovery of the fossil. If treatment and salvage is required, recommendations shall be consistent with Society of Vertebrate Paleontology guidelines and currently accepted scientific practice and shall be subject to review and approval by the City. Work in the affected area may resume once the fossil has been assessed and/or salvaged and the City, in consultation with the professional paleontologist, has provided written approval to resume work.

4.8.6 Level of Significance After Mitigation

The analysis in Section 4.8.4 identified the potential for significant impacts related to strong seismic ground shaking, soil erosion, expansive soils and paleontological resources. Implementation of mitigation measure MM-GEO-1 requires implementation of all recommendations identified in the Geotechnical Evaluation (EEI, 2019). The recommendations detailed in the Geotechnical Evaluation include specific recommendations for Site preparation and grading, earthwork, fill material and placement, temporary Site excavations, yielding subgrade conditions, and shrinkage and bulking. Proper compliance with each of the detailed recommendations set forth in the Geotechnical Evaluation will minimize geotechnical hazards related to seismic ground shaking and expansive soils. With mitigation

measure MM-GEO-1, Impact GEO-1a and Impact GEO-1b related to seismic ground shaking and expansive soils will be less than significant.

Implementation of mitigation measures MM-HYDRO-1 through MM-HYDRO-3 require permanent source control BMPS, an onsite underground proprietary BMP in the form of an underground detention system and Low Impact Development (LID) and Site design BMPs. Following construction, disturbed soils would be built upon with hardscape or stabilized with vegetation and landscaping which would further reduce erosion potential. Implementation of mitigation measures MM-HYDRO-1 through MM-HYDRO-3 will reduce Impact GEO-2 related to soil erosion to below a level of significance.

Implementation of mitigation measures MM-GEO-3a and MM-GEO-3b require a qualified professional paleontologist to be retained to prepare and implement a PRIMP, and provide construction monitoring during ground-disturbing activities in order to assess and provide recommendations in the event that paleontological resources are discovered. MM-GEO-3b requires specific notes to be identified on the grading plan to ensure the PRIMP is properly implemented. With implementation of mitigation measures MM-GEO-3a and MM-GEO-3b, Impact GEO-3 related to paleontological resources will be reduced to less than significant considering any fossils discovered would be properly excavated and the associated paleontological research information would be preserved to the extent feasible. In summary, all geology and soils impacts will be reduced to below a level of significance.

Chapter 4.9 GREENHOUSE GAS EMISSIONS

The following document was used in the preparation of this section and is included in its entirety in **Appendix I, Appendix N** and **Appendix O**:

Ldn Consulting, Inc. March 23, 2020. *CarMax Auto Store Development Greenhouse Gas Screening Letter – City of Oceanside*. (**Appendix I**)

LOS Engineering, Inc. December 4, 2020. *CarMax Auto Dealership (D19-00021) 4000 Block of Plaza Drive City of Oceanside, October 1, 2020, Vehicle Miles Traveled Analysis.* (**Appendix N**)

LOS Engineering, Inc. October 1, 2020. *CarMax Auto Dealership (D19-00021) 4000 Block of Plaza Drive City of Oceanside, December 4, 2020, Local Transportation Study.* (**Appendix O**)

4.9.1 Environmental Setting

The Project Site is located in the southeastern portion of the City, within the SDAB. The Project Site is relatively flat, gently sloping southward towards Buena Vista Creek. Elevations range from 180 feet amsl to 220 feet amsl. The Project Site is located in a primarily developed area and is surrounded by commercial uses to the west, including a shopping center and auto repair shops. To the east are medium density residential uses as well as a DMV facility at the corner of Plaza Drive and Thunder Drive. To the north is SR-78 and further north are professional commercial uses. To the south are Buena Vista Creek, high density and residential estate uses including a senior living facility, and commercial and public/semipublic uses including an OFD station.

Climate within the SDAB can vary dramatically over short distances, with cooler temperatures in the western part of the basin along the coastline and gradually warming to the east. The high-pressure system that dominates the climate of southern California keeps the City sunny and warm for much of the year. In the winter, the high pressure drops to the south, bringing cool, moist weather from the north.

The Greenhouse Effect

Climate change refers to any substantial change in measures of climate, such as temperature, precipitation, or wind, lasting for an extended period (decades or longer). Gases that trap heat in the atmosphere are often called GHGs. The “greenhouse effect” is the trapping and build-up of heat in the atmosphere near the earth’s surface. The greenhouse effect traps heat in the atmosphere through the following process: short-wave radiation emitted as light from the sun is absorbed by the earth, a portion of this energy is reflected back towards space in the form of long-wave radiation, and GHGs in the upper atmosphere absorb this long-wave radiation and emit it back toward the earth – trapping heat in the atmosphere. The greenhouse effect is a natural process which regulates the earth’s ambient temperature. Global climate change concerns are focused on whether human activities are leading to an enhancement of the greenhouse effect.

Greenhouse Gases

Principal GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), O_3, and water vapor. Some GHGs such as CO_2, CH_4, and N_2O occur naturally and are emitted to the atmosphere through natural processes and human activities. Emissions of CO_2 are largely byproducts of fossil fuel combustion, whereas CH_4 results mostly from off-gassing associated with agricultural practices and landfills. Man-made GHGs, which have a much larger heat-absorption potential than CO_2, include fluorinated gases such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF_6) and nitrogen trifluoride (NF_3), which are associated with certain industrial products and processes.

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the earth.

The Intergovernmental Panel on Climate Change (IPCC) developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas. The reference gas used is CO_2 therefore GWP-weighted emissions are measured in metric tons of CO_2 equivalent (MT CO_2E).

Contributions to Greenhouse Gas Emissions

According to the EPA Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018, the total gross GHG emissions in 2018 in the U.S. was 6,676.6 million metric tons of CO_2E. Total U.S. emissions have increased by 3.7 percent from 1990 to 2018. The primary GHG emitted by human activities in the United States was CO2, representing approximately 81.3 percent of total GHG emissions. The largest source of CO_2 and of overall GHG emissions was fossil fuel combustion.

The CARB Emissions Trends Report for 2000 to 2017 indicates that statewide GHG emissions in 2017 were 424 million MT CO_2E which is 5 million MT CO_2E lower than 2016 levels. **Table 4.9-1** displays the 2017 GHG emissions by source for California.

Table 4.9-1
2017 California GHG Emissions by Source

Source Category	Percent of Total
Transportation	40.1%
Industrial	21.1%
Electricity	14.7%
Residential and Commercial	9.7%
Agriculture	7.6%
High GWP	4.7%
Waste	2.1%
Source: CARB Emissions Trends Report for 2000 to 2017	

The City Climate Action Plan (CAP) contains the 2013 community inventory of GHG emissions which is displayed in **Table 4.9-2** below.

Table 4.9-2
Community GHG Emissions by Source

Source Category	Percent of Total
Transportation	48%
Electricity	26%
Natural gas	17%
Solid Waste	4%
Water	3%
Municipal	3%
Source: City of Oceanside CAP	

4.9.2 Regulatory Setting

Federal

Federal Clean Air Act

In the past, the U.S. EPA has not regulated GHGs because it asserted that the Clean Air Act (CAA) did not authorize it to issue mandatory regulations to address global climate change. However, in 2007 the U.S. Supreme Court held that the U.S. EPA must consider regulation of motor-vehicle GHG emissions.[16] The Court did not mandate that the U.S. EPA enact regulations to reduce GHG emissions but found that the only instances in which the U.S. EPA could avoid taking action were if it found that GHGs do not contribute to climate change or if it offered a "reasonable explanation" for not determining that GHGs contribute to climate change. In December 2009, the U.S. EPA issued an endangerment finding for GHGs under the CAA, concluding that GHGs threaten the public health and welfare of current and future generations and that motor vehicles contribute to GHG pollution.[17] This is the first step in regulating GHGs under the provisions of the CAA. These findings provide the basis for adopting new national regulations to mandate GHG emission reductions under the Federal CAA. The EPA's endangerment finding paves the way for Federal regulation of GHGs.

Under the Consolidated Appropriations Act of 2008 (HR 2764), Congress established mandatory GHG reporting requirements for some emitters of GHGs. In addition, on September 22, 2009, the U.S. EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule. The rule requires annual reporting to the U.S. EPA of GHG emissions from large sources and suppliers of GHGs, including facilities that emit 25,000 MT or more a year of GHGs.

Executive Order 13432

In response to the Massachusetts v. Environmental Protection Agency ruling, President George W. Bush signed Executive Order 13432 on May 14, 2007, directing the U.S. EPA, along with the Departments of Transportation, and Energy to initiate a regulatory process that responds to the Supreme Court's decision. Executive Order 13432 was codified into law by the 2009 Omnibus Appropriations Law signed

[16] *Massachusetts v. Environmental Protection Agency et al. (127 S. Ct. 1438 (2007))*

[17] *United States Environmental Protection Agency, Endangerment, and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act, website: https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean, accessed February 2020.*

on February 17, 2009. The order sets goals in the areas of energy efficiency, acquisition, renewable energy, toxics reductions, recycling, sustainable buildings, electronics stewardship, fleets, and water conservation.

Light-Duty Vehicle Greenhouse Gas and Corporate Average Fuel Economy Standards

On May 19, 2009, President Barack Obama announced a national policy for fuel efficiency and emissions standards in the United States auto industry. The adopted federal standard applies to passenger cars and light-duty trucks for model years 2012 through 2016. The rule surpasses the prior Corporate Average Fuel Economy standards (CAFE)[18] and requires an average fuel economy standard of 35.5 miles per gallon (mpg) and 250 grams of CO_2 per mile by model year 2016, based on U.S. EPA calculation methods. These standards were formally adopted on April 1, 2010. In August 2012, standards were adopted for model year 2017 through 2025 for passenger cars and light-duty trucks. By 2025, vehicles are required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO_2 per mile. According to the U.S. EPA, a model year 2025 vehicle would emit one-half of the GHG emissions from a model year 2010 vehicle.[19] In 2017, the U.S. EPA recommended no change to the GHG standards for light-duty vehicles for model years 2022-2025.

In March 2020, the U.S. EPA and National Highway Traffic Safety Administration (NHTSA) adopted the Safer Affordable Fuel-Efficient Vehicles Rule that maintains the CAFE and CO_2 standards applicable in model year 2020 for model years 2021 through 2026. The estimated CAFE and CO_2 standards for model year 2020 are 43.7 mpg and 204 grams of CO_2 per mile for passenger cars and 31.3 mpg and 284 grams of CO_2 per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012. The final Safer Affordable Fuel-Efficient Vehicles Rule also excludes CO_2e emission improvements associated with air conditioning refrigerants and leakage (and, optionally, offsets for nitrous oxide and methane emissions) after model year 2020.[20]

Heavy-Duty Engines and Vehicles Fuel Efficiency Standards

In addition to the regulations applicable to cars and light-duty trucks, on August 9, 2011, the U.S. EPA and the NHTSA announced Phase I fuel economy and GHG standards for medium- and heavy-duty trucks, which apply to vehicles from model years 2014 through 2018.[21] The U.S. EPA and the NHTSA adopted standards for CO_2 emissions and fuel consumption, respectively, tailored to each of three (3) main vehicle categories: (1) combination tractors, (2) heavy-duty pickup trucks and vans, and (3)

[18] *The Corporate Average Fuel Economy standards are regulations in the United States, first enacted by Congress in 1975, to improve the average fuel economy of cars and light trucks. The U.S. Department of Transportation has delegated the National Highway Traffic Safety Administration as the regulatory agency for the Corporate Average Fuel Economy standards.*

[19] *United States Environmental Protection Agency, EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks, August 2012, https://nepis.epa.gov/ Exe/ZyPDF.cgi/P100EZ7C.PDF?Dockey=P100EZ7C.PDF.*

[20] *National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA),2018. Federal Register / Vol. 83, No. 165 / Friday, August 24, 2018 / Proposed Rules, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks 2018. Available at:https://www.gpo.gov/fdsys/pkg/FR-2018-08-24/pdf/2018-16820.pdf.*

[21] *United States Environmental Protection Agency, Office of Transportation and Air Quality. EPA and NHTSA Adopt First-Ever Program to Reduce Greenhouse Gas Emissions and Improve Fuel Efficiency of Medium-and Heavy-Duty Vehicles, August 2011.*

vocational vehicles. According to the U.S. EPA, this program will reduce GHG emissions and fuel consumption for affected vehicles by 6% to 23%.

Building on the Phase I standards, in August 2016, U.S. EPA and NHTSA jointly finalized Phase II standards for medium- and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution to reduce the impacts of climate change. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion MT; save vehicle owners fuel costs of about $170 billion; and reduce oil consumption by up to two (2) billion barrels over the lifetime of the vehicles sold under the program.[22]

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 is an energy policy which would aid in the reduction of national GHG emissions by the following measures:

1. Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.

2. Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.

3. Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

State

Assembly Bill 939 and Assembly Bill 341

In 1989, AB 939, known as the Integrated Waste Management Act (California Public Resources Code, Section 40000 *et seq*.), was passed in response to the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 50% by year 2000. AB 341 amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste be source-reduced, recycled, or composted by the year 2020 and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal.

Assembly Bill 1493

[22] *Regulations for Greenhouse Gas Emission from Commercial Trucks & Buses, November 16, 2016, website: https://19january2017snapshot.epa.gov/regulations-emissions-vehicles-and-engines/regulations-greenhouse-gas-emissions-commercial-trucks_.html.*

AB 1493 was enacted in July 2002 in response to the transportation sector accounting for more than half of California's CO_2 emissions. It required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the board that are used primarily for personal transportation in the state. The AB 1493 required that CARB set GHG emission standards for vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004.

Executive Order S-3-05

Executive Order S-3-05, signed in June 2005, established the following statewide goals: GHG emissions should be reduced to 2000 levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050. Under this Executive Order, the California Environmental Protection Agency (CalEPA) is directed to report biannually on progress made toward meeting the GHG targets and the impacts to California due to global warming, including impacts to water supply.

Assembly Bill 32

AB 32, also known as the California Global Warming Solutions Act of 2006, requires California to reduce its GHG emissions to 1990 levels by 2020, representing a reduction of approximately 15% below emissions expected under a "business-as-usual" scenario.

Under AB 32, CARB is responsible for carrying out and developing the programs and requirements necessary to achieve the GHG emissions reduction mandate of AB 32 and to monitor compliance with any rule, regulation, order, emission limitation, or emission reduction measure adopted. The full implementation of AB 32 will help mitigate risks associated with climate change, while improving energy efficiency, expanding the use of renewable energy sources, achieving cleaner transportation, and reducing waste.

AB 32 requires CARB to develop a Scoping Plan that lays out California's strategy for meeting the goals and must be updated every five (5) years. In December 2008, CARB approved the initial Scoping Plan, which included a suite of measures to sharply cut GHG emissions. In May 2014, CARB approved the first update to the Scoping Plan which builds upon the initial Scoping Plan with new strategies and recommendations. In December 2017 CARB adopted the *2017 Climate Change Scoping Plan Update* (2030 Scoping Plan). The 2030 Scoping Plan builds on the successful framework established in the initial Scoping Plan and First Update, while identifying new, technologically feasible, and cost effective strategies that will serve as the framework to achieve the 2030 GHG target and define the state's climate change priorities to 2030 and beyond.

For local governments, the 2030 Scoping Plan replaced the initial Scoping Plans 15% reduction goal with a recommendation to aim for a community-wide goal of no more than 6 MT CO_2E per capita by 2030 and no more than 2 MT CO_2E per capita by 2050, which are consistent with the state's long-term goals. The 2030 Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32, SB 32, and Executive Order S-3-05 and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. A Project is considered consistent with the statues and executive orders if it meets the general policies in reducing GHG emissions in order to facilitate the achievement of the state's goals and does not impede attainment of those goals. A given Project need not be in perfect conformity with every planning policy or goal to be consistent, rather, a Project would be consistent if it furthers the objectives and does not obstruct their attainment.

Executive Order B-30-15

On April 29, 2015, California Governor Jerry Brown issued Executive Order B-30-15. Therein, Governor Brown:

- Established a new interim statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030;[23]
- Ordered all state agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets;
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of $MMTCO_2E$.

Senate Bill 32

SB 32 was passed on September 8, 2016 and is known as the California Global Warming Solutions Act of 2006: Emissions Limit. SB 32 added Section 38566 to the Health and Safety Code which states that in adopting rules and regulations to achieve maximum technologically feasible and cost-effective GHG emissions reductions, the state board shall ensure that statewide GHG emissions are reduced to at least 40% below the statewide GHG emissions limit no later than December 31, 2030.

Senate Bill 97

SB 97 directs the Governor's Office of Planning and Research (OPR) to develop guidelines under the CEQA for the mitigation of GHG emissions. OPR was responsible for developing proposed guidelines by July 1, 2009, and the California Natural Resources Agency (CNRA) was directed to adopt guidelines by January 10, 2010.

In 2008 OPR issued a technical advisory as interim guidance regarding the analysis of GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities should be identified and estimated. On April 13, 2009, OPR submitted to the CNRA the proposed amendments to the CEQA Guidelines relating to GHG emissions. The CNRA adopted the CEQA Guidelines Amendments on December 30, 2009 and the amendments became effective on March 18, 2010.

The adopted amendments do not establish a GHG emission threshold; instead they allow a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. CNRA also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a Project's GHG emissions.

Senate Bill 350

The Clean Energy and Pollution Reduction Act of 2015, SB 350 (Chapter 547, Statutes of 2015) was approved by Governor Jerry Brown on October 7, 2015. SB 350 will: (1) increase the standards of the California RPS program by requiring that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by December 31, 2030; (2) require the State Energy Resources Conservation and Development Commission to establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas final end uses

[23] *In response to EO-B-30-15, this target was adopted by the California Senate under SB 32 on September 8, 2015.*

of retail customers by January 1, 2030; (3) provide for the evolution of the Independent System Operator (ISO) into a regional organization; and (4) require the state to reimburse local agencies and school districts for certain costs mandated by the state through procedures established by statutory provisions. Among other objectives, the Legislature intends to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation. In other words, SB 350 essentially requires the energy efficiency of existing buildings to be doubled by 2030.

Senate Bill 100

On September 10, 2018, Governor Jerry Brown signed SB 100, which further increased California's Renewables Portfolio Standard and requires retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030, and that CARB should plan for 100% eligible renewable energy resources and zero-carbon resources by December 31, 2045.

Senate Bill 1368

California SB 1368, a companion bill to AB 32, requires the California Public Utilities Commission (CPUC) and the California Energy Commission CEC to establish GHG emission performance standards for the generation of electricity. These standards also generally apply to power that is generated outside of California and imported into the State. SB 1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting CARB to meet its mandate under AB 32. On January 25, 2007, the CPUC adopted an interim GHG Emissions Performance Standard, which is a facility-based emissions standard requiring that all new long-term commitments for baseload generation to serve California consumers be with power plants that have GHG emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 pounds of CO_2 per megawatt-hour. Further, on May 23, 2007, the CEC adopted regulations that establish and implement an identical Emissions Performance Standard of 1,100 pounds of CO_2 per megawatt-hour (see CEC Order No. 07-523-7).

Sustainable Communities and Climate Protection Act (SB 375)

California's Sustainable Communities and Climate Protection Act, also referred to as SB 375 became effective January 1, 2009. The goal of SB 375 is to help achieve AB 32's GHG emissions reduction goals by aligning the planning processes for regional transportation, housing, and land use.
Among other things, SB 375 requires the regional governing bodies in each of the State's major metropolitan areas to adopt, as part of their regional transportation plan, "sustainable community strategies" that will meet the region's target for reducing GHG emissions. SB 375 creates incentives for implementing the sustainable community strategies by allocating Federal transportation funds only to projects that are consistent with the emissions reductions.

Local governments would then devise strategies for housing development, road-building and other land uses to shorten travel distances, reduce vehicular travel time and meet the new targets. If regions develop these integrated land use, housing, and transportation plans, residential projects that conform to the sustainable community strategy (and therefore contribute to GHG reduction) can have a more streamlined environmental review process.

SB 375 requires CARB to develop regional reduction targets for GHGs, and prompts the creation of regional plans to reduce emissions from vehicle use throughout the state. California's 18 Metropolitan

Planning Organizations (MPOs) have been tasked with creating "Sustainable Community Strategies" (SCS) in an effort to reduce the region's VMT in order to help meet AB 32 targets through integrated transportation, land use, housing and environmental planning. Pursuant to SB 375, CARB set per-capita GHG emissions reduction targets from passenger vehicles for each of the State's 18 MPOs. For the SCAG region, the targets are set at eight percent below 2005 per capita emissions levels by 2020 and 13% below 2005 per capita emissions levels by 2035. Beginning October 1, 2018, the target changed to 19% for 2035.

Center for Biological Diversity v. California Department of Fish and Wildlife and Newhall Land and Farming

The California Supreme Court took on the challenging CEQA issue of GHG emissions in the *Center for Biological Diversity v. California Department of Fish and Wildlife and Newhall Land and Farming* case, 2015) 224 Cal.App.4th 1105 (*CBD vs. CDFW*), also known as the "Newhall Ranch" case. The justices evaluated for compliance with CEQA one of the most common approaches to GHG analyses for development projects (i.e., evaluating the efficiency of a project's emissions in the context of the AB 32's 2020 reduction goal, as presented in the statewide CARB Scoping Plan, using a comparison to an unregulated, "business as usual (BAU)" emissions scenario.

As discussed in the *Newhall Ranch* decision, determining consistency with local GHG reduction plans or Climate Action Plans that qualify under Section 15183.5 of the CEQA Guidelines may be the most effective strategy for local governments to assess the significance of GHG emissions from proposed land use developments. Qualified CAPs also provide a workable option for addressing post-2020 GHG emissions and resolving issues that arise out of project-level GHG analyses raised in the Court's decision.

Title 24 of the California Code of Regulations

Title 24 of the CCR, serves to enhance and regulate California's building standards. Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure that new and existing buildings in the State of California achieve energy efficiency and preserve environmental quality.

The 2019 Title 24 building energy standards are the most recent, and became effective on January 1, 2020. Title 24, Part 11 known as CALGreen, instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, residential, state-owned buildings, schools and hospitals. The CALGreen 2019 standards became effective on January 1, 2020. These standards focus on building energy efficiency. The mandatory standards require the following:

- 20% mandatory reduction in indoor water use;
- Diversion of 50% of construction and demolition waste from landfills;
- Mandatory inspections of energy systems to ensure optimal working efficiency;
- Low pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle board.

Voluntary efficiency measures are provided at two separate tiers and are implemented at the discretion of local agencies and applicants.

California Air Pollution Control Officers Association

The California Air Pollution Control Officers Association is the association of air pollution control officers representing all 35 air quality agencies throughout California. The California Air Pollution Control Officers Association is not a regulatory body, but has been an active organization in providing guidance in addressing the CEQA significance of GHG emissions and climate change as well as other air quality issues.

Local

San Diego Forward: The Regional Plan

SANDAG is the regional planning agency for San Diego County and serves as a forum for regional issues related to the economy, community development and the environment. SANDAG has prepared the Regional Plan, which includes a SCS that is built on an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system. The Regional Plan also participates in the district's air quality plans that are designed to meet health-based criteria pollutant standards.

City of Oceanside Climate Action Plan

The City adopted a CAP in May of 2019. The purpose of the CAP is to align the City with statewide efforts to reduce GHG emissions by expanding local renewable energy generation, reducing energy use, promoting recycling and reuse, facilitating active transportation, and encouraging other sustainable practices. The CAP is built on a variety of reduction measures that promote energy efficiency, increased renewable energy use, water conservation, and solid waste reduction. The City has established efficiency metric thresholds, for which Projects are to use to evaluate impacts from GHG emissions, in order to help the City meet state reduction targets for 2020 and 2030. Projects that generate mass GHG emissions exceeding 900 MT CO_2E must assess Project-induced emissions against CAP-aligned thresholds of significance. Under the CAP thresholds, Projects are required to meet an efficiency metric threshold of 4.0 MT CO_2E per service population (MT CO_2E/SP) per year for Projects that will be implemented prior to year 2020 and an efficiency metric threshold of 3.5 MT CO_2E/SP for projects that will not be implemented prior to 2020. Projects that meet these thresholds would be considered consistent with the City's CAP.

City of Oceanside General Plan

Land Use Element

The following policies of the Land Use Element regulate GHG emissions.

2.7121 Bicycle Facilities

> Policy A: Development shall provide Class II Bikeways on all secondary, major and prime arterials.

2.7122 Pedestrian

> Policy A: The construction of five foot wide sidewalks adjacent to the curb shall be required in all new developments and street improvements.

2.725 Energy

Policy B: The City shall encourage the use of energy efficient design, structures, materials, and equipment in all land development or uses.

Policy C: The City shall encourage the use of long-term lower cost energy sources.

Energy and Climate Action Element

Policy ECAE-1d-3: Encourage the use of locally-produced construction materials, including salvaged lumber.

Policy ECAE-2a-2: In the City's commercial corridors, promote a mix of land uses that contributes to a sense of place, creates synergies between local businesses and affords residents the opportunity to live, work, and play within a walkable radius.

Policy ECAE-2b-2: In conjunction with infill and redevelopment Projects, pursue opportunities to integrate public open space into the City's urbanized corridors.

Policy ECAE-2c-4: Ensure that capital improvements are consistent with the City's Complete Streets policies, as articulated in the Circulation Element.

Policy ECAE-2f-1: Promote the installation of public electric vehicle charging facilities at convenient locations throughout the City.

Policy ECAE-3a-2: Continue to enhance organics waste recycling opportunities for both the commercial and residential sector in accordance with the City's Zero Waste goals and State Organics mandates.

Policy ECAE-3a-13: Improve monitoring and enforcement of the City's construction waste diversion requirements.

Policy ECAE-5b-3: In coordination with adjacent private property owners, identify hardscaped spaces within the public right-of-way that can be rendered permeable and plantable.

4.9.3 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, impacts would be considered significant if the Project would:

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment;
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Local Thresholds

The City Planning Division Policy Directive 2018-01 (Revised) – CEQA GHG Impact Analysis: Thresholds of Significance dated November 6, 2019 provides direction on CEQA-compliant analysis of GHG emissions

impacts associated with new development. While many Projects may otherwise be categorically exempt from CEQA review, those that generate mass GHG emissions exceeding 900 MT CO_2E (the generally accepted "bright line" threshold of significance for GHG emissions) must assess Project-induced emissions against CAP-aligned thresholds of significance. Therefore, if the Project does not exceed 900 MT CO_2E, it would demonstrate compliance with the City's CAP.

Projects that generate emissions exceeding 900 MT CO_2E must comply with the following thresholds of significance for new development. Projects within the City that are to be implemented prior to 2020 are required to meet an efficiency metric threshold of 4.0 MT CO_2E/SP and efficiency metric threshold of 3.5 MT CO_2E/SP for Projects being implemented by year 2025. Projects that cannot comply with these thresholds of significance require an EIR and an associated Statement of Overriding Considerations.

4.9.4 Project Impact Analysis

Would the Project:

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

Construction Impacts

Construction of the Project would result in GHG emissions primarily associated with the use of off-road construction equipment, on-road hauling and vendor trucks and worker vehicles. Construction of the Project would entail site preparation, grading, paving, building construction and architectural coatings. Equipment to be used during construction includes rubber tire dozers, tractors, loaders, backhoes, excavators, graders, pavers and other paving equipment, rollers, cranes, forklifts, generator sets, welders, and air compressors.

GHG emissions were calculated using the latest CalEEMod Version2016.3.2 air quality model. For the purpose of estimating the Project's emissions, it was assumed that construction of the Project would begin in November 2021 with completion in January 2023 and includes construction of the entire Project including utility infrastructure, facilities, improvements and structures. The expected annual construction emissions are provided in **Table 4.9-3** below.

Table 4.9-3
Expected Annual Construction Emissions (MT CO_2E)

Year	Bio-CO_2	NBio-CO_2	Total CO_2	CH_4	N_2O	CO_2E
2021	0.00	514.14	514.14	0.09	0.00	516.46
2022	0.00	39.03	39.03	0.01	0.00	39.19
Total						555.65
Yearly Average Construction Emissions (MT CO_2E / year over 30 years)						**18.52**
Source: Greenhouse Gas Screening Letter Prepared by Ldn Consulting, Inc. (Appendix I)						

Total cumulative or combined construction emissions are generated prior to operations and will ultimately contribute to yearly GHG emission levels of the Project as a whole. Therefore, it is acceptable to average the total construction emissions over a 30-year period which represents an average lifecycle of a Project (South Coast Air Quality Management District, 2014). Based on the results of **Table 4.9-3** above, the 30-year average emissions would be 18.52 MT CO_2E.

Operation Impacts

Emissions from daily operations would include sources such as area, energy, mobile, solid waste and water uses. The Project is expected to be fully operational in 2023 and would generate the first complete year of GHG emissions in 2024. As identified in the Vehicle Miles Traveled Analysis prepared by LOS Engineering, Inc. **(Appendix N)**, the Project is estimated to generate 475 ADT. As with construction emissions, operation emissions were calculated using the latest CalEEMod Version 2016.3.2 model. Operation emissions from the Project would also include amortized construction emissions from **Table 4.9-3** above. The expected operational emissions are provided in **Table 4.9-4.**

Table 4.9-4
Expected Annual Operational Emissions (MT CO_2E)

Source	Bio-CO_2	NBio-CO_2	Total CO_2	CH_4	N_2O	CO_2E
Area	0.00	0.01	0.01	0.00	0.00	0.01
Energy	0.00	59.94	59.94	0.00	0.00	60.16
Mobile	0.00	198.90	198.90	0.01	0.00	199.20
Waste	8.88	0.00	8.88	0.52	0.00	22.00
Water	0.34	6.98	7.32	0.04	0.00	8.47
Total Operations						289.84
Total Construction Emissions (Amortized over 30 years from **Table 4.9-3** above)						18.52
Total Cumulative Operations (Construction + Operation)						**308.36**
CarMax Customers Per Day						**237**
Emissions per Service Population (SP)						**1.30**
Source: Greenhouse Gas Screening Letter Prepared by Ldn Consulting, Inc. (Appendix I)						

Based on the results provided in **Table 4.9-4,** the Project would generate 308.26 MT CO_2E each year during a typical operational year. This includes the combined operational and construction GHG emissions over a 30-year period.

The Project would not exceed the City's 900 MT CO_2E screening threshold for Projects that must assess Project-induced emissions against CAP-aligned thresholds of significance and therefore would be in compliance with the City's CAP. Furthermore, the Project would serve up to approximately 237 customers per day, which would be considered the service population for the Project. Given this, the Project would generate approximately 1.3 MT CO_2E/SP, which is less than the 3.5 MT CO_2E/SP CAP threshold for projects that will be implemented prior to year 2025. Thus, the Project will not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment and impacts are **less than significant.**

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

Consistency with City of Oceanside General Plan

The Project would be consistent with the policies set forth in the City General Plan Land Use Element and ECAE as provided in Section 4.9.2 that are designed to reduce the emissions of GHG, promote alternative transportation and other methods of efficiency. The Project would provide improvements along Plaza Drive including a 5-foot sidewalk and pedestrian ramps on both sides of the street, to

connect to existing sidewalks to the east and west of the Project site. Improvements along Plaza Drive would also include a designated 8-foot bicycle lanes on both sides of the street, in accordance with the Land Use Element policies related to Bicycle and Pedestrian Facilities. The Project would promote energy efficiency within buildings including energy efficient appliances.

In accordance with the ECAE, the Project would be an infill Project surrounded by other commercial development to the west and northwest and residential developments to the east and south. Seven (7) EV charging spaces would be provided in the customer and employee parking lot in accordance with the California Green Building Standards. Project construction would comply with all construction waste diversion requirements.

The Project would not conflict with the General Plan applicable goals and policies related to GHG emissions.

Consistency with City of Oceanside Climate Action Plan

The CAP was developed to align with state efforts to reduce GHG emissions and meet the State of California's 2050 GHG reduction goal. As provided in **Table 4.9-4**, the Project would generate 308.36 MT CO_2E each year during a typical operational year. This includes the combined operational and construction GHG emissions over a 30-year period. The Project would not exceed the City's 900 MT CO_2E screening threshold for Projects that must assess Project-induced emissions against CAP-aligned thresholds of significance. Further, the Project would generate approximately 1.3 MT CO_2E/SP, which is less than the 3.5 MT CO_2E/SP CAP threshold for projects that will be implemented prior to year 2025.

Therefore, the Project would be incompliance with the City's CAP and the Project would not generate a significant impact to GHG emissions.

Consistency with SB 32, EO S-3-05

Executive Order S-3-05 establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, 1990 levels by 2020, and 80% below 1990 levels by 2050. SB 32 establishes a GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by December 31, 2030. The Project would generate 308.36 MT CO_2E each year during a typical operational year. This includes the combined operational and construction GHG emissions over a 30-year period. The Project would not exceed the City's 900 MT CO_2E screening threshold for Projects that must assess Project-induced emissions against CAP-aligned thresholds of significance. Further, the Project would generate approximately 1.3 MT CO_2E/SP, which is less than the 3.5 MT CO_2E/SP CAP threshold for projects that will be implemented prior to year 2025 and therefore would be in compliance with the City's CAP.

The Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG, and impacts are **less than significant**.

4.9.5 Mitigation Implementation and Monitoring

No significant impacts to GHG emissions have been identified and therefore no mitigation measures are required.

4.9.6 Level of Significance After Mitigation

Project impacts to GHG emissions will be less than significant.

Chapter 4.10 HAZARDS AND HAZARDOUS MATERIALS

The following documents were used in the preparation of this section and are included in their entirety in **Appendix B, Appendix H, Appendix P,** and **Appendix Q**:

EnviroApplications, Inc. September 11, 2019. *Phase I Environmental Site Assessment Report for Proposed Oceanside CarMax Facility*. **(Appendix B)**

EEI Engineering Solutions. September 6, 2019. *Geotechnical Evaluation for Proposed "CarMax" Commercial Development Plaza Drive and Hacienda Drive, City of Oceanside, County of San Diego, California.* **(Appendix H)**

EnviroApplications, Inc. November 6, 2019. *Summary of Berm Soil Sampling.* **(Appendix P)**

REC Consultants, Inc. March 2020. *Cortese List Verification.* **(Appendix Q)**

4.10.1 Environmental Setting

The Project Site consists primarily of disturbed and vacant land. The topography of the Project Site is relatively flat, and slopes gently south towards Buena Vista Creek. Elevations range from 180 feet amsl to 220 feet amsl. The Project Site has been previously graded and crushed rock is present along the western boundary of the Project Site. No structures or roads exist onsite. The Project Site boundaries are bisected by Plaza Drive, bounded on the north by SR-78, to the east by the DMV facility and Thunder Drive, to the south by Buena Vista Creek and to the west by a shopping center. The Project Site is surrounded primarily by commercial and residential uses.

The Project would be constructed in two (2) phases. The southern parcel, developed as Phase I, would provide a sales and administrative building, service building, private carwash, associated access drives, landscaped areas, presentation area, staging area, sales display area, and a customer and employee parking lot. The northern parcel would be developed as part of Phase II and would provide an additional sales display area.

Site History

Aerial Photographs and Historic Topographic Maps

Historical uses of the Project Site were observed through aerial photographs of the Phase I Environmental Site Assessment (ESA) Report prepared by EnviroApplications, Inc. **(Appendix B). Table 4.10-1** summarizes the series of photographs observed:

Table 4.10-1
Aerial Photographs and Historic Uses

Year	Observations and Use
1928 1939 1946 1953	The subject property and surrounding area appear to be open, hilly land in a rural, ranching setting. The currently existing roadways are not yet present. The subject property appears to be covered with brush and Buena Vista Creek is clearly visible to the south in its natural channel.

1964 1967 1970	The subject property still appears to be open, brush-covered land. State Route 78 has been constructed through the area to the north. Beyond the freeway further to the north are what appear to be a hospital campus and a drive-in movie theater. Thunder Drive (unpaved) is present along the eastern boundary of the subject property. By the time of the 1967 photo, the subject property and properties to the east appear to have been graded.
1979 1985	The subject property appears to be vacant, graded land crossed by several trails. The homes in the residential neighborhood across Thunder Drive to the east have been constructed. Land along Buena Vista Creek to the south appears to have been graded to control flooding. The land to the west of the subject property is still vacant. By the 1985 photo the currently existing CA DMV facility is present to the east of the subject property.
1989 1990 1994 2005 2009 2012 2016	The subject and surrounding properties appear similar to the way they did during the reconnaissance visit for this ESA.
Source: Phase I Environmental Site Assessment (Appendix B)	

Historic topographic U.S. Geological Survey (USGS) maps of the Project Site and surrounding area were analyzed and summarized in **Table 4.10-2** below. No indicators of historic or current American Society of Testing and Materials (ASTM) recognized environmental conditions (RECs) were found.

Table 4.10-2
Historic USGS Topographic Map Review

Years	Observations
1996 2012	The subject property is depicted as vacant hillside land with SR-78 present to the north and Marron Canyon and Buena Vista Creek to the south. The surrounding area on the 1996 map is shaded pink, an indication of fully-developed land, with no features depicted.
Source: Phase I Environmental Site Assessment (Appendix B)	

Table 4.10-3 below summarizes the historical uses of the properties surrounding the Project Site.

Table 4.10-3
Historical Adjacent Property Uses

Direction	Summary of Historical Use
North	Originally open hillside land that became developed with the east-bound lanes of SR-78.
East	Originally open hillside land that became developed with, from north to south: the Oceanside DMV facility at 4005 Plaza Drive then Thunder Drive, followed by a residential neighborhood.
South	Always occupied by Buena Vista Creek, whose banks have undergone grading for flood control purposes.
West	Originally open hillside land that became developed with a large, multi-tenant shopping center with nearest address being 3841 Plaza Drive (a vacant shop for lease).
Source: Phase I Environmental Site Assessment (Appendix B)	

Site Reconnaissance

Site Reconnaissance Methodology

A reconnaissance visit to the Project Site was conducted by EnviroApplications, Inc. on July 29, 2019 and the results are provided in the Phase Environmental Site Assessment Report **(Appendix B).** Methodology used to observe the subject property included the following:

- Traverse the central area of the subject property lots.
- Walk the reasonable accessible boundary areas of the subject property.
- Observe adjacent property areas from public thoroughfares.

Hazardous Substances and Petroleum Products

No hazardous substances or petroleum products; drums; strong pungent or noxious odors; pools of liquid, unidentified substance containers; or other observed evidence of hazardous substances or petroleum products were observed.

Additionally, no underground storage tanks or aboveground storage tanks were observed.

Exterior Observations

No pits, ponds, or lagoons; stained soil or pavement; stressed vegetation; waste streams or waste collection areas; or solid waste disposal areas were observed onsite. No sources of wastewater; indication of storm water discharge; wells; septic systems; electrical power transmissions lines or other sources of elevated electromagnetic radiation were observed onsite.

Two (2) mounds of fill soil located on the eastern portion of the property adjacent to Thunder Drive appear to consist of several hundred cubic yards of soil. While not qualifying as an ASTM REC, the mounds of fill soil were recommended for Phase II soil sampling and analysis to determine the source of the soil and its contents. The Summary of Berm Soil Sampling prepared by EnviroApplications, Inc. is provided as **Appendix P**. The results of the soil sampling are discussed below.

No potential adverse environmental conditions were observed and no evidence of an ASTM REC or Historic REC (HREC) was observed on the Project Site based on the reconnaissance visit.

Soil Sampling Results

Following the initial reconnaissance visit, EnviroApllications, Inc. conducted a visit to collect soil samples from the mounds of fill soil located on the eastern portion of the property. Approximately 30 soil samples were collected from 10 locations at depths of approximately 1.5-, 3-, and 5-feet below the surface of the mounds. The 10 samples collected from the three-foot depth interval were submitted for laboratory analysis which screened for VOCs identified by U.S. EPA Method 8260B, including: Total Petroleum HydroCarbons (TPH) Extended Range by EPA Method 8015B, California Administrative Manual (CAM) 17 Metals by EPA Method 6010B, mercury by EPA Method 7471A, and organochlorine pesticides by EPA Method 8081A. Based on the results from these samples, the remaining 20 samples were not analyzed.

VOCs, TPH in the gasoline fuel range (TPHg), and organochlorine pesticides were not detected in any of the soil samples collected.

TPH in the diesel fuel range (TPHd) was detected in four of the samples collected, with detected concentrations ranging from 4.9 to 217.4 milligrams per kilogram (mg/kg). Total TPH was detected in eight of the soil samples collected, with concentrations detected ranging from 5.1 to 220 mg/kg.

Concentrations of 12 of the 17 CAM metals were detected in the samples collected.

Based on the results obtained, it was concluded that the mounds of fill soil are not considered a health risk for a commercial property with comparisons to the Department of Toxic Substances Control (DTSC) Screening Levels, and that the metal concentrations detected are within the range of typical elemental metal concentrations in soils of the western United States.

Environmental Records Review

A government agency database search report was obtained from Environmental Data Resources, Inc. (EDR) and found that the Project Site is not listed in the EDR Report nor do listings for nearby sites have the potential to impact the Project Site. The EDR Report did not indicate any oil or gas well sites located near the site and there are no existing or abandoned oil or gas wells or dry holes present on, or within a one-mile radius of the Project Site. A local and regional environmental records search was obtained for the Project Site and no records associated with the Project Site were found by the following agencies: DEH, OFD, Oceanside Building Department, Department of Toxic Substance Control, San Diego Water Board, SDAPCD and the Oceanside Water Utilities Department. The environmental records review did not result in an indication of a potential ASTM HREC or REC for the Project Site.

Other Environmental Hazards

Other environmental risks screened for in the search included lead-based paint, asbestos, flood zones, vapor encroachment, radon, dry cleaning operations, mold, and pesticides and other agricultural chemicals. There are no existing structures located onsite and therefore the presences of lead-based paint, asbestos, and mold were considered negligible. The Project Site is located within the 100-year and 500-year flood plain as depicted in the FEMA flood insurance rate map (FEMA Panel 06073C0766G). No VOC release sites located hydrogeologically up-gradient, or immediately side-gradient of the Project Site that could act as a source of contamination to oil gas underlying the Project Site. The potential for subsurface contaminant vapor reaching the site is low. Based on the Federal EPA Radon Zone rating and California Department of Health Services (CDHS) survey results radon gas is not expected to represent an environmental impact risk at the Project Site. No dry cleaning operations were reported or observed to be at or near the Project Site. Lastly, the historical research for the Project Site does not indicate that it was ever used for agricultural purposes, and therefore there are no concerns regarding residual pesticides or other agricultural chemicals presenting environmental impacts to the Project Site.

Cortese List

Below are the data resources that provide information regarding the facilities or sites identified as meeting the “Cortese List” requirements pursuant to Government Code Section 65962.5. The Project was not listed under the following data resources:

- List of hazardous waste and substances from the DTSC EnviroStor database;

- List of leaking underground storage tank sites form the State Water Board's GeoTracker database;
- List of solid waste disposal sites identified by Water Board with waste constituents above hazardous waste levels outside the waste management unit;
- List of "active" Cease and Desist Orders (CDO) and Cleanup Abatement Orders (CAO) from Water Board; and
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

Wildfire Setting and History

The threat of brushfire is endemic to the Southern California coastal area, and the probability of fire occurring in the City is higher than for any other natural hazard. The City's climate, topography, and wildland urban interface, when fueled by shrub overgrowth, Santa Ana winds, and high temperatures, creates an ever-present threat of wildland fire.

Brush fire hazards exist to some degree throughout the City; however, it is "high" only in areas in proximity to residential development. The hazard is rated "extreme" in those areas where the vegetation changes from grass and sage to the denser and more flammable chaparral; an even higher risk occurs where residential development is scattered on large lots, where more of the natural vegetation is preserved, than in the standard single-family development. The Project Site is not located in an area of "high" or "extreme" fire hazard as depicted in Figure PS-5 in the General Plan Public Safety Element.

While there are some patches of native vegetation onsite, the Project Site vegetation can largely be characterized as disturbed land with patches of ruderal, ice plant, and ornamental vegetation. The Project Site is characterized by Urban and Built-up land by the FMMP as displayed in **Figure 10**. Additionally, the Project Site is not located in a State Responsibility Area (SRA) recognized by the Board of Forestry and Fire Protection.

Airport Hazards

The Oceanside Municipal Airport is located approximately 4.2 miles northwest of the Project Site. The Project Site is not located within the Oceanside Municipal Airport Influence Area or any of the safety zones as displayed in the Oceanside Municipal Airport Land Use Compatibility Plan (ALUCP).

4.10.2 Regulatory Setting

Federal

Federal Toxic Substances Control Act and Resource Conservation and Recovery Act

The Federal Toxic Substances Control Act of 1976 and the Resource Conservation and Recovery Act (RCRA) of 1976 established a program administered by the U.S. EPA for regulation of the generation, transportation, treatment, storage and disposal of hazardous waste. The RCRA was amended in 1984 by the Hazardous Solid Waste Act which affirmed and extended the "cradle-to-grave" system of regulating hazardous wastes. Any business, institution, or other entity that generates hazardous waste is required to identify and track the waste from the point of generation until it is recycled, reused, or disposed.

Under the authority of the RCRA, the regulatory framework for managing hazardous waste, including requirements for entities that generate, store, transport, treat and dispose of hazardous waste is found in Title 40, Part 260-299, of the Code of Federal Regulations (CFR).

Hazardous Materials Transportation Act

The U.S. Department of Transportation regulates hazardous materials transportation under Title 49 of the CFR. State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and Caltrans. These agencies also govern permitting for hazardous materials transportation.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), commonly known as "Superfund", was enacted by Congress on December 11, 1980. This law provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERLA established requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. CERCLA also enabled the revision of the National Contingency Plan which provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration (OSHA) is the federal agency responsible for ensuring worker safety. These regulations provide standards for a safe workplace and work practices, including those relating to hazardous materials handling and infection prevention during the Coronavirus Disease 2019 (COVID-19) pandemic. Under OSHA, contractors are required to comply with hazardous materials management and handling requirements to reduce the possibility of hazardous spills. OSHA provides guidance for construction employers and workers, such as those engaged in carpentry, ironworking, plumbing, electrical, heating/ventilation/air conditioning, masonry and concrete work, utility construction work, and earthmoving activities.

Resources Conservation and Recovery Act

The Resources Conservation and Recovery Act (RCRA) is the principal law governing the management and disposal of hazardous materials. RCRA is considered a "cradle-to-grave" statute for hazardous wastes in that it addresses all aspects of hazardous materials from creation to disposal. RCRA applies to the Project because RCRA is used to define hazardous materials and provide requirements for their storage, use and disposal; off-site disposal facilities and the wastes each may accept are regulated under the RCRA.

International Fire Code

The International Fire Code (IFC), created by the International Code Council (ICC), is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The IFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The IFC and the International

Building Code (IBC) use a hazard classification system to determine what protective measures are required to protect life safety in relation to fire. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the IFC employs a permit system based on hazard classification.

Federal Aviation Administration

The Federal Aviation Administration (FAA) has primary responsibility for the safety of civil aviation. The FAA's major functions regarding hazards include the following: 1) developing and operating a common system of air traffic control and navigation for both civil and military aircraft, 2) developing and implementing programs to control aircraft noise and other environmental effects of civil aviation, 3) regulating U.S. commercial space transportation, and 4) conducting reviews to determine that the safety of persons and property on the ground are protected.

Federal Response Plan

The FEMA Federal Response Plan (FRP) published April of 1999, is a signed agreement amongst 27 Federal departments and agencies, including the American Red Cross and provides the following: mechanisms for coordinating delivery of Federal assistance and resources to augment efforts of State and local governments overwhelmed by a major disaster or emergency; supports implementation of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended (United States Code, Title 42, 5121 et seq.) as well as individual agency statutory authorities; and supplements other Federal emergency operations plans developed to address specific hazards. The FRP is implemented in anticipation of a significant event likely to result in a need for Federal assistance and in response to an actual event requiring Federal assistance under a Presidential declaration of a major disaster or emergency.

State

California Occupational Safety and Health Administration

CalOSHA is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. CalOSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure. The regulations specify requirements for employee training, availability of safety equipment, accident prevention programs, and hazardous substance exposure warnings. CalOSHA also provides workplace safety and health guidelines for employers to take steps to protect workers during COVID-19 including specific guidelines for employers and workers in the construction industry.

California Hazardous Waste Control Act

DTSC is responsible for the enforcement of the Hazardous Waste Control Act (California Health and Safety Code, Section 25100 *et seq*.), which creates the framework under which hazardous wastes are managed in California. The law provides for the development of a state hazardous waste program that administers and implements the provisions of the federal RCRA cradle-to-grave waste management system in California. While the Hazardous Waste Control Act is generally more stringent than RCRA, until the EPA approves the California hazardous waste control program (which is charged with regulating the generation, treatment, storage, and disposal of hazardous waste), both the state and federal laws apply in California. The Hazardous Waste Control Act lists 791 chemicals and approximately 300 common

materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

According to Title 22 of the CCR, Sections 66001 *et seq*., substances having a characteristic of toxicity, ignitability, corrosivity, or reactivity are considered hazardous waste. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, or contaminated or stored prior to proper disposal. Toxic substances may cause short-term or long-lasting health effects ranging from temporary effects to permanent disability or death.

Other types of hazardous materials include radioactive and biohazardous materials. Radioactive materials and wastes contain radioisotopes, which are atoms with unstable nuclei that emit ionizing radiation to increase their stability. Biohazardous materials and wastes include anything derived from living organisms. They may be contaminated with disease-causing agents, such as bacteria or viruses.

Government Code Section 65962.5 (a), Cortese List

California Government Code, Section 65962.5, commonly referred to as the Cortese List, was originally enacted in 1985. Government Code Section 65962.5 requires the CalEPA to develop, at least annually, an updated Cortese List. The DTSC is responsible for compiling and updating a list of the following:

- List of hazardous waste and substances from the DTSC EnviroStor database;
- List of leaking underground storage tank sites form the State Water Board's GeoTracker database;
- List of solid waste disposal sites identified by Water Board with waste constituents above hazardous waste levels outside the waste management unit;
- List of "active" Cease and Desist Orders (CDO) and Cleanup Abatement Orders (CAO) from Water Board; and
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

California Accidental Release Prevention Program

The California Accidental Release Prevention (CalARP) Program CCR, Title 19, Division 2, Chapter 4.5 regulates facilities that use or store regulated substances, such as toxic or flammable chemicals, in quantities that exceed established thresholds. The overall purpose of CalARP is to prevent accidental release of regulated substances and reduce the severity of releases that may occur.

California Aboveground Petroleum Storage Act

The Aboveground Petroleum Storage Act (APSA) was originally adopted in 1989 and administered by the State Water Resources Control Board Regional Water Quality Control Boards. AB 1130 transferred the responsibility for the implementation, enforcement and administration of aboveground storage of petroleum to Unified Program Agencies (UPA). APSA regulates non-transportation related facilities with aggregate aboveground petroleum storage capacities of 1,320 gallons or more stored in aboveground storage containers, tanks, or oil-filled equipment. Unless exempted, a facility in the APSA Program must prepare and implement a Spill Prevention, Control and Countermeasures (SPCC) Plan, submit facility information in the California Environmental Reporting System (CERS), and pay a fee to the UPA. The

intent of the SPCC Plan is prevention of, preparedness for, and response to petroleum discharges by describing procedures, methods, and equipment at the facility to prevent such discharges.

California Health and Safety Code

In California, the handling and storage of hazardous materials is regulated by Division 20, Chapter 6.95, of the California Health and Safety Code (Section 25500 *et seq*.). Under this Section, facilities handling hazardous materials are required to prepare a hazardous materials business plan. Hazardous materials business plans contain basic information about the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the state.

Chapter 6.95, Section 25507, of the California Health and Safety Code establishes minimum statewide standards including the minimum quantities for which businesses shall prepare a Hazardous Materials Business Plan. Additionally, in the event that a facility stores quantities of specific acutely hazardous materials above the thresholds set forth by the California Health and Safety Code, facilities are also required to prepare a risk management plan and California accidental release prevention plan.

California Emergency Services Act

Under the Emergency Services Act (California Government Code Section 8558 *et seq.),* the State of California developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. The Governor's Office of Emergency Services administers the emergency response plans and coordinates the responses of other agencies, including the EPA, CHP, Regional Water Quality Control Boards (RWQCBs), air quality management districts, and county disaster response offices.

California Fire Code

The California Fire Code (CFC) is Chapter 9 of Title 24 of the CCR. It was created by the California Building Standards Commission and is based on the IFC created by the ICC. The CFC is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The CFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the CBC use a hazard classification system to determine what protective measures are required to protect fire and life safety.

Local

County of San Diego Department of Environmental Health

The County DEH Hazardous Materials Division (HMD) is responsible for the protection of public health and the environment by ensuring hazardous materials, hazardous waste, medical waste, aboveground tanks and underground storage tanks are properly managed. The HMD has the authority pursuant to state law and County Code to regulate facilities that handle or store hazardous materials, and/or generate or treat hazardous waste.

San Diego County Emergency Operations Plan

The Emergency Operations Plan is for use by the County and all of the cities within the County to respond to major emergencies and disasters. It describes the roles and responsibilities of all County

departments and the relationship between the County and all its departments and the jurisdictions within the County. The plan also identifies the sources of outside support that may be provided, through mutual aid and specific statutory authorities, by other jurisdictions, state and federal agencies, and the private sector.

San Diego County Multi-Jurisdiction Hazard Mitigation Plan

The Multi-Jurisdictional Hazard Mitigation Plan was prepared in 2010 and was revised in October 2017 and was prepared to meet FEMA requirements thus, making the County and all participating jurisdictions and special districts eligible for funding and technical assistance from the state and federal hazard mitigation programs. The plan includes a risk assessment to enable local jurisdictions to identify and prioritize appropriate mitigation actions that will reduce losses from potential hazards, including flooding, earthquakes, fires and artificial hazards. To address potential hazards, the plan incorporates mitigation goals and objectives, mitigation actions and priorities, an implementation plan, and documentation of the mitigation planning process for each of the 21 participating jurisdictions, including the City.

California Disaster and Civil Defense Master Mutual Aid Agreement

As provided for in the California Emergency Services Act, the California Disaster and Civil Defense Master Mutual Aid Agreement was developed in 1950 and adopted by all 58 counties in California. This statewide mutual aid system is designed to ensure that adequate resources prove to be inadequate to cope with a give situation. The County is located in Mutual Aid Region 6 of the state system, which also includes Imperial, Riverside, San Bernardino, Inyo, and Mono counties.

Oceanside Municipal Airport Land Use Compatibility Plan

The County Regional Airport Authority develops and adopts ALUCPs for each public use and military airport within its jurisdiction. The Oceanside Municipal ALUCP provides policies to ensure compatibility with the airport and surrounding land uses. Policies range from noise, overflight zones, and safety zones.

City of Oceanside Emergency Operations Plan

In 2017, the City adopted an Emergency Operations Plan. The purpose of the plan is to define the actions and roles necessary to provide a coordinated response, in order to ensure the most effective use of all resources for the maximum benefit, protection, and resiliency of the community in times of emergency. It includes an assessment of hazards the City faces, and establishes a system for coordinating the prevention, preparedness, response, recovery, and mitigation phases of emergency management. The plan defines responsibilities, establishes an emergency organization, and defines lines of communication.

City of Oceanside General Plan

The General Plan serves as a policy guide for determining the appropriate physical development and character of the City.

Hazard Waste Management Element of the General Plan

The Hazardous Waste Management Element of the City's General Plan provides measures necessary for the protection of the citizens of Oceanside during the siting of hazardous waste facilities in coordination with the San Diego County Hazardous Waste Management Plan, and measures to reduce the need for such facilities through the minimization of hazardous materials and wastes.

Public Safety Element of the General Plan

The Public Safety Element of the General Plan identifies and addresses features or characteristics existing in or near the City that represent a potential hazard to the community's citizens, sites and structures, public facilities and infrastructure. It establishes policies to minimize the danger to residents, workers, and visitors while identifying actions needed to manage crisis situations such as earthquakes, fires, and floods. This element also provides a Public Safety Plan which includes maps indicating areas that have increased susceptibility to these hazards and relocation routes during emergency evacuations. The following roadway relocation routes identified in the Public Safety Element are in proximity to the Project Site:

- College Boulevard between Oceanside Boulevard and Lake Boulevard
- SR- 78 (throughout the entire City)
- Lake Boulevard from College Boulevard to Cannon Road

4.10.3 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, impacts would be considered significant if the Project would:

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
e. For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area;
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

4.10.4 Project Impact Analysis

Would the Project:

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction

Construction of the Project would entail routine transport of typical construction materials potentially hazardous to humans, wildlife, and sensitive environments. These materials could include gasoline, diesel fuel, used oil, solvents, cleaners, lead paint debris, lubricants, and other petroleum-based products used for the operation and maintenance of construction equipment and vehicles. Handling of these hazardous materials would be temporary in nature, and limited to quantities and concentrations consistent with a typical infill commercial use of this size. Proper BMPs such as proper and clear labeling of chemicals, storage in approved containers, preparation of an accidental release plan, and compliance with hazardous materials handling protocols would be prepared and implemented to ensure safe storage, handling, transport, use and disposal of all hazardous materials during the construction phase of the Project, in compliance with all applicable laws, ordinances, rules, regulations, and orders. The Contractor would ensure hazardous waste generated is properly disposed by a California registered hazardous waste hauler.

Project construction would also adhere to all local standards set forth by the City, as well as state and federal health and safety requirements that are intended to minimize hazardous materials risk to the public, such as CalOSHA requirements, Hazardous Waste Control Act CalARP, and the California Health and Safety Code.

Thus, Project construction would not create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials, and impacts are **less than significant.**

Operation

Operation of the proposed CarMax Project would consist of a sales and administrative building, service building, private carwash, associated access drives, landscaped areas, presentation area, staging area, sales display area, and a customer and employee parking lot, and additional sales display area. Typical daily operations include deliveries of vehicles, parts and supplies to the site, vehicle sales and test drives, preparation of vehicles for sales, and vehicle service work which is to be performed inside fully-conditioned buildings equipped with rollup doors. Only minor vehicle servicing will occur including routine maintenance, oil changes, tire rotations diagnostic and mileage services. No major mechanical work, body work or painting will occur within the service building.

The Project would be expected to handle small quantities, at a time, of commonly used hazardous substances such as cleaning solvents, diesel, gasoline, and oil as part of daily operations. The servicing operations would require the storage, transport, use and disposal of such potentially hazardous materials. Gasoline would be transported to the site by fuel trucks, which is a routine, permitted use. Given the quantities of potentially hazardous materials and the characteristics of use (e.g., routine maintenance and cleaning) the Project would not be considered a potential risk to human health or the environment. Fuel transportation would be subject to federal tank, placard, and shipment documentation and reporting requirements. The amount of hazardous materials stored and used is expected to be limited and would be required to comply with applicable local, state and federal regulations.

The Project would comply with the County DEH HMD for submitting a Hazardous Materials Questionnaire to complete a Hazardous Materials Plan Check application to obtain a Unified Program

Facility Permit (UPFP). The UPFP regulates handling and storage of hazardous materials, facilities that generate hazardous waste, and facilities that store over 1,320 gallons of above ground petroleum.

A private aboveground fuel storage tank with a capacity of 4,000 gallons would be located to the south of the sales building with a non-public fuel pump within the secured staging area to fuel inventory vehicles as needed. The aboveground storage tank would have a triple-wall design in order to provide an additional level of containment protection. The Project will comply with the following County DEH HMD regulations and will obtain the required permits for operation of the aboveground fuel storage tank.

Operation of aboveground fuel storage tanks with a total storage capacity of 1,320 gallons or more of petroleum are subject to the Aboveground Petroleum Storage Act (APSA). The County DEH, HMD is the Certified Unified Program Agency (CUPA) responsible for the regulatory inspections of all tank facilities subject to the APSA in the County. In accordance with the APSA program, the Project would prepare and implement a Spill Prevention, Control and Countermeasure (SPCC) Plan in order to prevent discharge of petroleum and to allow for the preparedness and proper response of petroleum discharges. The SPCC Plan is to be kept onsite for HMD inspections.

The Project would also be required to submit a Hazardous Material Business Plan to the County of San Diego DEH HMD that details the onsite use and storage of fuels in order to prevent damage to public health, safety, and the environment. The Hazardous Materials Business Plan also provides emergency response personnel with adequate information to help better prepare and respond to incidents at regulated facilities. The aboveground storage tank and associated facilities would undergo yearly inspections by the County DEH including inspections of any installations, repairs or required updates.

Anticipated chemicals used in the carwash are as follows: presoak Hi pH 366, carwash detergent Blue Coral hi pH3600, Rain X Protectant, and Cold Wax (or similar). These chemicals would be stored and labeled in closed containers inside the carwash and used in only the small amounts necessary. Carwash wastewater would go into an oil water separator, the water would be reused in the carwash and the separated chemicals and oil would be taken off-site to be treated by a certified waste vendor.

Operational activities including vehicle servicing, carwash, fueling and fuel storage, and other service related activities would comply with all applicable federal, state and local laws and regulations, would obtain all required DEH HMD permits and would prepare a Hazardous Materials Business Plan which would reduce potential impacts related to hazardous materials to a level below significance.

Operational impacts related to the routine transport, use or disposal of hazardous materials will be **less than significant**.

b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The Phase I Environmental Site Assessment (**Appendix B**) revealed no evidence of potential ASTM RECs, controlled RECs, or historical RECs associated with the existing Project Site. Furthermore, soil sampling and analysis of the two fill mounds located on the eastern portion of the Project Site, provided in the Summary of Berm Soil Samples prepared by EnviroApplications, Inc. (**Appendix P**), determined that the soil was not considered a health risk for a commercial property when compared to DTSC Screening Levels. Thus, the likelihood of release of hazardous materials into the environment from upset and accident conditions during grading and earth-moving activities onsite is minimal.

As discussed above in Section 4.10.4a, handling of potentially hazardous materials during Project construction would be temporary in nature, and limited to quantities and concentrations consistent with a typical infill commercial use of this size. Proper BMPs such as proper and clear labeling of chemicals, storage in approved containers, preparation of an accidental release plan, and compliance with hazardous materials handling protocols would be prepared and implemented to reduce significant hazards to the public or the environment.

During Project operations, the Project would be expected to handle small quantities of commonly used hazardous substances such as cleaning solvents, diesel, gasoline, and oil as part of daily operations. Fuel transportation would be subject to federal tank, placard, and shipment documentation and reporting requirements. A private aboveground fuel storage tank with a capacity of 4,000 gallons would be located to the south of the sales building with a non-public fuel pump within the secured staging area to fuel inventory vehicles as needed. The aboveground storage tank would have a triple-wall design in order to provide an additional level of containment protection. The Project will comply with the following County DEH HMD regulations and will obtain the required permits for operation of the aboveground fuel storage tank.

The Project would be required to submit a Hazardous Material Business Plan to the County DEH HMD that details the onsite use and storage of fuels in order to prevent damage to public health, safety, and the environment involving the release of hazardous materials. Chemicals used in the carwash would be stored in closed containers and used in small amounts. Wastewater from the carwash would go into an oil water separator, the water would be reused in the carwash and the separated chemicals and oil would be taken off-site to be treated by a certified waste vendor.

Compliance with applicable state, local, and federal laws and preparation of a Hazardous Materials Business Plan would ensure all operational activities involving potentially hazardous materials would not result in the release of such materials into the environment.

The Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and therefore, impacts are **less than significant**.

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The Project Site is not located within 0.25 mile of an existing or proposed school. Calavera Hills Elementary School and Calavera Hills Middle School, within the City of Carlsbad are located approximately 0.7 mile southwest of the Project Site. Hope Elementary School, also within the City of Carlsbad, is located approximately 1.2 miles southwest of the Project Site and Tri-City Christian School is located approximately 0.8 mile northeast of the Project Site.

As discussed in Section 4.10.4a and 4.10.4b, compliance with applicable state, local, and federal laws and preparation of a Hazardous Materials Business Plan would ensure all construction and operational activities involving potentially hazardous materials would not result in a significant hazard to the public or the environment.

As discussed in Section 4.4 *Air Quality*, the Project would not exceed SDAPCD thresholds for any pollutant during construction and operation phases of the Project.

There are no schools located within one-quarter mile of the Project area. Therefore, the Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter-mile of an existing or proposed school, and impacts are **less than significant.**

d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

As part of the Phase I ESA (**Appendix B**) prepared for the Project Site, a government agency database search report was obtained from Environmental Data Resources, Inc. (EDR) and found that the Project Site is not listed in the EDR Report, and there are no listings for nearby sites have the potential to impact the Project Site. The environmental records review did not result in an indication of a potential ASTM HREC or REC for the Project Site.

Additionally, a Cortese List Verification (**Appendix Q**) pursuant to Government Code Section 65962.5 was prepared and the Project Site was not listed under the following data resources:

- List of hazardous waste and substances from the DTSC EnviroStor database;
- List of leaking underground storage tank sites form the State Water Board's GeoTracker database;
- List of solid waste disposal sites identified by Water Board with waste constituents above hazardous waste levels outside the waste management unit;
- List of "active" CDO and CAO from Water Board; and
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

Therefore, the Project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and as a result, would not create a significant hazard to the public or environment, and therefore, **no impact** will occur.

e. For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?

The Oceanside Municipal Airport is located approximately 4.2 miles northwest of the Project Site. The Project Site is not located within the Oceanside Municipal Airport Influence Area or any of the safety zones as displayed in the Oceanside ALUCP. Due to the distance from the Oceanside Municipal Airport, the Project would not expose workers or patrons to safety hazards associated with the airport. Therefore, the Project would not result in a safety hazard or excessive noise for people residing or working in the Project area, and impacts are **less than significant impact.**

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The Project Site would be accessed from Thunder Drive at two main access points into the customer and employee parking lot area. Plaza Drive separates the north and south parcels and would provide access to the northern parcel sales display area that would be constructed as part of Phase II. The southern

parcel would have access off of Plaza Drive for test drives only and would not be accessible to the public. A Knox Box will be provided at the security gate and control island on the northern parcel sales display area as well as at the security gate and control island located at the test drive-only driveway. A Knox Box is a small, wall-mounted safe that holds building keys in order for fire departments, emergency medical services and police to gain access into buildings in emergency situations. The Project would provide all required setbacks, fire truck access and turnarounds, fire hydrants, address numbers, sprinklers and an OPTICOM system in accordance with the City Fire Department requirements. The OPTICOM system is a traffic control system that provides a green light and intersection right-of-way to emergency vehicles.

As provided in the Public Safety Element of the General Plan, SR-78 to the north, College Boulevard located to the west, and Lake Boulevard to the south of the Project Site are the nearest evacuation routes. As part of the development process, the Project has been reviewed by the OFD to ensure it does not impair any emergency response or evacuation plans.

The adopted emergency plans applicable to the Project area consist of the Multi-Jurisdictional Hazard Mitigation Plan for San Diego County, the San Diego County Emergency Operations Plan, and City Emergency Plan. Compliance of all Fire Department requirements would ensure the Project would not impair an adopted emergency response plan or emergency evacuation plan, and impacts are **less than significant**.

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The Project Site is not located in a SRA as recognized by the Board of Forestry and Fire Protection as areas where California Department of Forestry and Fire Protection (CAL FIRE) is the primary emergency response agency responsible for fire suppression and prevention. Additionally, the Project Site is not located in an area of “high” or “extreme” fire hazard as depicted in Figure PS-5 in the General Plan Public Safety Element.

The Project Site is relatively flat and slopes gently south toward Buena Vista Creek. Elevations range from approximately 180 to 220 feet amsl. The Project is located in a developed area and is surrounded by commercial uses to the west, medium density residential uses and a DMV facility to the east and SR-78 to the north. Located to the south are Buena Vista Creek, high density and residential estate uses, commercial and public/semipublic uses including an OFD station. The Project is not located adjacent to wildland areas and therefore, would not exacerbate wildfire risks and thereby expose people or structures to a significant risk of loss, injury or death involving wildland fires and impacts are **less than significant**.

4.10.5 Mitigation Implementation and Monitoring

No significant impacts related to hazards and hazardous materials have been identified and therefore, no mitigation measures are required.

4.10.6 Level of Significance After Mitigation

Impacts related to hazards and hazardous materials from the implementation of the Project will be less than significant.

Chapter 4.11 HYDROLOGY AND WATER QUALITY

The following documents were used in the preparation of this section and are included in their entirety in **Appendix H, Appendix J, Appendix K** and **Appendix L**:

EEI Engineering Solutions. September 2019. *Geotechnical Evaluation, for Proposed "CarMax" Commercial Development Plaza Drive and Hacienda Drive, City of Oceanside, County of San Diego, California.* **(Appendix H)**

REC Consultants, Inc. December 16, 2019. *Drainage Study for CarMax Oceanside.* **(Appendix J)**

REC Consultants, Inc. February 28, 2020. *Priority Development Project Storm Water Quality Management Plan for CarMax Oceanside.* **(Appendix K)**

REC Consultants, Inc. December 17, 2019. *Technical Memorandum: SWMM Modeling for Hydromodification Compliance of: CarMax Oceanside.* **(Appendix L)**

4.11.1 Environmental Setting

In its existing conditions, the Project Site is vacant, but has been previously graded. The Project Site contains a north and south parcel separated by Plaza Drive. Development of the southern parcel, which will occur as Phase I, will include a sales and administrative building, service building, private carwash, associated access drives, landscaped areas, presentation area, staging area, sales display area, and a customer and employee parking lot. Development of the northern parcel, which will occur as Phase II, will include an additional sales display area with a security gate and control island.

While there are some patches of native vegetation onsite, it can largely be characterized as disturbed land with patches of ruderal, ice plant, and ornamental vegetation. The overall topography of the Project Site is relatively flat, sloping gently toward Buena Vista Creek in the southern portion of the Project Site. Elevations range from approximately 180 feet amsl to 220 feet amsl, with the highest elevations being in the northern parcel and the lowest elevations in the southern portion of the Project Site along the creek.

Hydrologic Setting

The Project Site is located within the Vista Hydrologic Sub-Area 904.22 of the Buena Vista Creek Hydrologic Area (HA) 904.20 of the Carlsbad Hydrologic Unit (HU). Buena Vista Creek runs along the southern portion of the Project Site from east to west, eventually connecting to Buena Vista Lagoon and the Pacific Ocean approximately four (4) miles west of the Project Site. Buena Vista Creek is classified as a freshwater forested/shrub wetland by the USFWS's National Wetlands Inventory (USFWS, 2019). The southern portion of the Project Site lies within Zone X of the FEMA 500-year floodplain and Zone AE of the 100-year floodplain (FEMA FIRM Panel 06073C0758G effective 5/16/19).

Existing runoff from the northern parcel drains via overland flow to the southwest corner of the Project Site where it sheet flows over the existing berm and onto Plaza Drive. Plaza Drive drainage flows west towards the intersection of SR-78 and Plaza Drive where it enters a curb inlet. Runoff from the southern parcel drains south towards Buena Vista Creek with a small portion draining east over the sidewalk and

curb onto Thunder Drive. The Drainage Study prepared by REC Consultants, Inc. **(Appendix J)** analyzes existing and developed conditions for 100-year flowrates from the development to the existing points of discharge. Per County of San Diego drainage criteria, the Modified Rational Method is used to determine peak design flowrates when the contributing drainage area is less than one (1) square mile. Since the total watershed area discharging from the Project Site is less than one (1) square mile, Advanced Engineering Software (AES) was used to model pre-and post-developed condition runoff response per the Modified Rational Method. **Table 4.11-1** below displays the existing conditions 100-year peak flows from the Project Site.

Table 4.11-1
Existing Conditions Peak Flow

Discharge Location	Drainage Area (Acre)	Runoff Coefficient (C)	100-Year Peak Flow (cubic feet/sec (cfs))
POC-1	1.43	0.66	5.42
POC-2	0.21	0.66	0.82
POC-3	6.89	0.66	23.75
POC-4	0.28	0.66	1.07
TOTAL	**8.81**		
Source: Drainage Study for CarMax Oceanside Prepared by REC Consultants, Inc. (Appendix J)			

Water Quality Setting

Treatment of storm water runoff from the site is addressed in the SWQMP prepared by REC Consultants, Inc. **(Appendix K).** Hydromodification Management Plan (HMP) analysis is addressed in the Technical Memorandum: SWMM Modeling for Hydromodification prepared by REC Consultants, Inc. **(Appendix L).** Runoff from the Project Site flows into Buena Vista Creek, which flows west and ultimately contributes to Buena Vista Lagoon, then discharges into the Pacific Ocean. According to Section 303(d) of the Clean Water Act (CWA), Buena Vista Creek, Buena Vista Lagoon and the Pacific Ocean are identified as impaired water bodies within the path of storm water from the Project Site. This means that storm water runoff from the Project Site has the potential to impact any of the three (3) water bodies listed above.

Groundwater Resources

Groundwater was not encountered in any trenches at the time of a subsurface exploration to a depth of 15.5 feet below-ground-surface conducted by EEI in September 2019. Nor was groundwater encountered in a separate geotechnical investigation conducted by Norcal Engineering in 2007 to a depth of 50 feet below-ground-surface (NorCal Engineering, 2007). In general, groundwater is often expected to follow the direction of surface topography. Based on Project Site topography, local groundwater flow is expected to be in a westerly direction.

4.11.2 Regulatory Setting

Federal

Clean Water Act

The CWA was adopted in 1972 and is the principal federal law for the regulation of water quality. The CWA includes water quality standards, discharge limitations, and permits to protect the designated beneficial uses of water resources.

Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. The standards are based on the designated beneficial uses of the water body and must protect the most sensitive use where multiple uses exist.

Section 401 of the CWA requires any person applying for a federal permit or license that may result in pollutant discharge into waters of the United States to obtain a state certification. In California, the SWRCB administers certifications through the nine (9) RWQCBs. It must be demonstrated that the activity complies with all applicable water quality standards, restrictions, and limitations in order to acquire certification. Section 401 certifications require applicants for federal permits relating to the construction or operation of a facility that may result in the discharge of a pollutant to obtain certification of those activities from the state in which the discharge originates. Section 404 establishes a permitting program to regulate the discharge of dredged or filled material into waters of the United States, which is administered by the United States Army Corp of Engineers (USACE).

Section 402 of the CWA places restrictions on certain types of construction, prohibiting discharges of pollutants contained in storm water runoff, except in compliance with a NPDES permit.

National Pollutant Discharge Elimination System

The NPDES program was established in 1987 in an amendment to the CWA, authorized by Section 402. In California, the NPDES program is implemented by the SWRCB. The program addresses non-agricultural sources of storm water runoff that could negatively impact the water quality of Waters of the United States. Under the program, entities that are regulated must obtain an NPDES storm water permit and implement a SWQMP and a SWPPP. The SWPPP must identify best management practices (BMPs) to reduce or prevent the discharge of pollutants into receiving waters. The regulations generally cover the following classes of storm water dischargers: operators of construction activities that disturb one or more acre of land, operators of municipal separate storm sewer systems (MS4), and owners and operators of certain industrial facilities. The SWPPP must also include description of BMPs to reduce pollutants in storm water discharges after construction phases are completed (post-construction BMPs). Implementation of the Project requires conformance with the NPDES Storm Water Program's Construction General Permit and the Regional MS4 Permit, as further defined and described below.

Federal Emergency Management Agency (FEMA)

FEMA is the primary federal agency responsible for coordination with communities to establish effective floodplain management standards. FEMA prepares Federal Insurance Rate Maps, which delineate the areas of special flood hazards and applicable risk premium zones. State and local agencies are responsible for implementing regulations, ordinances and policies in compliance with FEMA requirements to address floodplain management issues.

National Flood Insurance Act

FEMA administers the National Flood Insurance Program adopted under the National Flood Insurance Act of 1968. This program makes federally subsidized flood insurance available to homeowners, business owners, and renters within communities who participate in the program. Areas of special flood hazard

(subject to inundation by a 100-year flood) are identified through regulatory flood maps called Flood Insurance Rate Maps (FIRM). Restrictions are imposed on development within the regulatory floodplain. Development is not allowed within the floodplain if it results in more than a one-foot increase in flood elevation, and is not allowed within the delineated floodways of floodplains.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) establishes the responsibilities and authorities of the California SWRCB and its nine (9) RWQCBs, which include identifying water quality objectives, preparing water quality plans for the region, and issuing NPDES permits. In California, all surface waters and groundwater are considered to be "Waters of the State" under this the Porter-Cologne Act. Under the Porter-Cologne Act, a Water Quality Control Plan for the San Diego Basin was prepared (San Diego Basin – Region 9), designating beneficial uses for water bodies in the San Diego region and establishing water quality objectives and implementation plans to protect those uses.

Sustainable Groundwater Management Act of 2014

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package (AB 1739, SB 1168 and SB 1319) known as the Sustainable Groundwater Management Act of 2014. The legislation provides a framework for sustainable management of groundwater supplies by local authorities in high- and medium-priority alluvial basins, as designated by the California Water Resources Control Board. The groundwater sustainability agency, which can be a County, City or water district, must be formed by June 30, 2017 and would be required to prepare a groundwater sustainability plan by January 31, 2022. Each plan requires implementation measures to bring each basin into sustainability within 20 years of implementation of the plan. In the County, the following four (4) basins have been designated to require plans: San Diego River Valley Basin, San Pasqual Basin, San Luis Rey River Basin and Borrego Valley Basin (all medium-priority basins). The Project Site is not located within a basin that requires a designated groundwater sustainability plan.

Local

San Diego Basin Plan

The San Diego Basin Plan, most recently amended on May 17, 2016, sets forth water quality objectives for Region 9. Specifically, the Basin Plan is designed to accomplish the following: (1) designate beneficial uses for surface and ground water; (2) set the narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy; (3) describe mitigation measures to protect the beneficial uses of all waters within the region; and (4) describe surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan. The San Diego Basin Plan incorporates by reference all applicable SWRCB and the San Diego Water Board plans and policies.

Regional MS4 Permit (Order No. R9-2015-0100)

The San Diego Water Board regulates discharges from Phase I MS4s in the San Diego Region under the Regional MS4 Permit. The Regional MS4 Permit covers 39 municipalities. These include the City, the County and special district entities located in the County, Southern Orange County, and southwest

Riverside County who own and operate large MS4s that discharge storm water runoff (from rainfall events) and non-storm water runoff (e.g., dry weather runoff from irrigation overspray) to surface waters throughout the San Diego Region. The Regional MS4 Permit requires development of Water Quality Improvement Plans (WQIPs) that will allow the City to prioritize and address pollutants through an appropriate suite of BMPs in each watershed.

Pursuant to the CWA, the Regional MS4 Permit includes requirements that prohibit non-storm water discharges into MS4s and requires controls to reduce the discharge of pollutants in storm water to the maximum extent practicable. The Regional MS4 Permit regulates pollutants, including suspended solids, sediment, pathogens, heavy metals, petroleum products and polynuclear aromatic hydrocarbons, synthetic organics, nutrients, oxygen demanding substances, detergents, and trash from sources associated with various forms of land development including car emissions and maintenance, sewage, pesticides, household hazards, pet waste and debris/litter.

The Regional MS4 Permit establishes water quality standards and requires the application of pollution prevention, source control and treatment control BMPs to effectively prevent and remove pollutants from runoff. The Regional MS4 Permit requires that BMP design and implementation occur at every phase of development including the planning, construction and operational phases.

County of San Diego Code of Regulatory Ordinances

The County of San Diego Code of Regulatory Ordinances, Title 6, Division 4, Chapter 2 addresses vector control and grants the County DEH Vector Control Program (VCP) the authority to exercise the powers of vector control.

The County of San Diego Code of Regulatory Ordinances, Title 6, Division 7, Chapter 8 provides the Watershed Protection, Stormwater Management and Discharge Control Ordinance which sets forth storm water management requirements. This ordinance requires the use of structural BMPs to detain or infiltrate storm water for land development Projects and specifies that these BMPs must be designed to drain within 72 hours to preclude mosquito breeding.

City of Oceanside BMP Design Manual for Permanent Site Design, Storm Water Treatment and Hydromodification Management

In response to requirements mandated by the Regional MS4 Permit, the City has prepared the BMP Design Manual for Permanent Site Design, Storm Water Treatment and Hydromodification Management (BMP Design Manual). The BMP Design Manual addresses updated onsite post-construction storm water requirements for Standard Projects and Priority Development Projects and provides updated procedures for planning, preliminary design, selection and design of permanent storm water BMPs based on the performance standards presented in the Regional MS4 Permit. The intended users of the BMP Design Manual include applicants, for both private and public developments, their representatives responsible for preparation of SWQMPs, and City personnel responsible for review of these plans. The BMP Design Manual requires implementation of appropriate BMPs to achieve water quality goals through inclusion in a Project-specific SWQMP for Priority Development Projects (PDPs).

Projects are determined a PDP if it creates or replaces 5,000 SF or more of impervious surface or 2,500 SF of impervious surface near Environmentally Sensitive Areas (ESA). A PDP SWQMP shall address implementation of source control BMPs and Low Impact Development (LID) practices such as conservation of natural topographic features, provision of development setbacks from natural water

bodies and conveyances, minimization of site imperviousness, maximization of infiltration and retention and slowing of runoff.

City of Oceanside Municipal Code

Chapter 40 of the OMC is known as the Urban Runoff Management and Discharge Control Ordinance. The overall intent of this ordinance is to "protect the health, safety and general welfare of Oceanside residents; to protect water resources and to improve water quality; to cause the use of management practices by the City and its citizens that will reduce the adverse effects of polluted runoff discharges on waters of the state; to secure benefits from the use of storm water as a resource; and to ensure the City is compliant with applicable state and federal law" (Oceanside 2019). General provisions of the Urban Runoff Management and Discharge Control Ordinance include the following:

- Prohibiting polluted or non-storm water discharges from entering the storm water conveyance system;
- Establishing minimum requirements for urban runoff management, including source control requirements, to prevent and reduce pollution;
- Establishing requirements for development Project site design, to reduce urban runoff pollution and erosion;
- Establishing requirements for the management of flows from development Projects, both to prevent erosion and to protect and enhance existing water-dependent habitats;
- Establishing standards for the use of off-site facilities for urban runoff management to supplement onsite practices at new development sites; and
- Establishing notice to procedures and standards for adjusting urban runoff management requirements where necessary.

City of Oceanside General Plan

Environmental Resource Management Element

The General Plan establishes goals and implementing policies associated with hydrology and water quality in its Environmental Resource Management Element. The following objectives are relevant to this analysis:

Objectives: Water

1. Plan for an adequate water system based on the projected needs of the City.
2. Investigate sources of local water supplies to reduce dependence on imported water.
3. Minimize pollution of water supplies, including lakes, rivers, streams, lagoons, and ground water.
4. Minimize loss of life and property in flood prone areas.

Objectives: Soil, Erosion and Drainage

1. Consider appropriate engineering and land use planning techniques to mitigate rapid weathering of the rocks, soil erosion, and the siltation of the lagoons.

Land Use Element

The Land Use Element of the General Plan also contains policies associated with hydrology and water quality which are relevant to this analysis:

3.13 Erosion and Siltation Controls

Objective: To preserve the Buena Vista Lagoon's Critical Habitats by a comprehensive program of erosion and siltation control.

Policy A: The City shall continue to participate in the Buena Vista Lagoon Joint powers Committee and to implement recommendations made by the Committee.

Community Facilities Element

The Community Facilities Element of the General Plan includes the following policies related to the storm water management system:

Objective: To provide adequate storm water management facilities and services for the entire community in a timely and cost effective manner, while mitigating the environmental impacts of construction of the storm drain system as well as storm water runoff.

Policies:

6.1 The Master Drainage Plan for the City of Oceanside shall establish standards for citywide drainage. Within each major watercourse addressed by the Plan, the City and/or developers shall assure that adequate drainage improvements and facilities are provided to handle runoff when the drainage basin is fully developed to the intensity proposed by the Land Use Element of the General Plan.

6.2 All new development in the City of Oceanside shall pay drainage impact fees to defray that development's proportionate share of drainage facilities serving the basin where the new development is located.

6.3 The City shall continue to participate in the National Flood Insurance Program. Any development application for construction within the 100-year floodplain shall be reviewed to ensure that the Project complies with flood protection measures required by the National Flood Insurance Program. For existing developed areas within the 100-year floodplain, these same measures and standards shall be applied if City approval of substantial improvements or upgrades is sought.

6.4 To the degree that is economically feasible and consistent with sound engineering practices and maintenance criteria, the City shall discourage disruption of the natural landform and encourage the maximum use of natural drainage ways in new development. Non-structural flood protection methods, which avoid major construction programs such as channels and favor vegetative measures to protect and stabilize land areas, should be considered as an alternative to constructing concrete channels where feasible.

6.5 The City shall locate and/or design new critical facilities to minimize potential flood damage from the 100-year flood. Such facilities include those that provide emergency response (hospitals, fire stations, police stations, civil defense headquarters, utility lines, ambulance services, and sewage treatment plants). Such facilities also include those that do not provide emergency response but attract large numbers of people, such as schools, theaters, and other public assembly facilities.

6.6 The City shall maintain public flood control channels and storm drains through dredging, repair, desilting, and clearing as needed to prevent any loss in effective use.

6.7 The City shall require appropriate and sufficient screening, fencing, landscaping, open space setbacks, or other permanent mitigation or buffering measures between drainage way corridors and adjacent and surrounding land uses. The employed measures shall be of sufficient scope to minimize, to the maximum extent possible, negative impacts to adjacent surrounding land uses from the particular drainage way corridor.

6.8 The City of Oceanside shall integrate required drainage planning efforts with linear open space amenities and trail corridors throughout the community, while addressing the issues of life safety, attractive nuisances, and long-term maintenance responsibility costs.

6.9 The City shall comply with the sections of the Federal Clean Water Act in regard to storm water drainage.

4.11.3 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, impacts would be considered significant if the Project would:

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin;
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (1) result in substantial erosion or siltation on- or off-site; (2) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; (3) create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or (4) impede or redirect flood flows;
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation;
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

4.11.4 Project Impact Analysis

Would the Project:

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

The Project Site is located within the Vista Hydrologic Sub-Area 904.22 of the Buena Vista Creek Hydrologic Area (HA) 904.20 of the Carlsbad Hydrologic Unit (HU). Within this Hydrologic Sub-Area, downstream impaired 303(d) listed water bodies include the Pacific Ocean Shoreline, Buena Vista Creek HA at Buena Vista Lagoon Outlet, Buena Vista Lagoon, and Buena Vista Creek. This means that storm water runoff from the Project Site has the potential to impact any of the three (3) water bodies listed above.

Total Maximum Daily Loads (TMDLs) are developed to establish the maximum amount of a pollutant allowed in a waterbody. TMDLs have not been established to address pollutants for these impaired water bodies. Considering the downstream waters are impaired, the potential pollutants of concern that may be generated by the Project are sediment, nutrients, heavy metals, trash and debris, oxygen demanding substances, oil and grease, bacteria and viruses and pesticides.

The project would violate a water quality standard or waste discharge requirement or otherwise substantially degrade surface or groundwater quality, and a **significant impact** (**Impact HYDRO-1a**) will occur.

In accordance with all applicable regulations, a SWQMP (**Appendix K)** has been prepared for the Project to address the construction and operational impacts to water quality and the potential pollutants of concern. Impacts related to the potential for pollutants to impact an impaired 303(d) listed water body is further described below.

Construction

The potential for erosion and pollutant discharge would increase during construction as a result of vehicles, heavy equipment and general earth work accelerating the erosion process. Wind erosion has the potential to occur on bare soils or where vehicles and equipment cause dust. Fuels, oils, lubricants, or other hazardous substances and waste used and/or generated during construction have the potential to be released and further impact water quality.

Pollutants associated with grading and construction would degrade water quality if they are washed into surface waters, ultimately flowing to the Pacific Ocean, Buena Vista Creek and/or Buena Vista Lagoon. Sediment is often the most common pollutant associated with construction sites because of the associated earth-moving activities and areas of exposed soil. As required by the SWRCB's Construction General Permit, the Project would be required to prepare and implement a SWPPP to employ numerous erosion control, sediment control, tracking control, materials and waste management, and inspection and maintenance BMPs to minimize the potential for erosion, sedimentation and water quality impacts related to the grading and construction process. Preparation and implementation of the SWPPP practices would reduce the potential for pollutant discharge into the Buena Vista Creek, ultimately reducing impacts to the Buena Vista Lagoon and Pacific Ocean.

Prior to obtaining a grading permit, the Project would be required to prepare a SWPPP, which would describe and depict in detail the various grading and construction-related BMPs necessary to minimize the Project's impacts to Buena Vista Creek, Buena Vista Lagoon and the Pacific Ocean, and to obtain a Waste Discharge Identification Number from the San Diego Water Board. This process includes completing a risk assessment for the Project's potential water quality risk. Sediment and erosion control

BMPs described in the SWPPP may include, but are not limited to, straw mulch, soil binders, silt fencing, gravel bags, street sweeping and vacuuming and storm drain inlet protection. The City's Urban Runoff Management and Discharge Control Ordinance also require compliance with the SWRCB's Construction General Permit and for the SWPPP to be available at the construction site at all times.

The City requires that land disturbance activities (such as grading and construction) install, implement, and maintain BMPs to reduce pollutant discharges in urban runoff from the Project Site to the maximum extent practicable. BMPs must be site-specific, seasonally appropriate and construction phase appropriate, and implemented at the site-year round. BMPs are not limited to and must be implemented in the following categories: (1) Project planning; (2) good site management, including waste management; (3) non-storm water management; (4) erosion control; (5) sediment control, including but not limited to dust control and off-site tracking; (6) run-on and runoff control; and (7) active/passive sediment treatment systems, where applicable.

Additionally, as discussed in Section 4.4 *Air Quality,* the Project would be required to comply with San Diego Air Pollution Control District (SDAPCD) Rule 55, Fugitive Dust Control, which would prevent erosion potential through the watering of active construction sites throughout the day.

During construction the Project has the potential to violate a water quality standard or waste discharge requirement, and will have a **significant impact (Impact HYDRO-1b).**

Operation

Post-construction, the Project would introduce impervious surfaces and new sources of pollutants from urban runoff. Impervious site features consist of sales and administrative building, service building, private carwash, associated access drives, presentation area, staging area, sales display area, and a customer and employee parking lot. Off-site impervious features consist of Plaza Drive road widening, curb, gutter and sidewalk improvements. The Project would have 3.56 acres of pavement or impervious surfaces and 0.26 acre of buildings. The northern parcel would be constructed solely of permeable material. The southern parcel pervious features besides landscaping and open space, include landscape islands within the parking lots and vehicle display areas. The Project would include 0.49 acre of pervious concrete, 1.5 acres of open space and 1.5 acres of landscape/grassed area.

A SWQMP (**Appendix K)** has been prepared for the Project and was prepared consistent with the requirements of the City's BMP Design Manual. As discussed in the Project SWQMP, prior to discharging from the Project Site, first flush runoff would be treated via an underground proprietary BMP that is designed and constructed in accordance with standards set forth by the San Diego Water Board and City's BMP Design Manual. Storm water from the southern parcel would be conveyed via underground pipes from various parts of the Project Site through proprietary water quality measures and into an underground detention system located at the southeast corner of the site. Storm water would then be released to POC-3. The underground detention system would be responsible for handling hydromodification requirements for the Project and would have a footprint of 6,090 SF and a depth of four (4) feet. The underground detention system has been designed to drain within 72 hours in order to avoid standing water and mosquito breeding in accordance with the County Storm Water and Discharge Control Ordinance.

During operation the Project has the potential to violate a water quality standard or waste discharge requirement, and will have a **significant impact (Impact HYDRO-1c)**.

b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?

The Project would not use groundwater during construction or operation of the Project. As stated in the Geotechnical Evaluation prepared by EEI **(Appendix H),** groundwater was not encountered in any of the subsurface explorations with a maximum depth of exploration of 15.5 feet, nor was groundwater encountered during earlier explorations in 2007 with a maximum depth of exploration of 50 feet. Although the Project would result in an increase in the amount of impervious groundcover, the Project would contain pervious features such as landscaping, including landscape islands within the parking lots and vehicle display areas and open space.

Due to the depth of groundwater and the proposed use and development of the Project, the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge, such that the Project may impede sustainable groundwater management of the basin, and impacts are **less than significant impact.**

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. Result in substantial erosion or siltation on- or off-site?

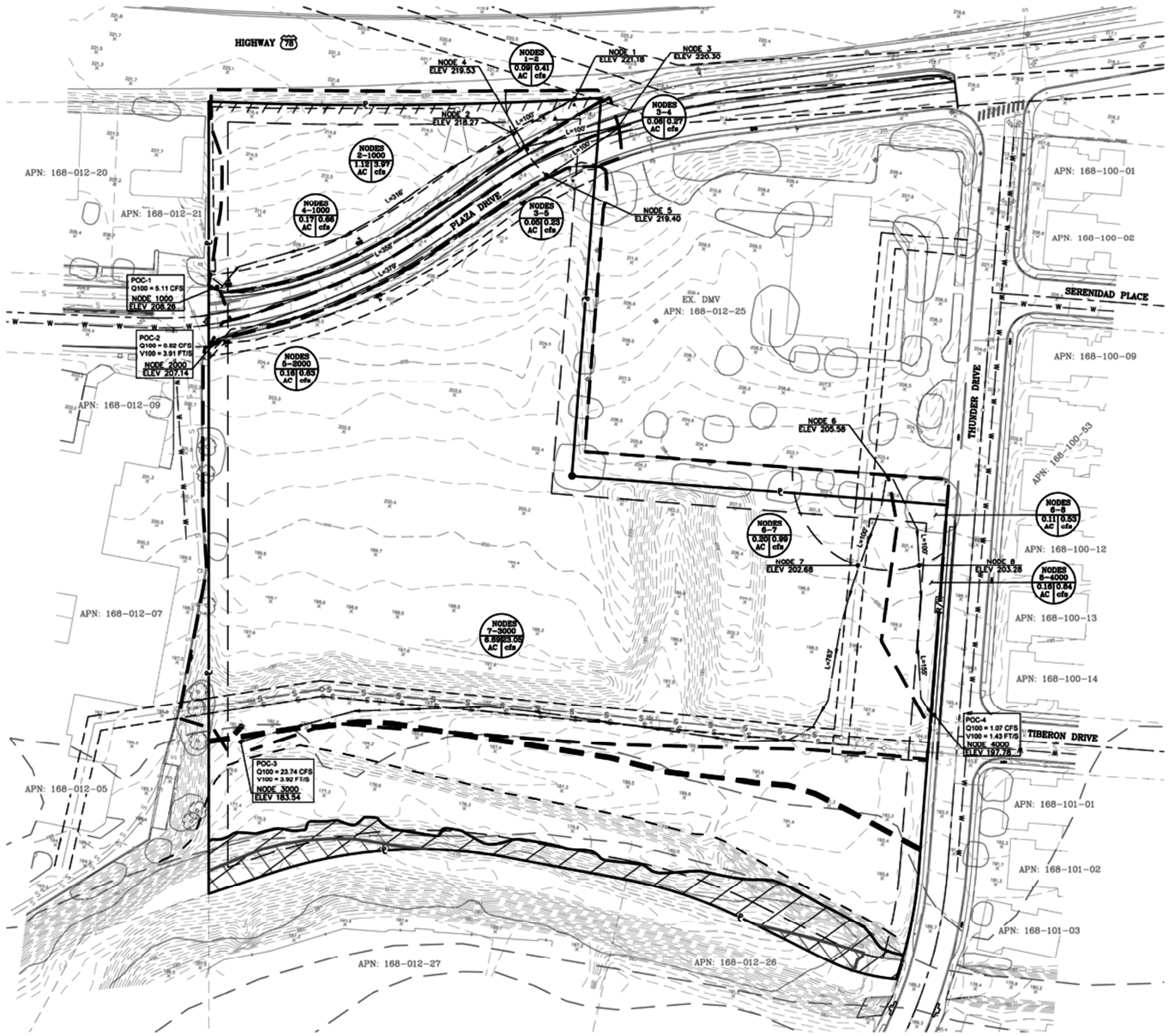
The Project has the potential to result in exposed soils or changes in runoff that could result in erosion or siltation during the construction phase of the Project, and will have a **significant impact (Impact HYDRO-2)**.

Prior to obtaining a grading permit, the Project would be required to prepare a SWPPP, which would describe and depict in detail the various grading and construction-related BMPs. The SWPPP would be prepared in conformance with City regulations and the NPDES SWRCB Construction General Permit. Sediment and erosion control BMPs described in the SWPPP may include, but are not limited to, straw mulch, soil binders, silt fencing, gravel bags, street sweeping and vacuuming and storm drain inlet protection.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Pre-Development Conditions

Existing runoff surface flows to four (4) points of discharge, two (2) of them located on Plaza Drive, one (1) on Thunder Drive and one (1) to Buena Vista Creek. Existing runoff from the northern parcel drains via overland flow to the southwest corner of the Project Site where it sheet flows over the existing berm and on to Plaza Drive. Existing runoff from the southern parcel drains south toward Buena Vista Creek with a small portion draining east over the sidewalk and curb and on to Thunder Drive. Existing conditions peak flows are displayed in **Table 4.11-1**. **Figure 15** displays the existing drainage conditions.



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Existing Drainage Conditions

CARMAX AUTO SUPERSTORE OCEANSIDE EIR

NOT TO SCALE

Source: REC Consultants, Inc. (10/25/2019)

FIGURE 15

October 2020

Post-Development Conditions

The northern parcel, to be developed as Phase II of the Project, would be constructed solely of permeable pavement and therefore, pre- and post-development runoff would remain constant.

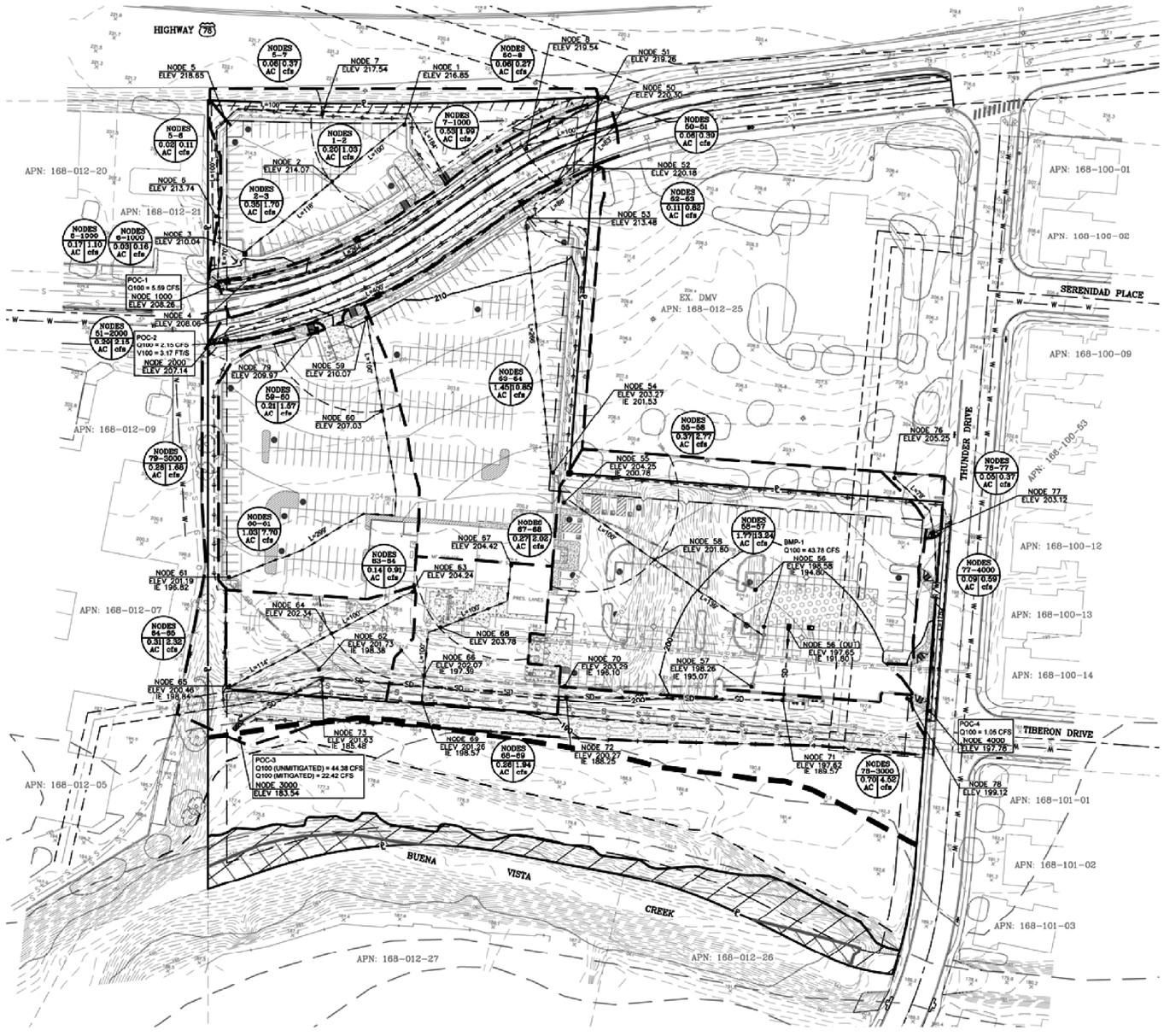
On the southern parcel, prior to discharging from the Project Site, first flush runoff would be treated via an underground proprietary BMP in accordance with standards set forth by the San Diego Water Board and City BMP Design Manual. Runoff from the developed site would drain to a single onsite underground detention system near the southeast corner of the site. Mitigated peak flows would then drain from the detention facility via a 24" PVC storm drain to POC-3 at the southwest corner of the Project Site, where runoff would ultimately meet with existing Buena Vista Creek. **Table 4.11-2** below displays the summary of peak flows. **Figure 16** displays the proposed drainage conditions.

Table 4.11-2
Summary of Peak Flows

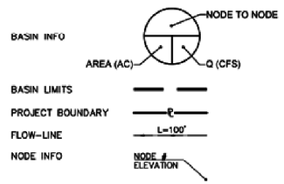
Discharge Location	Area (acre)			100-Year Peak Flow (cubic feet/sec (cfs))		
	Existing	Developed	Difference	Existing	Developed	Difference
POC-1	1.43	1.43	0.00	5.42	5.59	0.17
POC-2	0.22	0.35	0.14	0.82	2.15	1.33
POC-3	6.88	6.89	0.00	23.75	21.20	-2.55
POC-4	0.28	0.14	-0.14	1.07	1.05	-0.02
Source: Drainage Study for CarMax Oceanside Prepared by REC Consultants, Inc. (Appendix J)						

As summarized in **Table 4.11-2**, the Project would have reduced peak flows for the majority of the Project Site. POC-1 and POC-2 at Plaza Drive would increase slightly due to the widening and expansion of Plaza Drive. Runoff discharging at these locations would make its way west towards the intersection of SR-78 and Plaza Drive where said runoff enters curb inlets on the north and south sides of Plaza Drive respectively. POC-3 and POC-4 would both have a decrease in peak flows and would ultimately confluence at POC-3 in Buena Vista Creek. The Project would not alter existing drainage patterns onsite or increase net runoff after development.

The Project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, and impacts are **less than significant.**



LEGEND



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Proposed Drainage Conditions

NOT TO SCALE

FIGURE 16

R·E·C Consultants, Inc. | CARMAX AUTO SUPERSTORE OCEANSIDE EIR

Source: REC Consultants, Inc. (10/25/2019) | October 2020

iii. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

As discussed above and displayed in **Table 4.11-2,** peak flows from POC-3 and POC-4 would decrease and peak flows at POC-1 and POC-2 would increase slightly due to the widening and expansion of Plaza Drive. The Project would not alter existing drainage patterns onsite or increase net runoff after development. The proposed storm drain system is designed to safely convey the 100-year peak flows of the existing system. There would be no adverse impact from the proposed development on the existing facilities as there would be an overall reduction in peak flow rates. The total net reduction of peak flows to Buena Vista Creek from pre- to post-development conditions is approximately 2.60 cubic feet per second (cfs). Additionally, the ultimate discharge points would remain the same. The Project would comply with all recommendations set forth in the Project SWQMP and Drainage Study which are designed in compliance with the San Diego Water Board and City BMP Design Manual.

The Project would not create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff, and impacts are **less than significant.**

iv. Impede or redirect flood flows?

The northern parcel would be constructed solely of permeable pavement and therefore, pre- and post-development runoff would remain constant. The Project would not impede or redirect flood flows on the northern parcel.

On the southern parcel, prior to discharging from the Project Site, first flush runoff would be treated via an underground proprietary BMP in accordance with standards set forth by the San Diego Water Board and City BMP Design Manual. Runoff from the developed site would drain to a single onsite underground detention system near the southeast corner of the Project Site. Mitigated peak flows would then drain from the detention facility via a 24-inch PVC storm drain to POC-3 at the southwest corner of the Project Site, where runoff would ultimately meet with existing Buena Vista Creek. POC-3 is the existing point of discharge from the Project Site.

The southern portion of the Project Site lies within Zone X of the FEMA 500-year floodplain and Zone AE of the 100-year floodplain (FEMA FIRM Panel 06073C0758G effective 5/16/19). Peak flows from POC-3 and POC-4 would decrease and peak flows at POC-1 and POC-2 would increase slightly due to the widening and expansion of Plaza Drive. However, the total net reduction of peak flows to Buena Vista Creek from pre- to post-development conditions would be approximately 2.60 cfs.

Therefore, the Project would not substantially alter the existing drainage pattern of the Project Site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would impede or redirect flood flows, and impacts are **less than significant.**

d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?

The southern portion of the Project Site lies within Zone X of the FEMA 500-year floodplain and Zone AE of the 100-year floodplain (FEMA FIRM Panel 06073C0758G effective 5/16/19). As discussed previously, the total net reduction of peak flows to Buena Vista Creek from pre- to post-development conditions is approximately 2.60 cfs. The Project would not encroach into either of the flood zones or the 100-foot

riparian buffer. The Project is located approximately four (4) miles east of the Pacific Ocean and is not located within a Tsunami Evacuation Area as provided in the Geotechnical Evaluation (**Appendix H)**. The Project would not be at risk due to a tsunami as damage due to tsunami risk is considered low. A seiche is an oscillating wave in an enclosed or restricted body of water generated by ground motion during an earthquake and can cause overflow of a lake, reservoir, or lagoon. The Project is located 3.5 miles east of Buena Vista Lagoon and approximately 0.9 mile north of Calavera Lake. As discussed in the Geotechnical Evaluation, the Project Site is not located immediately adjacent to any lakes or confined bodies of water and therefore, the potential for a seiche to affect the Project Site is considered low.

In flood hazard, tsunami, or seiche zones, the Project would not risk release of pollutants due to Project inundation, and impacts are **less than significant.**

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The San Diego Basin Plan, most recently amended on May 17, 2016, sets forth water quality objectives for Region 9. Specifically, the Basin Plan is designed to accomplish the following: (1) designate beneficial uses for surface and ground water; (2) set the narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy; (3) describe mitigation measures to protect the beneficial uses of all waters within the region; and (4) describe surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan. The Basin Plan incorporates by reference all applicable SWRCB and the San Diego Water Board plans and policies.

The Regional MS4 Permit establishes water quality standards and requires the application of pollution prevention, source control and treatment control BMPs to effectively prevent and remove pollutants from runoff. The Regional MS4 Permit requires that BMP design and implementation occur at every phase of development including the planning, construction and operational phases. A SWQMP was prepared for the Project in compliance with RWQCB NPDES MS4 Permit and addresses onsite treatment of storm water runoff. Onsite storm water quality design was prepared in accordance with the City of Oceanside's BMP Design Manual. Prior to obtaining a grading permit, the Project would be required to prepare a SWPPP which would satisfy requirements set forth in the NPDES Construction General Permit.

The Sustainable Groundwater Management Act provides a framework for sustainable management of groundwater supplies by local authorities in high- and medium-priority alluvial basins, as designated by the SWRCB. In the County, the following four (4) basins have been designated to require plans: San Diego River Valley Basin, San Pasqual Basin, San Luis Rey River Basin and Borrego Valley Basin (all medium-priority basins). The Project Site is not located within a basin that requires a designated groundwater sustainability plan. Thus, the Project would not conflict with a sustainable groundwater management plan.

The Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan, and impacts are **less than significant.**

4.11.5 Mitigation Implementation and Monitoring

Based on the analysis above, the Project would comply with the following mitigation measures.

Water Quality Standards (Impact HYDRO-1a, 1b, and 1c) and Potential for Erosion (Impact HYDRO-2)

MM-HYDRO-1 The Project shall incorporate permanent source control BMPs as identified in the Project SWQMP such as the following:

BMP Type	Inspection Frequency	Summary of Maintenance Activity
Prevention of Illicit Discharges Into MS4	Continuous	A grease trap has been incorporated into the Utility Plan and dumping of grease down the storm drain is prohibited. Other good housekeeping practices would be implemented to discourage discharges of non-storm water pollutants, including cleaning up food and grease with absorbents, discarding trash, and routine maintenance of grease trap.
Storm Drain Signage	Continuous	Labeling shall be provided for all storm water conveyance system inlets and catch basins within the Project area. Storm drain placards shall be used for signage (stenciling is prohibited by City). Inspect and maintain placards as needed.
Protect Trash Storage Areas From Rainfall, Run-On, Runoff and Wind Dispersal	Regularly	Ensure trash enclosure areas are fully contained (three walls, door and roof) and are provide with attached lids. Keep containers away from storm drain vicinity. Post signs on all enclosures and/or dumpsters informing users to keep lid closed and not to dispose of liquid or hazardous materials. Inspect trash storage areas to ensure integrity of containers and that area is kept clean. Replace leaking bins. Clean trash storage areas regularly.
Additional BMPS Based on Potential Sources of Runoff Pollutants	Regularly as Determined Necessary	On-Site Storm Drain Inlets: On-site inlets shall be protected from any illicit discharges and debris. Inlets shall have prohibitive signs where all inlets are marked with the words "NO DUMPING! DISCHARGES TO BAY" or similar. Inlet markings shall be maintained and periodically repainted on a regular basis to remove pollutants. Clean inlets regularly and remove sediments and debris, especially before start and end of wet season. Keep record of cleaning and disposal activities.
		Need for Future Indoor and Structural Pest Control: Building includes doors and windows with sealing that discourages entry of pests. Any pesticides shall be applied minimally in accordance with manufacturer's specifications and City and State requirements.
		Landscape/Outdoor Pesticide Use: Final Landscape Plans shall preserve existing drought tolerant trees, shrubs, and ground cover to the maximum extent possible, and include landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to storm water pollution.
		Fire Sprinkler Test Water: Fire sprinkler test water shall be drained to sanitary sewer system. During a fire sprinkler test, the fire riser discharge shall be connected by a hose to the sewer cleanout.
		Miscellaneous Drain or Washwater: Boiler drains shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain.
		Plazas, Sidewalks, and Parking Lots: Sweep regularly to prevent accumulation of litter and debris, debris from pressure washing must be collected to prevent entry into the storm drain system.

MM-HYDRO-2 An onsite private underground proprietary BMP in the form of an underground detention system shall be designed and constructed per the Project SWQMP in accordance with the RWQCB and City of Oceanside BMP Design Manual. Storm water shall be conveyed via underground pipes from various parts of the Project Site through water quality measures and into the underground detention system.

MM-HYDRO-3 Low Impact Development (LID) and Site Design BMPs shall be incorporated into the Project design to reduce impacts to water quality. The contractor shall construct the LID BMPs in accordance with the Project SWQMP and the engineer of work shall inspect that all LID BMPs have been constructed in compliance with the approved plans and all applicable specifications and permits. The widening of Plaza Drive shall be treated via a green streets approach with the construction of swales behind sidewalks to treat runoff for water quality and hydromodification purposes.

4.11.6 Level of Significance After Mitigation

The analysis presented in Section 4.11.4, identified the potential for significant impacts related to water quality standards and erosion. Implementation of mitigation measure MM-HYDRO-1 requires the Project to incorporate permanent source control BMPs such as practices to prevent illicit discharge into the MS4, storm drain signage, trash storage protection prohibitive signage at storm drain inlets, pest control practices, use of drought tolerant landscaping, fire sprinkler water tests and sweeping of parking lots and sidewalks in order to prevent polluted runoff from entering the storm drain system. Ongoing compliance with and maintenance of the source control BMPs will prevent storm water pollution, reducing impacts to water quality standards and erosion.

Implementation of mitigation measure MM-HYDRO-2 requires construction of an underground detention system to convey and treat storm water from the Project Site. Construction and operation of the underground detention system would reduce water quality impacts by properly treating storm water before it enters the storm drain system.

Implementation of mitigation measure MM-HYDRO-3 would provide LID and Site Design BMPs which would treat storm water runoff using the green streets approach and swales, incorporating vegetation and soil to slow and filter storm water runoff and further reduce water quality and the potential for erosion.

Mitigation measures MM-HYDRO-1, MM-HYDRO-2 and MM-HYDRO-3 would reduce impacts to water quality standards (Impact HYDRO-1a, 1b and 1c) and erosion (Impact HYDRO-2) to below a level of significance.

Chapters 4.12 LAND USE AND PLANNING

4.12.1 Environmental Setting

The City encompasses approximately 42 square miles, and is bound by the Pacific Ocean to the west, Camp Pendleton to the north, the City of Vista and unincorporated portions of the County to the east and the City of Carlsbad to the south. The City of Oceanside is largely developed and predominately has the attributes of a coastal community. The City's primary coastal resources include approximately 3.5 miles of public beaches, a public marina, an approximately 2,000-foot pier, three (3) coastal watersheds and the extension of Lawrence Canyon and the Buena Vista Nature Center.

Development along the coast of the City is organized by grid pattern of streets and generally consists of single-family homes along the southern portion of the City's coastline, medium- to higher-density residential uses within the central and northern portions, hospitality and other visitor-serving uses in the downtown district and within the harbor, and community-serving commercial uses along the length of Coast Highway.

Within the City, major commercial corridors extend from the coastal zone to inland and include Oceanside Boulevard, Mission Avenue, College Boulevard, and Vista Way. Regional shopping areas are located along the SR-78 corridor and industrial development is largely located in industrial districts along Oceanside Boulevard.

The Project is located in the southeastern portion of the City (**Figure 1**). Plaza Drive separates the north and south parcels within the Project area and Thunder Drive borders the Project Site to the east (**Figure 2 and Figure 3**). The Project Site is relatively flat with a drop in elevation to the south towards Buena Vista Creek. Onsite elevations range from approximately 180 feet to 220 feet amsl. The Project Site is located in a primarily developed area and is surrounded by commercial uses to the west, including a shopping center and auto repair shops. To the east are medium density residential uses as well as a DMV facility at the corner of Plaza Drive and Thunder Drive. To the north is SR-78 and further north are professional commercial uses. To the south are Buena Vista Creek, high density, residential estate, uses including a senior living facility, and commercial and public/semipublic uses including an OFFD station. The area surrounding the Project is entirely developed with exception of the areas located to the south and southwest which include portions of Buena Vista Creek.

The Project Site is designated CC by the General Plan and CC by the Zoning Ordinance.

4.12.2 Regulatory Setting

Regional

San Diego Forward: The Regional Plan

The 2015 San Diego Forward: The Regional Plan prepared by the SANDAG, combines the region's two (2) most important planning documents – the Regional Comprehensive Plan (RCP) and the Regional Transportation Plan and its Sustainable Communities Strategy (RTP/SCS). The Regional Plan serves as the blueprint for how the San Diego region will grow, how SANDAG will invest in transportation infrastructure that will in return provide more choices, strengthen the economy, promote healthy

environment and support thriving communities. SANDAG's Regional Growth Forecast uses the most recent land use planning assumptions from all 18 cities of the region and the County. These planning assumptions are used to develop the supporting transportation network, water agencies use for water planning purposes, and utility providers use for long range planning. The Regional Plan contains both near-term actions and continuing actions that are designed to support the longer-term implementation of projects and programs.

Local

City of Oceanside General Plan

The Land Use Element of the General Plan and the associated Land Use Maps are guides to land use planning within the City and identify the type and location of future land uses within the City. As a guide to future growth and development, the Land Use Element identifies the general distribution, location, mix, and extent of desired land uses, including residential, commercial, industrial, public facilities and open space uses. The following are goals and policies of the Land Use Element of the General Plan that relate to the Project:

1.0 General Plan Consistency

Objective: To ensure all projects are consistent with the General Plan.

Policy A: Tentative Maps, Development Plans and Conditional Use Permits approved prior to the adoption of this Element and exercised thereafter without modification, revision, amendment, or extension shall be considered consistent with this Element.

1.12 Land Use Compatibility

Objective: To minimize conflicts with adjacent or related land uses.

Policy A: Adequate setbacks, buffering, and/or innovative site design shall be required for land uses that are contiguous to and incompatible with existing land uses

Policy B: The use of land shall not create negative visual impacts to surrounding land uses.

Policy C: The use of land shall not subject people to potential sources of objectionable noise, light, odors, and other emissions nor the exposure of toxic, radioactive, or other dangerous materials

2.21 Community Commercial

Policy A: This designation shall provide the community with commercial centers containing a wide variety of commercial establishments. Major tenants shall provide larger, low volume, higher cost items, such as home furnishings, apparel, durable goods, and specialty items and generally have citywide market areas. Support facilities such as entertainment establishments and restaurants shall be encouraged.

2.26 Commercial Enhancement

Policy A: The City shall encourage the establishment of specialized districts, centers, and developments for unique commercial uses which contribute positively to the City's revenue and employment generating abilities and cultural enhancement.

Policy B: The City shall not permit the proliferation and/or over-concentration of commercial uses that generate adverse impacts to the social structure, visual quality, economy, public safety, or well-being of the community.

City of Oceanside Zoning Ordinance

The Zoning Ordinance is the primary implementation tool for the Land Use Element. Together, the Zoning Ordinance and Zoning Map identify specific types of land use, intensity of land use, and development and performance standards applicable to specific areas and parcels of land within the City. Article 11 of the Zoning Ordinance provides development and land use regulations for commercial districts.

Oceanside Subarea Habitat Conservation Plan

As set forth by the state and federal Endangered Species Acts and the State of California Natural Community Conservation Planning (NCCP) Act, the Oceanside Subarea Habitat Conservation Plan/Natural Community Conservation Plan (Subarea Plan) comprehensively addresses how the City will conserve natural biotic communities and sensitive plant and wildlife species. This Subarea Plan provides regulatory certainty to landowners within the City and will aid considerably in conserving the region's biodiversity and enhancing the overall quality of life for residents of the southern coastal region of California. The Subarea Plan has not been adopted by City Council, and therefore incidental take permits currently cannot be issued under the Subarea Plan. However, the Subarea Plan provides guidance for project proponents to determine potential impacts to biological resources that may result from implementation of a project and to develop appropriate avoidance, minimization, and mitigation measures to reduce project impacts to below a level of significance.

4.12.3 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, impacts would be considered significant if the Project would:

a. Physically divide an established community;
b. Cause significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

4.12.4 Project Impact Analysis

Would the Project:

a. Physically divide an established community?

The Project Site is located in a primarily developed, urbanized area and is surrounded by commercial uses to the west, including a shopping center and auto repair shops. To the east are medium density residential uses as well as a DMV facility at the corner of Plaza Drive and Thunder Drive. To the north is

SR-78 and further north are professional commercial uses. To the south are Buena Vista Creek, high density, residential estate, uses including a senior living facility, and commercial and public/semipublic uses including an OFD station. The area surrounding the Project is entirely developed with exception of the areas located to the south and southwest which include portions of Buena Vista Creek.

The Project proposes the construction of a CarMax pre-owned automobile facility consisting of a sales and administration building, service building, private carwash, associated access drives, landscaped areas, presentation area, staging area, sales display area, and a customer and employee parking lot, on a vacant parcel located in a developed area. The Project Site is designated CC by the General Plan and CC by the Zoning Ordinance. The Project does not require a change to the zoning or land use designation.

Additionally, the Project proposes a concrete sidewalk along the Project frontage on both sides of Plaza Drive, where currently a dirt path is being used to cross the Project frontage from the existing commercial center to the west to the DMV to the east. The proposed sidewalk, associated landscaping, and proposed pedestrian ramps would assist in the safe movement connection for the existing established community. The Project would also provide bicycle lanes on both sides of Plaza Drive along the Project frontage to further allow for connections to the surrounding community.

The Project would not physically divide an established community, and therefore **no impact** will occur.

b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Consistent with the CEQA Guidelines Section 15125(d), an EIR shall discuss any inconsistencies between a Project and applicable general plan and regional plans. The following analysis addresses this requirement, as it pertains to land use.

The Project is subject to several local and regional plans intended to avoid environmental effects. Such applicable local plans include the Zoning Ordinance, General Plan, and the Subarea Plan of the North County MHCP. The applicable regional plans include San Diego Forward: The Regional Plan and SDAPCD Rules and Regulations. The analysis below provides the consistency determination information.

Local Plans

<u>City of Oceanside Zoning Ordinance</u>

The Project does not require a change to the CC zoning designation. The Project will require issuance of a CUP in compliance with Section 1120 of the Zoning Ordinance in order to allow for the use of vehicle sales, service stations and automobile washing under the CC zone.

The Zoning Ordinance Article 11, Section 1110 outlines the purpose of each of the commercial districts. The purpose of CC Community Commercial District is as follows:

- To provide sites for commercial centers containing a wide variety of commercial establishments, including businesses selling home furnishings, apparel, durable goods, and specialty items and generally having a citywide market area. Support facilities such as entertainment and restaurants are permitted, subject to certain limitations to avoid adverse effects on adjacent land uses.

The Project meets this goal by providing a commercial use that varies from the existing commercial establishments located directly to the west and northwest and is compatible with the existing uses. Additionally, the CarMax Project would not only provide a citywide market area but also a regional-wide market area. The Project would not conflict with the City of Oceanside Zoning Ordinance.

City of Oceanside General Plan

The Project would construct a CarMax pre-owned automobile facility on a vacant parcel located in a developed area surrounded primarily by commercial and residential developments. The Project does not require an amendment to the General Plan in order to change the CC land use designation. The Project would be consistent with the City's General Plan designations and would be consistent with the City's General Plan Land Use Element objectives and policies as further described below.

Land Use Element

The General Plan Land Use Element provides several objectives and policies related to general plan consistency, land use compatibility, community commercial districts, commercial enhancement and natural resource management. **Table 4.12-1** below provides the City's applicable General Plan Land Use Element objectives and policies followed by a land use consistency analysis with regard to each policy. The Project would not conflict with a General Plan Land Use Element Policy.

Table 4.12-1
General Plan Land Use Element Consistency Evaluation

Policy Number	Policy	Consistency Analysis	Consistent/ Inconsistent
City of Oceanside General Plan			
Land Use Element			
1.01 General Plan Consistency Objective	To ensure all projects are consistent with the General Plan.	The Project would not change the land use designation of the Project Site and therefore would be consistent with the land use designation provided by the General Plan.	Consistent
1.12 Land Use Compatibility Objective	To minimize conflicts with adjacent or related land uses.	Land use designations immediately surrounding the Project Site include CC uses directly north, Professional Commercial (PC) further north, CC to the west, south and north east, Urban High Density Residential (UHD-R) to the southwest, Private Institutional (PI) further south, Medium Density-B Residential (MDB-R) to the east. The Project would provide a commercial use in an area of existing development consisting of primarily commercial uses. A commercial center (Tri-City Crossroads shopping center) is located directly west of the Project Site, automobile services and part stores are located northeast, and a DMV facility is located east of the Project Site. The Project would be compatible with the surrounding land uses and therefore, would not create any conflicts with adjacent land uses.	Consistent
1.12A	Adequate setbacks, buffering, and/or innovative site design shall be required for land uses that are contiguous to and	The Project would be compatible with the surrounding land uses. However, residential land uses are located to the east. The Project would provide all setbacks in compliance with City standards, would provide adequate	Consistent

Policy Number	Policy	Consistency Analysis	Consistent/ Inconsistent
	incompatible with existing land uses.	parking, and site design features that would further enhance compatibility between land uses.	
1.12B	The use of land shall not create negative visual impacts to surrounding land uses.	Due to the fact that the Project would provide a use similar to the surrounding existing developments, and the existing character of the surrounding area is characterized by development; the Project would not create a negative visual impact to surrounding land uses. The Project would provide all required landscaping along the Project frontage and surrounding the parking lot areas of the Project and would comply with all City policies related to visual character, building heights, scale, setbacks, landscaping and parking.	Consistent
1.12C	The use of land shall not subject people to potential sources of objectionable noise, light, odors, and other emissions nor the exposure of toxic, radioactive, or other dangerous materials	The Project Site is surrounded by existing commercial uses including a commercial center to the west, several automobile services and part stores are located northeast, and a DMV facility is located east of the Project Site. The Project would not emit construction or operational noise which exceeds City or other local standards. The Project would provide light fixtures that contain proper shielding and downcast in order to prevent glare on to adjacent properties. Light poles would not exceed 25 feet in compliance with the City Municipal Code and all lighting would be reduced after operating hours. All Project lighting would meet the requirements of Chapter 39 of the OMC. The Project would not exceed the SDAPCD's daily significance thresholds for air quality during construction or operation. The Project would comply with SDAPCD Rule 51 in order to reduced potential impacts related to construction odor.	Consistent
2.2 Commercial Development Objective	To promote and preserve a balance of successful markets and services in aesthetic, people-oriented associations that are compatible and organized to surrounding land uses.	The Project would provide a CarMax facility in an area with existing commercial developments with a variety and balance of markets and service types including restaurants, drug stores, specialty stores, thrift store, and automobile services and part stores. The Project would further promote this balance of successful markets and would be compatible with the surrounding uses. Additionally, the Project would provide improvements along Plaza Drive including a sidewalk which would connect to the sidewalks from the west along the shopping center and to the east along the DMV. The Project would also provide a bicycle lane on Plaza Drive that would further allow for better access between developments and to enhance the "people-oriented" area.	Consistent
2.21A	This designation shall provide	The existing commercial developments provide a wide	Consistent

Policy Number	Policy	Consistency Analysis	Consistent/ Inconsistent
	the community with commercial centers containing a wide variety of commercial establishments. Major tenants shall provide larger, low volume, higher cost items, such as home furnishings, apparel, durable goods, and specialty items and generally have citywide market areas. Support facilities such as entertainment establishments and restaurants shall be encouraged.	variety of establishments including restaurants, drug stores, specialty stores, thrift store, and automobile services and part stores. The Project would provide a CarMax pre-owned automobile facility that would provide larger, low volume, higher cost items. The CarMax Project would also provide not only a Citywide market area, but also a regional-wide market area.	
2.26A	The City shall encourage the establishment of specialized districts, centers, and developments for unique commercial uses which contribute positively to the City's revenue and employment generating abilities and cultural enhancement.	The Project would provide a specialized development within the City by providing a CarMax pre-owned automobile facility. The Project would positively contribute to the City's economy and would generate employment opportunities.	Consistent
2.26B	The City shall not permit the proliferation and/or over-concentration of commercial uses that generate adverse impacts to the social structure, visual quality, economy, public safety, or well-being of the community.	The Project would not over-concentrate the existing area as it has a zoning and land use designation for CC which has been established by the Zoning Ordinance and General Plan. Additionally, the Project would be adjacent to other uses such as residential uses and a fire station. The Project would not degrade the existing visual quality as it would provide similar characteristics as the existing commercial developments. The Project would positively contribute to the local economy and would promote public safety by providing sidewalks along Plaza Drive and by discouraging encampments located within the creek area.	Consistent
3.11 Vegetation and Wildlife Habitats Objective	Recognition and preservation of significant areas with regard to vegetation and wildlife habitats	The Project is within the Oceanside Subarea Plan, a draft plan used as a guidance document for projects within the City. The Project is consistent with the requirements of the Subarea Plan and has been designed to comply with the measures outlined in the plan.	Consistent
3.11A	A biological survey report, including a field survey, shall be required for a proposed project site if the site is largely or totally in a natural state or if high interest species of plants or animals have been found on nearby properties.	A Biological Technical Report (**Appendix D**), Biological Constraints Report (**Appendix E**) and Jurisdictional Delineation (**Appendix F**) were prepared for the Project and were used in this EIR analysis Chapter 4.5 *Biological Resources*. The preparation of these technical reports included field surveys, focused surveys, jurisdictional delineation and literature review to assess potential impacts to sensitive biological resources. All surveys were conducted in accordance with applicable plans, policies and ordinances set forth by the federal and state wildlife agencies, the City and current industry and agency standards.	Consistent

Policy Number	Policy	Consistency Analysis	Consistent/ Inconsistent
3.11C	In areas where vegetation or wildlife habitat modification is inevitable, mitigation and/or compensatory measures such as native plant restoration, land reclamation, habitat replacement, or land interest donation will be considered.	The Project would result in potentially significant impacts to sensitive biological resources including sensitive plant species and vegetation communities, jurisdictional resources, *Brodiaea* species, fairy shrimp, coastal California gnatcatcher, least Bell's vireo, other MBTA-covered species and disturbed Diegan coastal sage scrub. Appropriate mitigation measures in compliance with the Oceanside Subarea Plan and applicable federal, state, and local codes are required and are provided in Section 4.5.5 Mitigation Implementation and Monitoring of this EIR.	Consistent
3.12A	Construction is prohibited within the floodway and restricted in the floodplain by requiring flood-proofing measures for all structures.	The southern portion of the site lies within Zone X of the FEMA 500-year floodplain and Zone AE of the 100-year floodplain. Peak flows from POC-3 and POC-4 would decrease and peak flows at POC-1 and POC-2 would increase slightly due to the widening and expansion of Plaza Drive. However, the total net reduction of peak flows to Buena Vista Creek from pre- to post-development conditions would be approximately 2.60 cfs. . Temporary impacts will occur to approximately 0.0008 acre (344 SF) of disturbed habitat within the planning buffer during the sewer realignment. Due to the small size of the impacts and the distance from the riparian habitat (94 feet), no direct impact to riparian habitat is anticipated.	Consistent
3.12B	The City shall require property owners with land adjacent to the floodway to make reasonable channel improvements concurrent with development of their land or to contribute to a fund for future improvement of the length of the channel by the City.	On the southern parcel, prior to discharging from the Project Site, first flush runoff would be treated via an underground proprietary BMP in accordance with standards set forth by the San Diego Water Board and BMP Design Manual. Runoff from the developed Project Site would drain to a single onsite underground detention system near the southeast corner of the site. Mitigated peak flows would then drain from the detention facility via a 24-inch PVC storm drain to POC-3 at the southwest corner of the Project Site, where runoff would ultimately meet with existing Buena Vista Creek. The Project would have reduced peak flows for the majority of the Project Site. POC-1 and POC-2 at Plaza Drive would increase slightly due to the widening and expansion of Plaza Drive. Runoff discharging at these locations would make its way west towards the intersection of SR-78 and Plaza Drive where said runoff enters curb inlets on the north and south sides of Plaza Drive respectively. POC-3 and POC-4 would both have a decrease in peak flows and would ultimately confluence at POC-3 in Buena Vista Creek. The owner/tenant would be responsible for implementation and maintenance of all drainage and flood control facilities.	Consistent
3.14 Grading and Excavations	To provide mitigation recommendations for grading	Construction of the Project would include grading of the development area which has the potential to result in	Consistent

Policy Number	Policy	Consistency Analysis	Consistent/ Inconsistent
Objective	and excavations in the City of Oceanside.	exposed soils or changes in runoff that could result in erosion. Prior to obtaining a grading permit, the Project would prepare a SWPPP which would include sediment and erosion control BMPs such as placement of straw mulch, soil binders, silt fencing, and gravel bags. The Project would also comply with the City Grading Regulations Manual.	
3.14A	Investigation and evaluation of currently affected areas will indicate the measures to be included, such as the following measures: 1) Keep grading to a minimum, leave vegetation and soils undisturbed wherever possible. 2) Plant bare slopes and cleared areas with appropriate vegetation immediately after grading. 3) Chemically treat soils to increase stability and resistance to erosion. 4) Install retaining structures where appropriate. 5) Construct drainage systems to direct and control rate of surface runoff. 6) Construct silt traps and settling basins in drainage systems. 7) Construct weirs and check dams on streams.	Erosion control measures as included in the Project SWPPP would include placement of straw mulch, soil binders, silt fencing, and gravel bags. Placement of landscaping will occur as soon as possible after grading activities. The Project would have reduced peak flows for the majority of the site. POC-1 and POC-2 at Plaza Drive would increase slightly due to the widening and expansion of Plaza Drive. Runoff discharging at these locations would make its way west towards the intersection of SR-78 and Plaza Drive where said runoff enters curb inlets on the north and south sides of Plaza Drive respectively. POC-3 and POC-4 would both have a decrease in peak flows and would ultimately confluence at POC-3 in Buena Vista Creek. The owner/tenant would be responsible for implementation and maintenance of all drainage and flood control facilities. The Project would also comply with the City Grading Regulations Manual.	Consistent
3.18A	The City shall cooperate with the San Diego County Air Pollution Control Board, and participate in the Regional Air Quality Control Strategy (RAQS).	The Project would not exceed the SDAPCD's daily significance thresholds for air quality during construction or operation. The Project is zoned CC and has a corresponding land use designation and would be consistent with the growth assumptions in the General Plan and SANDAG's growth projections and would not conflict with the RAQS.	Consistent
3.2B	The City shall encourage the acquisition, restoration and/or maintenance of significant cultural resources by private organizations.	As discussed in Chapter 4.6 *Cultural Resources*, due to the Project's close proximity to Buena Vista Creek, there is potential for buried cultural resources within the alluvial deposits along the creek. The Project would incorporate mitigation measure MM-CUL-1a through MM-CUL-1h. These measures would require a qualified archaeologist and Native American monitor to be present during ground disturbing activities and the protocol in the event of a discovery.	Consistent
3.2C	Cultural resources that must remain in-situ to preserve their significance shall be preserved intact and interpretive signage and protection shall be provided by project developers.	As discussed in Chapter 4.6 *Cultural Resources*, due to the Project's close proximity to Buena Vista Creek, there is potential for buried cultural resources within the alluvial deposits along the creek. The Project would incorporate mitigation measure MM-CUL-1a through MM-CUL-1h. If cultural resources are found, ground-	Consistent

Policy Number	Policy	Consistency Analysis	Consistent/ Inconsistent
		disturbing activities would temporarily halt in order to assess the find. If the resources must remain in-situ, proper protection and signage would be implemented in accordance with the direction of the onsite archaeological monitor and/or Native American monitor.	
3.2D	An archaeological survey report shall be prepared by a SOPA (Society of Professional Archaeologists) certified archaeologist for a project proposed for grading or development if any of the following conditions are met: 1) The site is completely or largely in a natural state; 2) There are recorded sites on nearby properties; 3) The project site is near or overlooks a water body (creek, stream, lake, freshwater lagoon); 4) The project site includes large boulders and/or oak trees; or 5) The project site is located within a half-mile of Mission San Luis Rey.	An Archaeological Survey Report (**Appendix G**) was prepared for the Project in accordance with City standards. The report recommended incorporation of mitigation measure MM-CUL-1a through MM-CUL-1h in order to reduce potentially significant impacts to cultural resources to less than significant levels.	Consistent
3.21A	The City shall encourage the preservation of significant visual open areas.	The Project is not located in close proximity to important aesthetic resources including views of the Pacific Ocean, San Luis Rey River, Buena Vista Lagoon, Oceanside Harbor and Oceanside Pier. The nearest designated open space area included as visual open space by the Environmental Resource Management Element, is located approximately one mile northwest. Due to the Project location, the Project would not block views of visual open space areas.	Consistent
3.23 Paleontological Resources Objective	Recover, retention and evaluation of paleontological resources.	Due to the high sensitivity of the Santiago Formation underlying the site, the Project would have the potential to disturb a paleontological resource and would implement mitigation measures MM-GEO-3a and MM-GEO-3b as discussed in Chapter 4.8 *Geology and Soils*.	Consistent
3.23A	Paleontological survey reports shall be prepared by a qualified paleontologist approved by the City for all Projects that are located in the area designated as having a high potential for fossils on the City's natural resource management data base system.	As stated in mitigation measure MM-GEO-3a, a qualified professional paleontologist or California Registered Professional Geologist with appropriate paleontological expertise, would prepare and implement a PRIMP.	Consistent

Oceanside Subarea Plan of the North County Multiple Habitat Conservation Plan (MHCP)

The Subarea Plan is the only applicable local, regional or state habitat conservation plan that applies to the Project. While the Subarea Plan has not been formally adopted, the Project has been designed to comply with the measures outlined in the MHCP and Subarea Plan. Although the Project was designed to comply with the measures outlined in the MHCP and the Subarea Plan, the Project has the potential to result in significant impacts to sensitive plant species and vegetative communities, jurisdictional resources, *Brodiaea* species, fairy shrimp, coastal California gnatcatcher, least Bell's vireo, and other MBTA-covered species. The Project would result in unavoidable direct impacts to disturbed Diegan coastal sage scrub which will be considered a **significant impact** (**Impact LU-1)**.

The Project would include mitigation measures consistent with the Subarea Plan to address potential direct, significant and unavoidable impacts to sensitive biological resources.

Regional Plans

San Diego Forward: The Regional Plan

The 2015 San Diego Forward: The Regional Plan prepared by SANDAG, includes a set of policy objectives related to habitat and open space preservation, regional economic prosperity, environmental stewardship, mobility choices, partnerships/collaboration and health and complete communities. The Project's consistency with applicable policy objectives is presented in **Table 4.12-2**. As shown in **Table 4.12-2**, the Project would not conflict with the applicable policy objectives of the Regional Plan.

Table 4.12-2
Consistency with SANDAG San Diego Forward – The Regional Plan

Policy Objectives	Consistency
Habitat and Open Space Preservation: Focus growth in areas that are already urbanized, allowing the regional to set aside and restore more open space in our less developed areas. Protect and restore our region's urban canyons, coastlines, beaches, and water resources.	***Consistent:*** The Project would development a CarMax automobile facility on a vacant site located in a primarily developed area surrounded by commercial and residential uses. The Project would be consistent with the zoning and land use designations for the Project Site. Therefore, the Project would provide growth in an already urbanized area. The Project is not located near canyons, coastline, or beaches. The Project would provide a 100-foot riparian buffer on the southern portion of the site. This would include a 50-foot biological buffer as well as a 50-foot planning buffer. This would ensure protection of the Buena Vista Creek.
Environmental Stewardship: Support energy programs that promote sustainability.	***Consistent:*** In accordance with the California Green Building Standards Code Table 5.106.5.3.3, seven (7) EV charging spaces would be provided onsite. The Project would comply with all applicable state and local energy programs and regulations. Designated clean air vehicle parking would be provided within the customer and employee parking lot. Project improvements on Plaza Drive along the Project frontage would include an 8-foot bicycle lane and a 5-foot sidewalk that would connect to the existing sidewalks to the east and west to promote pedestrian and bicycle uses and to provide these connections along the Project Site. The Project would implement irrigation systems with respect to water conservation.

Policy Objectives	Consistency
	Shade trees would be provided within the customer and employee parking lot a lot the parking lot boundaries and within the parking islands. Shade trees have a minimum 24-inch box.
Healthy and Complete Communities: Create great places for everyone to live, work and play.	***Consistent:*** The Project would positively contribute to the City's economy and would generate employment opportunities. The Project would be located near several types of residential uses including medium density residential, high density residential and a senior living facility. The Project would contribute to the complete community of the existing area.

San Diego Air Pollution Control District Rules and Regulations

The Project is located within the SDAPCD. Impacts related to air quality are analyzed in Chapter 4.4 *Air Quality*. The SDAPCD is responsible for enforcing standards and regulating stationary sources of pollution. The Project is subject to the rules and regulations set forth by the SDAPCD. Land use assumptions utilized to prepare the RAQS take into account local land use plans. The Project is consistent with the City land use designation of the Project Site, and therefore the Project emissions are not expected to exceed SDAPCD thresholds.

No significant impacts to air quality have been identified and no mitigation is required, and impacts related to a regional air quality plan will be less than significant.

4.12.5 Mitigation Implementation and Monitoring

Land Use Plan (Impact LU-1)

Mitigation measures MM-BIO-1a through MM-BIO-1c, MM-BIO-2, MM-BIO-3, MM-BIO-4 and MM-BIO-5, MM-BIO-6 and MM-BIO-7 which are presented in Section 4.5.5, will reduce this impact to below a level of significance.

Sensitive Plant Species and Vegetation Communities and Jurisdictional Resources (Impact BIO-1a, Impact BIO-1b, and Impact BIO-1c)

MM-BIO-1a Pre-Construction Mitigation Measures

Pre-Construction Meeting: Prior to construction, a qualified biological monitor will attend the preconstruction meeting, discuss the Project's biological monitoring program with construction contractors, and arrange to perform any follow up mitigation measures and reporting for the proposed Project.

Resource Delineation and Protection Measures: Prior to construction activities, a qualified biological monitor will supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other Project mitigation measures. This pre-construction phase will include flagging sensitive plant species and delineating buffers to protect sensitive biological resources (e.g., habitats, flora and fauna species, nesting birds) during construction activities. In addition, appropriate BMPs will be installed as

applicable to provide fugitive dust control, minimize lighting and noise in adjacent habitats, and avoid the introduction of exotic and invasive plant and animal species into the area. Responsible construction practices as well as storm water and runoff management will also be included as part of the BMPs.

Contractor Environmental Awareness Training: Prior to commencement of construction activities, a qualified biological monitor will meet with all construction contractors to conduct an on-site contractor environmental awareness training to discuss the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain construction limits flagging, discuss sensitive resource flagging, review wetland buffers, clarify acceptable access routes/methods and staging areas).

MM-BIO-1b Construction Measures

Biological Monitoring: During construction, all construction activities, including access and staging, will be restricted to areas previously identified and depicted on the approved Project plans. A qualified biological monitor will monitor construction activities as needed to verify that construction activities do not encroach into biologically sensitive areas and that, if applicable, the mitigation measures developed to accommodate any sensitive species located during the pre-construction surveys are being implemented. The qualified biological monitor will complete a Daily Biological Monitoring Form to document all construction and monitoring activities.

Subsequent Resource Identification: During construction, the qualified biological monitor will note/act to prevent any new disturbances to habitat, flora, and/or fauna on-site (e.g., flag newly identified sensitive resources for avoidance during access). If active nests or other previously unknown sensitive resources are detected, all Project activities that directly impact the resource will be delayed until species-specific local, state, or federal regulations have been determined and applied by the qualified biological monitor.

MM-BIO-1c Post-Construction Measures

Upon completion of Project construction, a post-construction report that summarizes the construction activities, actual Project impacts, and Project design/mitigation measures implemented before and during construction will be prepared for the Project. If Project impacts exceed the approved totals, additional impacts will be mitigated in accordance with the Subarea Plan and other applicable local, state, and federal laws. The qualified biological monitor will submit the post-construction report to the City of Oceanside within 30 days of construction completion.

Sensitive *Brodiaea* Species (Impact BIO-2)

MM-BIO-2 Prior to construction of the Project, focused sensitive plant species surveys of the Project Site shall include general rare plant surveys in addition to focused *Brodiaea* species surveys by a qualified biologist. Rare plant surveys shall be conducted twice, including one in early spring and one in late spring/early summer prior to Project construction in order to document any sensitive plant species that occur within the

Project area. Six (6) focused *Brodiaea* species surveys shall be conducted in spring prior to construction with the timing based on the emergence of the species documented during reference site checks.

If not sensitive plant species are documented within the Project survey area during focused surveys, no additional avoidance, minimization measures or mitigation measures would be required.

If sensitive plant species are documented within the Project survey area, impacts to these species shall be avoided to the extent feasible. Unavoidable impacts shall be minimized and/or mitigated through compensatory measures (e.g., restoration, transplantation, habitat preservation) that will be determined based on the species present, population estimate and significance of the impacts. All significant unavoidable impacts shall require additional mitigation measures to reduce impacts to below a level of significance.

Fairy Shrimp (Impact BIO-3)

MM-BIO-3 Prior to construction of the Project, if construction has not been initiated prior to the 2022/2023 rainy season, additional pre-construction surveys shall be conducted prior to construction initiation in order to update the status of the fairy shrimp species within the Project survey area. Pre-construction fairy shrimp surveys shall be conducted by a qualified biologist in accordance with current USFWS survey guidelines.

If sensitive fairy shrimp species are documented within the survey area, impacts to listed fairy shrimp shall be avoided to the extent feasible. Unavoidable impacts to these species would be considered significant and would require consultation with the USFWS under Section 10(a)(1)(B) of the ESA to develop project-specific minimization and mitigation measures to reduce these impacts to below a level of significance.

Coastal California Gnatcatcher (Impact BIO-4)

MM-BIO-4 Prior to construction of the Project, if construction has not been initiated prior to the 2021 survey season, additional pre-construction surveys shall be conducted prior to construction initiation to determine if coastal California gnatcatcher is present in the Project survey area. Focused coastal California gnatcatcher surveys shall be conducted by a qualified biologist in accordance with current USFWS survey guidelines.

Impacts to coastal California gnatcatcher shall be avoided to the extent feasible. Unavoidable impacts to this species would be considered significant and would require consultation with the USFWS under Section 10(a)(1)(B) of the ESA to develop project-specific minimization and mitigation measures (e.g., construction outside of breeding season, habitat protection, noise attenuation) in order to reduce impacts to a level below significance.

Least Bell's Vireo (Impact BIO-5)

MM-BIO-5 Prior to construction of the Project, if construction has not been initiation prior to the 2021 survey season, additional pre-construction surveys shall be conducted prior to

construction initiation to determine if least Bell's vireo is present in the Project survey area. Pre-construction focused least Bell's vireo surveys shall be conducted by a qualified biologist in accordance with current USFWS survey guidelines.

Impacts to least Bell's vireo shall be avoided to the extent feasible. Unavoidable impacts to this species would be considered significant and would require consultation with the USFWS under Section 10(a)(1)(B) of the ESA to develop project-specific minimization and mitigation measures (e.g., construction outside of breeding season, habitat protection, noise attenuation) to reduce these impacts to below a level of significance.

MBTA-Covered Bird Species (Impact BIO-6)

MM-BIO-6 During construction, all vegetation clearing will occur outside of the breeding season (February 1 to September 15) to avoid impacts to sensitive avian species (e.g., any species identified as a listed, candidate, sensitive, or special status species; any species covered by the MBTA). If vegetation clearing must occur during the breeding season, a qualified biological monitor will conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey will be conducted no more than four (4) calendar days prior to the start of construction activities (including removal of vegetation). The results of the pre-construction nesting bird survey will be submitted to the City of Oceanside for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan will be prepared and will include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan will be submitted to the City of Oceanside for review and approval and will be implemented to the satisfaction of the City of Oceanside. The qualified biological monitor will verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.

Disturbed Diegan Coastal Sage Scrub (Impact BIO-7)

MM-BIO-7 Prior to issuance of a building permit, the Project shall mitigate impacts to disturbed Diegan coastal sage scrub within the WCPZ or within a PAMA at a 3:1 ratio. As such, the Project shall preserve 1.224 acres of Diegan coastal sage scrub at an existing mitigation bank or within a PAMA which shall be determined and approved by the City of Oceanside Planning Department.

4.12.6 Level of Significance After Mitigation

The analysis in Section 4.12.4 identified the potential for significant impacts related to compliance with a land use plan. Implementation of mitigation measure MM-BIO-1a through MM-BIO-1c requires specific pre-construction, construction and post-construction requirements for the provision of pre-construction meeting, resource delineation and protection measures, awareness training, biological monitoring, resource identification and post-construction reporting. Compliance with these mitigation measures would provide onsite construction personnel with further information and protocol in the event that sensitive biological resources are identified. Flagging of resources will provide a physical and visual barrier to these sensitive resources, and the presence of a biological monitor will further protect

sensitive biological resources. Compliance with mitigation measure MM-BIO-1a through MM-BIO-1c will reduce impacts to sensitive plant species and vegetation communities and jurisdictional resources to level below significance.

Implementation of mitigation measure MM-BIO-2 would ensure focused sensitive plant species surveys, including *Brodiaea* species surveys are conducted prior to construction, once the 2020 focused surveys are no longer valid. Additional focused surveys will ensure that no new species are located onsite, reducing potential impacts to a less than significant level.

Implementation of mitigation measure MM-BIO-3 will require focused fairy shrimp surveys prior to construction of the Project upon expiration of the 2019/2020 surveys. Pre-construction surveys will ensure that no fairy shrimp species are present onsite before commencement of construction activities. With implementation of MM-BIO-2, impacts related to fairy shrimp will be reduced to levels below significance.

Implementation of mitigation measure MM-BIO-4 will require coastal California gnatcatcher surveys prior to construction, upon expiration of the 2020 focused surveys. Additional pre-construction surveys will ensure that coastal California gnatcatcher species are not present or have the likelihood to be present onsite during construction activities. With implementation of MM-BIO-3, impacts related to coastal California gnatcatcher would be reduced to less than significant levels.

Implementation of mitigation measure MM-BIO-5 will require least Bell's vireo surveys prior to construction of the Project, upon expiration of the 2020 focused surveys. Pre-construction least Bell's vireo surveys will ensure species are not present onsite or have the likelihood to be present onsite during construction activities. With implementation of MM-BIO-4, impacts related to least Bell's vireo would be reduced to a level below significance.

Implementation of mitigation measure MM-BIO-6 will require avoidance of vegetation clearing during the avian breeding season, in order to reduce impacts to sensitive avian species and MBTA-covered species such as Cooper's hawk and yellow warbler. Avoidance of clearing during the breeding season will reduce any impacts to sensitive avian and MBTA-covered species to a level below significance.

Implementation of mitigation measure MM-BIO-7 will require preservation of 1.224 acres of Diegan coastal sage scrub at an existing mitigation bank or Pre-Approved Mitigation Area. Off-site mitigation will offset impacts associated with the unavoidable direct impacts to Diegan coastal sage scrub in accordance with the Subarea Plan. With implementation of mitigation measure MM-BIO-7, impacts to Diegan coastal sage scrub will be reduced to a level below significance. Impacts to biological resources and impacts related to compliance with a land use plan will be less than significant after mitigation incorporated.

Chapter 4.13 MINERAL RESOURCES

4.13.1 Environmental Setting

Mineral resources can be divided into three general categories of which are important to the County. Construction materials such as sand, gravel and crushed rock resources are the most important category of mineral resources economically. Industrial and chemical mineral materials include limestone, dolomite, and marble (except where used as construction aggregate); specialty sands, clays, phosphate, borates and gypsum, feldspar, talc, building stone and dimension stone. Metallic and rare minerals are the third category which includes precious metals (gold, silver and platinum), iron and other ferro-alloy metals, copper, lead, zinc, gemstones and semi-precious materials, and optical-grade calcite.

There are two (2) major areas of mineral deposits within the City located along the northern portion of the City as shown in Figure ERM-5 of the Environmental Resource Management Element of the General Plan. One of these areas, the San Luis Rey River Basin, contains landfill, beach sand (non-construction quality) and construction quality sand suitable for concrete and plaster. The other significant deposits consist of silica sand, primarily used in glass manufacturing.

The County has undertaken a River Sand Resource Study (June 1974). In its report, the sand deposits in the San Luis Rey River Basin comprise of 73.5% of total available deposits accessible to sand procedures. In the City, as part of the North County Market Area, there is one sand producer operating in the floodplain. However, most of the sand deposits are found in the urbanized area within the City and these deposits are classified as “unavailable”. Currently, the more significant mineral extraction operation is found along El Camino Real north of Oceanside Boulevard where silica sand is being extracted by the Crystal Silica Company. The Project Site is not located within an area of mineral deposits within the City as displayed in Figure ERM-5 of the Environmental Resource Management Element or in a mineral resource area as depicted in Figure LU-22 of the Land Use Element.

The California Surface Mining and Reclamation Act (SMARA) of 1975 required the classification of land into Mineral Resource Zones (MRZs), according to the land’s known or inferred mineral resource potential. The City contains land designated in three categories: MRZ-2, MRZ-3 and MRZ-4. MRZ-2 designates areas where adequate information exists to indicate that significant mineral deposits are present or where it was determined that a high likelihood for their presence exists. MRZ-3 areas are those containing mineral deposits whose significance cannot be evaluated from available data. This classification also includes area where both acceptable and unacceptable quality materials are intermixed, usually in layers. MRZ-4 areas are those for which available information is inadequate for assignment to any other MRZ zone. The Project Site currently holds an MRZ-3 designation, which indicates that there are no known mineral resources present on the Project Site.

4.13.2 Regulatory Setting

State

Surface Mining and Reclamation Act of 1975

Urban preemption of prime mineral deposits and conflicts between mining and other uses throughout California led to passage of SMARA, which establishes policies for the conservation, development, and reclamation of mineral lands and contains specific provisions for the classification of mineral lands by

the State Geologist. The SMARA requires all cities and counties to incorporate in their general plans the mapped designations approved by the Division of Mines and Geology. These designations are to include lands categorized as MRZs. MRZ classifications are used to communicate information concerning the existence of mineral resources.

Local

City of Oceanside General Plan

The General Plan Environmental Resource Management Element is designed to conserve natural resources and is founded on the principles of conservation, preservation, planned management and wise utilization of natural resources. An objective of the Environmental Resource Management Element is to regulate mineral extraction activities to minimize hazards and conflicts with other land uses as well as to preserve and enhance the appearance of the area.

The Land Use Element of the General Plan contains the following policies related to Mineral Resources:

3.31 Mineral Resource Areas

Objective: To provide for the conservation and development of mineral deposits of local and regional significance and to allow the environmentally sensitive extraction of said deposits while minimizing land use conflicts.

Policy A: Mining operations shall be restricted to the following areas which contain mineral deposits determined to be of regional significance by the State Mining and Geology Board pursuant to the California Surface Mining and Reclamation Act of 1975 and those found to be essential to the economic well-being of the City (see Figure LU-22).

Policy B: Mineral Resource Areas shall remain in effect until the resource has been depleted or no longer exists in sufficient quantity or quality to be of benefit to the City and/or the region.

Policy C: The City shall not approve, extend, or amend any permit for mining operations that are not located within designated mineral resource areas.

4.13.3 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, impacts would be considered significant if the Project would:

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state;
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

4.13.4 Project Impact Analysis

Would the Project:

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

The Project is located in a primarily developed, urbanized area surrounded by a commercial center to the west, the DMV and medium-density residential to the east, SR-78 directly north and Buena Vista Creek, high density residential uses for a senior living facility and OFD station to the south. The City has land designated in the MRZ-2, MRZ-3 and MRZ-4 categories as depicted in the County of San Diego Guidelines for Determining Significance – Mineral Resources, Figure 2 (County of San Diego, 2007). The Project Site has an MRZ-3 designation, which indicates that there are no known mineral resources present on the Project Site. Additionally, the Project Site is not located in an area having probable construction quality sand, non-construction quality sand or silica sand as mapped in the Environmental Resource Management Element of the General Plan. Furthermore, the Project Site is not located in a Mineral Resource Area as depicted in the Land Use Element of the General Plan.

The Project would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state and therefore **no impact** will occur.

b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

The Project Site is designated as MRZ-3 designation which indicates that there are no known mineral resources present as depicted in the County of San Diego Guidelines for Determining Significance – Mineral Resources, Figure 2 (County of San Diego, 2007). The Project Site is not a mineral resource recovery site and it is located outside of the major areas identified as having mineral deposits by the City of Oceanside General Plan Environmental Resource Management Element and Land Use Element.

The Project would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan, and therefore **no impact** will occur.

4.13.5 Mitigation Implementation and Monitoring

No significant impacts to mineral resources have been identified and therefore no mitigation measures are required.

4.13.6 Level of Significance After Mitigation

Project impacts to mineral resources will be less than significant.

Chapter 4.14 NOISE

The following document was used in the preparation of this section and is included in its entirety in **Appendix M:**

Ldn Consulting, Inc. March 25, 2020. *Noise Study CarMax Auto Store City of Oceanside, CA.*

4.14.1 Environmental Setting

Noise Characteristics and Descriptors

Sound is mechanical energy transmitted by pressure waves in a compressible medium, such as air. Noise is defined as unwanted sound which interferes with or disrupts normal daily activities. Sound levels are measured in units called decibels (dB). Sounds heard by humans generally consist of multiple frequencies. The A-weighted decibel scale is (dBA) is used to evaluate sounds, which reflects how the human ear responds to different sound levels at different frequencies.

Several descriptors of noise exist to help predict average community reactions to the adverse effects of environmental noise, including traffic-generated noise. To evaluate the long-term characteristics of sound, accounting for the variability in sound levels over time, a mathematical average is taken for a given time interval. This time-averaged sound level over a specific period of time is called a noise equivalent level (L_{eq}). Maximum sound level (L_{max}) is the greatest sound level measured during a designated time interval or event. The minimum sound level (L_{min}) is the minimum sound level and is often called the floor of a measurement period.

The day-night average noise level (L_{dn}) and community noise equivalent level (CNEL) represent 24-hour periods that apply a time-weighted factor designed to emphasize noise events that occur during the non-daytime hours. CNEL penalizes noise that occurs during certain sensitive periods. Noise occurring during the daytime (7:00 a.m. to 7:00 p.m.) receives no penalty. Noise during the evening (7:00 pm to 10:00 pm) is penalized by added 5 dB and nighttime (10:00 p.m. to 7:00 a.m.) noise is penalized by adding 10 dB. L_{dn} differs from CNEL in that the daytime period is longer (7:00 a.m. to 10:00 p.m.). L_{dn} and CNEL are the predominant criteria used to measure roadway noise affecting residential and sensitive receptors.

Vibration Fundamentals

Vibration is oscillatory movement of mass over time. It is described in terms of frequency and amplitude and, unlike sound, can be expressed as displacement, velocity or acceleration. For environmental studies, vibration is often studied as a velocity that, akin to the discussion of sound pressure levels, can also be expressed in dB as a way to cast a large range of quantities into a more convenient scale. Vibration impacts to buildings are generally discussed in terms of inches per second (ips) peak particle velocity (PPV). Common sources of vibration within communities include construction activities and railroads.

Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and demolition-related activities where sudden releases of subterranean energy or powerful impacts of tools on hard materials occur. Depending on their distances to a sensitive receptor, operation of large bulldozers, graders, loaded dump trucks, or other heavy

construction equipment and vehicles on a construction site also have the potential to cause high vibration amplitudes.

Project Site Noise

Noise measurements were taken on January 13, 2020 by Ldn Consulting, Inc. in the afternoon hours using a Larson-David Model LxT Type 1 precision sound level meter. The sound level meter and microphone were mounted to a tripod, five (5) feet above the ground and equipped with a windscreen during all measurements. Ambient noise consisted of primarily of traffic noise along the adjacent roadway. **Table 4.14-1** displays the ambient noise levels for the Project Site. The ambient L_{eq} noise levels measured in the area for the Project during the early afternoon were found to be between 57 and 73 dBA L_{eq}.

Table 4.14-1
Ambient Noise Levels

Measurement Identification	Primary Noise Source	Time	Noise Levels (dBA)					
			L_{eq}	L_{max}	L_{min}	L10	L50	L90
M1	State Route 78	3:00 – 3:15 pm	61.8	73.1	57.4	63.1	60.5	59.3
Source: Noise Study Prepared by Ldn Consulting, Inc. (Appendix M)								

4.14.2 Regulatory Setting

Federal

Noise Control Act

In 1972, Congress enacted the Noise Control Act. The Act authorized the U.S. EPA to establish a means for effective coordination of federal research and activities in noise control, establish federal noise emission standards for products distributed in commerce, and provide information to the public about the noise reduction characteristics of such products.

Federal Transit Administration

In its Transit Noise and Vibration Impact Assessment Manual, the Federal Transit Administration (FTA) recommends a daytime construction noise level threshold of 80 dBA L_{eq} over an eight-hour period when detailed construction noise assessments are performed to evaluate potential impacts to community residences surrounding a project (FTA 2018). Although the FTA guidance is not a regulation, it can serve as a quantified standard in the absence of such limits at the state and local jurisdictional levels.

State

California Code of Regulations, Title 24

According to Title 24 (Part 2, Volume 1, Chapter 12 – Interior Environment, Section 1206.4), interior noise levels attributed to exterior noise sources are not to exceed 45 dBA CNEL for any habitable room. . The "State Noise Insulation Standard", as it is referred to, requires buildings to meet performance

standards through design and/or building materials that would help to reasonably offset any significant noise source in the receptor's vicinity.

California Department of Transportation

In its Transportation and Construction Vibration Guidance Manual, Caltrans recommends a vibration velocity threshold of 0.2 ips PPV for assessing vibration impacts to occupants of residential structures. Although this Caltrans guidance is not a regulation, it can serve as a quantified standard in the absence of such limits at the local jurisdictional level.

Local

County of San Diego Noise Ordinance Code

The County of San Diego Noise Ordinance Code states that with the exception of an emergency, it should be unlawful to conduct any construction activity so as to cause, at or beyond the property lines, an average sound level greater than 75 dB between the hours of 7:00 am and 7:00 pm. The City relies on this standard in absence of a City property line noise standard for construction, as provided in the Noise Study prepared by Ldn Consulting, Inc. (**Appendix M**).

City of Oceanside Noise Control Ordinance

The OMC Chapter 38 includes a Noise Control Ordinance which identifies acceptable noise levels within the community. Section 38.12 of the Noise Control Ordinance establishes general sound level limits for various zoning districts and shown in **Table 4.14-2**. For commercial zones, noise levels are not to exceed 65 dBA from the hours of 7:00 a.m. to 9:59 p.m. and 60 dBA from 10:00 p.m. to 6:59 a.m.

Table 4.14-2
Noise Level Limits by Base District Zone

Base District Zone	Applicable Limit (dB)	Time Period
RE (Residential Estate)	50 45	7:00 a.m.to 9:59 p.m. 10:00 p.m. to 6:59 a.m.
RS (Single-Family)	50 45	7:00 a.m. to 9:59 p.m. 10:00 p.m. to 6:59 a.m.
RM (Medium Density)	50 45	7:00 a.m. to 9:59 p.m. 10:00 p.m. to 6:59 a.m.
RH (High Density)	55 50	7:00 a.m. to 9:59 p.m. 10:00 p.m. to 6:59 a.m.
RT (Residential Tourist)	55 50	7:00 a.m. to 9:59 p.m. 10:00 p.m. to 6:59 a.m.
C (Commercial)	65 60	7:00 a.m. to 9:59 p.m. 10:00 p.m. to 6:59 a.m.
I (Industrial)	70 65	7:00 a.m. to 9:59 p.m. 10:00 p.m. to 6:59 a.m.
D (Downtown)	65 55	7:00 a.m. to 9:59 p.m. 10:00 p.m. to 6:59 a.m.
A (Agricultural)	50 45	7:00 a.m. to 9:59 p.m. 10:00 p.m. to 6:59 a.m.
OS (Open Space)	50	7:00 a.m. to 9:59 p.m.

	45	10:00 p.m. to 6:59 a.m.
Source: City of Oceanside Municipal Code Section 38.12		

Construction activities are subject to Section 38.17 of the Noise Control Ordinance, which specifically prohibits the operation of any pneumatic or air hammer, pile driver, steam shovel, derrick, steam, or electric hoist, parking lot cleaning equipment, or other appliance, the use of which is attended by loud or unusual noise, between the hours of 10:00 p.m. and 7:00 a.m..

Section 38.16 of the Noise Control Ordinance prohibits nuisance noise as recommended in the City's General Plan Noise Element. It is unlawful for any person to make, continue, or cause to be made or continued within the limits of the City any disturbing, excessive, or offensive noise that causes discomfort or annoyance to reasonable persons of normal sensitivity. The Noise Control Ordinance Section 35.15 provides that construction maintenance or other public improvement activities by government agencies or public utilities may be exempt from the noise level limits upon the City manager determination that the authorization furthers the public interest.

The Noise Ordinance is the City's principal tool in in implementing the goals and policies of the General Plan's Noise Element.

City of Oceanside General Plan

The General Plan Noise Element contains policies for minimizing unnecessary noises and establishing standards for maximum noise levels in the City. The Noise Element provides the following limitations on construction noise:

1. It should be unlawful for any person within any residential zone of 500 feet there from to operate any pile driver, power shovel, pneumatic, power hoist, or other construction equipment between 8:00 p.m. and 7:00 a.m. generating an ambient noise level of 50 dBA at any property line unless an emergency exists.

2. It should be unlawful for any person to operate any construction equipment at a level in excess of 85 dBA at 100 feet from the source.

3. It should be unlawful for any person to engage in construction activities between 6:00 p.m. and 7:00 a.m. when such activities exceed the ambient noise level by 5dBA. A special permit may be granted by the Director of Public Works if extenuating circumstances exist.

In addition, the Noise Element addresses nuisance noise and states that it should be unlawful for any person to make or continue any loud, unnecessary noise that causes annoyance to any reasonable person of normal sensitivity.

Further, the General Plan Noise Element outlines goals, objectives, and noise policies as follows:

Goal: To minimize the effects of excessive noise in the City of Oceanside

Objective: To protect the residents and visits to Oceanside from noise pollution. To improve the quality of Oceanside's environment.

Policies:

- Noise levels shall not be so loud as to cause danger to public health in all zones except manufacturing zones where noise levels may be greater.

- Noise shall be controlled at the source where possible.

- Noise shall be intercepted by barriers or dissipated by space where the source cannot be controlled.

- Noise shall be reduced from structures by the use of soundproofing where other controls fail or are impractical.

- Noise levels shall be considered in the approval of any projects or activities, public or private, which require a permit or other approval from the City.

- Noise levels shall be considered in any changes to the Land Use and Circulation Elements of the General Plan.

- Noise levels of City vehicles, construction equipment, and garbage trucks shall be reduced to acceptable levels.

4.14.3 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, impacts would be considered significant if the Project would result in:

a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
b. Generation of excessive groundborne vibration or groundborne noise levels;
c. For a project located within the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

4.14.4 Project Impact Analysis

Would the Project result in:

a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction Noise

Construction noise is short-term in nature and varies from hour to hour and day to day, depending on the equipment in use, the operations performed, and the distance between the source and receptor. Equipment that would be in use during construction for site preparation and grading would include dozers, tractors, loaders, backhoes, water truck, excavators, graders, pavers, rollers, cranes, forklifts,

generators, welders and air compressors. Grading activities typically represent one of the highest sources of noise impacts. Site preparation and grading is estimated to occur over approximately six (6) weeks. Due to normal site preparation operations, most of the equipment will be spread out over the Project Site. All residential uses within the Project vicinity are located more than 330 feet from all site preparation activities. **Figure 17** displays the locations to the nearest sensitive noise receptors.

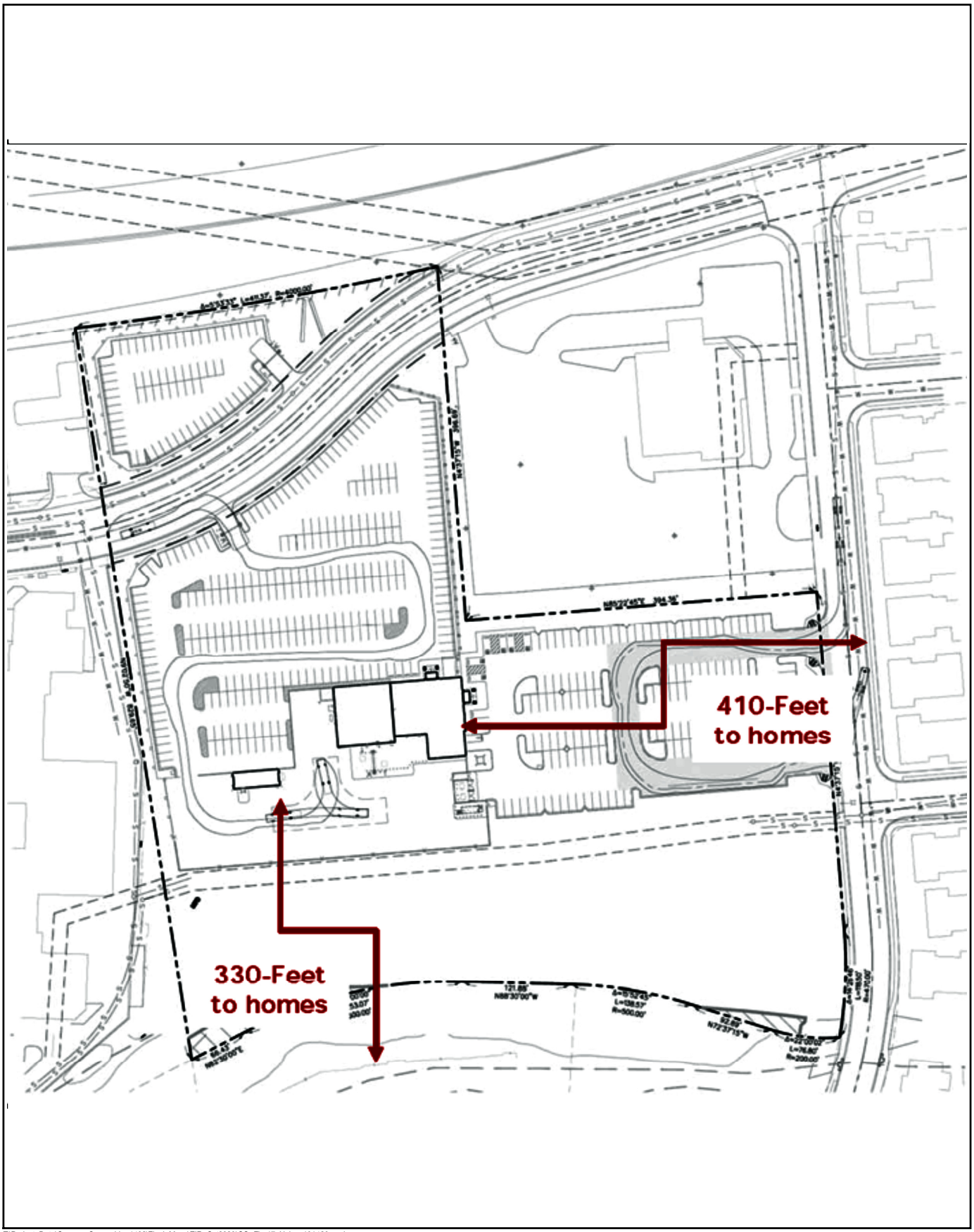
Construction for the entire Project includes utility infrastructure, facilities, improvements and structures and estimated construction noise levels are provided in **Table 4.14-3.** As shown in **Table 4.14-3**, if all construction equipment was working in the same area, at a distance as close as 330 feet, the point source noise attenuation from the construction activities and the nearest property line is -16 dBA.

Table 4.14-3
Construction Noise Levels

Equipment Type	Quantity Used	Source @ 50 Feet (dBA)	Cumulative Noise Level @ 50 Feet (dBA)
Tractor/Backhoe/Loader	3	72	77
Grader	1	73	73
Roller	1	74	74
Water Truck	1	70	70
Dozer	1	74	74
		Cumulative Level (dBA)	**82**
		Distance to Separation (Feet)	**330**
		Noise Reduction due to Distance (dBA)	**-16**
		Property Line Noise Level (dBA)	**66**
Source: Noise Study Prepared by Ldn Consulting, Inc. (Appendix M)			

As displayed in **Table 14.4-3**, if all equipment were working in the same area, at a distance as close as 330 feet, at worst case scenario, Project construction would result in an eight-hour average of 66 dBA at the property line. Construction equipment for the Project would not operate any construction equipment at a level in excess of 85 dBA at 100 feet from the source in accordance with the City standard. In absence of a City standard for property line construction noise the City relies on the County of San Diego standard of 75 dBA L_{eq}. The Project would also meet the County's standard for construction activities at or beyond a property line not to exceed 75 dBA.

Project construction would not generate a substantial temporary increase in ambient noise levels in excess of local standards, and impacts are **less than significant**.



T:\Project_Data\Carmax_Oceanside_1492\Final_Maps\EIR_Oct2020\CO_Fig-17_Noise_101420.mxd

R·E·C Consultants, Inc.

Noise Sources

NOT TO SCALE

FIGURE 17

CARMAX AUTO SUPERSTORE OCEANSIDE EIR

Source: Ldn Consulting Inc, (03/25/2020)

October 2020

Operation Noise

Operation of the Project includes used car sales, vehicle service work including a car wash, truck deliveries of vehicles parts and supplies and customer vehicle trips including customer test drives. The Project would also include rooftop mechanical heating, ventilation and air conditioning units (HVAC) which would be installed within the proposed buildings. The proposed HVAC units would be screened by a prefinished metal rooftop unit screen. Reference noise levels for the proposed carwash and HVAC unit were utilized in calculating the operational noise levels. **Table 4.14-4** displays the operational noise levels at the southern property line located approximately 330 to 410 feet from sensitive receptors.

The Project Site is zoned commercial which allows an equivalent one-hour sound level of 65 dBA L_{eq} between the hours of 7:00 a.m. and 9:59 p.m. and 60 dBA from 10:00 p.m. to 6:59 a.m. at the property line. To the west and east of the Project Site are commercial uses with residential uses to the east and south. Residential uses allow an equivalent one-hour sound level of 50 dBA L_{eq} between 7:00 a.m. and 9:59 p.m. and 45 dBA from 10:00 p.m. to 6:59 a.m. at the property line. Since the Project Site is surrounded by residential and commercial zones, the arithmetic mean of the sound level standards is used. The hours of operation of the Project facility would be between the daytime hours and therefore the arithmetic mean of the daytime standards was used (57.5 L_{eq}).

Table 4.14-4
Operational Noise Levels – Southern Property Line

Source	Distance from Source (Feet)	Measured Noise Level (dBA)	Distance to Nearest Property Line (Feet)	Noise Reduction due to Distance (dBA)	Resultant Noise Level @ Property Line (dBA)
Vacuum Equipment	3	81.8	330	-40.8	16.5
Carwash Entrance	9	84.3		-31.3	38.1
Carwash Exit (Blowers)	9	84.5		-31.3	38.3
HVAC West Building	6	65.9		-34.8	12.7
HVAC East Building	6	65.9		-34.8	12.7
Cumulative Noise Level @ Property Line (dBA)					**41.3**
Source: Noise Study Prepared By Ldn Consulting, Inc. (Appendix M)					

Based on the information in **Table 4.14-4**, property line noise levels would result in 41.3 dBA and would not exceed the City's property line noise standards for both commercial and residential uses.

The Project would not generate substantial permanent increase in ambient noise levels in the vicinity of the Project in excess of local standards, and impacts related to operational noise are **less than significant.**

Off-Site Transportation Noise Levels

The Project is located south of SR-78 and therefore, impacts related to noise levels from the existing freeway were analyzed. For the purpose of this analysis, a direct roadway impact would be considered significant if the Project increases noise levels for a noise sensitive land use by 3 dBA CNEL and if the Project increases noise levels above an unacceptable noise level per the City's General Plan in the area adjacent to the roadway segment. To determine if direct cumulative off-site noise level increases

associated with the development of the Project would create noise impacts, the traffic volumes for the existing conditions were compared to the traffic volumes increase of the existing plus Project.

A Vehicle Miles Traveled Analysis (**Appendix N**) was prepared for the Project by LOS Engineering, Inc. estimated that the Project would generate 475 ADT which includes customer test drives of inventory vehicles. The existing ADT volumes along Thunder Drive between Plaza Drive and Tiberon Drive are 9,100 ADT and 7,631 ADT between Tiberon Drive to Lake Boulevard. The Project would result in the traffic volumes to increase to 10,255 ADT and 7,796 ADT along those two (2) segments, respectively. As stated in the Noise Study (**Appendix M**), in order for traffic volumes to have a direct impact of 3 dBA CNEL or be a major contributor to cumulative traffic volumes, a project would have to double the traffic existing volumes. The Project would result in an increase in the noise levels by less than 0.5 dBA. Therefore, the anticipated traffic volumes as a result of the Project would increase, but not in the amount resulting in an increase of 3 dBA or greater.

Impacts related to off-site transportation impacts are **less than significant.** The Project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the General Plan or Noise Ordinance, or applicable standards of other agencies. Impacts are **less than significant.**

b. Generation of excessive groundborne vibration or groundborne noise levels?

Construction Groundborne Vibration and Noise

Common sources of groundborne vibration are trains, buses on rough roads, and construction activities. Construction activities have the potential to expose people to excessive groundborne vibration or groundborne noise during site preparation and grading. Vibration impacts from construction activities would typically be created from the operation of heavy duty off-road equipment. Construction activity would result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes groundborne vibrations that spread through the ground and diminish in strength with distance. Due to normal site preparation operations, most of the equipment will be spread out over the Project Site. All residential uses within the Project vicinity are located more than 330 feet from all site preparation activities, as described in the Noise Study (**Appendix M**).

Using the methodology prescribed by Caltrans, the ground vibration produced by a large bulldozer at the property line of the site to the nearest residence (330 feet) would produce a peak particle velocity of 0.0019 ips PPV. Caltrans recommends a vibration velocity threshold of 0.2 ips PPV for assessing vibration impacts to occupants of residential structures. Therefore, the Project would not generate excessive groundborne vibration during construction activities.

Additionally, in accordance with City regulations, construction activities would be limited to the hours of 7:00 a.m. to 6:00 p.m. Monday through Friday and 7:00 a.m. to 6:00 p.m. on Saturday for work that is not inherently noise-producing and that would not disrupt normal hours of sleep. Compliance with City construction hour regulations would further reduce vibration impacts to nearby sources. As discussed above, construction noise levels would reach 66 dBA and would not exceed City standards for construction and operational noise levels or County standards for property line noise during construction activities.

The Project would not generate excessive groundborne vibration or groundborne noise during construction, and impacts are **less than significant.**

Operational Groundborne Vibration and Noise

Once operational, the Project would include vibration and noise associated with used car sales, vehicle service work including a car wash, truck deliveries of vehicles parts and supplies and customer vehicle trips including customer test drives. Project operation would also include rooftop HVAC systems on the sales and service buildings. Anticipated HVAC systems would be designed and manufactured to feature rotating and reciprocating components that are well-balanced with isolated vibration within or external to the equipment casings to reduce vibration. As stated above, common sources of groundborne vibration include trains, buses on rough roads, and construction activities. Operation activities related to the sales and service buildings and carwash are not uses typically associated with excessive groundborne vibrations.

Impacts related to operational groundborne vibration and noise will be **less than significant.**

c. For a project located within the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?

No private airstrips are located within the vicinity of the Project Site. The Project is located approximately 4.2 miles southeast of the Oceanside Municipal Airport; however, the Project Site is not located within the Oceanside Municipal Airport Influence Area or any of the safety zones displayed in the Oceanside Municipal ALUCP.

The Project is not located within the vicinity of a private airstrip or an airport land use plan and therefore would not expose people residing or working in the project area to excessive noise levels, and therefore, **no impact** will occur.

4.14.5 Mitigation Implementation and Monitoring

No significant impacts to noise have been identified and therefore, no mitigation measures are required.

4.14.6 Level of Significance After Mitigation

Impacts related to noise from the implementation of the Project will be less than significant.

Chapter 4.15 POPULATION AND HOUSING

4.15.1 Environmental Setting

City of Oceanside

Population

The City is located in the northwestern most part of the County, which includes a total of 18 cities and unincorporated land and has a total population of 3,343,364 persons (USCB 2018) within the County. The City occupies approximately 42 square miles and has a population of 176,080 (USCB 2018) and comprises approximately 5% of the population of the County.

During the 15-year period from 2000 to 2015, population growth occurred at a slower rate in the City (9.1%) than the County (17.3%). SANDAG contains projections that population growth will increase the greatest in 2020, but will then slowly decrease back to the relatively low population growth that has been typical within the City in the last 20 years. Based on the Series 13 Regional Growth Forecast for the City, provided by SANDAG, the anticipated total population by 2050 is 190,129. This is a 13.6% increase from 2010 to 2050.

Housing

According to the California Department of Finance, the City had 65,117 housing units in May 2016. A majority of the total housing units are single-family which comprises approximately 64.5% of the total housing units, reflecting the City's family-oriented population and suburban neighborhoods character. Multi-family units make up approximately 31% of the total units, while mobile homes account for the remaining 5% of total housing units.

Project Area

The Project Site is located in the southeastern portion of the City, south of SR-78, east of College Boulevard, and west of Thunder Drive. The Project Site is located in a primarily developed, urbanized area and is surrounded by commercial uses to the west, including the Tri-City Crossroads shopping center and auto repair shops. To the east are medium density residential uses as well as a DMV facility at the corner of Plaza Drive and Thunder Drive. To the north is SR-78 and further north are professional commercial uses. To the south are Buena Vista Creek, high density and residential estate uses including a senior living facility, and commercial and public/semipublic uses including an OFD station.

4.15.2 Regulatory Setting

Regional

San Diego Association of Governments Regional Comprehensive Plan

SANDAG's RCP serves as the long-term planning framework for the San Diego region. The primary goals of the RCP are to improve the standard of living, enhance the quality of life, promote social and economic equity, improve the region's sustainability and encourage "smart growth". Issues addressed in

the RCP include urban form, transportation, housing, healthy environment, economic prosperity, public facilities and border issues.

Regional Housing Needs Assessment

Each regional government in California receives a Regional Housing Needs Assessment (RHNA) approximately every eight (8) years and consists of the projected housing needs for the entire region over the eight (8) year period. SANDAG is responsible for distributing the total RHNA throughout the region by adopting methodology and RHNA Plan for the projection period pursuant to Government Code Section 65584(d).

Local

City of Oceanside General Plan Land Use Element

The Land Use Element of the General Plan and associated land use maps identify the type and location of future land uses within the City. The specific land uses in turn affect the remaining General Plan elements. The following objectives and policies guide population and housing within the City:

1.01 General Plan Consistency

Objective: To ensure all projects are consistent with the General Plan

Policy A: Tentative Maps, Development Plans and Conditional Use Permits approved prior to the adoption of this Element and exercised thereafter without modification, revision, amendment, or extension shall be considered consistent with this Element.

1.16 Housing

Objective: To ensure that decent, safe and sanitary housing is available to all current and future residents of the community at a cost that is within reach of the diverse economic segments of Oceanside.

Policy A: The City shall strive to maintain a reasonable balance between rental and ownership housing opportunities, between senior and family housing and encourage a variety of individual choices of tenure, type, and location of housing throughout Oceanside.

Policy B: The City shall strive to produce opportunities for decent and affordable housing in a pleasant environment for all of Oceanside's citizens.

Policy C: The City shall ensure that housing is developed in areas with adequate access to employment opportunities, community facilities, and public services.

Policy D: The City shall encourage development of a variety of housing opportunities, with special emphasis on providing:

1. A broad range of housing types, with varied levels of amenities and number of bedrooms;

2. Sufficient rental stock for all segments of the community, including families with children; and
3. Housing which meets the special needs of the elderly and the handicapped.

Policy E: The City shall protect, encourage, and where feasible, provide housing opportunities for persons of low and moderate income.

Revision Housing 1.16: The City of Oceanside 2000 Housing Element contains more specific policy statements and programs for the implementation of these overall policies.

2.3 Residential Development

Objective: To direct and encourage the proper type, location, timing, and design of housing to benefit the community consistent with the enhancement and establishment of neighborhoods and a well-balanced and organized City.

2.32 Potential Range of Residential Densities

Policy A: The base density shall be considered the appropriate density for development within each residential land use designation.

Policy B: Residential projects that possess an excellence of design features shall be granted the ability to achieve densities above the base density. Project characteristics that exceed standards established by City policy and those established by existing or approved developments in the surrounding area will be favorably considered in the review of acceptable density within the range. Such characteristics include, but are not limited to the following:

1. Infrastructure improvements beyond what is necessary to serve the Project and its population.
2. Lot standards (i.e. lot area, width, depth, etc.) which exceed the minimum standards established by City policy.
3. Development standards (i.e. parking, setbacks, lot coverage, etc.) which exceed the standards established by City policy.
4. Superior architectural design and materials.
5. Superior landscape/hardscape design and materials
6. Superior recreation facilities or other amenities.
7. Superior private and/or semi-private open space areas.
8. Floor areas that exceed the norm established by existing or approved development in the surrounding area.
9. Consolidation of existing legal lots to provide unified site design.
10. Initiation of residential development in areas where nonconforming commercial or industrial uses are still predominant.
11. Participation in the City's Redevelopment, Housing or Historical Preservation programs.
12. Innovative design and/or construction methods that further the goals of the General Plan.

Policy C: Residential projects with densities below the base shall be considered to be consistent with the land use designation.

City of Oceanside General Plan Housing Element

State law recognizes the vital role local governments play in the supply and affordability of housing. Each local government in California is required to adopt a comprehensive, long-term General Plan for the physical development of the city or county. The Housing Element is one of seven mandated elements of the General Plan. As mandated by state law, the planning period for the current Housing Element extends from April 30, 2013 to April 30, 2021. This element identifies strategies and programs that focus on the following major goals:

- Facilitate the development of a variety of housing types for all income levels to meet the existing and future needs of residents, including the homeless and persons with special needs;
- Address, and where appropriate and legally possible, remove governmental constraints to the maintenance, improvement and development of housing;
- Maintain and enhance the quality of existing residential neighborhoods;
- Promote equal housing opportunities for all persons regardless of race, color, national origin, ancestry, religion, sex, marital status, or familial status;
- Encourage new housing growth patterns that conform to local, regional and state policies for sustainable development and energy use.

4.15.3 Thresholds of Significance

Based on Appendix G of the CEQA guidelines, impacts would be considered significant if the Project would:

a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

4.15.4 Project Impact Analysis

Would the Project:

a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The Project proposes the construction of a CarMax pre-owned automobile facility on a vacant parcel located in a developed area. The Project Site is designated and zoned CC by the General Plan and by the Zoning Ordinance and the proposed CarMax facility is an allowable use under these designations.

The Project does not include the construction of any new residential development. The Project would serve existing residences in the region and is unlikely to cause significant growth due to the nature of the development.

Therefore, implementation of the Project would not directly or indirectly induce substantial unplanned population growth in the area, and **no impact** will occur.

b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The Project would construct a CarMax pre-owned automobile facility on a vacant parcel located in a developed area surrounded primarily by residential and commercial developments. The Project would comply with the land use and zoning designations for the site. The site is vacant and is categorized as disturbed land.

The Project would not displace substantial numbers of existing housing or people necessitating the construction of replacement housing elsewhere, and **no impact** will occur.

4.15.5 Mitigation Implementation and Monitoring

No significant impacts to population and housing have been identified and therefore, no mitigation measures are required.

4.15.6 Level of Significance After Mitigation

No impact to population and housing will occur as a result of the Project.

Chapter 4.16 PUBLIC SERVICES

The following document was used in the preparation of this section and is included in **Appendix R**:

Armijo, F. 2020. Email from F. Armijo (City of Oceanside Fire Department) to R. Del Rosario (REC Consultants, Inc.). March 19, 2020.

4.16.1 Environmental Setting

Fire Protection

The Project Site is within the boundary of the City and under the jurisdiction of the Oceanside Fire Department (OFD). The City currently has eight (8) operational fire stations. The Project would be served by Fire Station 4 located at 3990 Lake Boulevard, approximately 0.1 mile south of the Project Site. The OFD's response times vary within the City, with the current goal being to provide an average maximum initial response time of no more than six minutes (6) and twenty (20) seconds in accordance with the National Fire Protection Association's National Standard (1710) (TriData, 2012). The average response time for OFD was six (6) minutes and thirty-eight (38) seconds in 2015, according to a 2015 Annual Report issued by the Department (Oceanside, 2015). The City benefits from the boundary-drop system in the northern portion of the County where the closest emergency unit responds to a call regardless of political jurisdiction. However, given the close proximity from the Project Site to Fire Station 4, response times in the event of an emergency are anticipated to be short. Discussions regarding wildfire and potential impacts as a result of the Project are addressed in Chapter 4.21 *Wildfire.*

Police Protection

Police protection is provided by the City of Oceanside Police Department (OPD) which operates out of their station located at 3855 Mission Ave, approximately five (5) miles northwest of the Project Site. The Department's current goal is to provide a maximum response time of five (5) minutes for all Priority I and II emergency service calls. The following are the approximate response times for emergency and non-emergency calls in the Project area (Armijo, 2020):

- 5.47 minutes for Priority I – Emergency
- 8.43 minutes for Priority II – Timing Critical/Felony Just Occurred
- 25.84 minutes for Priority III – Non-Violent/Misdemeanor Just Occurred
- 38.24 minutes for Priority IV – Routine Calls for Service

OPD has 228 sworn and 84 professional staff members. The City's 2018 estimated population is 176,080 and therefore, the City currently has an officer-to-citizen ratio of one to 564.7.

Schools

The Project Site is located within the boundaries of the Carlsbad Unified School District. It is located within the attendance boundaries of Calavera Hills Elementary School, Calavera Hills Middle School, Carlsbad High School and Sage Creek High School.

Calavera Hills Elementary School, serving grades K-5, is located at 4100 Tamarack Avenue. In 2018, student enrollment was 472 students, the operational capacity was 621 students and the maximum capacity was 729 students (WLC, 2018).

Calavera Hills Middle School, serving grades 5-8, is located at 4104 Tamarack Avenue. In 2018, student enrollment was slightly above capacity with 574 students enrolled at an operational capacity of 567 students. Maximum capacity was 702 students. Student enrollment is projected to increase over the next five (5) years, and then decrease to return to current enrollment numbers (WLC, 2018).

Carlsbad High School, serving grades 9-12, is located at 3557 Monroe Avenue. In 2018, student enrollment was 2,336 students. The operational capacity was 2,430 students and the maximum capacity as 2,700 students. Over the next 10 years, enrollment is expected to increase, and then decrease to slightly below current numbers (WLC, 2018).

Sage Creek High School, serving grades 9-12, is located at 3900 Cannon Road. In 2018, student enrollment was 1,258 students. The operational capacity was 1,431 students and maximum capacity was 1,539 students. Enrollment is expected to stay more or less the same, and slightly decline by 2027 (WLC, 2018).

Parks

There are no existing designated parks or other recreational facilities within the Project Site area. The nearest existing designated park or other recreation facilities are John Landes Recreation Center, located approximately one (1) mile north of the Project Site and Calavera Hills Community Park, located approximately two (2) miles southwest of the Project Site.

Library

The Project is located approximately 5.3 miles southeast of the Oceanside Public Library, located at 330 North Coast Highway. The Mission Branch of the Oceanside Public Library is located at 3861-B Mission Avenue, approximately 3.7 miles northwest of the Project Site. The Library also operates the READS Literacy Center located at 321 N. Nevada Street, approximately 5.3 miles northwest of the Project Site. The Library offers Bookmobile services at Libby Lake Park, John Landes Park, Rancho Del Oro Park, Balderrama Recreation Center, Crown Heights Resource Center and Libby Lake Community Center.

4.16.2 Regulatory Setting

State

California Health and Safety Code, Section 13000, Division 12

The California Health and Safety Code Section 13000, Division 12 – Fires and Fire Protection sets forth state fire regulations concerning building standards, fire protection devices such as extinguishers and smoke alarms, fire notification and protection systems, and standards for high-rise buildings and childcare facilities.

California Code of Regulations Title 24, Part 2 and Part 9

The California Code of Regulations, Title 24, Part 2 provides the California Building Code, which contains general construction building standards including fire, life safety, and field inspection provisions. Part 9 is the California Fire Code, which includes fire safety-related building standards.

Local

City of Oceanside General Plan

General Plan Community Facilities Element provides direction for the provision of adequate public facilities necessary to serve the existing and future developed areas of the City in a coordinated and cost effective manner. Within the Community Facilities Element are subsections on Fire Department Facilities, Police Facilities, and Park and Recreation Facilities. These subsections outline specific policies and objectives to ensure acceptable service levels and adequate provision of these facilities. Specific services standards include:

- A five (5) minute response time from fire stations to all developed areas within the City of Oceanside;
- A maximum response time for paramedic units of eight minutes in urban areas and 15 minutes in rural areas, 85% of the time;
- A maximum police response time of five minutes for all Priority I and II emergency service calls.

City of Oceanside Municipal Code Chapters 32 B, C and D

The OMC Chapter 32B stipulates that as a condition of approval of development projects, impact fees shall be imposed to offset impacts to public facilities. The term "public facilities" includes all governmental facilities specified in the adopted elements of the City's General Plan, including the Community Facilities Element. This includes fire, police, library, and administrative facilities.

The OMC Chapter 32C requires as a condition of new development that developers of projects in the City contribute funds to insure adequate provision of public facilities and improvements within the City, including: libraries; administrative space/civic center; police records/management; corporation yard; and fire protection to meet new development's share of costs for facilities needed to meet the level of service standard as identified in the City's long range capital improvements program.

The OMC Chapter 32D, Park Land Dedication and Payment of Fees, states that the provisions of this municipal code chapter shall apply to all development within the City by which additional residential lots and/or dwelling units are created. Every owner, developer or subdivide who crates such lots and/or units shall dedicate a portion of land, pay a fee, or do both as set forth in Chapter 32D for the purposes of providing open space, park and recreational facilities. Thus, the Project would not be subject to the payment of park land dedication fees.

City of Oceanside Impact Fees for New Development

The City Impact Fees for New Development provides a fee schedule for all associated impact fee categories. The current impact fee (revised 7/9/2019) for Public Facilities required for a commercial project is $0.902 per square foot. The current impact fee for schools required for a commercial project in the Carlsbad School District is $0.61 per square foot.

4.16.3 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, impacts would be considered significant if the Project would:

a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: (1) fire protection; (2) police protection; (3) schools; (4) parks; (5) other public facilities.

4.16.4 Project Impact Analysis

a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire protection?

As stated above, OFD currently has eight (8) operational fire stations. The closest station to the Project Site is Fire Station 4 located at 3990 Lake Boulevard, approximately 0.1 mile south of the Project Site. OFD utilizes a dynamic distribution system that chooses units based on which OFD unit is the closest at the time the alarm is received. It is anticipated that Fire Station 4 would respond to the majority of future emergency calls for the CarMax facility, and when Station 4 is unavailable, units identified for response to the site could come from multiple stations.

Emergency Medical Service (EMS) vehicles would utilize an OPTICOM system which is a traffic control system that provides a green light and intersection right-of-way to emergency vehicles. A Knox Box will be provided at the security gate and control island on the northern parcel sales display area as well as at the security gate and control island located at the test drive-only driveway. A Knox Box is a small, wall-mounted safe that holds building keys in order for fire departments, emergency medical services and police to gain access into buildings in emergency situations. The Project would provide all required setbacks, fire truck access and turnarounds, fire hydrants, address numbers, and sprinklers in accordance with the City Fire Department requirements. Fire extinguishers sizes and locations will be determined by the Fire Marshal during the building permit application.

Off-site improvements as part of the Project would construct an 80-foot curb to curb width across the Project frontage on Plaza Drive. Striping would include two (2) eastbound lanes and one (1) westbound lane with a center two-way left turn lane. On Thunder Drive, a 10-foot street widening will occur between two (2) proposed driveways and would be striped with “No Parking”. The Project improvements would improve traffic and further improve emergency access in the surrounding area of the Project Site.

The Project would develop a commercial facility and would have a corresponding increase in demand for fire protection services. However, the Project would comply with the existing zoning and land use designations and the increase in demand would have already been accounted for. Additionally, the Project would contribute to all required development impact fees in accordance with the City’s current requirements, a portion of which would go towards funding fire protection services in the City. The

Project will be reviewed by OFD to ensure that the Project meets all requirements related to access, fire hydrants and setbacks and would comply with all conditions set forth for Project approval.

Existing fire protection services are adequate to serve the Project and the need for new or altered fire protection facilities is not expected.

The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, and impacts are **less than significant impact**.

Police protection?

Police protection is provided by OPD which operates out of their centralized station located at 3855 Mission Ave, approximately five (5) miles northwest of the Project Site. The Project would construct a CarMax pre-owned automobile dealership and is consistent with the existing zoning and land use designations for the site. OPD has existing staff levels adequate to meet current demands for police protection in this area and does not foresee any unique law enforcement problems associated with this Project, and OPD does not anticipate the need to hire additional officers in order to provide services for the Project (Armijo, 2020). Additionally, OPD anticipates that the Project would have a *de minimis* impact on response times (Armijo, 2020).

OPD recommendations to ensure a less than significant impact on police services include utilization of inventory control measures to prevent loss, including driveway barriers after hours and strict control of keys and access to vehicles. Other recommendations include onsite security and video surveillance cameras (Armijo, 2020). The Project would utilize interior and exterior surveillance cameras that are monitored 24 hours a day, seven (7) days a week for safety and loss prevention purposes. The sales display and staging area entrances are secured by embassy style gates which are designed to be impenetrable and are used to secure and prevent vehicle theft. Guardrail is also used around the perimeter of the sales lot to further prevent vehicle theft.

The Project is not anticipated to negatively impact OPD's ability to provide adequate services or OPD response time goals. Additionally, the Project would contribute to all required development impact fees in accordance with the City's current requirements, a portion of which go towards funding police services in the City.

Existing police protection is adequate to serve the proposed automobile retail facility and the need for new or altered police protection facilities is not expected. The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, and impacts are **less than significant impact**.

Schools?

The Project is a commercial development for a pre-owned automobile dealership and would not construct housing that is expected to result in the generation of additional school aged children which would require the provision of new or physically altered school facilities. Additionally, the Project would contribute to all required development impact fees for schools in accordance with the City's current requirements, which go towards funding school facilities in the City. The current impact fee for schools

required for a commercial Project in the Carlsbad School District is $0.61 per square foot. The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, and **no impact** will occur.

Parks?

The Project is a commercial development for a pre-owned automobile dealership and would not result in the addition of any residents that require the use of existing neighborhood or regional parks or other recreational facilities, nor would it require construction of new or physically altered park facilities. As stated in the Regulatory Setting section above, the payment of park land fees is only required for projects which propose the addition of residential lots and/or dwelling units. Therefore, the Project would not be subject to the payment of park land dedication fees. The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, and **no impact** will occur.

Other Public Facilities?

There are no other public services, facilities, or infrastructure anticipated to be required or impacted due to the construction and operation of the Project, and **no impact** will occur.

4.16.5 Mitigation Implementation and Monitoring

No significant impacts to public services have been identified and therefore no mitigation measures are required.

4.16.6 Level of Significance After Mitigation

Impacts to public services will be less than significant.

Chapter 4.17 RECREATION

4.17.1 Environmental Setting

Site Location and Surroundings

The Project Site is located in the southeastern portion of the City, south of SR-78, east of College Boulevard, and west of Thunder Drive. The Project boundary encompasses approximately 10.54 acres on APNs 168-012-42-00 and 168-012-43-00. The Project Site is situated on two (2) vacant and undeveloped parcels. The northern parcel is bounded on the north by the east-bound lanes of SR-78 and on the south by Plaza Drive. An existing billboard is located on the eastern portion of this parcel. The southern parcel is located south of Plaza Drive and west of Thunder Drive.

The Project Site is surrounded by commercial uses to the west, including the Tri-City Crossroads shopping center and auto repair shops. To the east are medium density residential uses as well as a DMV facility at the corner of Plaza Drive and Thunder Drive. To the north is SR-78 and further north are professional commercial uses. To the south are Buena Vista Creek, high density and residential estate zones which include a senior living facility, and commercial and public/semipublic uses including an OFD station.

County Recreational Facilities

The County park system contains more than 100 locations across approximately 50,000 acres, including 36 local day-use parks, 19 regional parks, nine camping parks, a number of open space preserves, several registered historic sites, fishing lakes, community centers, special use facilities, and preserves located within the unincorporated County. The County has approximately 350 miles of trails that take visitors through multiple climates and habitats. The nearest County Park is Guajome Regional Park located approximately 4.4 miles northeast of the Project Site.

City Parks

The City parks and recreation facility inventory indicates there is a broad range of passive and active opportunities, well dispersed throughout the City. Currently the City has approximately 642 acres of park land. This includes 269 acres of community parks and centers, 74 acres of neighborhood parks, and two (2) aquatic facilities. Residents can also enjoy 115 acres of school recreation areas. A major recreation resource for the community is the coastline. The City has approximately 35 acres of usable beaches under their control. The City also owns Oceanside Harbor which offers marine boating facilities and services.

Parks and Recreational Facilities near the Project

The City of Oceanside Parks and Recreation Master Plan 2019 displays existing parks and recreation facilities within the City. These include community centers, neighborhood parks, community parks, school facilities, special use parks, regional parks and golf courses. Facilities nearest to the Project Site include Mira Costa College, John Landes Recreation Center, John Landes Park, Palisades Park, Joseph Sepulveda Park and Oak Riparian Park. Mira Costa College is the nearest dedicated recreation facility which is located approximately 0.90 mile northwest of the Project Site. Mira Costa College is designated

as a school with a Memorandum of Understanding (MOU) in place for public use and provides a baseball field, soccer field, tennis courts, Pedley Park, fountain and clock tower. The nearest trails to the Project Site are the San Luis Rey River Trail easternmost access point located approximately four (4) miles north, the southwestern portion of the San Luis Rey River Trail located 4.3 miles west, and the trail adjacent to the Buena Vista Lagoon Nature Center located four (4) miles west.

4.17.2 Regulatory Setting

State

Landscaping and Lighting Act

The Landscaping and Lighting Act (California Streets and Highways Code, Section 22500 *et seq*.) enables cities, counties, and special districts to acquire land for parks, recreation, and open space. A local government may also use the assessments to pay for improvements and maintenance to these areas. In addition to being provided by local government agencies (i.e., counties and cities), park and recreation facilities may be provided by other public agencies such as a community service district, park and recreation district, etc.

Quimby Act

The 1975 Quimby Act (California Government Code, Section 66477) was enacted to promote the availability of park and open space areas in California. The Quimby Act authorizes cities and counties to pass ordinances requiring the dedication of land, donation of conservation easements or the payment of fees for park and/or recreational facilities and improvements. The Quimby Act outlines a number of items that must be contained in the local ordinance, including standards from which calculations can be made for the amount of land or fee that must be given for recreation purposes. Revenues generated through the Quimby Act can only be used for creating or rehabilitating recreational facilities, not for the operation and maintenance.

Local

City of Oceanside General Plan

The State of California requires that each city draft and adopt a comprehensive general plan that provides long-term guidance for development within the city's jurisdiction. The General Plan sections that address goals and policies related to parks and recreation include the Land Use Element, Community Facilities Element, Recreational Trails Element and Environmental Resource Management Element. Each of these elements is described in detail below as they relate to parks and recreation.

Land Use Element

The General Plan Land Use Element provides policies, definitions, and zoning designations for land use types within the City. It establishes guiding policies for each type of land use, including open space, recreation, and community facilities. As it relates to parks and recreation, the Land Use Element gives overall direction for encouraging, preserving, and developing adequate open space, park areas, and recreation facilities for community use. The element also establishes the general development impact

fee policy to provide for expanding public facilities to meet the demand of any new development. The General Plan Land Use Element identifies the following objectives and policies relating to recreation:

2.74 Public Recreation Facilities Objective: To enhance the well-being of City residents by providing opportunities for relaxation, rest, activity, and education through a well-balanced system of private and public parks and recreational facilities distributed to serve the entire community.

Policies:

A. Enrich the quality of life for all citizens of Oceanside while providing constructive and creative leisure opportunities.

B. Provide recreational experiences and programs that contribute to the total health of the individual while meeting the desires of the community as a whole.

C. Provide adequate parkland acreage in both location and size to meet the recreation needs of existing and future residents and to preserve natural resources within the City.

D. Develop park sites to provide diverse recreational facilities to meet the active and passive recreational needs of Oceanside residents.

E. Provide for the optimum functional and aesthetic integration of all recreational, environmental, cultural, and social elements into Oceanside parks.

F. Improve and modernize Oceanside parks to overcome both design deficiencies and any deterioration of existing facilities.

G. Distribute future park sites to equitably serve a greater number of Oceanside residents while reducing annual maintenance and operation costs.

H. Maintain the presence of parklands and open space as a fundamental element to conserve and enhance the natural environment thereby improving the quality and livability of the City of Oceanside.

I. Emphasize trail linkage opportunities between community, County, and State open space systems and recreation facilities and throughout those private developments where deemed both suitable and appropriate.

J. Foster cooperative use of existing land resources and recreational facilities between other public and quasi-public agencies.

K. Operate and maintain Oceanside park and recreation facilities through programs that are designed for the most effective use and enhancement of the park site at the least cost possible.

L. Define basic objectives, financing, and alternative/nontraditional means for timely and balanced development of park and recreation facilities in Oceanside.

Community Facilities Element

The General Plan Community Facilities Element guides the development of community facilities. The Community Facilities Element intends to ensure that sufficient and adequate public facilities and services, including park land, are provided to the City. This element of the General Plan establishes a park land goal of five (5) acres of park space per 1,000 residents within the City. Community Facilities Financing Policy 14.1 states that all new development shall pay its proportionate share of the costs of the public facilities necessitated by that development through payment of impact fees for roads, parks and recreation, stormwater management, police service, fire protection and emergency services, City administrative space and City corporation yard, and library services, and payment of connection fees for water and wastewater service. The following objectives and policies relate to parks and recreation:

Parks and Recreation Facilities Objective: To enrich the quality of life for all residents of Oceanside by providing adequate and accessible public park and recreation facilities, by providing constructive leisure opportunities, and by providing recreational experiences and programs that contribute to the total health of the individual while meeting the overall needs and desires of the community.

Policies:

1.1 The objectives and policies of the Park and Recreation Master Plan (1987) for the City of Oceanside shall guide the acquisition and development of parks and recreation facilities in the City of Oceanside and shall be supplemented and modified by the following policies.

1.2 The City of Oceanside shall assist in the coordinated planning, development and maintenance of unique regional amenities within and adjacent to the community. These amenities include: Guajome Regional Park; the Oceanside Public Beach Area; the proposed greenway and bikeway along the San Luis Rey Corridor; and the Buena Vista Lagoon. This regional recreational and open space amenity system shall be planned, developed and implemented in coordination with the existing system of parks throughout the City of Oceanside.

1.3 The City of Oceanside shall combine its park designation categories of Neighborhood, Community, and Special Use Parks into a single “Community Park” designation and shall strive to provide five acres of developed “Community Parks” per 1,000 residents within the City.

1.4 The City of Oceanside shall undertake a systematic annual park development program and shall strive to correct existing deficiencies in the system by Fiscal Year 1998-99. The average annual rate of development needed to achieve this policy is estimated at six acres of developed parkland per year.

1.5 The City of Oceanside shall also undertake a parks acquisition and improvement program to accommodate future growth needs and shall strive to acquire and develop an average

annual program of approximately 14.0 acres per year through Fiscal Year 2009-10 to serve new development.

1.6 Sites being considered for development as new active "Community" parks should meet all of the following standards:

a. The topography and land configuration should be suitable to accommodate the park's proposed uses. A minimum of 65% of the park land area should be useable for active recreation;
b. Sites should have or be able to achieve safe pedestrian and bicycle access;
c. Sites should be visible from the street in order to enhance enjoyment of the park by people driving by and to facilitate security surveillance;
d. Noise generated by park use should be mitigated to avoid disturbing adjacent residents;
e. Lighting should be designed to limit impacts on adjacent residents;
f. Parks should be buffered from adjacent residences through the use of fences, landscaping, berms, or other treatments, in order to prohibit undesired access to private property; and
g. "Community Parks" located in residential neighborhoods should have at least one access point on a Collector road. Whenever possible, these facilities should be located adjacent to public schools.

Community Facilities Financing Objective: To provide financing for the orderly and planned construction of adequate public facilities to serve existing and future development in the City of Oceanside.

Policy 14.1 All new development shall pay its proportionate share of the costs of the public facilities necessitated by that development through payment of impact fees for roads, parks and recreation, storm water management, police service, fire protection and emergency services, City administrative space and City corporation yard, and library services, and payment of connection fees for water and wastewater service.

Recreational Trails Element

The General Plan Recreational Trails Element, a sub-element to the Circulation Element, provides policies and guidance for the City's bicycle, pedestrian, and equestrian trail system. This element defines adequacy standards and goals for maintaining recreational trails, such as hiking trails, multi-use trails, equestrian trails and bicycle trails throughout the City. The following are related objectives and policies within the Recreational Trails Element:

Goal 1: Encourage safe multiple use trails within the City that provide a variety of experiences.

Goal 2: A safe, interconnected network of bicycle facilities within Oceanside

Goal 3: A safe transition from Oceanside to the Camp Pendleton bike trail.

Goal 4: Safe bicycle use within the City for recreational and commuter users.

Goal 8: An interconnected network of pedestrian facilities within the City, linking recreational and other destinations.

Environmental Resource Management Element

The General Plan Environmental Resource Management Element provides guidance for conserving and preserving natural resources and open space as the City develops. As related to recreation, this element encourages the preservation of open space for public health and welfare. The Environmental Resource Management Element identifies the following objective related to recreation:

Recreation and Scenic Areas Objective:

1. Plan adequate recreation facilities based on existing recreation standards and criteria established by the appropriate agencies as contained in the other elements of the General Plan.

City of Oceanside Parks and Recreation Master Plan

Adopted in January 1996, the Parks and Recreation Master Plan provides guidance for the development of future park, recreation, and open space facilities in order to meet the needs of the community. The Parks and Recreation Master Plan identifies existing facilities, provides a needs assessment, proposes implementation strategies, and includes overall goals and policies for the development, renovation, use, acquisition, and maintenance of park facilities. The City Parks and Recreation Master Plan Report was updated in 2019.

4.17.3 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, impacts would be considered significant if the Project would:

a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated;
b. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

4.17.4 Project Impact Analysis

a. Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The Project Site is situated on two (2) vacant parcels and development would consist of the construction of a CarMax pre-owned automobile dealership, including a sales and administrative building, service building, private carwash, associated access drives, landscaped areas, presentation area, staging area, sales display area, and a customer and employee parking lot on the southern parcel. An additional sales display area would be provided on the northern parcel with a security gate and control island. The

Project Site is zoned CC and has a corresponding land use designation in the General Plan. The Project does not require a zoning change or General Plan amendment.

The Project is a commercial facility and although the number of people visiting the site would increase compared to existing conditions, due to the nature of the development, and the fact it does not encourage population growth, the Project would not increase the use of existing neighborhood and regional parks or other recreational facilities. It is typically residential projects that result in an increase in demand on parks and recreation facilities. Additionally, the Project would pay all appropriate development fees, a portion of which would go towards funding of park and recreation facilities in the City.

Therefore, the Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated, and the impacts are **less than significant.**

b. Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The Project Site is currently vacant and does not include recreational facilities. The Project does not include residential development that would increase long-term populations in the Project vicinity leading to an increased use of recreational facilities.

The development of the CarMax Project would not require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment, and **no impact** will occur as a result.

4.17.5 Mitigation Implementation and Monitoring

The proposed Project would result in less than significant impacts. Therefore, no mitigation is required.

4.17.6 Level of Significance After Mitigation

Project impacts related to recreation will be less than significant.

Chapter 4.18 TRANSPORTATION

The following document was used in the preparation of this section and is included in its entirety in **Appendix N** and **Appendix O**:

LOS Engineering, Inc. December 4, 2020. *CarMax Auto Dealership 4000 Block of Plaza Drive City of Oceanside October 1, 2020. Vehicle Miles Traveled Analysis.* **(Appendix N)**

LOS Engineering, Inc. December 4, 2020. *CarMax Auto Dealership 4000 Block of Plaza Drive City of Oceanside October 1, 2020. Local Transportation Study.* **(Appendix O)**

4.18.1 Environmental Setting

The Project is located in the southeastern portion of the City approximately seven (7) miles east of downtown Oceanside, south of SR-78, east of College Boulevard, and west of Thunder Drive. The northern parcel is bounded to the north by the east-bound lanes of SR-78 and to the south by Plaza Drive. The southern parcel is located south of Plaza Drive and west of Thunder Drive. Regional access is provided from SR-78, College Boulevard and Plaza Drive. The Project Site has been previously graded but no structures, roads or other improvements are located onsite.

A Local Transportation Study (LTS) was prepared for the Project to determine if there are any traffic effects caused by Project traffic that would result in the need for roadway improvements or fair share participation. The LTS is provided as **Appendix O** of this EIR. The LTS analyzes the level of service (LOS) of nearby roadway segments and intersections for six (6) scenarios as a result of Project traffic. Based on the City's new requirements for vehicle miles traveled (VMT), LOS discussions have been omitted from this EIR.

As required by CEQA, a VMT analysis is required which utilizes VMT as the measure of effectiveness for determining transportation impacts. A VMT Analysis was prepared for the Project and is provided as **Appendix N** of this EIR and is utilized as the bases for this transportation analysis.

4.18.2 Existing Conditions

4.18.2.1 Existing Transportation System

Existing Street System

The following roadways are located in the vicinity of the Project and are described below. The roadway classifications were obtained from the General Plan Circulation Element.

College Boulevard

College Boulevard is classified as a Major Arterial from Vista Way to Plaza Drive. This segment of College Boulevard is generally constructed as a six-lane roadway with three (3) lanes in each direction along with Class II bike lanes in each direction. The road has either a painted median (double-double yellow) or a raised median just south of Vista Way.

Plaza Drive

Plaza Drive is classified as a Secondary Collector from College Boulevard to Thunder Drive. Plaza Drive from College Boulevard to approximately 300 feet past SR-78 ramps is constructed as a four-lane roadway with two (2) lanes in each direction. Along the Project frontage, Plaza Drive is constructed as a two-lane undivided roadway. East of the Project Site and along the DMV frontage, Plaza Drive is generally constructed as a three-lane roadway (2 EB lanes and 1 WB lane) along with a center two-way left turn lane (TWLTL). The posted speed limit is 35 miles per hour (mph).

Thunder Drive

Thunder Drive is classified as a Collector Road from Plaza Drive to Lake Boulevard. This segment of Thunder Drive is constructed as a two-lane roadway with one (1) travel lane in each direction. The posted speed limit is 25 mph.

Pedestrian Facilities

The Local Transportation Study (LTS) prepared by LOS Engineering, Inc. (**Appendix O**) included a pedestrian analysis which consists of documenting pedestrian infrastructure available including any opportunities or deficiencies such as path obstructions or missing sidewalk from the Project access points extending to the nearest intersection with a classified roadway or to a connection with a Class I path. The following pedestrian facilities have been analyzed:

Plaza Drive

Plaza Drive from College Boulevard, the nearest intersection with a classified roadway, east of the Project Site, there are either non-contiguous or contiguous sidewalks on both sides of the street. There are no sidewalks along the Project frontage on Plaza Drive. From east of the Project Site to Thunder Drive, the nearest intersection with a classified roadway, there are contiguous sidewalks on the south side of the street and no sidewalk on the north side of the street. There are no major sidewalk obstructions observed along the roadway segments that had sidewalks.

Thunder Drive

Thunder Drive from Plaza Drive to Lake Boulevard, the nearest intersection with a classified roadway, has either non-contiguous or contiguous sidewalks on both sides of the street. There are no major sidewalk obstructions observed along this segment.

Bicycle Facilities

The LTS prepared by LOS Engineering, Inc. (**Appendix O**) included a bicycle analysis which consists of documenting bicycle infrastructure available including any opportunities or deficiencies such as bike lanes, bike buffers, or bike boxes from the Project access points extending in each direction to the nearest intersection with a classified roadway or connection with a Class 1 path. The following bicycle facilities have been analyzed:

Plaza Drive

Plaza Drive from College Boulevard to Thunder Drive, which are the study limits identified by the nearest intersection with a classified roadway, has a recommended Class 3 bike route identified in the City Bicycle Master Plan 2017 Update. This segment of Plaza Drive did not have any observed bike lane or bike route signs.

Thunder Drive

Thunder Drive from Plaza Drive to Lake Boulevard, which are the study limits identified by the nearest intersection with a classified roadway, has a recommended Class 3 bike route identified in the Bicycle Master Plan 2017 Update. This segment of Thunder Drive did not have any observed bike lane or bike route signs.

Transit Facilities

The LTS prepared by LOS Engineering, Inc. (**Appendix O**) included a transit analysis which includes identification of the closest transit routes and stops to the Project. If the stops are within 0.5 mile walking distance of the Project access, the condition of the closest transit stop amenities are described. The North County Transit District (NCTD) lists Bus Route 323 within 0.5 mile walking distance from the Project access points or driveways. The closes bus stops to the Project Site are located on Lake Boulevard just west of Thunder Drive.

The bus stop for westbound travel on Lake Boulevard is located a walking distance of approximately 710 feet from the Project access on Thunder Drive. The bus stop includes a bench and trash receptacle and the bus stop is in good condition. The bus stop for eastbound travel on Lake Boulevard is located walking distance of approximately 940 feet from the Project access on Thunder Drive. The bus stop includes only a trash receptacle and the bus stop is in good condition. The bus service times are provided in **Table 4.18-1.**

Table 4.18-1
Bus Service Operations and Frequency

Bus Route	Weekday (Monday-Friday)			Weekends (Saturday and Sunday)	
	Weekday Service Operations (Off-Peak Service Frequency Range)	7:00 AM-9:00 AM Peak Hour Service Frequency	4:00 PM-6:00 PM Peak Hour Service Frequency	Saturday Service Operations (Service Frequency Range)	Sunday Service Operations (Service Frequency Range)
Route 323	≈6:00 AM to ≈6:00 PM (≈60 minutes)	60 minutes	60 minutes	No Scheduled Service	No Scheduled Service

Note: Service times are summaries, thus please refer to Appendix E of the Local Transportation Study for exact service details.
Source: Local Transportation Study prepared by LOS Engineering, Inc. (Appendix O)

4.18.3 Regulatory Setting

State

Senate Bill 743

In 2013, SB 743 was signed into law and requires new metrics for analyzing transportation impacts under CEQA to provide an alternative to LOS. Measurements of transportation impacts may include

vehicle miles traveled (VMT), vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated. In most cases, a project's effect on automobile delay will no longer constitute a significant environmental impact. Proposed changes to the CEQA Guidelines, Section 15064.3, were promulgated by the Office of Planning and Research (OPR) in November 2017. Per the updated 2019 CEQA Guidelines, measurements of transportation impacts will include VMT for analyses completed after July 1, 2020.

Local

SANDAG Regional Transportation Plan and Sustainable Communities Strategy

SANDAG's *San Diego Forward: The Regional Plan* (Regional Plan) combines the region's two (2) most important existing planning documents – the RCP and the Regional Transportation Plan and its Sustainable Communities Strategy (RTP/SCS). The RCP, adopted in 2004 laid out key principles for managing the region's growth while preserving natural resources and limiting urban sprawl. The plan covered eight (8) policy areas including urban form, transportation, housing, healthy environment, economic prosperity, public facilities, our borders, and social equity. These policy areas were addressed in the 2050 Regional Transportation Plan and its Sustainable Communities Strategy (2050 RTP/SCS) and are now fully integrated into the Regional Plan.

City of Oceanside *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment*

The purpose of the *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment* prepared by the City is to provide general instructions for analyzing the potential transportation impacts of proposed development projects. The guidelines provide transportation analysis significance criteria, screening criteria and thresholds of significance for environmental clearance for development projects. It also provides appropriate methodologies, procedures, and process for the preparation of a transportation analysis report within the context of CEQA.

City of Oceanside General Plan

Circulation Element – Master Transportation Roadway Plan

The City has adopted a Master Transportation Roadway Plan as part of the General Plan Circulation Element. In conjunction with the other elements of the General Plan, and the Circulation Element, the Master Transportation Roadway Plan chapter focuses on the guidelines to provide a network of roadways throughout the City which form the transportation network. The Circulation Element and the Master Transportation Roadway Plan chapter are designed to effectively promote policies and guidelines that support the various forms of transportation available in the City. Select applicable General Plan goals and their corresponding policies are listed below:

> **Objective i:** Implement a circulation system that provides a high level of mobility, efficiency, access, safety, and environmental consideration that accommodates all modes of travel such as vehicular, truck, transit, bicycle, pedestrian, and rail.
>
> > **Policy 2.4**: The City's circulation system shall promote efficient intra- and inter-city travel with minimum disruption to established and planned residential neighborhoods.

Policy 2.5: The City will strive to incorporate complete streets throughout the Oceanside transportation network which are designed and constructed to serve all users of streets, roads and highways, regardless of their age or ability, or whether they are driving, walking, bicycling, or using transit.

Objective i: Aim for an acceptable Level of Service (LOS) D or better on all Circulation Element roadways on an average daily basis and at intersections during the AM and PM peak periods.

Objective ii: Ensure that all streets within the City achieve the City's mobility goals and design standards as highlighted throughout this chapter.

Policy 3.3: All streets within the City shall be designed in accordance with the adopted City of Oceanside design standards. Typical cross-sections and design criteria for the various street classifications are shown in the City Engineers Design and Processing Manual.

Objective iii: Construct the roadway network in phases consistent with the needs and growth of the community.

Policy 3.12: The City shall require or provide adequate traffic safety measures on all new and existing roadways. These measures may include, but are not limited to, appropriate levels of maintenance, proper street design, traffic control devices (signs, signals, and striping), street lighting, and coordination with the school districts to provide school crossing signs and protection.

Policy 3.18: The City shall:

- Require new developments to dedicate necessary right-of-way when the subdivision or development of property adjacent to Circulation Element streets is proposed.
- Require new developments to provide all necessary grading, installation of curbs, gutters, sidewalks, parkway tree planting, and street lights, unless these improvements are provided through other means.
- Require new developments to provide half-street improvements plus 12 feet beyond the centerline in accordance with City standards.

Land Use Element

The following policies of the Land Use Element regulate transportation:

2.711 Master Street Plan

Objective: To provide a balanced circulation system to serve the rowing transportation demands within and through the community.

Policy C: The City shall approve and build streets as per City of Oceanside Engineering Manual Specifications.

Policy E: The City shall:

1. Require development to provide collector and local street improvements according to standards of the City Engineering Department.

3. Require development to provide all necessary grading, installation of curbs, gutters, and parkway tree planting, unless these improvements are provided through other means.

6. The development will install all sidewalks and curbs as required in their permanent location to provide for maximum design development.

2.7121 Bicycle Facilities

Policy A: Development shall provide Class II Bikeways on all secondary, major and prime arterials.

2.7122 Pedestrian

Policy A: The construction of five foot wide sidewalks adjacent to the curb shall be required in all new developments and street improvements.

2.7131 Transit System

Policy A: The City shall coordinate and encourage the existing bus system to serve newly developed areas.

4.18.4 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, impacts would be considered significant if the Project would:

a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;
b. Be inconsistent with CEQA Guidelines section 15064.3, subdivision (b);
c. Substantially increase hazards due to a geometric design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment);
d. Result in inadequate emergency access.

In accordance with the above significance criteria, this analysis uses the following standards to evaluate transportation impacts.

Vehicle Miles Traveled

The City's *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment* lists several project types that screen out of the VMT Analysis. One criterion is for projects that generate less than 1,000 daily vehicle trips, if consistent with the adopted General Plan would be screened out from a VMT Analysis. The City of Oceanside has developed a Project Information Form (PIF) to facilitate the screening of project requirements. A completed PIF for the Project is provided in Appendix C of the VMT Analysis which is provided as **Appendix N** of this EIR.

Multi-Modal Plan Consistency

The multi-modal consistency analysis shall be based on consistency with the Circulation Element, including the Bicycle Master Plan and Pedestrian Master Plan. The Circulation Element goals and policies are aimed at incorporating complete streets throughout the City transportation network that serve all users of streets, roads, and highways, regardless of their age or ability, or whether they are driving, walking, bicycling, or using transit. If the Project does not comply with an aspect of these, then further review would be necessary to determine if a potential physical significant impact would result.

Geometric Design and Emergency Access

To determine impacts related to hazards due to a geometric design feature and emergency access adequacy, a review of compliance with the City's roadway standards is utilized. City roadway and emergency access requirements are considered to provide for roadway and safety and adequate emergency access. If a feature does not comply with the standards, then further review is necessary to determine if a potential hazard or inadequate emergency access will occur.

4.18.5 Project Impact Analysis

Would the Project:

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

Access

The Project would have a total of four (4) driveways for access. One driveway is located on the northern parcel for the additional sales display area. One driveway on the south side of Plaza Drive for is for sales personnel and test drive vehicles only. Arriving customers, employees, vehicle carriers and other visitors and deliveries would use the two (2) Thunder Drive access points. Once vehicles are unloaded from the vehicle car carriers employees would drive the vehicles to the main lot using Plaza Drive. There is no internal vehicular connection between the sales display areas adjacent to Plaza Drive and the customer and employee lot adjacent to Thunder Drive. Customers can walk between the main sales display area and customer parking lot.

Test Drive Route

The Project would include vehicle test drives for customers interested in purchasing a vehicle. The proposed test drive route is approximately 1.6 miles round trip and lasts approximately five (5) minutes. Designated routes for all test drives will not include residential streets. The proposed test drive route is as follows:

- Customers would turn left on Plaza Drive out of the test drive-only driveway, to enter the SR-78 freeway entrance;
- Customers would make a right to gain access to SR-78 freeway;
- Customers would take the SR-78 exit for Emerald Drive and make a right on Emerald Drive and an immediate right on Hacienda Drive;

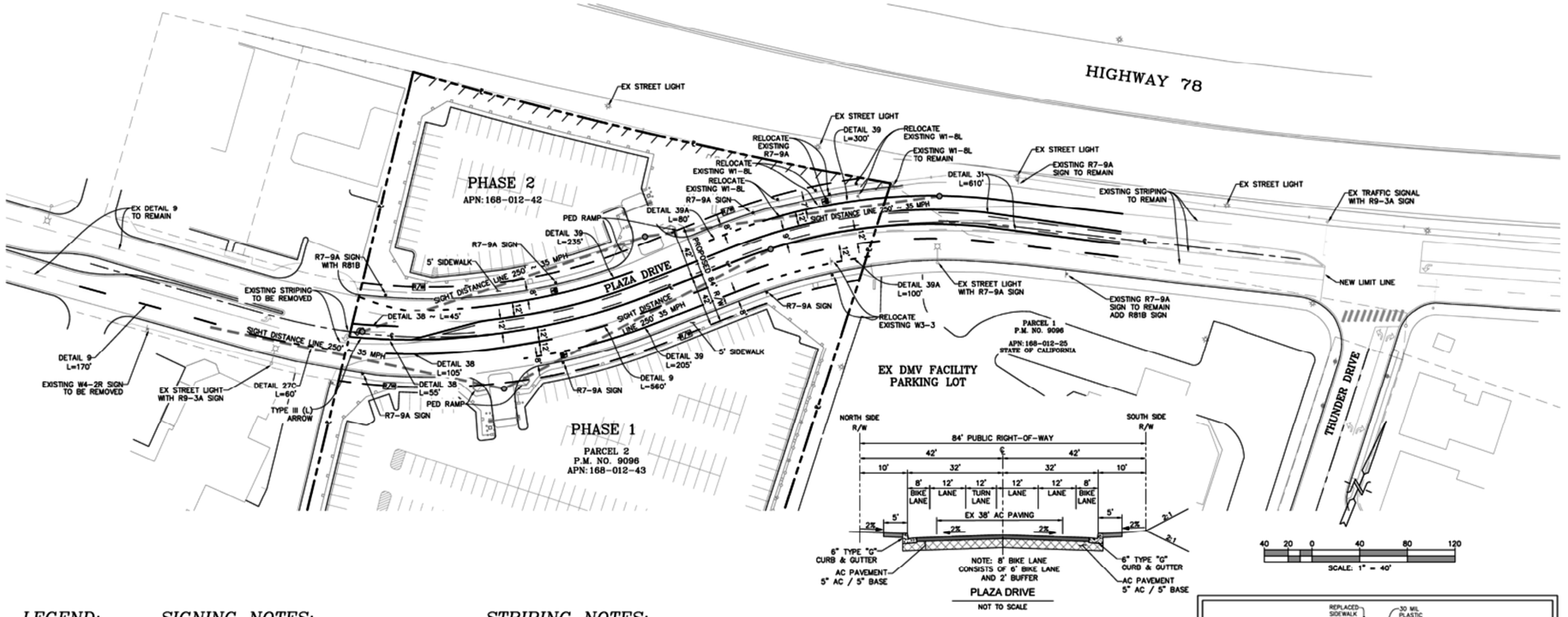
- Hacienda Drive becomes Plaza Drive, which would take customers back to the store location;
- Customers would enter the Site through the test drive-only driveway by making a left from Plaza Drive into the Site.

Project Roadway Improvements

Prior to issuance of occupancy permits, the following roadway improvements would be completed as part of the Project to the satisfaction of the City Engineer:

- Widen Thunder Drive along the Project frontage into the Project Site. Parking shall be restricted along the Project frontage side of Thunder Drive between the two Project driveways.
- Widen Plaza Drive along the Project frontage to the General Plan classification of a Secondary Collector. The Applicant shall stripe this segment with three (3) travel lanes (two eastbound lanes and one westbound lane).
- Provide a center two-way left turn lane on Plaza Drive in order to match the existing westbound single travel lane configuration adjacent to the DMV.
- Install sidewalks on both sides of Plaza Drive along the Project frontage.
- Include striping for bike lanes on both sides of Plaza Drive along the Project frontage.

Project roadway improvements are displayed in **Figure 18.**



LEGEND:

SIGN	●
R7-9A	R7-9A
R2-1	SPEED LIMIT 35
W3-3	W3-3
W1-8L	W1-8L
R9-3a	R9-3a
R81B	END

SIGNING NOTES:

ALL SIGNS SHALL BE MADE WITH ALUMINUM SIGN PANELS WITH TYPE IV OR BETTER (AT LEAST HIGH INTENSITY PRISMATIC) RETROREFLECTIVE SHEETING IN CONFORMANCE WITH SECTION 82, "SIGNS AND MARKINGS" OF THE MOST CURRENT CALTRANS STANDARD SPECIFICATIONS WITH THE EXCEPTION OF SECTION 82-2.02A, PART 1.

UNLESS SPECIFICALLY NOTED ON THE PLAN, ALL SIGNS SHALL BE MOUNTED SO THAT THE BOTTOM OF THE SIGN IS 7' ABOVE THE SURROUNDING GROUND SURFACE. ROADSIDE SIGNS SHALL NOT HANG OVER THE ROADWAY. SIGN PLACEMENT SHALL COMPLY WITH RSI OF THE MOST CURRENT CALTRANS STANDARD PLANS AND SHALL BE INSTALLED IN ACCORDANCE WITH STATE AND LOCAL ADA REQUIREMENTS.

SIGN POSTS SHALL BE 4"x 4" TREATED WOOD PER SECTION 82-3, "ROADSIDE SIGNS" OF THE MOST CURRENT CALTRANS STANDARD SPECIFICATIONS. SIGN POSTS SHALL BE PLACED SO THAT THEY COMPLY WITH ADA (FACILITY ACCESSIBILITY) REQUIREMENTS. SIGN POSTS SHALL BE PLACED IN COMPACTED NATIVE SOIL PER RSI OF THE MOST CURRENT CALTRANS STANDARD PLANS. IT IS PREFERRED THAT SIGNS BE INSTALLED BEHIND SIDEWALKS, BUT IF SIGN POSTS ARE TO BE INSTALLED IN CONCRETE SIDEWALKS, THEN A 1'x 1' SQUARE, 1/2-INCH DEEP JOINT OR SAWCUT SHALL BE PLACED AROUND THE SIGN POST IN THE SIDEWALK. SIGNS SHALL BE MOUNTED ON SIGN POSTS USING SIGN PANEL FASTENING HARDWARE PER RS2 OF THE MOST CURRENT CALTRANS STANDARD PLANS, SECTION 82-3, "ROADSIDE SIGNS" OF THE MOST CURRENT CALTRANS STANDARD SPECIFICATIONS, AND AS SPECIFIED BY THE SIGN FILM MANUFACTURER.

SIGNS TO BE INSTALLED ON COUNTY OF SAN DIEGO – MAINTAINED STREET LIGHT POLES, TRAFFIC SIGNAL POLES, AND FLASHERS SHALL BE INSTALLED AS APPROVED BY THE RESIDENT ENGINEER PER THE PLAN OR WITH APPROVED STAINLESS STEEL BAND CLAMPS OR OTHER APPROVED HARDWARE THAT IS APPROPRIATE FOR THE WIND LOADING.

STREET NAME SIGNS SHALL BE INSTALLED PER THE MOST CURRENT COUNTY OF SAN DIEGO DESIGN STANDARD DRAWINGS DS-13A THROUGH DS-13G.

THE RESIDENT ENGINEER SHALL APPROVE ALL SIGN INSTALLATION LOCATIONS PRIOR TO THE CONTRACTOR INSTALLING THE SIGNS. ALL TRAFFIC SIGNS SHALL BE READILY VISIBLE TO ALL MOTORISTS DRIVING AT THE PREVAILING SPEED AS WELL AS ALL OTHER ROADWAY USERS (BICYCLISTS, EQUESTRIANS, AND PEDESTRIANS). IF THE VISIBILITY OF THE TRAFFIC SIGN IS BLOCKED, THEN THE CONTRACTOR WITH THE RESIDENT ENGINEER'S APPROVAL SHALL EITHER RELOCATE THE SIGN OR REMOVE THE OBSTRUCTIONS (SUCH AS VEGETATION, ROCKS, PRIVATE SIGNS, AND MINOR EMBANKMENTS THROUGH MINOR GRADING) THAT BLOCK THE VISIBILITY OF THE SIGN.

STRIPING NOTES:

TRAFFIC STRIPES, THERMOPLASTIC PAVEMENT MARKINGS, AND PAVEMENT MARKERS

CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ALL STRIPING, PAVEMENT MARKERS, AND LEGENDS (PAVEMENT MARKINGS) OBLITERATED BY THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL NEW STRIPING, PAVEMENT MARKERS, AND LEGENDS REQUIRED FOR THIS PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONFLICTING AND REDUNDANT STRIPING, PAVEMENT MARKERS, AND LEGENDS IN THIS PROJECT.

INSTALLATION OF TRAFFIC STRIPES (TRAFFIC LINES) AND THERMOPLASTIC PAVEMENT MARKINGS SHALL CONFORM TO SECTION 84-1, "GENERAL" AND 84-2, "TRAFFIC STRIPES AND PAVEMENT MARKINGS", OF THE CALTRANS STANDARD SPECIFICATIONS AND THE FOLLOWING:

CONTROL OF THE ALIGNMENT AND LAYOUT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SUBJECT TO APPROVAL BY THE ENGINEER. ALL NEW STRIPING AND REMOVAL OF REDUNDANT STRIPING SHALL BE DONE BY CONTRACTOR. STRIPING SHALL BE REMOVED BY SANDBLASTING / GRINDING AND THEN SAND SEALED PER THE ENGINEER. CONTRACTOR TO PROVIDE AND INSTALL PAVEMENT MARKERS.

SECTION 84-2.02, "MATERIALS", OF THE STANDARD SPECIFICATIONS IS AMENDED TO READ:

PAINT FOR TRAFFIC STRIPING SHALL BE LEAD FREE AND CONFORM TO THE LATEST STATE SPECIFICATIONS FOR RAPID DRY WATER BORNE, WHITE & YELLOW PAINT.

THERMOPLASTIC MATERIAL SHALL BE FREE OF LEAD AND CHROMIUM, AND SHALL CONFIRM TO THE REQUIREMENTS IN STATE SPECIFICATION PTH-02SPRAY, PTH-02HYDRO, OR PTH-02ALKYD.

FOR EACH BATCH OF THERMOPLASTIC MATERIAL FOR PAVEMENT MARKINGS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER:

1. CERTIFICATE OF COMPLIANCE UNDER SECTION 6-1.07, "CERTIFICATES OF COMPLIANCE," OF THE STANDARD SPECIFICATIONS
2. DEPARTMENT'S MATERIALS ENGINEERING AND TESTING SERVICES NOTIFICATION LETTER STATING THAT THE MATERIAL IS APPROVED FOR USE
3. MATERIAL SAFETY DATA SHEET

PRIMER MUST COMPLY WITH THE THERMOPLASTIC MANUFACTURER'S RECOMMENDATIONS. DO NOT THIN THE PRIMER.

GLASS BEADS SHALL CONFORM TO STATE SPECIFICATIONS NO. 8010-004 (TYPE II).

COPIES OF STATE SPECIFICATIONS FOR TRAFFIC PAINT AND GLASS BEADS MAY BE OBTAINED FROM THE TRANSPORTATION LABORATORY, P.O. BOX 19128, SACRAMENTO, CALIFORNIA, 95812, TEL. (916) 227-7000.

THERMOPLASTIC PAVEMENT MARKINGS WITH ENHANCED WET-NIGHT VISIBILITY MUST CONSIST OF A SINGLE UNIFORM LAYER OF THERMOPLASTIC AND 2 LAYERS OF GLASS BEADS AS FOLLOWS:

1. THE 1ST LAYER OF GLASS BEADS MUST BE ON THE AUTHORIZED MATERIAL LIST UNDER HIGH-PERFORMANCE RETROREFLECTIVE GLASS BEADS FOR USE IN THERMOPLASTIC PAVEMENT MARKINGS. THE COLOR OF THE GLASS BEADS MUST MATCH THE COLOR OF THE STRIPE OR MARKING TO WHICH THEY ARE BEING APPLIED.
2. THE 2ND LAYER OF GLASS BEADS MUST COMPLY WITH AASHTO M 247, TYPE 2.

BOTH TYPES OF GLASS BEADS MUST BE SURFACE TREATED FOR USE WITH THERMOPLASTIC UNDER THE BEAD MANUFACTURER'S INSTRUCTIONS.

GLASS BEADS MAYBE APPLIED BY HAND ON THERMOPLASTIC PAVEMENT MARKINGS.

WITHIN 14 DAYS OF APPLYING A THERMOPLASTIC PAVEMENT MARKING WITH ENHANCED WET-NIGHT VISIBILITY, THE RETROREFLECTIVITY MUST BE A MINIMUM OF 700 MCD/SQ M/LX FOR WHITE STRIPES AND MARKINGS AND 500 MCD/SQ M/LX FOR YELLOW STRIPES AND MARKINGS. TEST THE RETROREFLECTIVITY USING A REFLECTOMETER UNDER ASTM E 1710.

WHERE STRIPING JOINS EXISTING STRIPING, AS SHOWN ON THE PLANS, THE CONTRACTOR SHALL BEGIN AND END THE TRANSITION FROM THE EXISTING STRIPING PATTERN INTO OR FROM THE NEW STRIPING PATTERN A SUFFICIENT DISTANCE TO ENSURE CONTINUITY OF THE STRIPING PATTERN.

APPLY EXTRUDED THERMOPLASTIC AT A TEMPERATURE FROM 400 TO 425 DEGREES F, UNLESS A DIFFERENT TEMPERATURE IS INSTRUCTED BY THE MANUFACTURER.

APPLY THERMOPLASTIC PAVEMENT MARKING AT A RATE OF AT LEAST 1.06 LB/SQ FT. THE APPLIED THERMOPLASTIC PAVEMENT MARKING MUST BE AT LEAST 0.125 INCH THICK.

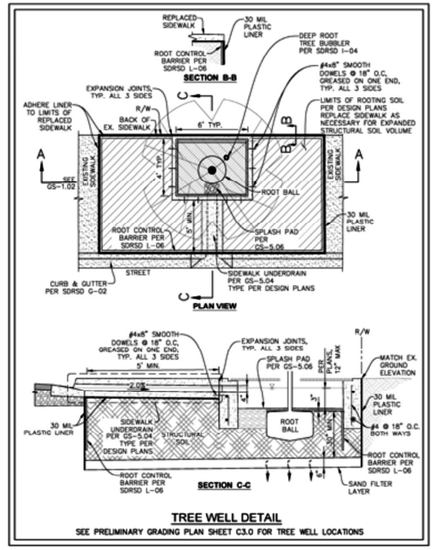
DISTRIBUTE GLASS BEADS UNIFORMLY ON PAVEMENT MARKINGS. APPLY HIGH-PERFORMANCE GLASS BEADS AT A RATE OF AT LEAST 6 LB/100 SQ FT OF MARKING. APPLY AASHTO M 247, TYPE 2, GLASS BEADS AT A RATE OF AT LEAST 8 LB/100 SQ FT OF MARKING. THE COMBINED WEIGHT OF THE 2 TYPES OF GLASS BEADS MUST BE GREATER THAN 14 LB/100 SQ FT OF MARKING.

THERMOPLASTIC PAVEMENT MARKINGS SHALL BE FREE OF RUNS, BUBBLES, CRATERS, DRAG MARKS, STRETCH MARKS, AND DEBRIS.

THE SURFACE OF THE THERMOPLASTIC MATERIAL UPON APPLICATION SHALL PROVIDE A MINIMUM SKID RESISTANCE VALUE OF 60 BPN WHEN TESTED ACCORDING TO ASTM E 303. DOCUMENTATION DETAILING MANUFACTURE'S MINIMUM SKID RESISTANCE FOR PERFORMED THERMOPLASTIC MATERIAL SHALL BE PROVIDED TO THE ENGINEER PRIOR TO COMMENCEMENT OF PAVEMENT MARKING OPERATIONS.

PAVEMENT MARKER SHALL CONFORM TO SECTION 81-3, "PAVEMENT MARKERS," OF THE MOST CURRENT CALTRANS STANDARD SPECIFICATIONS, AND THE FOLLOWING PROVISIONS:

PAVEMENT MARKER HEIGHT SHALL BE 0.70-INCH MINIMUM. "LOW PROFILE" TYPE MARKERS WILL NOT BE ACCEPTABLE.



TREE WELL DETAIL

SEE PRELIMINARY GRADING PLAN SHEET C3.0 FOR TREE WELL LOCATIONS

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General Plan Circulation Element Consistency

Chapter 3 of the Circulation Element discusses the Master Transportation Roadway Plan which provides the guidelines for providing a network of roadways throughout the City. The Circulation Element and the Master Transportation Roadway Plan are designed to effectively promote policies and guidelines that support the various forms of transportation available in the City. **Table 4.18-2** provides the Project's consistency with applicable policies and implementation strategies provided in the Circulation Element Master Transportation Roadway Plan. The Project would not conflict with any applicable policies of the Circulation Element and impacts are **less than significant.**

Table 4.18-2
Project Consistency with Circulation Element Master Transportation Roadway Plan Policies

Policy Number	Policy	Consistency Analysis	Consistent/ Inconsistent
3.3	All streets within the City shall be designed in accordance with the adopted City of Oceanside design standards (shown in Table 3-1, page 24 of the Circulation Element). Typical cross-sections and design criteria for the various street classifications are shown in the City Engineers Design and Processing Manual.	The Project would provide roadway improvements along Plaza Drive and Thunder Drive that would be designed in accordance with the City's design standards. Typical cross-sections would be provided on Project Grading Plans and would be shown in accordance with the City's Engineers Design and Processing Manual.	Consistent
3.10	The City shall require dedication and improvement of necessary rights-of-way along Master Transportation Roadway Plan streets. This usually will occur in fulfillment of a condition of approval for a tentative map or as a condition of approval for a building permit, whichever occurs first.	As part of the Project roadway improvements along Plaza Drive and Thunder Drive would be constructed prior to issuance of occupancy permits for the Project and would be required as a condition of approval for the Development Plan, CUP, and Variance.	Consistent
3.12	The City shall require adequate traffic safety measures on all new and existing roadways. These measures may include, but are not limited to, appropriate levels of maintenance, proper street design, traffic control devices (signs, signals, and striping), street lighting, and coordination with the school districts to provide school crossing signs and protection.	The Project would provide striping along Plaza Drive for the three (3) travel lanes (two eastbound lanes and one westbound lane) in coordination with the widening improvements along the Project frontage. Five-foot sidewalks would be provided on both sides of Plaza Drive and would include pedestrian ramps. Striping for the 8-foot bicycle lanes on both sides of Plaza Drive would be provided and would include the required 6-foot bike lane and 2-foot buffer. Street lighting would be provided along Plaza and Thunder Drive along the Project Site boundaries.	Consistent

3.17	The City shall require additional right-of-way width and additional improvements of major arterials where required for turning movements or to provide access to adjacent properties whenever access is not feasible from a lower classification street system.	The Project would provide roadway improvements which include widening of Plaza Drive and Thunder Drive. A center two-way left turn lane on Plaza Drive would be provided in order to match the existing westbound single travel lane configuration adjacent to the DMV. This would provide for better turning movements into the Project Site for test drive vehicles.	Consistent
3.21	The City shall require that those responsible for street improvements replant, replace, or install new landscaping pursuant to existing City policy along all new roadways or on those that have been redesigned and reconstructed.	Landscaping would be provided along the Project frontage along Plaza Drive and along Thunder Drive along the Project Site boundary. Landscaping would contain various trees, shrubs and groundcover types. The customer and employee parking lot would contain additional landscaping and parking lot islands would consist of deciduous trees, palm trees, evergreen shrubs and grasses. The Conceptual Landscape Plan is provided as **Figure 8** and **Figure 9**.	Consistent

Multi-Modal Transportation

The overall goal of the General Plan Circulation Element is to provide complete streets and multi-modal transportation systems within the City. The General Plan aims to enhance the City's corridors, increasing bicycle and pedestrian routes, and improving existing facilities. A LTS was prepared by LOS Engineering, Inc. and is provided as **Appendix O** of this EIR. The LTS includes the analysis of pedestrian, bicycle, and transit facilities to evaluate their opportunities or deficiencies.

Pedestrian

The LTS pedestrian analysis included the assessment of pedestrian facilities in the vicinity of the Project. Existing pedestrian infrastructure from College Boulevard to Thunder Drive were analyzed and deficiencies were found on the north side of Plaza Drive from the Project Site east to Thunder Drive where the north side is missing sidewalk infrastructure. The Project would include widening improvements along Plaza Drive and would include installation of sidewalks on both sides of Plaza Drive along the Project frontage, where sidewalks did not previously exist.

Bicycle

The LTS bicycle analysis included the assessment of bicycle facilities in the vicinity of the Project. The Project would include widening improvements along Plaza Drive which would include bicycle lanes on both sides of the street along the Project frontage, where bicycle lanes did not previously exist. The 8-foot bicycle lanes include the required 6-foot bicycle lane and the 2-foot buffer in accordance with City requirements.

Transit

The LTS transit analysis included the assessment of transit facilities in the vicinity of the Project Site. NCTD Bus Route 323 is located at Thunder Drive and Lake Boulevard and is within 0.5 mile walking distance of the Project Site. The bus stop for westbound travel on Lake Boulevard is located a walking distance of approximately 710 feet from the Project access off of Thunder Drive. This bus stop contains a bench and trash receptacle that is in good condition. The bus stop for eastbound travel on Lake Boulevard is located a walking distance of approximately 940 feet from the Project access off of Thunder Drive. This bus stop contains a trash receptacle that is in good condition. No transit improvements are required as part of the Project. Bus service operations and frequency are provided in **Table 4.18-1.**

The Project Site is located approximately five (5) miles southeast of the Oceanside Transportation Center which provides access to the Coaster, Sprinter, Metrolink and Amtrak trains.

The overall goal of the General Plan Circulation Element is to obtain complete streets and multi-modal transportation systems. The Project would not conflict with the City's General Plan Circulation Element or other plans related to multi-modal transportation systems. The Project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, bicycle and pedestrian facilities and therefore will have a **less than significant impact.**

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

Per CEQA Guidelines Section 15064.3(b) Criteria for Analyzing Transportation Impacts, for land use projects, VMT exceeding an applicable threshold of significance may indicate a significant transportation impact. The OPR Technical Advisory developed guidance on implementing SB 743 that shifts the transportation impact measure of effectiveness from LOS to VMT. In accordance with OPR Guidelines, lead agencies have the discretion to set or apply their own thresholds of significance. The City of Oceanside *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment* adopted by City Council in August 2020 identified project types that are presumed to be considered VMT reducing projects. A list of "screened out" projects is provided in the City VMT Guidelines and is provided below as **Table 4.18-3.**

Table 4.18-3
City of Oceanside VMT "Screened Out" Projects

#	Project Type
1	Projects located in a Transit Priority Areas (TPA) or Smart Growth Opportunity Area as identified in the most recent SANDAG San Diego Forward Regional Plan and is consistent with the General Plan at the time of project application. (1)(2)
2	Projects located in a low-VMT generating area identified on the most recent SANDAG SB 743 VMT Screening map
3	Locally serving K-12 schools
4	Day care centers
5	Local parks
6	Locally serving retail uses less than 50,000 square feet, including: gas stations, banks, restaurants, grocery stores, and shopping centers
7	Community institutions (Public libraries, fire stations, local government)
8	Locally serving hotels (e.g. non-destination hotels, non-regionally serving)
9	Student housing projects on or adjacent to college campuses
10	Local serving community colleges that are consistent with the assumptions noted in the most recent SANDAG Regional Transportation Plan/Sustainable Communities Strategy
11	Affordable housing projects (3)

12	Assisted living facilities
13	Senior housing (as defined by HUD)
14	Transit projects
15	Bike projects
16	Pedestrian projects
17	Safety improvement projects (e.g. RRFBs and high visibility crosswalks at uncontrolled locations, pedestrian count down timers, additionally projects identified through the Highway Safety Improvement Program)
18	Safe Routes to School
19	Projects generating less than 500 daily vehicle trips (if inconsistent with adopted General Plan)
20	Projects generating less than 1,000 daily vehicle trips (if consistent with adopted General Plan)

(1) Projects located in a TPA must be able to access the transit station within a ½ mile walking distance or 6 minute walk continuously without discontinuity of sidewalk or obstructions to the route. Qualifying transit stops means a site containing an existing rail transit station served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (OPR, 2017). A high-quality transit corridor may also be considered if a corridor with fixed route bus service has service intervals no longer than 15 minutes during peak commute hours (OPR, 2017). (2) Smart Growth Opportunity Area Map is provided in Appendix B. The most recent version available shall be used. (3) If a project is a mix of affordable housing and market rate housing or unscreened use, only the affordable housing component would qualify as screened out. Additionally, any removal of affordable housing automatically requires CEQA VMT analysis.
Source: City of Oceanside Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment

A VMT Analysis and LTS were prepared by LOS Engineering, Inc. and are provided as **Appendix N** and **Appendix O** of this EIR. As provided in the LTS (**Appendix O)**, the project will generate 475 ADT (18 AM peak hour trips (11 inbound and 7 outbound) and 50 PM peak hour trips (31 inbound and 19 outbound). The Project is designated as CC by the General Plan and no change to the General Plan designation is required. In accordance with screened out project type #20 above, the Project is consistent with the adopted General Plan and will generate less than 1,000 ADT, and is therefore screened out from a transportation VMT analysis.

The Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3 subdivision (b), and therefore impacts are **less than significant.**

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

The Project is located on Plaza Drive east of College Boulevard, west of Thunder Drive and south of SR-78. Both parcels are vacant and undeveloped. The Project Site is located in a primarily developed, urbanized area and is surrounded by commercial uses to the west, medium density residential uses and the DMV to the east and SR-78 to the north. To the south are Buena Vista Creek, high density residential and residential estate uses including a senior living facility and an OFD station. The Project would not introduce incompatible uses. The Project does not require a change the zoning or land use designation of the Project Site.

The Project would consist of sales and administration building, service, building, private carwash, associated access drives, presentation area, staging area, sales display area and a customer and employee parking lot. No new roads or streets would be provided as part of the Project. Project improvements include the widening of Plaza Drive to a secondary collector with three travel lanes (two eastbound lanes and one westbound lane) and a center two-way left turn lane in order to match the existing westbound single travel lane configuration adjacent to the DMV. All associated striping would be provided along Plaza Drive.

Driveways proposed along Plaza Drive and Thunder Drive would be consistent with the City's Engineers Design and Processing Manual which includes driveway standards to provide safe geometric designs and line of sight for drivers, pedestrians and bicyclists. The Project would provide an 8-foot bike lane on both sides of Plaza Drive which includes the required 6-foot bike lane and 2-foot buffer. The Project would provide a 5-foot sidewalk and pedestrian ramps along the Project frontage on Plaza Drive which would promote pedestrian access consistent with the General Plan.

Additionally, OFD has reviewed the Site Plan details to ensure that fire truck access roadways meet City standards. Fire lanes within the customer and employee and sales display parking lots have been designed and reviewed by OFD and provide adequate width, turn-around radius and access to the building. The Project would not substantially increase hazards due to a geometric design feature or incompatible use, and impacts will be **less than significant.**

d. Result in inadequate emergency access?

Emergency access to the Project Site would be provided by the two (2) driveways located off of Thunder Drive and the driveway off Plaza Drive. A Knox Box would be provided at the Plaza Drive security gate and control island as well as in the building lobby and would provide access to all gates and doors onsite. The Phase II sales display area would also have a Knox Box located at the security gate and control island.

The OFD has reviewed the proposed Site Plan details to ensure that fire truck access roadways meet City standards and that access would be provided to all sides of the structure. Further, the Project is designed to provide adequate width, turn-around radius and access to the building in accordance with the CFC, Title 24 Park 9 and the OMC Chapter 11 – Fire Protection. Specifically, the Project would provide a minimum 28-foot width for access through the proposed drive aisles within the customer and employee, sales display and sales and staging areas. The Project would comply with the CFC and the OMC requirements which are intended to ensure adequate emergency access. Project roadway improvements along Plaza Drive and Thunder Drive would improve circulation along the surrounding roadways of the Project Site and therefore would improve emergency access in the surrounding areas of the Project Site. The Project would meet or exceed such requirements and therefore, the Project would not result in inadequate emergency access, and impacts will be **less than significant.**

4.18.6 Mitigation Implementation and Monitoring

No significant impacts to transportation have been identified, and therefore no mitigation measures are required.

4.18.7 Level of Significance after Mitigation

Impacts related to transportation will be less than significant.

Chapter 4.19 TRIBAL CULTURAL RESOURCES

The following document was used in the preparation of this section and is included in its entirety in **Appendix G**:

ASM Affiliates. August 9, 2019. *Archaeological Survey Report for the CarMax Project, Oceanside, California.*

4.19.1 Environmental Setting

Regional Setting

Two (2) main cultural groups have occupied the County: the Uto-Aztecan-speaking Luiseño in the north and the Kumeyaay, Ipai/Tipai or Diegueño in the south. Traditionally, Luiseño territory encompassed an area from roughly Batiquitos Lagoon on the coast, east to Lake Henshaw, north into Riverside County, and west through San Juan Capistrano to the coast. The region inhabited by various groups of the Kumeyaay was much larger and extended from Batiquitos Lagoon eastward into the Imperial Valley and southward through much of northern Baja California.

The term Luiseño is derived from association with the San Luis Rey Mission, on the San Luis Rey River. The Luiseño people had a moderately high population density and a fairly rigid social structure. It is estimated that the Luiseño had approximately 50 villages of 200 individuals each. The Luiseño were divided into several autonomous lineages or kin groups based on patrilineal descent groups. Each Luiseño lineage was based around an autonomous village that held ownership over a well-defined territory for hunting and gathering. Village territories may have ranged from as small as ten square kilometers near the coast and major drainages such as the San Luis Rey River, to as large as 100 square kilometers elsewhere.

Leadership included hereditary chiefs and council members who had knowledge and authority over specific religious, warfare, and economic issues, and conducted elaborate ceremonies. Ritual and ceremonial specialists maintained ceremonial knowledge in secrecy and passed on the knowledge to only one heir. These leaders and specialists also made use of fenced-in ceremonial structures, typically located in the village center. Economic activities took place on a community and extended household level, and varied significantly between coastal and inland areas. Community-wide efforts included fire management for game drives, and systematic use of fire to facilitate grasslands and increase yields of plants and animals.

Acorns were the most important food source and were gathered in upland areas. Seeds from gasses, manzanita, sage, sunflowers, lemonade berry, chia, and other plants were also used, along with various wild greens and fruits. Deer, antelope, small game, birds, and coastal marine animals were also exploited. Some coastal communities exploited local shellfish in the winter and during times of stress, the interior Luiseño would travel to the coast to obtain shellfish, fish, and even some land mammals. Rigid gender division did not exist, however, women generally collected plant resources and men hunted. Houses were dispersed throughout villages. Lowland village houses were conical structures covered with tule bundles and other structures included sweathouses, ceremonial enclosures, ramadas, and acorn granaries. Domestic implements included wooden utensils, baskets, ceramic cooking, and milling tools. Hunting implements included bow and arrow, nets, snares, and curved throwing sticks.

Nets and hooks of bone and shell were used to fish. The Project Site is within the traditional territory of the Luiseño people.

Tribal Coordination and Consultation

Sacred Lands File Search

A record search of the Sacred Lands File (SLF) held by the Native American Heritage Commission (NAHC) was requested on January 9, 2018. On January 10, 2018 the NAHC responded the record search had negative results. The NAHC provided a list of 35 tribal entities and individuals to contact for additional information. All correspondence pertaining to the NAHC is included in the Archaeological Survey Report prepared by ASM Affiliates (**Appendix G**). Results of the consultation efforts from the City and tribal entities during the AB 52 process are detailed below.

Consultation

To date, the City has received one request for consultation pursuant to AB 52. This request was formally made by the Rincon Band of Luiseño Indians on October 24, 2020 and the City responded to the tribe's request by providing additional technical information.

(Information to be provided upon additional responses: name of tribes contacted, dates contacted, details of response, details of requests or mitigation required by each tribe)

Onsite Tribal Cultural Resources

No tribal cultural resources were found onsite during a survey of the Project area. A records search of the SCIC revealed that 75 cultural resource studies have previously addressed the one-mile record search radius surrounding the Project area. The records search identified approximately 26 cultural resources that were previously recorded within the one-mile record search radius. None of these were recorded within the Project area.

4.19.2 Regulatory Setting

State

California Register of Historical Resources and the California Environmental Quality Act

CEQA requires that all private and public activities not specifically exempt be evaluated against the potential for environmental damage, including effects to historical and tribal cultural resources. Lead agencies have a responsibility to evaluate historical resources against the CRHR criteria prior to making a finding as to a Project's impacts to historical or tribal cultural resources. Mitigation of adverse impacts is required if the Project would cause substantial adverse change to a resource. Substantial adverse change includes demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired. The CRHR is used in the consideration of historical resources relative to significance for purposes of CEQA. The CRHR includes resources listed in or formally determined eligible for listing in the NRHP and come California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance or that have been identified in a local historical resources inventory may be eligible for listing in the

CRHR, and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise.

Senate Bill 18

In 2004, SB 18 was enacted, requiring local governments to consult with California Native American tribes prior to making certain planning decisions. The purpose of the consultation is to protect the identity of traditional tribal cultural places "cultural places" through local land use planning. As required by Government Code Sections 65352.3 and 655762.5, the NAHC maintains a list of tribes with whom local agencies must consult. The intent of SB 18 is to provide all California Native American tribes an opportunity to consult with local governments for the purpose of preserving and protecting their cultural places.

Assembly Bill 52

AB 52 took effect on July 1, 2015 and established a consultation process between California Native American tribes and lead agencies in order to address tribal concerns regarding Project impacts and mitigation to tribal cultural resource. Public Resources Code Section 21074(a) defines tribal cultural resources and states that a Project that has the potential to cause a substantial adverse change to a tribal cultural resource is a Project that may have an adverse effect on the environment. A tribal cultural resource is described as a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe that is either (1) listed or eligible for listing in the CRHR or a local register of historic resources, or (2) determined by a lead agency to be a tribal cultural resource.

Public Resources Code Section 21074

Section 21074 of the Public Resources Code defines "tribal cultural resources" as any of the following:

5. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that is either:

    a. Included or determined to be eligible for inclusion in the California Register of Historical Resources;

    b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

6. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

7. A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

8. A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as

defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

California Public Resources Code Section 5097

California Public Resources Code Section 5097, also referred to as the Native American Historic Resources Protection Act, identifies that the unauthorized disturbance or removal of archaeological or historical resources located on public land us a misdemeanor. It prohibits the knowing destruction of objects of antiquity without a permit on public lands, and it provides for criminal sanctions. The Native American Historic Resource Protection Act establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project and establishes the NAHC to resolve disputes regarding the disposition of such remains.

California Native American Graves Protection and Repatriation Act

The California Native American Graves Protection and Repatriation Act, enacted in 2001, requires all state agencies and museums that receive state funding and that have possession or control over collections of humans remains or cultural items, to complete an inventory and summary of these remains and items on or before January 1, 2003. This California Native American Graves Protection Act also provides a process for the identification and repatriation of these items to the appropriate tribes.

California Health and Safety Code

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the County Coroner has examined the remains. If the coroner determines or has reason to believe that the remains are those of a Native American, the coroner must contact the NAHC within 24 hours. The NAHC will notify the most likely descendent (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 48 hours of the MLD being granted access to the site. The MLD may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

Local

City of Oceanside Municipal Code

The OMC Section 14A.6 states that a historical area or site may be designated as such by resolution of the City Council it if meets the following criteria:

a. It exemplifies or reflects special elements of the City's cultural, social, economic, political, aesthetic, engineering, or architectural history; or
b. It is identified with persons or events significant in local, state, or national history; or
c. It embodies distinctive characteristics of a style, type, period, or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship; or
d. It is representative of the notable work of a builder, designer, or architect;

e. It is found by the council to have significant characteristics which should come under the protection of this chapter.

4.19.3.1 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, impacts would be considered significant if the Project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

4.19.3.2 Project Impact Analysis

Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place or object with cultural value to a California Native American tribe, and that is:

a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

No cultural resources were identified in the Project area during the pedestrian survey and no cultural resources have been previously recorded within the Project area. The record search of the Sacred Lands File held by the NAHC had negative results. Based on the data and information obtained, there is a low potential for impacts to cultural resources associated with implementation of the Project. However, due to the Project's proximity to Buena Vista Creek the potential for buried cultural resources within alluvial deposits along the creek exists.

Therefore, the Project will result in a **significant impact (Impact TCR-1a)**.

b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? (In applying the criteria set forth in subdivision(c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe)?

Consultation and coordination has been initiated with the culturally-affiliated tribes to identify any potential tribal cultural resources located onsite or in the Project vicinity. Consultation coordination indicated that the Project is located in the territory of the Rincon Band of Luiseño Indians and is within the Bands specific Area of Historic Interest (AHI) and is therefore traditionally and culturally affiliated to the Project area. Embedded in the Luiseño territory are Rincon's history, culture and identity.

Considering this information, there is potential for the discovery of unknown tribal cultural resources during Project grading activities, and therefore a **significant impact** will occur (**Impact TCR-1b**).

4.19.5 Mitigation Implementation and Monitoring

Eligible or Listed Tribal Cultural Resource and Resource to a California Native American Tribe (Impact TCR-1a and Impact TCR-1b)

Mitigation measure MM-CUL-1a through MM-CUL-1h which is presented in Section 4.6.5, will reduce this impact to below a level of significance.

MM-CUL-1a Prior to issuance of a Grading Permit, the Applicant/Owner shall enter into a pre-excavation agreement, otherwise known as a Tribal Cultural Resources Treatment and Tribal Monitoring Agreement with the "Traditionally and Culturally Affiliated (TCA) Native American Monitor associated with a TCA Luiseño Tribe". A copy of the agreement shall be included in the Grading Plan Submittals for the Grading Permit. The purpose of this agreement shall be to formalize protocols and procedures between the Applicant/Owner and the "TCA Native American Monitor associated with a TCA Luiseño Tribe" for the protection and treatment of, including but not limited to, Native American human remains, funerary objects, cultural and religious landscapes, ceremonial items, traditional gathering areas and tribal cultural resources, located and/or discovered through a monitoring program in conjunction with the construction of the proposed Project, including additional archaeological surveys and/or studies, excavations, geotechnical investigations, grading, and all other ground disturbing activities. At the discretion of the Luiseño Native American Monitor, artifacts may be made available for #D scanning/printing, with scanned/printed materials to be curated at a local repository meeting the federal standards of 36CFR79.

MM-CUL-1b Prior to the issuance of a Grading Permit, the Applicant/Owner or Grading Contractor shall provide a written and signed letter to the City of Oceanside Planning Division stating that a Qualified Archaeologist and Luiseño Native American Monitor have been retained at the Applicant/Owner or Grading Contractor's expense to implement the monitoring program, as described in the pre-excavation agreement.

MM-CUL-1c The Qualified Archaeologist shall maintain ongoing collaborative consultation with the Luiseño Native American monitor during all ground disturbing activities. The requirement for the monitoring program shall be noted on all applicable construction documents, including Demolition Plans, Grading Plans, etc. The Applicant/Owner or Grading Contractor shall notify the City of Oceanside Planning Division of the start and end of all ground disturbing activities.

MM-CUL-1d The Qualified Archaeologist and Luiseño Native American Monitor shall attend all applicable pre-construction meetings with the General Contractor and/or associated Subcontractors to present the archaeological monitoring program. The Qualified Archaeologist and Luiseño Native American Monitor shall be present onsite full-time during grubbing, grading and/or other ground altering activities, including the placement of imported fill materials or fill used from other areas of the Project Site, to

identify any evidence of potential archaeological or tribal cultural resources. All fill materials shall be absent of any and all tribal cultural resources.

MM-CUL-1e In order for potentially significant archaeological artifact deposits and/or cultural resources to be readily detected during mitigation monitoring, a written "Controlled Grade Procedure" shall be prepared by a Qualified Archaeologist, in consultation with the Luiseño Native American monitor, other TCA Luiseño Tribes that have participated in the state-prescribed process for this Project, and the Applicant/Owner, subject to the approval of City representatives. The Controlled Grade Procedure shall establish requirements for any ground disturbing work with machinery occurring in and around areas the Qualified Archaeologist and Luiseño Native American monitor determine to be sensitive through the cultural resource mitigation monitoring process. The Controlled Grade Procedure shall include, but not be limited to, appropriate operating pace, increments of removal, weight and other characteristics of the earth disturbing equipment. A copy of the Controlled Grade Procedure shall be included in the Grading Plan Submittals for the Grading Permit.

MM-CUL-1f The Qualified Archaeologist or the Luiseño Native American monitor may halt ground disturbing activities if unknown tribal cultural resources, archaeological artifact deposits or cultural features are discovered. Ground disturbing activities shall be directed away from these deposits to allow a determination of potential importance. Isolates and clearly non-significant deposits will be minimally documented in the field, and before grading proceeds these items shall be secured until they can be repatriated. If items cannot be securely stored on the Project Site, they may be stored in off-site facilities located in San Diego County. If the Qualified Archaeologist and Luiseño Native American monitor determine that the unearthed tribal cultural resource, artifact deposits or cultural features are considered potentially significant TCA Luiseño Tribes that have participated in the state-prescribed consultation process for this project shall be notified and consulted regarding the respectful and dignified treatment of those resources. The avoidance and protection of the significant tribal cultural resource and/or unique archaeological resource is the preferable mitigation. If, however, it is determined by the City that avoidance of the resource is infeasible, and it is determined that a data recovery plan is necessary by the City as the Lead Agency under CEQA, TCA Luiseño Tribes that have participated in the state-prescribed consultation process for this Project shall be notified and consulted regarding the drafting and finalization of any such recovery plan. For significant tribal cultural resources, artifact deposits or cultural features that are part of a data recovery plan, an adequate artifact sample to address research avenues previously identified for sites in the area will be collected using professional archaeological collection methods. The data recovery plan shall also incorporate and reflect the tribal values of the TCA Luiseño Tribes that have participated in the state-prescribed consultation process for this Project. If the Qualified Archaeologist collects such resources, the Luiseño Native American monitor must be present during any testing or cataloging of those resources. Moreover, if the Qualified Archaeologist does not collect the tribal cultural resources that are unearthed during the ground disturbing activities, the Luiseño Native American monitor, may at their discretion, collect said resources and provide them to the appropriate TCA Luiseño Tribe, as determined through the appropriate process, for respectful and dignified treatment in accordance with the Tribe's cultural and spiritual traditions. Ground disturbing activities shall not resume until the Qualified Archaeologist, in consultation

with the Luiseño Native American Monitor, deems the cultural resource or feature has been appropriately documented and/or protected.

MM-CUL-1g The landowner shall relinquish ownership of all tribal cultural resources unearthed during the cultural resource mitigation monitoring conducted during all ground disturbing activities, and from any previous archaeological studies or excavations on the Project Site to the appropriate TCA Luiseño Tribe, as determined through the appropriate process, for respectful and dignified treatment and disposition, including reburial at a protected location onsite, in accordance with the Tribe's cultural and spiritual traditions. All cultural materials that are associated with burial and/or funerary goods will be repatriated to the Most Likely Descendant (MLD) as determined by the Native American Heritage Commission per California Public Resources Code Section 5097.98. No tribal cultural resources shall be subject to curation.

MM-CUL-1h Prior to the release of the grading bond, a monitoring report and/or evaluation report, if appropriate, which describes the results, analysis and conclusions of the archaeological monitoring program (e.g., data recovery plan) shall be submitted by the Qualified Archaeologist, along with the Luiseño Native American monitor's notes and comments, to the City of Oceanside Planning Division for approval.

4.19.6 Level of Significance After Mitigation

The analysis in Section 4.19.4 identified the potential for significant impacts related to an eligible or listed tribal cultural resource and resource to a California Native American Tribe. Implementation of mitigation measures MM-CUL-1a through MM-CUL-1h requires construction monitoring by a Qualified Archaeologist and Native American monitor and specific protocols for pre-construction, construction and post-construction activities, requirements for discovery of cultural resources and reporting of monitoring activities and evaluation of results. With implementation of mitigation measures MM-CUL-1a through MM-CUL-1h, Impact TCR-1a and Impact TCR-1b related to listed tribal cultural resources and resources to a California Native American Tribe would be reduced to below a level of significance by requiring specific monitoring program protocols during construction which would allow for proper care of resources in the event of a discovery. Therefore, all impacts to tribal cultural resources will be reduced to less than significant.

Chapter 4.20 UTILITIES AND SERVICE SYSTEMS

The following document was used in the preparation of this section and is included in its entirety in **Appendix S:**

City of Oceanside Water Utilities Department. October 7, 2020. *Water and Sewer Will Serve Letter Request.*

4.20.1 Environmental Setting

Water Utilities Department

The City of Oceanside Water Utilities Department is responsible for providing potable water, wastewater and storm water services to the City. This department is also responsible for overseeing waste and recycling services, as well as implementing the City's Zero Waste Plan.

Water Division

The Water Division of the Water Utilities Department is responsible for obtaining the City's water, including purchasing water from the San Diego County Water Authority (SDCWA) and delivering it throughout the City for domestic, commercial, irrigation, and fire protection purposes. The City treats up to 25 million gallons per day of water received from the SDCWA and up to six million gallons per day of local brackish groundwater from the Mission Basin. Imported raw water is treated at the Robert A. Weese Filtration Plant which is capable of treating up to 25 million gallons per day of surface water. The Water Utilities Department maintains and operates this plant on a 24-hour basis and it provides the majority of the City's water. The Plant was built in 1983 and has undergone several upgrades over the years to ensure its efficiency and compliance with all applicable rules and regulations. The Mission Basin Groundwater Purification Facility is a desalting treatment facility that provides 15% of the City's water supply. The facility uses reverse osmosis to treat local brackish groundwater extracted from the Mission Basin. The facility began service in 1992 with a capacity of two million gallons per day and was expanded to its current capacity of 6.4 million gallons per day in 2002.

Currently no water is provided onsite. However, water is supplied to adjacent developments in the surrounding area. There is an existing 10-inch water line running along Plaza Drive west of the Project Site, an 8-inch water line running along the shopping center on the western boundary of the Project Site, and a 12-inch water line running along Thunder Drive.

Wastewater Division

The City of Oceanside's Wastewater Division of the Water Utilities Department collects, treats, and disposes of all of the City's sewage at the San Luis Rey Wastewater Treatment Plant and the La Salina Wastewater Treatment Plants. The San Luis Rey plant serves areas east of I-5 and the La Salina plant treats sewage from areas west of I-5, downtown and along the coast. The City sewer system includes over 450 miles of pipelines, two wastewater treatment plants, 34 sewer lift stations and an industrial waste inspection program. The City's sewage is presently treated at full secondary treatment level according to the U.S. EPA standards. The City has a goal of zero sewer spills. The Wastewater Division also coordinates implementation of the Clean Water (storm water) program, recycling programs and implementation of the Waste Management contract.

The Project is located to the east of I-5 and would be served by the San Luis Rey Wastewater Treatment Plant. An existing 12-inch vitrified clay pipe (VCP) and 21-inch VCP sewer line runs from east to west through the southern portion of the Project Site. This line is fed by a 10-inch VCP line which runs from north to south along Thunder Drive, and it connects to an 8-inch VCP line running southwest along the eastern boundary of the shopping center west of the Project Site.

Storm Water

In its existing condition, the Project Site is vacant and has been previously graded. Existing runoff from the north side of the Project Site drains via overland flow to the southwest corner of the Project Site where it sheet flows over the existing berm and onto Plaza Drive. Plaza Drive drainage flows west towards the intersection of SR-78 and Plaza Drive where it enters a curb inlet. Runoff from the southern parcel drains south towards Buena Vista Creek with a small portion draining east over the sidewalk and curb onto Thunder Drive. The Drainage Study prepared by REC Consultants, Inc. (**Appendix J**) analyzes existing and developed conditions for 100-year flowrates from the development to the existing points of discharge. Treatment of storm water runoff from the site is addressed in the SWQMP prepared by REC Consultants, Inc. (**Appendix K**).

Electricity and Natural Gas

SDG&E is the utility company which provides electric and natural gas services in southern Orange County and the County, including the City and the Project Site. Within its 4,100 square-mile service area are 3.6 million customers, 1.4 million electric meters, and 873,000 natural gas meters. Most of the gas transported from out-of-state, as well as some of what is produced in-state is delivered to regional transmission systems for PG&E and SoCalGas natural gas transmission pipeline systems. SDG&E is a customer of SoCalGas and receives all of its natural gas from the SoCalGas system. Power and gas requirements for upcoming development Projects are handled on a case-by-case basis, where SDG&E consults developers to incorporate energy saving devices into Project design, where feasible. Section 4.7.1 provides additional details of local electricity and natural gas usage and history.

Telecommunication Systems

Communication systems for telephone, internet and cable television are serviced by utility providers such as SBC, AT&T, IBM, and other local independent cable companies. Communication systems needs for incoming Projects are serviced by these utility providers on an as-needed basis. Forecasting future service demand is typically performed by computerized statistical modeling based on land use patterns, zoning and other growth indicators. When feasible, developers and telecommunication utility providers work together during the early stages of development projects to establish upcoming service demand.

Solid Waste Disposal Service

The City implements and oversees solid waste and recycling services to ensure compliance with state regulations and the OMC. Waste Management, Inc. of North County services the entire City and disposes of solid waste at the El Sobrante Landfill located at 10910 Dawson Canyon Road, Corona, CA 92883. As of 2018, the landfill was projected to be able to continue its operations until 2051, with a remaining capacity of 143,977.180 CY (CalRecycle, 2018). Recyclables are collected by Waste Management, Inc. and delivered to the Waste Management Materials Recovery Facility located at 2050

North Glassell Street, Orange, CA 92865. Trash, recyclables, and green waste within the City are normally picked up weekly.

The City adopted and enacted the *Zero Waste Strategic Management Plan*, which establishes methods to reach the goal of diverting 75% to 90% of solid waste by 2020, and works in conjunction with the goals of the City Council's adoption of Resolution No. 10-R0636-1 (Zero Waste Resolution) and the State of California AB 341. The City currently has achieved a 67% diversion and recycling rate.

4.20.2 Regulatory Setting

Federal

Federal Safe Drinking Water Act

The Safe Drinking Water Act grants the EPA the authority to set drinking water standards. There are two (2) categories of standards: (a) the National Primary Drinking Water Regulations; and (b) the National Secondary Drinking Water Regulations. The former are legally enforceable standards that apply to public water systems, and protect water quality by limiting levels of contaminants known to adversely affect public health. The latter are non-mandatory guidelines for certain substances that do not pose a risk to public health.

Clean Water Act

The CWA is the primary federal law for the regulation of water quality. The CWA includes water quality standards, discharge limitations, and required permits as part of the NPDES. The CWA establishes regulatory requirements for potable water supplies, including raw and treated water quality criteria.

State

Senate Bill 221

Signed into law on October 8, 2001, SB 221 established a process whereby sufficient water supply must be identified and available for new development for any residential development of 500 homes or more, or, in the case wherein a water supplier has fewer than 5,000 service connections or the proposed development would increase the number of connections by at least 10%, unless there is proof of adequate water over at least the next 20 years, including long periods of drought. Due to the size of the proposed project, a water supply assessment and verification report pursuant to SB 221 and SB 610, described below, are not required.

Senate Bill 610

Signed into law October 9, 2001, SB 610 resulted in amendments to the Public Resources Code and the Water Code. Revising provisions established by SB 901, SB 610 requires that the planning agency determine whether a proposed project, subject to CEQA, meets any of the thresholds for requiring preparation of a water supply assessment. Specifically, if the project is a proposed development of more than 500 dwelling units (or equivalent water use for another development type), the planning agency must then request that the urban water supplier prepare a water supply assessment. The assessment would include the identification of existing water entitlements, water rights, or water service contracts

relevant to the water supply identified for the proposed project, and the amount of water received pursuant to such entitlements, rights, or contracts. Due to the size of the proposed project, a water supply assessment pursuant to SB 610 is not required.

State Safe Drinking Water Act

The State Safe Drinking Water Act builds on and strengthens the Federal Safe Drinking Act. The State Act authorizes the SWRCB to protect public health by establishing maximum contaminant levels that are at least as stringent as those mandated by the EPA under the Federal Safe Drinking Water Act.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act establishes the responsibilities and authorities of the SWRCB and the nine (9) RWQCB. In California, all surface waters and groundwater are considered to be "Waters of the State" under this Porter-Cologne Act. Pursuant to the Porter-Cologne Act, a Water Quality Control Plan for the San Diego Basin was prepared.

California Green Building Standards Code

The CALGreen Code is set forth in CCR, Title 24, Part 11. It establishes minimum mandatory standards as well as voluntary standards for the planning and design of sustainable site development, water conservation, and other issues. The CALGreen Code provides waste diversion requirements, plumbing fixture requirements, water efficiency and conservation measures and energy efficiency measures.

Executive Order B-29-15

On April 1, 2015, Governor Jerry Brown signed Executive Order B-29-15 which directs the SWRCB to implement mandatory water reductions in cities and towns across California to reduce water usage by 25%. This order directs the SWRCB to require commercial, industrial, and institutional properties to immediately implement water efficiency measures to reduce potable water usage by the 25% target.

California Integrated Waste Management Board

The California Integrated Waste Management Board policies require local governments to prepare a Source Reduction and Recycling Element in its Solid Waste Management Plan calling for integration of solid waste management, including such processes as source reduction, reuse, recycling, and composting before landfill disposal.

California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act of 1991 (California Public Resource Code, Division 30, Part 3, Chapter 18) provides solid waste diversion requirements through source reduction, recycling and composting activities for cities and counties in California.

Assembly Bill 341

On October 5, 2011 AB 341 was approved by Governor Jerry Brown and declared the policy goal of the state that not less than 75% of solid waste generated would be source-reduced, recycled, or composted

by the year 2020. AB 341 required a report to be prepared by January 1, 2014 that provides strategies to achieve the goal and would include other specifications and recommendations.

Local

San Diego Regional Water Quality Control Board

The San Diego Water Board regulates water quality in the County and portions of Orange and Riverside Counties pursuant to the CWA. The San Diego Water Board sets standards, determines regulatory compliance, issues discharge permits and enforces other actions related to ensuring the water quality of the region. The San Luis Rey Plant, La Salinas Treatment Plan and Mission Basin Groundwater Purification Facility in the City operate in compliance with the NPDES Permit No. CA0107433 adopted by the San Diego Water Board through Order No. R9-2011-0016, as amended by Order Nos. R9-2012-0042 and R9-2012-0060.

City of Oceanside General Plan

Community Facilities Element

The General Plan's Community Facilities Element provides direction for the provision of adequate public facilities necessary to serve the existing and future developed areas of the City in a coordinated and cost effective manner. The following policies are relevant to the Project:

> **Water and Sewer Systems**
>
> **Policy 5.3:** Within the San Luis Rey Wastewater Service Area, the City shall construct adequate sewer mains and lift stations as required to meet existing needs and future growth requirements and will increase the capacity of the Oceanside outfall line by constructing a parallel line to serve future needs of the community.
>
> **Policy 5.4:** New development shall be responsible for on-site wastewater facility improvements required by that development.
>
> **Policy 5.10:** New development in unserved areas shall be approved only with assurance that required supply, storage facilities, and distribution systems shall be provided prior to occupancy.
>
> **Policy 5.11:** New development shall be responsible for on-site water facilities improvements required by that development.

Hazardous Waste Management Element

The Hazardous Waste Management Element provides overall policy guidance for safe and effective managing of hazardous waste within the City. Items within this element's scope include hazardous waste facilities and waste reduction and elimination. This element is consistent with the City's General Plan and other elements.

City of Oceanside Climate Action Plan

The City adopted the CAP in May of 2019. The purpose of the CAP is to align the City with state efforts to reduce greenhouse gas emissions while balancing a variety of community interests such as quality of life, economic development and social equity. The CAP contains measures and strategies to reduce greenhouse gas emissions associated with the provision of drinking water, transportation and treatment of wastewater, and disposal of solid waste. Relevant measures and strategies for the Project include:

Measure W1: Implementation of the Water Conservation Master Plan

- Require plan reviews for water use efficiency for all new business customers
- City will install Automated Meter Infrastructure (AMI) meters and provide a means of viewing daily consumption inside their home/business either through the internet or separate device. The AMI system would, on demand, indicate to the customer and utility where and how their water is used, facilitating water use reduction and prompt leak identification. Also require that larger or irrigation customers install such AMI meters.
- Offer commercial, industrial, and institutional rebates to replace inefficient equipment.
- Top Water Users Program: Top water customers from each category would be offered a professional water survey that would evaluate ways for each to save water and money. The surveys would be for high-volume users such as hotels, restaurants, stores and schools.

Measure W2: Non-Residential Water Use Benchmarking and Disclosure

- Promote use of building water consumption benchmarking using tools such as Portfolio Manager.
- Promote disclosure of building water consumption and water consumption benchmark scores at the time-of-sale of non-residential real estate.

Measure SW1: Implementation of Zero Waste Strategic Resource Plan

- Update the City's recycling ordinance and provide technical assistance to businesses to comply with the AB 341 State mandatory commercial recycling program
- Develop a program for business and institution waste reduction services

Urban Water Management Plan

As required by California Water Code Sections 10617 and 10620, the City, as an urban water supplier, must prepare and adopt an Urban Water Management Plan (UWMP) every five (5) years. The City adopted its 2015 UWMP in June 2016. The UWMP describes current water system services, facilities, supplies and demands, and includes an analysis of the City's water supply and demand planning within its service area for variable water years (average, single-dry, and multiple-dry years) over a 20-year horizon. Based on the 2015 UWMP the City's supply and reliability analysis show that with implementation of additional planned supplies and water conservation measures, supplies would meet demand under all water years through 2040.

Zero Waste Strategic Resource Management Plan

In response to the adoption of Resolution No. 10-R0636-1 by the City Council on August 25, 2010, to divert 75 percent of waste by 2020, the City developed the Zero Waste Strategic Resource Management Plan (Zero Waste Plan). The Zero Waste Plan identifies and recommends strategies for the City to

achieve this goal. At the time of the preparation of the Zero Waste Plan, the City had already reached 67 percent waste diversion. The private companies contracted to provide solid waste and recycling services such as Waste Management, Inc., Agri Service Inc., and Moodys are also working to support the City in achieving this goal.

City of Oceanside Municipal Code

Chapter 13 of the OMC provides the Solid Waste and Recycling Code. The Solid Waste and Recycling Code provides definitions, administration requirements, enforcement and regulations for storage, disposal, and collection of solid waste and provision of recycling facilities and separation of recyclables within the City.

4.20.3 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, in determining the significance of impacts associated with the Project, it must be considered whether the Project would:

a. Require or result in the relocation or construction of new or expanded water, or wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
b. Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years;
c. Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments;
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals;
e. Comply with federal, state, and local management and reduction statues and regulations related to solid waste.

4.20.4 Project Impact Analysis

Would the Project:

a. Require or result in the relocation or construction of new or expanded water, or wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Water

The Project Site would be served by the City of Oceanside Water Utilities Department. Currently, no water service is provided onsite; however, water is supplied to adjacent developments in the surrounding area. There is an existing 10-inch water line running along Plaza Drive west of the Project Site, an 8-inch water line running along the shopping center on the western boundary of the Project Site, and a 12-inch water line running along Thunder Drive. As part of the proposed off-site improvements, the Project would connect to existing water infrastructure in the vicinity and the construction of onsite and off-site water infrastructure would be required to serve the Project.

A new 2-inch domestic water service line would run east to west along the middle of the southern parcel of the Project Site. The Project would also include a 1-inch irrigation meter and 1-inch backflow on the south side of Plaza Drive, west of the test drive-only driveway and security gate. A ¾-inch irrigation meter and ¾-inch backflow would be provided on the north side of Plaza Drive east of the driveway and security gate. These onsite water infrastructure improvements are considered within the Project footprint, as described in the Project Description (Section 3.0 of this EIR). These onsite water infrastructure improvements do not result in any new Project-footprint related impacts beyond those already disclosed in this document.

Off-site Project improvements would include the extension of the existing 10-inch water line west of the Project Site and would provide a 12-inch PVC water main along Plaza Drive that would run across the Project frontage and the DMV and would be looped to Thunder Drive. The construction related activities to install this infrastructure was included in the air quality, GHG and noise analysis of this EIR (see Section 4.4, Section 4.8 and Section 4.14) and construction related air quality and GHG emissions are less than significant. Similarly, construction related noise impacts are less than significant. These off-site improvements would be located within already disturbed/developed areas and would not result in impacts to sensitive resources. Impacts related to construction of these off-site water improvements are **less than significant.**

Further, as part of the entitlement application review process, the City of Oceanside Water Utilities Department has reviewed the Project and has provided a letter stating that: "As part of this [entitlement] process, any off-site improvements to the City's water and sewer systems that are necessary to accommodate the proposed Project must be identified and included as part of the development. Once the entitlement process is complete, the flow and capacity allowances will be set aside for the approved project." This letter is provided in its entirety as **Appendix S.** The Project would comply with all Water Utilities Department conditions and would incorporate all requirements into the Project design. General conditions include the following:

1. The landowner must enter into an agreement with the City providing for landowner's assignment of rights to divert and extract local groundwater supplies;
2. The developer will be responsible for developing all water and sewer utilities necessary to develop the property;
3. Water and wastewater construction conformance with the recent edition of the *Water, Sewer, and Recycled Water Design and Construction Manual;*
4. The property owner shall maintain private water and wastewater utilities located on private property;
5. Water services and sewer laterals constructed in existing right-of-way are to be constructed by an approved and licensed contractor at developer's expense;
6. Provide separate irrigation water meter with reduced pressure principle backflow device for common area landscaping;
7. Buildings requiring automatic sprinkler system for fire protection shall have a dedicated fire service connection to a public water main with a double check detector backflow assembly; and
8. Car wash facility shall recycle 90% of the water utilized in the washing process.

Wastewater Treatment

The City Wastewater Division collects, treats and disposes of all of the City's sewage. The Project would be served by the San Luis Rey Wastewater Treatment Plant. The San Luis Rey Waste Water Treatment Plant has a design capacity of 13.5 million gallons per day (mgd) according to the City's Biosolids Annual

Report (Oceanside 2016), and has an average flow of 8.7 mgd. An existing 12-inch VCP and 21-inch VCP sewer line runs from east to west through the southern portion of the Project Site. This line is fed by a 10-inch VCP line which runs from north to south along Thunder Drive, and it connects to an 8-inch VCP line running southwest along the eastern boundary of the shopping center west of the Project Site.

The Project would connect to existing sewer infrastructure in the vicinity. The Project would realign the existing sewer mains and would construct a new 12-inch and new 21-inch PVC sewer main that would run along the southern portion of the site, south of the sales and staging and customer and employee parking lots, and would connect to existing sewer to the west and to the east in Thunder Drive. The existing 12-inch and 21-inch sewer mains located directly north of the proposed sewer mains would be abandoned. An existing sewer easement for the City runs east to west along the southern portion of the Project Site is to be relocated in line with the proposed sewer realignment. The existing sewer easement that runs north to south on the eastern portion of the site is to be vacated.

The sewer realignment would encroach approximately six (6) feet into a small portion of the 50-foot planning buffer. This is a temporary impact and was analyzed in Chapter 4.5 *Biological Resources.* As detailed in Section 4.5.4, temporary direct impacts will occur to approximately 0.008 acre (334 SF) of disturbed habitat within the planning buffer. These impacts are considered temporary as they would recover on their own within one growing season. Additionally, because these impacts are minimal and occur to disturbed habitat, and because they are located at least 94 feet from the riparian habitat, no direct significant impacts will occur.

As part of the Project review process, the City of Oceanside Wastewater Division of the Water Utilities Department reviewed the Project and has provided a letter stating that: “As part of this [entitlement] process, any off-site improvements to the City’s water and sewer systems that are necessary to accommodate the proposed project must be identified and included as part of the development. Once the entitlement process is complete, the flow and capacity allowances will be set aside for the approved project.” This letter is provided in its entirety as **Appendix S.** The Project would comply with all Wastewater Utilities Department conditions and would incorporate all requirements into the Project design.

Impacts related to the construction or relocation of new or expanded wastewater facilities will be **less than significant.**

Storm Water Drainage

As discussed in Chapter 4.11 *Hydrology and Water Quality,* storm water drainage facilities would be located entirely onsite. The northern parcel would be constructed solely of permeable material and runoff from the southern parcel would be treated via an underground proprietary BMP. The Project would not create or contribute runoff which would exceed the capacity of an existing or planned storm water drainage system.

The construction related activities to install this infrastructure was included in the air quality, GHG and noise analysis of this EIR (see Section 4.4, Section 4.8 and Section 4.14) and construction related air quality and GHG emissions are less than significant. Similarly, construction related noise impacts are less than significant. The environmental effects of installing these facilities have been evaluated within this EIR and these improvements are included within the Project development footprint. These onsite storm water infrastructure improvements are considered within the Project footprint, as described in the

Project Description (Section 3.0 of this EIR). These onsite storm water infrastructure improvements do not result in any new project-footprint related impacts beyond those already disclosed in this document.

Impacts related to the construction or relocation of new or expanded storm water drainage facilities will be **less than significant.**

Gas, Electric Power, and Telecommunication Facilities

The 8-inch fire water supply and gas and water services would run south of the sales and administration building through the customer and employee parking lot. New electrical services and telephone lines would run east to west through the customer and employee parking lot. The construction related activities to install this infrastructure was included in the air quality, GHG and noise analysis of this EIR (see Section 4.4, Section 4.8 and Section 4.14) and construction related air quality and GHG emissions are less than significant. Similarly, constriction related noise impacts are less than significant. The environmental effects of installing these facilities have been evaluated within this EIR and these improvements are included within the Project development footprint. These onsite gas, electric and telecommunications infrastructure improvements are considered within the Project footprint, as described in the Project Description (Section 3.0 of this EIR). These onsite energy and telecommunications infrastructure improvements do not result in any new Project-footprint related impacts beyond those already disclosed in this document.

Impacts related to the construction or relocation of new or expanded gas, electric power, or telecommunication facilities will be **less than significant**.

b. Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?

The Project will result in an increase in water demand through proposed Project activities, such as water use for irrigation, car washing, restroom facilities, fire protection system, and other uses that create a demand for water.

The anticipated water demand for the Project is 200,000 to 300,000 gallons per year based on the water usage of existing CarMax facilities in the region of similar size. A Water Supply Assessment pursuant to SB 610 is not required for the Project as it does not propose the construction of 500 residential units, or development with an equivalent water demand.

The City Water Utilities Department currently serves the Project area with potable water, and would serve the Project. Citywide water supply planning is completed through the 2015 UWMP. The UWMP includes an analysis of the City's water supply and demand planning within its service area for variable water years (average, single-dry, and multiple-dry years) over a 20-year horizon. The UWMP considered the City's planning documents (e.g., General Plan), regional planning documents, and the SANDAG Series 13 Growth Forecast in determining future water demand. Water demand assumptions for the Project Site in the 2015 UWMP would have been based on a commercial land use, since that was the land use designation at the time the UWMP was prepared. The Project Site still has a commercial land use designation and no change in land use or zoning is required as part of the Project.

The 2015 UWMP, Table 7-2, indicates that in an average year, a single-dry year, and in Year 1 and Year 2 of a multiple-dry year scenario, there are available water supplies. In Year 3 of a multiple-dry year scenario supplies could fall short of demand but that the difference could be made up through

extraordinary conservation or conversion to recycled water and the demand could ultimately be met (Table 7-6 of the 2015 UWMP).

The Project would be in compliance with the Zoning Code and General Plan designations and therefore water demand for the Project has been planned for in the City and regional water supply documents that are based on the buildout of the City, as discussed above. The City has also developed the Oceanside Water Conservation Master Plan that further ensures water availability to the City during drought years. Additionally, the Project would include water conserving landscaping along with efficient irrigation design consistent with the City's water planning efforts.

There would be sufficient water supplies available from the City Water Utilities Department to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Impacts will be **less than significant**.

c. Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

Based on the sewer generation rates provided in the City Water, Sewer, and Reclaimed Water Design & Construction Manual, commercial land uses would generate 1,000 gpd/acre of sewer. Using this generation rate, the Project would be anticipated to generate approximately 11,700 gpd of wastewater.

The City's 2015 Sewer Master Plan (SMP) is utilized to help the City plan, develop, and finance wastewater collection facilities for existing and planned future growth. It acts as a strategic planning guide for upgrading, improving, and expanding the City's wastewater collection system. The 2015 SMP considers existing flow conditions as well as future growth projected by a number of specific near-term development projects and SANDAG's long-term (2050) regional growth projections. Wastewater demand assumptions for the Project Site in the SMP would have been based on a commercial land use, since that was the land use designation at the time the SMP was prepared. The Project Site still has a commercial land use designation, and no change in the land use or zoning is required as part of the Project.

Two (2) future flow scenarios were developed to analyze system capacity as part of the SMP: a near-term scenario (2020) and a long-term scenario (2050). Near-term flow projection through year 2020 assumes that all planned and currently being constructed development projects (during the preparation of the SMP) have been built. The long-term flow projection through year 2050 assumes wastewater flow increases according to SANDAG's 2011-2050 population and employment projections. The average dry weather flows (ADWF) and peak wet weather flows (PWWF) in near-term and long-term scenarios were used to determine peaking factors at the San Luis Rey Wastewater Treatment Plan and La Salina Wastewater Treatment Plan. The City's sewer models were then updated to perform an evaluation of the wastewater collection system.

The 2015 SMP includes evaluation of the City's wastewater collection system facilities and identified current and future system deficiencies. As provided in the SMP, wastewater collection system improvement projects are recommended and included in the City's Capital Improvement Plan (CIP). The construction of these improvements are not part of, or a result of, the Project and would require separate environmental analysis for determining environmental effects.

The Project is in compliance with the General Plan and Zoning Ordinance and therefore the Project's wastewater demand has been planned for in the City's wastewater system plans which are based on buildout of the City, as discussed above. Impacts related to adequate wastewater treatment capacity would be **less than significant**.

d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Waste Management, Inc. would provide solid waste disposal services to the Project Site as with the rest of the City. Solid waste collected from the City is disposed of at the El Sobrante Landfill located in Corona, California. The El Sobrante Landfill was projected to have a remaining capacity of 134,549,993 tons at the end of 2018. At the current rate this equates to approximately 40 years of site life remaining.

Construction waste would be generated onsite throughout the construction phase of the Project and would include items such as dredging materials, tree stumps, rubble, dirt, building materials scrap and packaging materials. In accordance with the City's adoption of the CALGreen Building Standards Code, a Waste Management Plan would be submitted to the City prior to the issuance of building permits. This Waste Management Plan would provide detail of how non-hazardous construction waste generated during the course of the Project would be recycled or salvaged for re-use at a minimum rate of 65 %.

CalRecycle procures commercial sector waste generation rates for different business types from select city and county planning documents. The waste generation rate provided for auto dealer and service stations is 0.9 lbs./100SF/per day. The Project would cover a total of 11,447 SF. Operational solid waste generation estimates are provided in **Table 4.20-1**.

Table 4.20-1
Project Waste Generation

Activity	Type	Waste Generation Rate	Total Square Feet	Waste Generation	
				Pounds per day	Pounds per year
Operational	Commercial/Auto-Dealer	0.9 lbs/100 SF/day	11,447	103	37,603
Source: CalRecycle; REC, 2020					

The Project is estimated to generate a total of 37,603 pounds of solid waste annually. This estimate, however, does not account for landfill diversion that would result from recycling and waste reduction activities. Given the remaining lifespan of the El Sobrante Landfill and the Project's waste generation, the landfill would have sufficient permitted capacity remaining to serve the Project. Additionally, the Project would participate in the City's recycling programs which would further reduce solid waste being sent to the landfill. The Project would provide three (3) separate trash enclosures each properly labeled for solid waste, recyclable waste and organic waste as required by the City. The trash enclosures would contain a metal roof and would be placed behind corrugated metal panel gates.

The City Waste Plan indicates the City's goal for achieving a 75% diversion/ recycling rate by 2020. This plan provides a program for expanded commercial composting along with requirements for compost and recycling bins. The Project would comply with these measures in accordance with the Zero Waste Plan.

The Project is not expected to generate solid waste in excess of the capacity of local infrastructure or state or local standards, nor is it expected to impair the attainment of solid waste reduction goals, and impacts will **be less than significant**.

e. Comply with federal, state, and local management and reduction statues and regulations related to solid waste?

The Project would generate solid waste both from construction and operation. As stated above, the Project would provide three (3) separate trash enclosures each properly labeled for solid waste, recyclable waste and organic waste as required by the City. In accordance with the City's adoption of the CALGreen Building Standards Code, a Waste Management Plan would be submitted to the City prior to the issuance of building permits. This Waste Management Plan would provide detail of how non-hazardous construction waste generated during the course of the Project would be recycled or salvaged for re-use at a minimum rate of 65%.

Compliance with the City waste requirements would ensure compliance with all federal, state and local management and reduction statutes and regulations for solid waste, and impacts will be **less than significant**.

4.20.5 Mitigation Implementation and Monitoring

No significant impacts to utilities and service systems have been identified and therefore no mitigation measures are required.

4.20.6 Level of Significance After Mitigation

Project impacts to utilities and service systems will be less than significant.

Chapter 4.21 WILDFIRE

4.21.1 Environmental Setting

The threat of brushfire is endemic to the Southern California coastal area. The County has experienced many major fires in recent history, with some of the most notable and destructive occurring in 2003 (Cedar Fire) and 2007 (Harris and Witch Creek Fires). CAL FIRE, the County, and local fire districts can provide guidance on preparing structures for wildfire including proper landscaping practices, construction standards and techniques, adequate emergency water supply needs and access.

The City is vulnerable to many types of disasters including wildfires. The probability of fire occurring is higher than for any other natural hazard. Responses to brushfires in the City constitutes nearly one third of all fire calls. The City topography, consisting of a semi-arid climate and wildland urban interface, when fueled by shrub overgrowth, occasional Santa Ana winds, and high temperatures, creates an ever-present threat of wildland fire. Extreme weather conditions such as high temperature, low humidity, and/or winds of extraordinary force may cause an ordinary fire to expand into one of massive proportions. There are three (3) primary factors that contribute to the brushfire threat in this area – vegetation, climate and development patterns. The chaparral, sage and other native vegetation of Southern California is dry and resinous, making it very combustible, especially during the hot summer months. The normal "fire season" is April through November when strong, hot winds of the Santa Ana variety compound the problem and can spread a minor fire into a major conflagration in minutes. The current practice of developing "canyon view" subdivisions introduces the potential for loss of homes and lives into the natural hazard.

Brush fire hazards in the City exist to some degree throughout the City; however, fire hazards are "high" in areas in proximity to residential development. The hazard is rated "extreme" in those areas where the vegetation changes from grass and sage to the denser and more flammable chaparral. An even higher risk occurs where residential development is scattered on large lots, where more of the natural vegetation is preserved, than in the standard single-family development. The Project Site is not located in an area of "high" or "extreme" fire hazard as depicted in Figure PS-5 in the General Plan Public Safety Element.

The Project Site is not located in a SRA recognized by CAL FIRE.

4.21.2 Regulatory Setting

Federal

International Fire Code

The International Fire Code (IFC) was published by the International Code Council and is a comprehensive fire code that establishes minimum regulations for fire prevention and fire protection systems using prescriptive and performance-related provisions. It is a model code and forms the basis for the current California Fire Code (California Code of Regulations, Title 24, Part 9). The IFC is the underlying nationally recognized code that sets standards and requirements to safeguard against the threat fires may pose to public health, safety, and the environment.

National Fire Protection Association Standards

The National Fire Protection Association (NFPA) Standards are a product of the NFPA, a world-wide organization of fire industry, fire agencies, fire professionals and concerned individuals. These model standards are annually compiled from the standards, recommended practices, manuals, guides, and model laws that are prepared by the individual technical committees of the NFPA. The standards are typically revised on a three-year cycle. The published standards are voted on by the members of the NFPA. The individual standards can be adopted by jurisdictions or modified and adopted as that jurisdiction's ordinance.

State

California Code of Regulations Title 24, Part 2 and Part 9

The CCR, Title 24, Part 2 provides the CBC, which contains general construction building standards including fire, life safety, and field inspection provisions. Part 9 is the California Fire Code, which includes fire safety-related building standards.

California Code of Regulations Title 14

The CCR, Title 14, Subchapter 2 (SRA Fire Safe Regulations), contains regulations that establish minimum wildfire protection standards in conjunction with building construction and development in a SRA.

California Code of Regulations Title 19

The CCR, Title 19, Division 1 (State Fire Marshal) contains regulations that have been developed by the State Fire Marshal for the purpose of establishing additional fire protection for group occupancies, such as places of assembly, schools, high rise buildings, hospitals and organized camps.

Local

San Diego County Operational Area Emergency Operations Plan

The County Emergency Operation Plan is a comprehensive emergency management system that provides for a planned response to disaster situations associated with natural disasters, technological incidents and nuclear defense operations. The plan includes operational concepts relating to various emergency situations, identifies components of the emergency management organization and describes the overall responsibilities for protecting life and property and assuring the overall well-being of the population. The plan also identifies the sources of outside support that might be provided (through mutual aid and specific statutory authorities) by other jurisdictions, state and federal agencies, and the private sector.

City of Oceanside Emergency Plan

On December 12, 1973, the City adopted an Emergency Plan that forms the basis for the conduct and coordination of emergency operations within the City. The plan is designed to permit the City to respond to earthquakes, tsunamis, flood, fire, accident, civil disturbance, storm, pollution and epidemic. The Emergency plan was updated in 2016 and serves as the current plan.

City of Oceanside General Plan

Land Use Element

The General Plan Land Use Element identifies the following objectives and policies related to wildfires:

1.153 Fire Hazards

Policies

A. The City shall maintain the necessary equipment, personnel and water supply levels required for the current class 4 insurance rating of the entire City.

B. Places of public assembly shall be designed with adequate, well-marked emergency exits, and have public address systems which would not be rendered inoperable because of fire.

Public Safety Element

The General Plan Public Safety Element identifies and addresses features or characteristics existing in and near the City that represent a potential hazard to the community's citizens, sites and structures, public facilities and infrastructure. The Safety Element establishes policies to minimize the danger to residents, workers and visitors. The following are goals and objectives of the Public Safety Element related to wildfire:

Fire Hazard

Goal: Take the action necessary to ensure an acceptable level of public safety for prevention and reduction of loss of life and personal property of the citizens of Oceanside.

Objectives

1. Maintain the necessary equipment, personnel and water supply levels required for the current class 5 insurance rating of the entire City.

2. Continue an active and effective fire prevention program through public education, code enforcement, and inspection service.

Community Facilities Element

The Communities Facilities Element of the General Plan discusses fire department facilities and its objectives to protect the health, safety, and welfare of the City's residents and property through the provision of adequate fire protection and emergency services and to prepare for, respond to, and aid in the recovery from emergencies related to fire and natural disasters such as wildfires. The following policies are provided in the Community Facilities Element:

Fire Department Facilities

Policies:

3.3 The City of Oceanside shall cooperate with the cities and fire protection agencies in North San Diego County in planning, developing, and maintaining a proposed Regional Training Center and Fire Communication Center.

3.4 Automatic and Mutual Aid Agreements with the cities of Carlsbad and Vista shall be maintained, if possible, in order to provide adequate fire station service area coverage and response times to all portions of the City of Oceanside.

3.11 Development proposals within designated high fire hazard areas shall include plans for mitigation of potential grass and brush fires. These plans shall address the need for life and safety automatic fire sprinkler systems, water availability, secondary emergency access routes, construction requirements, and landscaping around structures.

3.12 The City shall participate in the California Disaster and Civil Defense Master Mutual Aid Agreement, the San Diego County Mutual Aid Agreement and Operational Plan for Fire Departments, and the Unified San Diego County Emergency Services Agreement. In addition to these mutual aid agreements, the City shall continue to pursue Automatic Aid Agreements with adjacent jurisdictions, when such agreements provide substantially equal benefits to each jurisdiction involved.

4.21.3 Thresholds of Significance

Per Appendix G of the CEQA Guidelines, impacts would be considered significant if the Project is located in or near SRAs or lands classified as very high fire hazard severity zones, and the Project would:

a. Substantially impair an adopted emergency response plan or emergency evacuation plan;
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment;
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

4.21.4 Project Impact Analysis

If located in or near SRA or lands classified as very high fire hazard severity zones, would the Project:

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

The Project Site is not located in a very high fire hazard severity zone within the Oceanside Local Responsibility Area as mapped by CAL FIRE, and is not located within a SRA where CAL FIRE is the primary emergency response agency responsible for fire suppression and prevention.

The additional sales display area on the northern parcel would be accessed from Plaza Drive and would be developed as part of Phase II. The southern parcel would be accessed from Thunder Drive at two (2) main access points. Access off of Plaza Drive from the southern parcel would be for test drives only and would not be accessible to the public. A Knox Box would be provided at the security gate and control island on the northern parcel sales display area as well as at the security gate and control island located at the test drive-only driveway.

The Project would provide all required setbacks, fire truck access, fire hydrants, address numbers, sprinklers and an OPTICOM system on all gates in accordance with the OFD requirements.

As provided in the Public Safety Element of the General Plan (Figure PS-11), SR-78 to the north, College Boulevard located to the west of the Project Site and Lake Boulevard to the south are the nearest evacuation routes. El Camino High School would be the nearest refuge center as provided in the Public Safety Element of the General Plan.

With compliance of all Fire Department requirements, the Project would not impair an adopted emergency response plan or emergency evacuation plan, and impacts are **less than significant**.

b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The Project Site is relatively flat and slopes gently south toward Buena Vista Creek. Elevations range from approximately 180 to 220 feet amsl. The Project is located in a developed area and is surrounded by commercial uses to the west, medium density residential uses and a DMV facility to the east and SR-78 to the north. Located to the south are Buena Vista Creek, high density and residential estate uses including a senior living facility, commercial uses and public/semipublic uses including an OFD station.

The Project Site is not located in a very high fire hazard severity zone within the Oceanside Local Responsibility Area as mapped by CAL FIRE, nor is the site located within a SRA where CAL FIRE is the primary emergency response agency responsible for fire suppression and prevention. Additionally, the Project Site is not located in an area of “high” or “extreme” fire hazard as depicted in Figure PS-5 in the City of Oceanside General Plan Public Safety Element.

Therefore, the Project would not exacerbate wildfire risks due to slope, prevailing winds and other factors and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire, and impacts are **less than significant**.

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The Project proposes to construct a pre-owned automobile dealership including a sales and administration building, service building, non-public carwash, associated access drives, landscaped areas, presentation area, staging area, sales display area and a customer and employee parking lot. An additional sales display area would be provided on the northern parcel with a security gate and control island. The Project would provide all required setbacks, fire truck access, fire hydrants, address numbers, sprinklers and an OPTICOM system on all gates in accordance with the OFD requirements.

For water service the Project would construct a 2-inch domestic water service line and an 8-inch fire supply and gas and water services would run south of the sales and service buildings through the customer and employee parking lot. Additional off-site improvements would be required by the City and would include the extension of the 12-inch PVC water main along Plaza Drive across the Project frontage and the DMV to be looped to Thunder Drive. Full width improvements on Plaza Drive would construct an 80-foot curb to curb width across the Project frontage. This would include curb, gutter and sidewalk on both sides of Plaza Drive.

No installation or maintenance of associated infrastructure such as roads, fuel breaks or emergency water sources, power lines or other utilities would be required for the Project that would exacerbate fire risk or that would result in temporary or ongoing impacts to the environment, and impacts are **less than significant**.

d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

As stated in the Geotechnical Evaluation prepared by EEI (**Appendix H**), the site and surrounding areas are relatively flat and the potential for landslides to occur onsite is negligible. FEMA Flood Insurance Rate Map (FIRM) panel 06073C0766G was also reviewed to determine if the site was located within an area designated as a Flood Hazard Zone. The southern portion of the Project Site lies within Zone X of the FEMA 500-year floodplain and Zone AE of the 100-year floodplain. As stated in the Drainage Study prepared by REC Consultants, Inc. (**Appendix J**) the Project would not alter drainage patterns onsite or increase net runoff after development.

Therefore, the Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability or drainage changes, and impacts are **less than significant**.

4.21.5 Mitigation Implementation and Monitoring

No significant impacts to wildfire have been identified and therefore, no mitigation measures are required.

4.21.6 Level of Significance After Mitigation

Impacts related to wildfire from the implementation of the Project will be less than significant.

Chapter 5.0 CUMULATIVE IMPACTS

5.1 Introduction

CEQA requires an EIR to analyze cumulative impacts. The purpose of this section of the EIR is to explain the methodology for the cumulative analyses and present the potential cumulative effects of the Project.

Section 15355 of the CEQA Guidelines defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Section 15130 of the CEQA Guidelines provides guidance for analyzing significant cumulative impacts in an EIR. The discussion of cumulative impacts "need not provide as great detail as is provided for the effects attributable to the Project alone," but instead is to "be guided by standards of practicality and reasonableness" (Guidelines Section 15130(b)). The discussion should also focus only on significant effects resulting from the Project's incremental effects and the effects of other projects. According to Section 15130(a)(1), "an EIR should not discuss impacts which do not result in part from the Project evaluated in the EIR."

Cumulative impacts can result from the combined effect of past, present, and future projects located in proximity to the Project under review. Therefore, it is important for a cumulative impacts analysis to be viewed over time and in conjunction with other related past, present, and reasonably foreseeable future developments whose impacts might compound or interrelate with those of the Project under review.

5.2 Methodology

According to CEQA Guidelines Section 15130(b)(1) a cumulative impact analysis may be conducted and presented by either of two methods:

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

b) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

The cumulative "List Method" has been utilized in this cumulative analysis which consists of an analysis of related projects in the vicinity that are currently proposed or approved. The list of cumulative projects and the cumulative analysis is provided in the following sections.

5.3 Cumulative Projects

Based on the information provided by the City, City of Vista and City of Carlsbad, a list of cumulative projects under consideration for this analysis is presented in **Table 5.3-1** below. **Figure 4** displays the cumulative project locations.

Table 5.3-1
Cumulative Projects

#	Project Name	Location	Description	Status
City of Oceanside				
1	Arroyo Verde Commercial Center	North of Oceanside Boulevard and east of Rancho Del Oro Road	A 27,200-SF commercial retail center	Under Construction
2	Coastal Academy	South of Oceanside Boulevard between El Camino Real and Rancho Del Oro Road	Development of a Junior and Senior High School Campus on a 9.68-acre site formerly occupied by the Evergreen Nursery	Under Review
3	Dolphin Carwash	East of El Camino Real and north of Via Las Rosas	Development plan for carwash and smog check facility on a 1.2-acre site	Under Review
4	El Corazon Mixed Use	Oceanside Boulevard between El Camino Real and Rancho Del Oro Road	Development Plan for 268 residential units and 4,756 SF of commercial space.	Under Review
5	El Corazon Specific Plan	North of Oceanside Boulevard between El Camino Real and Rancho Del Oro Road	Subdivision of the property into four lots including a Zone Amendment and Specific Plan Amendment.	Approved
6	Arena Califino at El Corazon	North of Oceanside Boulevard between El Camino Real and Rancho Del Oro Road	A 170,000 SF multi-purpose sports arena, event facility within the El Corazon Specific Plan Area.	Under Review
7	Emerald Ridge	Southeast corner of Sky Haven Lane and Sunset Drive within the City of Oceanside; Emerald Drive and Sunset Drive located within the City of Vista	A 48-unit condominium project on a 7.78-acre site. The project would include nine townhome buildings, open space recreation areas and a sewer lift station. The project would install a storm drain in Sunset Drive/Emerald Drive within the City of Vista jurisdiction.	Approved
8	Home 2 Suites by Hilton	Rancho Del Oro Drive and El Corazon Drive	Development Plan for a four story, 137-unit hotel facility	Approved
9	La Paloma Nursing Facility Expansion	East of Thunder Drive and south of Waring Road	A 1,780-SF addition to the La Paloma Nursing Facility	Approved
10	Left Coast LLC	Southwest corner of Oceanside Boulevard and Ord Way	A Conditional Use Permit for the operation of a medical cannabis manufacturing facility	Approved
11	Lot 15 Office Building	North of Ocean Ranch Boulevard off of Maritime Way	Development Plan for a 99,800-SFoffice building with site improvements on a 4.22-acre site	Approved
12	Pacific Coast Business Park Phase II	West of College Boulevard, south of Old Grove Road and east of Avenida Del Oro	Construction of three industrial buildings totaling 278,127 SF on 17.57 acres	Under Construction
13	Seagate Shell Service Station	North of Oceanside Boulevard and east of Rancho Del Oro Road	A proposed gas station with convenience store, manager's office and carwash	Under Review

#	Project Name	Location	Description	Status
14	Tri-City Medical Office Building and Parking Structure	North of Vista Way and west of Thunder Drive	A three-story parking structure within the existing Tri-City Hospital property. The project includes a 60,000 SF medical office building. As provided in the Local Transportation Study (**Appendix O)**, the building construction is completed however; the building was not occupied during the traffic data collection period. Therefore, it is included as a cumulative project.	Approved
15	Pacific Ridge at Old Grove	Northwest corner of College Boulevard and Old Grove Road	Development of 320 residential units on a 28.2-acre site.	Under Construction
City of Vista				
16	Assi Retail	North of West Drive West of Emerald Drive	Site Development Plan for a 9,790-SF commercial building	Under Review
17	Cedar Road Townhomes	206 Cedar Road	35 attached residential condominiums on a 2-acre site	Under Review
18	Classic Chariots Service Center	129 Grapevine Road	14,522-SF automobile service center and expansion of existing used car dealership on a 1.45-acre site.	Approved
19	Hacienda Retail	Southwest corner of Hacienda Drive and La Tortuga Drive	Site Development Plan for a 3,200-SF retail building	Under Construction
20	Laurel Creek Condominiums	North of Date Street, east of Grapevine Road, and west of Durian Street	68 detached condominium units on 9.2 acres	Under Construction
21	Olive Avenue Annexation	1435 Olive Avenue	Annexation and Tentative Subdivision Map for 15 lots	Approved
22	Shell Gas Station Renovations	145 N. Emerald Drive	Building additions and renovations and for new services (smog check and car detail)	Under Review
23	Vista Emerald	729 N Emerald Road	27 detached single-family residences on 6.89 acres	Under Construction
City of Carlsbad				
24	Marja Acres	4901 El Camino real	State Density Bonus Residential for the development of 248 townhomes, 46 affordable units for seniors, and 10,000 SF of retail and restaurants with community recreation areas on 20.65 acres	Under Review
25	Quarry Creek Master Plan	South of Haymar Drive and west of College Boulevard	A master plan community with up 656 homes	Under Construction
26	The Shops at Robertson Ranch	El Camino Real and Cannon Road	Includes six retail buildings subdivided into five lots and would include banks, restaurants a private educational facility/ day care	Under Review

#	Project Name	Location	Description	Status
*Projects designated as Approved are approved through either the discretionary or building permit process.				

5.4 Cumulative Impact Analysis

The following section presents a discussion of the effects that the Project may have on each environmental category of concern.

5.4.1 Aesthetics

Existing development and infrastructure surrounding the Project Site, including SR-78, the Tri-City Crossroads shopping center to the west, the DMV and the residential development to the east have been present in the area for several decades and define the existing visual landscape. Due to existing development and intervening topography, cumulative impacts to aesthetics were determined based on the changes in the immediate vicinity of the Project Site. No other development projects are proposed in the immediate vicinity and therefore construction of the Project is the only anticipated change to the existing visual landscape.

The Project would contribute to the change in visual character of the area. These visual changes would be most evident along major arterials in the area including SR-78, Plaza Drive and Thunder Drive as well as from the existing Tri-City Crossroads shopping center, the DMV, and the residences to the east. However, cumulative development would not represent a substantial degradation in visual quality or substantial impediment to scenic views.

The Project would be constructed in an already urbanized area which consists of intense commercial development and would have similar massing appearance to the existing commercial center. In its present condition, the Project Site does not provide an expansive view of a highly valued landscape or scenic vista nor would it interfere with views of an existing scenic vista. The Project would comply with all development standards including building height, scale, setbacks, landscaping and parking. Further, the Project complies with the zoning and land use designations for the Project Site.

New sources of light and glare would be introduced to the surrounding area by the Project. The cumulative projects are also anticipated to contribute new sources of light and glare as projects are constructed. Each cumulative project would be required to address the effects of light and glare on sensitive receptors and provide mitigation as necessary.

As described in Section 4.2 *Aesthetics*, the Project would contain lighting in the proposed parking lot areas and along the site boundary. However, the Project would employ LED lamp technologies in lighting fixtures that would be full cut off with a flat lens, and downcast to reduce light spill onto adjacent properties. Proper shielding of lighting in parking areas would further prevent glare to adjacent properties. Light poles and associated pedestals would not exceed 25 feet per Section 3117 of the Zoning Ordinance and exterior lighting onsite would be reduced after operating hours. Lighting is reduced within the sales display area when the store closes to the public and is further reduced after employees exit the facility to the minimum level that sill allows security cameras to operate. Lighting in the customer and employee parking lot is reduced to the maximum extent possible while maintaining safety for customers and employees to reach their cars safely. All outdoor lighting would comply with the standards of the Zoning Ordinance, Article 30, Section 3024 and Article 31 for parking lot lighting

requirements. The CarMax sign is not illuminated and will not present additional light or glare to the Project area.

The proposed building siding would consist of split face CMU painted in dark earth tones with accents of smooth face CMU in light earth tones. The building would also have an aluminum storefront framing system, windows with blue tinted glazing and an entrance which would be accented by a blue standing seam metal roof. Windows would be tinted with blue tinted glazing which is typically used to reduce glare. All other proposed building materials would not contain highly reflective materials. Existing sources of light and glare in the surrounding area of the Project Site includes cars, streetlights, signs and reflective building materials. Development of the Project would not substantially add to the amount of light and glare present in the area. In addition, the Project and each cumulative project would be required to comply with lighting ordinances and regulations for the specific jurisdiction in which the Project is located in. Therefore, cumulative impacts related to aesthetics are **less than significant**.

5.4.2 Agriculture and Forestry Resources

Cumulative impacts to agriculture and forestry resources would occur if numerous projects within the City were to have significant impacts related to the conversion or loss of farmland, forest land or timberland. No projects listed within **Table 5.3-1** are known to have adverse impacts to agriculture or forestry resources.

A FMMP map was prepared for the Project Site and the site is classified as Urban and Built-Up Land. No prime farmland or unique farmland exist onsite. There are no areas designated as Williamson Act Contract lands located within the Project Site. The Project Site does not contain lands designated as forest land, timberland or timberland zoned Timberland Production as defined in the Public Resources Code Sections, and therefore, the Project would not result in the loss of forest land or the conversion of forest land to non-forest use. No farmland or forest land exists onsite or in the surrounding area and therefore the Project would not result in the conversion of farmland or forest land in the area to non-agricultural or non-forest uses. As the Project Site and the surrounding area do not include nor are adjacent to farmland or forest resources and are zoned for urban uses, in conjunction with other cumulative projects, would not result in significant impacts to agriculture and forestry resources. Cumulative impacts are **less than significant.**

5.4.3 Air Quality

Air pollution is largely a cumulative impact, which is measured cumulatively by the air basin. The Project is located within the SDAB and the SDAB is considered the cumulative air quality study area. All of the cumulative projects provided in **Table 5.3-1** are within the SDAB.

The portion of the SDAB where the Project is located is designated as nonattainment for federal and state O_3, and for state particulate matter (PM_{10} and $PM_{2.5}$). The 2016 RAQS and the SIP have been developed to reduce these emissions. These plans address measures for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality.

As discussed in Section 4.4 *Air Quality,* the Project would have a less than significant air quality impact for short-term construction and long-term operation as the Project will not exceed SDAPCD thresholds

for any pollutant during construction or operation of the Project. Therefore, the Project's cumulative impacts on air quality are **less than significant cumulative impact**.

For the SDAB, the RAQS serves as the long-term regional air quality planning document for the purpose of assessing cumulative operational emissions of the basin to ensure the SDAB continues to make progress toward the NAAQS and the CAAQS attainment status. Cumulative projects located in the San Diego region would have the potential to result in a cumulative impact to air quality if, in combination, they would conflict with or obstruct implementation of the RAQS. Similarly, individual projects that are inconsistent with the regional planning documents upon which the RAQS is based, would have the potential to result in cumulative operational impacts if they represent development and population increases beyond regional projections. The Project has a zoning and land use designation as CC and would be consistent with the growth assumptions in the General Plan and SANDAG's growth projections and would not conflict with the RAQS or SIP. As a result, the Project would not have a cumulatively considerable contribution to regional O_3 concentrations or other criterial pollutant emissions. Cumulative impacts will be **less than significant.**

5.4.4 Biological Resources

Cumulative biological resources impacts consider the potential regional effects of a project and how a project may affect an ecosystem or one of its members beyond the project limits and on a regional scale. The cumulative biological study area consists of the City within the North County MHCP as it represents the regional area with similar habitats and species as the Project Site.

As discussed in Section 4.5.4, the Project would result in potentially significant impacts to sensitive plant species and vegetation communities, jurisdictional resources, *Brodiaea* species, fairy shrimp, coastal California gnatcatcher, least Bell's vireo, other MBTA-covered species and disturbed Diegan coastal sage scrub. The Project would include implementation of mitigation measures MM-BIO-1 through MM-BIO-7 for the provision of pre-construction, construction and post-construction measures, pre-construction sensitive plant surveys including *Brodiaea* species surveys, pre-construction fairy shrimp surveys, pre-construction coastal California gnatcatcher surveys, pre-construction least Bell's vireo surveys, construction outside of avian breeding season (February 1 to September 15), and off-site mitigation of Diegan coastal sage scrub. Implementation of mitigation measures MM-BIO-1 through MM-BIO-7 would reduce impacts to a level below significance.

All cumulative projects within the Project Area and within the City would be subject to conform to existing regulations including the MHCP and Subarea Plan with respect to avoidance, minimization and mitigation of impacts to sensitive biological resources. Therefore, the Project's contribution to cumulative impacts to biological resources will be **less than significant.**

5.4.5 Cultural Resources

Historic Resources

Considering the historical uses of the Project Site are limited to local relevance and do not rise to the regional level, the historic resources cumulative study area is limited to the City.

As discussed in Section 4.6 *Cultural Resources,* the General Plan Environmental Resource Management Element identifies several sites as being of particular historical significance within the Oceanside area:

the Mission San Luis Rey de Francia and the Rancho Guajome Adobe. These resources are located over five (5) miles from the Project Site.

No historic resources were found onsite during a survey of the Project area pursuant to CEQA Section 15064.2 or the City's Historical Preservation Ordinance. The SCIC records search identified 26 cultural resources that were previously recorded within the one-mile record search radius. Of these resources, none were recorded within the Project area. A search of the historic addresses on file at the SCIC identified six (6) previously recorded historic addresses within the one-mile record search radius. The Project would not contribute to a cumulative significant historical resources impact. Therefore, the Project will have **no cumulative impact** on historic resources.

Archaeological Resources

Cumulative development may potentially impact archaeological resources as a result of projects within the City and in nearby areas. The cumulative study area would consist of coastal northern portion of the County within the Luiseño and Kumeyaay Native American traditional cultural boundaries.

No significant archaeological resources have been identified within the Project area and there is a low potential for impacts to archaeological resources. However, given the Project Site's close proximity to Buena Vista Creek, there is potential for buried cultural resources within the alluvial deposits along the creek. The Project would implement mitigation measure MM-CUL-1a through MM-CUL-1h requiring a Qualified Archaeologist and Luiseño Native American Monitor to be present during all ground disturbing activities to reduce potentially significant impacts to archaeological resources to below a level of significance.

Identification of cultural resources within the area of potential effects (APE) and mitigation of potentially significant adverse impacts would be handled on a project-by-project basis. It is presumed that all reasonably foreseeable cumulative projects would be required to conform to existing regulations with respect to avoidance, minimization, and mitigation of impacts similar to the Project. Therefore, impacts would be assessed and mitigated pursuant to CEQA, and those projects within the City's jurisdiction would be reviewed by the City's project review and approval process. Consistent with CEQA and other applicable laws, monitoring programs would be required for all cumulative projects with potential to impact archaeological resources. The Project's contribution to the cumulative loss of archaeological resources will be **less than significant.**

Human Remains

Cumulative projects located in the region would have the potential to result in impacts associated with human remains due to grading, excavation or other ground-disturbing activities. The Project requires ground disturbing construction activities that have the potential to disturb human remains. The Project would implement mitigation measure MM-CUL-2 for compliance with Section 7050.5 of the California Health and Safety Code and California Public Resources Code Section 5097.98 for requirements in the event of discovery of human remains including determination for the MLD. Impacts would be reduced to a level below significance with implementation of this mitigation measure. Cumulative projects would also be subject to compliance with the California Health and Safety Code and California Public Resources Codes and cumulative impacts will be **less than significant.**

5.4.6 Energy

Potential cumulative impacts on energy would result if the proposed Project, in combination with past, present, and future projects, would result in the wasteful or inefficient use of energy. This could result from development that would not incorporate sufficient building energy efficiency features, would not achieve building energy efficiency standards, or would result in the unnecessary use of energy during construction and/or operation.

The cumulative projects within the areas serviced by the energy service providers would be applicable to this analysis. All projects listed in **Table 5.3-1** are within the service area of SDG&E and therefore are applicable to this cumulative analysis. Projects that include development of large buildings or other structures that would have the potential to consume energy in an inefficient manner would have the potential to contribute to a cumulative impact.

Construction activities include electricity associated with the conveyance of water that would be used for dust control and electricity to power necessary lighting, electronic equipment, and other construction activities necessitating electrical power. The electricity used for such activities would be less than that required during operation of the Project, would be temporary and would have a minimal contribution to the Project's overall energy consumption. Construction of the Project would not typically involve the consumption of natural gas.

As described in Section 4.7 *Energy,* the Project would not involve wasteful, inefficient, or unnecessary use of energy and would be consistent with the 2019 Title 24 Building Efficiency Standards. The Project would generate approximately 161,790 kilowatt hours of electricity per year (kWh/year). The Project is located in a developed area and would consume electricity similarly to that of the existing commercial developments to the west and northwest. Overall, the Project would not result in excessive electricity usage and would not contribute to a cumulative energy use impact.

It is also noted that cumulative projects would be subject to applicable Title 24 and CALGreen requirements similar to the Project, which includes energy efficiency standards to minimize the wasteful and inefficient use of energy. In consideration of cumulative energy use, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Thus, the Project would not contribute to a cumulative impact to the wasteful or inefficient use of energy. A **less than significant cumulative impact** will occur.

5.4.7 Geology and Soils

Due to the nature of geology and soils, geologic and soils impacts are limited to a localized area. The cumulative geologic study area would be limited to the Project Site and immediately surrounding properties.

The nearest cumulative project is the Tri-City Medical Office Building and Parking Structure located north of the Project across SR-78. The Tri-City Medical Office Building and Parking Structure project is conditioned to comply with the CBC for provisions relating to geotechnical reports, structure design and specific provisions for structures in seismic zones. Compliance with project-specific geotechnical reports and CBC regulations would reduce potential impacts related to geology and soils to a level below significance.

The CarMax Project would result in potentially significant impacts related to seismic ground shaking, erosion, and expansive soils. The Project would implement mitigation measures MM-GEO-1 and MM-HYDRO-1 through MM-HYDRO-3 which would reduce impacts to a level below significance. Therefore, cumulative geology and soil impacts will be **less than significant.**

The Project would result in potentially significant direct impacts to paleontological resources as the site contains highly sensitive Santiago Formation and Project grading would consist of 12,500 CY of cut. Mitigation measures MM-GEO-3a and MM-GEO-3b would reduce potentially significant impacts to paleontological resources to less than significant levels. Cumulative impacts for the Tri-City Medical Office Building and Parking Structure would also be subject to CEQA and CEQA Guidelines and would be required to implement similar mitigation in order to reduce potential impacts related to paleontological resources. The Project contribution to cumulative paleontological impacts will be l**ess than significant**.

5.4.8 Greenhouse Gas Emissions

Due to the global nature of the assessment of GHG and the effects of global climate change, impacts can currently only be analyzed from a cumulative impact context and therefore, this EIR analysis in Chapter 4.9 *Greenhouse Gas Emissions,* includes the assessment of both Project and cumulative impacts. Under CEQA a project would have a significant cumulative impact caused by the combined impact of past, present, and probable future projects if its incremental impact represents a "cumulatively considerable" contribution to such cumulative impacts (CEQA Guidelines Section 15064(h)).

Construction of the Project would result in GHG emissions primarily associated with the use of off-road construction equipment, on-road hauling, vendor trucks and worker vehicle trips. GHG emissions generated during construction of the Project would be short-term in nature and would not represent a long-term source of GHG emissions.

The Project would generate operational GHG emissions from area sources, energy sources, mobile sources and water supply and wastewater treatment, and solid waste. The Project would generate 308.36 MT CO_2E each year during a typical operational year. This includes the combined operational and construction GHG emissions over a 30-year period. The Project would not exceed the City's 900 MT CO_2E screening threshold for projects that must assess project-induced emissions against CAP-aligned thresholds of significance and therefore would be in compliance with the City's CAP. Further, the Project would generate approximately 1.3 MT CO_2E/SP, which is less than the 3.5 MT CO_2E/SP CAP threshold for projects that will be implemented prior to year 2025.The Project would not generate a significant impact to GHG emissions and thus, will have a **less than significant cumulative impact** to GHG emissions.

The Project is consistent with the SANDAG Regional Plan, the General Plan, the CAP and SB 32 and Executive Order S-3-05. Therefore, the Project would not conflict with an applicable plan adopted for the purpose of reducing GHG emissions at regional and state levels, and plan consistency impacts will have a **less than significant cumulative impact**.

5.4.9 Hazards and Hazardous Materials

Cumulative impacts related to hazards and hazardous materials would result from projects that combine to increase exposure to hazards and hazardous materials. Therefore, the geographic context considered for potential cumulative impacts related to hazards and hazardous materials is localized and limited to

the immediate surrounding area. As shown in **Figure 4** the Tri-City Medical Office Building and Parking Structure is the nearest cumulative project and is located north of the Project Site across SR-78.

During construction of the Project there is potential for release of hazardous materials during the routine transport of construction materials to the Project Site. These materials could include gasoline, diesel fuel, used oil, solvents, cleaners, lead paint debris, lubricants, and other petroleum-based products used for the operation and maintenance of construction equipment and vehicles. Handling of these hazardous materials would be temporary in nature, and limited to quantities and concentrations consistent with a typical infill commercial use of this size. BMPs such as proper and clear labeling of chemicals, storage in approved containers, preparation of an accidental release plan, and compliance with hazardous materials handling protocols would be prepared and implemented to ensure safe storage, handling, transport, use and disposal of all hazardous materials during the construction phase of the Project, in compliance with all applicable laws, ordinances, rules, regulations, and permits by the County DEH HMD. Project construction would also adhere to all local standards set forth by the City, as well as state and federal health and safety requirements that are intended to minimize hazardous materials risk to the public, such as CalOSHA requirements, Hazardous Waste Control Act CalARP, and the California Health and Safety Code.

Typical daily operations include deliveries of vehicles, parts and supplies to the Site, vehicle sales and test drives, preparation of vehicles for sales, and vehicle service work which is to be performed inside fully-conditioned buildings equipped with rollup doors. Only minor vehicle servicing will occur including routine maintenance, oil changes, tire rotations, diagnostic and mileage services. The Project would be expected to handle small quantities of commonly used hazardous substances such as cleaning solvents, diesel, gasoline, and oil as part of daily operations. The servicing operations would require the storage, transport, use and disposal of such potentially hazardous materials. Gasoline would be transported to the site by fuel trucks, which is a routine, permitted use. Fuel transportation would be subject to federal tank, placard, and shipment documentation and reporting requirements. The amount of hazardous materials stored and used is expected to be limited and would be required to comply with applicable local, state and federal regulations.

A private aboveground fuel storage tank with a capacity of 4,000 gallons would be located to the south of the sales building with a non-public fuel pump within the secured staging area to fuel inventory vehicles as needed. The aboveground storage tank would have a triple-wall design in order to provide an additional level of containment protection. The County of San Diego DEH HMD is the CUPA responsible for the regulatory inspections of all tank facilities subject to the Aboveground Petroleum Storage Act APSA in the County. In accordance with the APSA program, the Project would prepare and implement a SPCC Plan in order to prevent discharge of petroleum and to allow for the preparedness and proper response of petroleum discharges.

The Project would also be required to submit a Hazardous Material Business Plan to the County DEH HMD that details the onsite use and storage of fuels in order to prevent damage to public health, safety, and the environment. The Hazardous Materials Business Plan also provides emergency response personnel with adequate information to help better prepare and respond to incidents at regulated facilities. The aboveground storage tank and associated facilities would undergo yearly inspections by the County DEH including inspections of any installations, repairs or required updates.

Anticipated chemicals used in the carwash are as follows: presoak Hi pH 366, carwash detergent Blue Coral hi pH3600, Rain X Protectant, and Cold Wax (or similar). These chemicals would be stored in closed containers inside the carwash and used in only the small amounts necessary. Carwash wastewater

would go into an oil water separator, the water then would be reused in the carwash and the separated chemicals and oil would be taken off-site to be treated by a certified waste vendor.

Operational activities including vehicle servicing, carwash, fueling and fuel storage, and other service related activities would comply with all applicable federal, state and local laws and regulations. Furthermore, the Project would obtain all required DEH HMD permits and would prepare a Hazardous Materials Business Plan which would reduce potential impacts related to hazardous materials to a level below significance.

Cumulative projects would be required to remediate any hazardous conditions that could combine with the less than significant hazardous materials impacts of the Project. Specifically, the Tri-City Medical Office Building and Parking Structure would be subject to federal, state, and local regulations that avoid significant impacts related to hazardous materials. Therefore, the Project in conjunction with cumulative projects provided in **Table 5.3-1** will result in a **less than significant cumulative impact** related to hazards and hazardous materials.

As discussed in Section 4.10 *Hazards and Hazardous Mate*rials, the adopted emergency plans applicable to the Project area consist of the Multi-Jurisdictional Hazard Mitigation Plan for San Diego County, the San Diego County Emergency Operations Plan, and the City Emergency Plan. The Project would provide all required setbacks, fire truck access and turnarounds, fire hydrants, address numbers, sprinklers, Knox Box and an OPTICOM system on all gates in accordance with the OFD requirements.

The Project would not impede the implementation of these plans, nor cumulatively combine with other proposed developments in a manner that would affect implementation of these plans. The Project will have a **less than significant** impact related to impairing implementation of or physically interfering with an adopted emergency response plan or emergency evacuation plan.

The Project Site is not located in a SRA as recognized by the Board of Forestry and Fire Protection as areas where CAL FIRE is the primary emergency response agency responsible for fire suppression and prevention. Additionally, the Project Site is not located in an area of “high” or “extreme” fire hazard as depicted in Figure PS-5 in the General Plan Public Safety Element. The Project is located within an urbanized and developed area of the City. The Project Site does not contain and is not adjacent to wildlands where there is risk for wildfire. The Project would not combine with any cumulative projects in a manner that would increase potential wildfire exposure. Therefore, cumulative impacts related to wildfires will be **less than significant.**

5.4.10 Hydrology and Water Quality

As described in Section 4.11 *Hydrology and Water Quality,* the Project Site is located within the Vista Hydrologic Sub-Area 904.22 of the Buena Vista Creek Hydrologic Area (HA) 904.20 of the Carlsbad Hydrologic Unit (HU). The cumulative study area for hydrology and water quality is the Carlsbad HU/Watershed. All of the projects listed in **Table 5.3-1** are located within the Carlsbad Watershed.

Considering the downstream waters are impaired by the listed pollutants and the Project potential pollutants, the potential cumulative pollutants of concern are sediment, nutrients, heavy metals, organic compounds, trash and debris, oxygen demanding substances, oil and grease, bacteria and viruses, and pesticides. During construction and operation of the Project, there is potential to violate a water quality standard or waste discharge requirement. The Project also has the potential to result in exposed soils or

changes in runoff that could result in erosion or siltation during the construction phase of the Project. The Project would implement mitigation measures MM-HYDRO-1, MM-HYDRO-2 and MM-HYDRO-3 to reduce potential impacts to water quality and erosion to a level below significance.

Cumulative projects would similarly be required to comply with local, state and federal storm water regulations and would also be required to provide a SWQMP for operations and SWPPP for construction. Therefore, the Project will result in a **less than significant cumulative impact** to hydrology and water quality.

The Project would not use groundwater during construction or operation of the Project, nor is the Project Site is not located within a basin that requires a designated groundwater sustainability plan. Thus, the Project would not contribute to any cumulative groundwater impacts and will have **no cumulative impact** related to groundwater.

5.4.11 Land Use and Planning

Although land use and planning impacts tend to be localized, and specific impacts are tied either directly or indirectly to specific action, the Project may have the potential to work in conjunction with other past, present, or future projects to either cause unintended land use impacts, such as reducing available open space or to accommodate increased growth that may result in more intensive land uses. Therefore, the geographic context for the cumulative land use and planning analysis is the policy area, which in this case is the City. Cumulative projects in the City are presented in **Table 5.3-1** and include a mix of commercial, residential and industrial projects of various sizes.

The Project and related cumulative projects in the immediate vicinity are subject to the goals and policies of General Plan and other planning documents, as applicable. As discussed in Section 4.12 *Land Use and Planning,* the Project would not divide an established community and therefore, in combination with other related cumulative projects, would not disrupt or divide the existing community.

Prior to approval, the Project and all related cumulative projects, must be found consistent with the City's General Plan and other applicable City planning documents including the Subarea Plan of the MHCP. The Project has the potential to result in significant impacts to sensitive plant species and vegetative communities, jurisdictional resources, *Brodiaea* species, fairy shrimp, coastal California gnatcatcher, least Bell's vireo, and other MBTA-covered species. The Project would result in unavoidable direct impacts to disturbed Diegan coastal sage scrub. The Project would implement mitigation measures MM-BIO-1 through MM-BIO-7 and would reduce impacts to a level below significance. As stated in Section 5.4.4, all cumulative projects within the Project Area and within the City would be subject to conform to existing regulations including the MHCP and Subarea Plan with respect to avoidance, minimization and mitigation of impacts to sensitive biological resources. Therefore, the Project's contribution to cumulative impacts to biological resources will be less than significant.

The cumulative projects requiring General Plan amendments also would require approval by the City. Consistency with the City's applicable General Plan policies and other planning policies would ensure compliance and orderly development of the Project and other cumulative projects. Therefore, the Project would not contribute to a cumulatively considerable impact concerning conflicts with applicable plans, policies, and regulations. Cumulative Project impacts related to land use and planning will be **less than significant.**

5.4.12 Mineral Resources

As discussed in Section 4.13 *Mineral Resources,* the Project Site currently holds a Mineral Resource Zone MRZ-3 designation, which indicates that there are no known mineral resources present on the Project Site. Therefore, the Project would have no impact on known mineral resources of value and would not result in the loss of availability of locally-important mineral resources recovery sites. The Project would not contribute to a cumulatively considerable impact on mineral resources. **No cumulative impact** to mineral resources will occur.

5.4.13 Noise

Construction noise is short-term in nature and varies from hour to hour and day to day, depending on the equipment in use, the operations performed, and the distance between the source and receptor. Grading activities typically represent one of the highest sources of noise impacts. Site preparation and grading is estimated to occur over approximately six weeks. Due to normal site preparation operations, most of the equipment will be spread out over the site. If all equipment were working in the same area, at a distance as close as 330 feet, at worst case scenario, Project construction would result in an eight-hour average of 66 dBA at the property line. The Project would not generate a substantial temporary increase in ambient noise levels in excess of local standards.

The Tri-City Medical Office Building and Parking Structure would also result in short-term construction noise. However, the Tri-City Medical Office Building and Parking Structure site is located to the north of the Project Site and across SR-78. Due to distance and additional noise associated with vehicles traveling along SR-78, it is not likely that construction noise from the proposed medical office building and parking structure and the proposed CarMax Project would be heard cumulatively. Therefore, the Project would have a direct construction noise impact to adjacent uses but will result in a **less than significant cumulative impact** to construction noise.

As operational stationary noise is measured at the property line of receiving locations and is based on onsite noise generation only, operational stationary noise impacts would not be cumulative in nature. As detailed in Section 4.14 *Noise,* property line noise levels would result in 41.3 dBA and would not exceed the City's property line noise standards for both commercial and residential uses. Therefore, the increase in operation noise associated with the Project would not be cumulatively considerable and will have a **less than significant cumulative impact**.

5.4.14 Population and Housing

The geographic context for the analysis of cumulative impacts associated with population and housing consists of the City. Population and housing within the City is guided by the General Plan and RHNA. Cumulative projects in the City are presented in **Table 5.3-1** and include a mix of commercial, residential and industrial projects of various sizes.

As discussed in Section 4.15 *Population and Housing,* the Project does not include the construction of any new residential development. The Project would serve existing residences in the area and is unlikely to cause significant growth due to the nature of the development. Additionally, the Project would not displace substantial numbers of existing housing or people necessitating the construction of replacement housing elsewhere.

The water and sewer improvements associated with the Project would not induce additional growth beyond what has been planned for as the improvements would only serve development in the immediate vicinity and would not serve areas beyond the Project Site. Existing water and sewer services and facilities provide services to the surrounding developments. The Project would not induce substantial unplanned population growth in the City and will have a **less than significant cumulative impact**.

5.4.15 Public Services

The geographic context for the analysis of cumulative impacts associated with public services consists of the City, since fire protection, police protection, recreation and other public services are provided directly by the City, and school services are provided by Oceanside Unified School District within the City. Cumulative projects in the City are presented in **Table 5.3-1** and include a mix of commercial, residential and industrial projects of various sizes.

As described in Section 6.2 *Growth Inducing Impacts*, the intensity of development proposed by the Project is consistent with and therefore incorporated into the General Plan and the growth projections utilized to plan for future public service needs.

As discussed in Section 4.16 *Public Services,* the Project would be subject to the development impact fee program which provides funding for future public service improvements via the City's capital improvement program. This program is intended to address the incremental increase in demand for public services such as police, fire and recreation generated by new development. While the Project would contribute to the cumulative demand for public services, the Project would provide development impact fees intended to offset this demand and would not lead to significant physical environmental effects.

Other cumulative projects would be subject to the same development fees to address their incremental increase in demand for public services, including police, fire, and park/recreation services. Therefore, the Project would not result in a cumulatively considerable impact to public services and impacts will be **less than significant.**

5.4.16 Recreation

The geographic context for the analysis of cumulative impacts associated with recreation consists of the City because recreational facilities are provided by the City. Cumulative projects in the City are presented in **Table 5.3-1** and include a mix of commercial, residential and industrial projects of various sizes.

Due to the nature of the development, the Project would not increase the use of existing neighborhood and regional parks or other recreational facilities. It is typically residential projects that result in an increase in demand on parks and recreation facilities. Therefore, the Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated. Additionally, the Project would pay all appropriate development fees, a portion of which would go towards funding of park and recreation facilities in the City.

Other cumulative projects would be subject to the same development fees to address their incremental increase in demand for park/recreation services. Therefore, impacts would not be cumulatively considerable. The Project's cumulative impact to recreation will be **less than significant.**

5.4.17 Transportation

A cumulative traffic impact analysis was conducted for the Project as part of the Local Transportation Study prepared by LOS Engineering, Inc. (**Appendix O**). Based on the City's new requirements for VMT, LOS discussions and cumulative LOS discussions have been omitted from this EIR.

Prior to issuance of occupancy permits, the following roadway improvements would be completed as part of the Project to the satisfaction of the City Engineer:

- Widen Thunder Drive along the Project frontage into the Project Site. Parking shall be restricted along the Project frontage side of Thunder Drive between the two Project driveways.
- Widen Plaza Drive along the Project frontage to the General Plan classification of a Secondary Collector. The Applicant shall stripe this segment with three (3) travel lanes (two eastbound lanes and one westbound lane).
- Provide a center two-way left turn lane on Plaza Drive in order to match the existing westbound single travel lane configuration adjacent to the DMV.
- Install sidewalks on both sides of Plaza Drive along the Project frontage.
- Include striping for bike lanes on both sides of Plaza Drive along the Project frontage.

Chapter 3 of the Circulation Element discusses the Master Transportation Roadway Plan which provides the guidelines for providing a network of roadways throughout the City. **Table 4.18-2** provides the Project's consistency with applicable policies and implementation strategies provided in the Circulation Element Master Transportation Roadway Plan. Cumulative projects would also be required to analyze project-specific consistency with the Circulation Element policies. The Project would not conflict with any applicable policies of the Circulation Element and would not contribute to a cumulative impact to an applicable policy and cumulative impacts are **less than significant**.

Multi-Modal Transportation

A LTS was prepared for the Project and is provided as **Appendix O** of this EIR. The LTS analyzed pedestrian, bicycle, and transit facilities to evaluate their opportunities and deficiencies. As part of the Project roadway improvements, the Project would provide a 5-foot sidewalk to connect to existing sidewalks to the west along the existing shopping center, and to the east along the DMV frontage. An 8-foot bicycle lane would also be constructed on both sides of Plaza Drive which includes the required 6-foot bike lane and 2-foot buffer. The Project would not conflict with a program, plan, ordinance or policy addressing the circulation system including transit, bicycle and pedestrian facilities. The Project would not contribute to a cumulative transportation impact related to plan or policy inconsistency and cumulative impacts will be **less than significant.**

Vehicle Miles Traveled Analysis

A VMT Analysis was prepared by LOS Engineering, Inc. and is provided as **Appendix N** of this EIR. As provided in the VMT Analysis, the Project would generate 475 ADT and the Project is consistent with the CC designation provided by the General Plan. The Project would comply with the screened out project type #20 provided in the City VMT Guidelines and is screened out from further VMT analysis. The Project would not conflict with CEQA Guidelines Section 15064.3 related to VMT. Projects in the vicinity would be subject to VMT analysis in accordance with the City's VMT Guidelines and CEQA Guidelines. The Project will have a **less than significant cumulative impact** to VMT and CEQA Guidelines Section 15064.3.

The Project would provide access and driveways designed in accordance with City standards. The Project would provide adequate width, turn-around radius and access to the building and would not increase hazards due to a geometric design feature, nor would the Project result in inadequate emergency access. Cumulative projects in the vicinity would be subject to the same design, access, and emergency standards, and therefore the Project will have a **less than significant cumulative impact** to transportation.

5.4.18 Tribal Cultural Resources

A cumulative impact, in terms of tribal cultural resources, refers to the mounting aggregate effect upon tribal cultural resources due to modern or recent historic land use, such as commercial development, and natural processes, such as erosion, that result from acts of humankind. The issue that must be explored in a cumulative impact analysis is the aggregate loss of tribal cultural resources, including impacts to Traditional Cultural Places.

Historic Resources

No cultural resources were identified in the Project area during the pedestrian survey and no cultural resources have been previously recorded within the Project area. The record search of the Sacred Lands File held by the NAHC had negative results. Based on the data and information obtained, there is a low potential for impacts to cultural resources associated with implementation of the Project. However, due to the Project's proximity to Buena Vista Creek the potential for buried cultural resources within alluvial deposits along the creek exists.

The Project would implement mitigation measures related to Cultural Resources identified in Section 4.6 of this document. Mitigation measure MM-CUL-1a through MM-CUL-1h would require a Native American monitor to be present during initial ground disturbance within the Project area and would require specific protocols in the event of a discovery. Implementation of mitigation measure MM-CUL-1a through MM-CUL-1h would reduce impacts to below a level of significance. Cumulative projects would be subject to similar requirements and therefore the Project will have a **less than significant cumulative impact** to historic tribal resources.

Tribal Cultural Resources

Consultation and coordination indicated that the Project is located in the territory of the Rincon Band of Luiseño Indians and is within the Bands specific Area of Historic Interest (AHI) and is therefore traditionally and culturally affiliated to the Project area. Therefore, there is potential for the discovery of unknown tribal cultural resources during Project grading. The Project would implement mitigation measures MM-CUL-1a through MM-CUL-1h to reduce potential impacts to tribal cultural resources to a

level below significance. Cumulative projects would be subject to similar consultation and coordination efforts with the project's culturally-affiliated tribes, and therefore the Project will have a **less than significant cumulative impact** to tribal cultural resources.

5.4.19 Utilities and Service Systems

The geographic context for the analysis of cumulative impacts associated with utilities and service systems consists of the City, because the City would provide utilities to the Project. Cumulative projects in the City are presented in **Table 5.3-1** and include a mix of commercial, residential and industrial projects of various sizes. The Project, along with all other cumulative projects within the City, would be subject to the City's current water and wastewater system capacity buy-in fees.

Water

The cumulative projects proposed in the City would result in an increase in water service demand. The City Water Utilities Department has reviewed the Project and has provided a letter stating that: "As part of this [entitlement] process, any off-site improvements to the City's water and sewer systems that are necessary to accommodate the proposed project must be identified and included as part of the development. Once the entitlement process is complete, the flow and capacity allowances will be set aside for the approved project." The Project would comply with all Water Utilities Department conditions and would incorporate all requirements into the Project design.

The UWMP includes an analysis of the City's water supply and demand planning within its service area for variable water years (average, single-dry, and multiple-dry years) over a 20-year horizon and are based on the buildout of the City. The UWMP considered the City's planning documents (e.g., General Plan), regional planning documents, and the SANDAG Series 13 Growth Forecast in determining future water demand. The UWMP would be used for determining future projects water supply and demand within the City. The Project is consistent with the zoning and land use designations of the Project Site, and thus its water usage would have previously been planned for. All water infrastructure improvements would be constructed in accordance with the City's design guidelines.

The City has also developed the Oceanside Water Conservation Master Plan that further ensures water availability to the City during drought years. The Project would include water conserving landscaping along with efficient irrigation design consistent with the City's water planning efforts. Cumulative projects in the City would be subject to similar requirements and compliance with the Water Conservation Master Plan.

As discussed in Section 4.20 *Utilities and Service Systems,* the onsite water infrastructure improvements are considered within the Project footprint, as described in the Project Description (Section 3.0 of this EIR). These onsite water infrastructure improvements do not result in any new Project-footprint related impacts beyond those already disclosed in this document. These off-site improvements would be located within already disturbed/developed areas and would not result in impacts to sensitive resources. Impacts related to construction of these off-site water improvements are less than significant.

The Project would have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Cumulative impacts related

to the construction of water facilities and water supplies will have a **less than significant cumulative impact.**

Wastewater

The cumulative projects proposed in the City would result in an increase in sewer service demand. The City of Oceanside Wastewater Division of the Water Utilities Department reviewed the Project and has provided a letter stating that: "As part of this [entitlement] process, any off-site improvements to the City's water and sewer systems that are necessary to accommodate the proposed project must be identified and included as part of the development. Once the entitlement process is complete, the flow and capacity allowances will be set aside for the approved project."

Based on the available capacity of the system and treatment plant, along with the proposed onsite improvements, the facilities and infrastructure serving the Project would be able to handle the projected flow rates of the Project Site. The Project would comply with all Water Utilities Department conditions and would incorporate all requirements into the Project design. Additionally, the Project is consistent with the City's zoning and land use designation, and therefore the Project would generate wastewater that is consistent with its planned use.

The sewer realignment would encroach approximately six (6) feet into a small portion of the 50-foot planning buffer. This is a temporary impact and was analyzed in Chapter 4.5 *Biological Resources.* As detailed in Section 4.5.4, temporary direct impacts will occur to approximately 0.008 acre (334 SF) of disturbed habitat within the planning buffer. These impacts are considered temporary as they would recover on their own within one growing season. Additionally, because these impacts are minimal and occur to disturbed habitat, and because they are located at least 94 feet from the riparian habitat, no direct significant impacts will occur.

All future projects would be required to complete similar water and sewer analyses to evaluate impacts to facilities and would be required to provide necessary improvements. As such, the Project contribution to cumulative water and wastewater impacts will be **less than significant.**

Solid Waste

The El Sobrante Landfill was projected to have a remaining capacity of 134,549,993 tons at the end of 2018. At the current rate this equates to approximately 40 years of site life remaining. The Project is estimated to generate a total of 37,603 pounds of solid waste annually. This estimate, however, does not account for landfill diversion that would result from recycling and waste reduction activities. Given the remaining lifespan of the El Sobrante Landfill and the Project's waste generation, the landfill would have sufficient permitted capacity remaining to serve the Project. Additionally, the Project would participate in the City's recycling programs which would further reduce solid waste being sent to the landfill.

The City Zero Waste Plan indicates the City's goal for achieving a 75% diversion/ recycling rate by 2020. This plan provides a program for expanded commercial composting along with requirements for compost and recycling bins. The Project would comply with these measures in accordance with the Zero Waste Plan. Construction waste would be generated onsite throughout the construction phase of the Project.

Considering the Project's minimal contribution towards cumulative waste demands and the City-wide implementation of the waste reduction plan, the Project would not contribute to significant amounts of solid waste, which would result in the exceedance of landfill capacity. Therefore, cumulative Project impacts to solid waste will be **less than significant.**

5.4.20 Wildfire

The geographic context for the analysis of cumulative impacts associated with wildfires consists of the City, because the OFD would provide initial response to wildfires, emergency response and evacuations. The projects listed within **Table 5.3-1** under the City would be included within this cumulative analysis.

Section 4.21 *Wildfire,* provides analysis of the Project's compliance with adopted emergency response plan and evacuation plan. With compliance of all OFD requirements, the Project would not impair an adopted emergency response plan or emergency evacuation plan. Cumulative impacts to emergency response and evacuation plans will be **less than significant.**

The Project is located in a developed area and is surrounded primarily by commercial and residential uses. The Project Site is not located in a very high fire hazard severity zone within the Oceanside Local Responsibility Area as mapped by CAL FIRE, nor is the Project Site located within a SRA where CAL FIRE is the primary emergency response agency responsible for fire suppression and prevention. The entire City is located within a Local Responsibility area and is not located within a SRA; therefore wildfire protection would primarily be provided by OFD for cumulative projects. The Project would provide all required setbacks, fire truck access, fire hydrants, address numbers, sprinklers, Knox Box and an OPTICOM system on all gates in accordance with OFD requirements. All other cumulative projects within the City would adhere to OFD requirements and safety codes.

The Project and all other cumulative projects located within the City would be subject to the City's current development fees to address the incremental increase in demand of fire services and fire protection resources. No installation or maintenance of associated infrastructure such as roads, fuel breaks or emergency water sources, power lines or other utilities would be required for the Project that would exacerbate fire risk or that would result in temporary or ongoing impacts to the environment.

The Project would be in compliance with the CFC and the OMC and cumulative projects would also be subject to such regulations. Cumulatively, the Project in conjunction with cumulative projects would not contribute to an exacerbation of wildfire risks or exposure to significant risks as a result of wildfires. The Project's cumulative impact to wildfire will be **less than significant.**

Chapter 6.0 OTHER CEQA CONSIDERATIONS

6.1 Introduction

This chapter includes the following other considerations that are required in an EIR such as:

- Growth-Inducing Impacts (Section 6.2)
- Significant and Irreversible Environmental Changes (Section 6.3)
- Significant and Unavoidable Environmental Impacts (Section 6.4)

6.2 Growth-Inducing Impacts

Section 15126.2(d) of the CEQA Guidelines mandates that growth-inducing impacts related to the proposed CarMax pre-owned automobile dealership facility be discussed. The CEQA Guidelines states the growth-inducing analysis is intended to address the potential for the Project to "foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." Further, CEQA Appendix G Checklist discussion under Population and Housing also mandates that a CEQA document speak to the proposed project's likelihood to induce substantial population grown in an area, either directly (e.g., by proposing new homes or businesses) or indirectly (e.g., through extension of roads or other infrastructure).

A project may be distinguished as either facilitating planned growth or inducing unplanned growth. Facilitating growth is relating to the establishment of direct employment, population, or housing growth that would occur within a project site. Inducing growth is related to lowering or removing barriers to growth or by creating an amenity or facility that attracts new population/economic activity. For purposes of this EIR analysis, a significant growth inducing impact would occur if the proposed project, and associated infrastructure improvements, directly or indirectly removes obstacles to growth such that the induced growth would significantly burden existing community services, the environment or cause a demand for General Plan Amendments. This section discusses growth inducing factors related to the proposed project and as defined under CEQA Guidelines Section 15126.2(e). A project is defined as growth inducing when it directly or indirectly:

1. Fosters population growth;
2. Fosters economic growth;
3. Includes the construction of additional housing in the surrounding environment;
4. Removes obstacles to population growth;
5. Taxes existing community service facilities, requiring construction of new facilities that could cause significant environmental effects; or
6. Encourages or facilitates other activities that could significantly affect the environment, either individually or cumulatively.

Population Growth

The City occupies approximately 42 square miles and has a population of 176,080 (USCB 2018) and comprises approximately 5% of the population of the County. According to the California Department of Finance, the City of Oceanside had 65,117 housing units in May 2016. A majority of the total housing units are single-family which comprises approximately 64.5% of the total housing units, reflecting the

City's family-oriented population and suburban neighborhoods character. Multi-family units make up approximately 31%of the total units, while mobile homes account for the remaining 5% of total housing units.

The Project proposes the construction of a CarMax pre-owned automobile dealership on a vacant, approximately 10.54-acre site and would consist of a sales building, service building, private carwash, associated access drives, landscaped areas, presentation area, staging area, sales display area, and a customer and employee parking lot on the southern parcel.

The Project Site is located in a primarily developed area and is surrounded by commercial uses to the west, including a shopping center and auto repair shops. To the east are medium density residential uses as well as a DMV facility at the corner of Plaza Drive and Thunder Drive. To the north is SR-78 and to the south are Buena Vista Creek, high density and residential estate uses including a senior living facility, and commercial and public/semipublic uses including an OFD station.

The Project would develop a CarMax facility on a site with a zoning and land use designation for commercial use and does not propose the construction of housing. Therefore, the Project would not alter the planned location, distribution, or growth of the human population in the area either directly or indirectly.

Public Services and Infrastructure

As part of the Project, sewer improvements would include the realignment of the existing sewer mains and the construction of a new 12-inch and new 21-inch PVC sewer main that would run along the southern portion of the Project Site, south of the sales and staging area and customer and employee parking lots, which would connect to existing sewer lines to the west and to the east in Thunder Drive. The existing 12-inch and 21-inch sewer mains located directly north of the proposed sewer mains will be abandoned. The Project would include off-site improvements such as the extension of the 12-inch PVC waterline along Plaza Drive across the Project frontage and the DMV to be looped to Thunder Drive.

Full width improvements on Plaza Drive would construct an 80-foot curb to curb width across the Project frontage. This would include curb, gutter, 5-foot sidewalks and 5-foot bicycle lanes on both sides of Plaza Drive and associated striping. Striping would include two (2) eastbound lanes and one (1) westbound lane with a center two-way left turn lane on Plaza Drive.

The Project would result in an incremental increase in demand for fire protection and emergency medical services, police protection, water demand, wastewater treatment, and solid waste services, these anticipated increases would not significantly burden existing community services facilities or require construction of new facilities that would cause significant environmental effects (see Section 4.16 *Public Services* and Section 4.20 *Utilities and Service Systems*). The Project would contribute to all required development impact fees in accordance with the City's current requirements, which would be allocated to offset for any increase in demand for such public services.

Although the Project would construct off-site improvements for the extension of the waterline along Plaza Drive, it would only serve development in the immediate vicinity and would not serve areas beyond the Project area. Surrounding developments are provided with existing water and sewer services. The Project Site has a land use and is zoned CC. The Project will not require a zone change or a General Plan amendment. Therefore, the Project's commercial use represents planned growth in accordance with the City of Oceanside General Plan and Zoning Ordinance. The Project is located within

an area served by urban infrastructure and services are generally consistent with existing and commercial uses to the west. The extension of the off-site waterline could act as a removal of a barrier to growth. The Project is intended to serve population growth that has already occurred in the region and would not be considered growth inducing. Therefore, the Project would not require extension of roads or other public services or infrastructure that would induce population growth either directly or indirectly. Growth-inducing impacts will be **less than significant.**

6.3 Significant and Irreversible Environmental Changes

CEQA Guidelines Section 15126.2(d) requires that an EIR identify any significant and irreversible environmental changes associated with project implementation. In accordance with Section 15126.2(d):

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Non-renewable resources generally associated with the Project include agriculture/land, biological resources, archaeological and paleontological resources, mineral resources, water, and energy resources.

Implementation of the Project would result in irreversible environmental changes. Commitment of 10.54 acres of land would be physically altered to create a commercial use. The relatively small commitment of land to commercial use would be considered less than significant when compared to commercial development in a local and regional context. Additionally, the Project Site has a zoning and land use designation as a commercial use and therefore have accounted for this change in development through the adoption of the General Plan Land Use and Zoning Maps. Additionally, alteration of the human environment is a known consequence of the development process. The Project, which represents a commitment of land to a commercial use, intensifies land use at the Project Site.

Development of the Project Site would result in direct impacts to a total 7.041 acres of vegetation communities and land covers identified within the Project footprint including disturbed Diegan coastal sage scrub, developed land, disturbed land, iceplant, ornamental, and ruderal. Unavoidable direct impacts to approximately 0.408 acre of disturbed Diegan coastal sage scrub will be considered a significant impact. The Project has the potential to cause significant impacts to sensitive plant species and vegetation communities, jurisdictional resources, *Brodiaea* species, fairy shrimp, coastal California gnatcatcher, least Bell's vireo, and other MBTA-covered species. Implementation of mitigation measures MM-BIO-1 through MM-BIO-7 would reduce impacts to a level below significance.

The Project involves grading and excavation activities which could result in significant impacts to cultural and paleontological resources by advertently unearthing archaeological, tribal cultural and paleontological resources and human remains. Implementation of mitigation measures MM-CUL-1a through MM-CUL-1h would reduce impacts related to archaeological and tribal cultural resources to a level below significance, implementation of mitigation measure MM-CUL-2 would reduce impacts

related to human remains, and implementation of mitigation measures MM-GEO-3a and MM-GEO-3b would reduce impacts related to paleontological resources to a level below significance.

An increase in use of public services and utilities by the Project represents a long-term commitment of these resources. However, payment of all required development impact fees and requirement of off-site improvements would ensure that such commitment would not cause a significant adverse impact by the Project.

The use of various new raw materials such as lumber, sand, steel, and gravel for construction are resources that are continuously being depleted worldwide. However, the Project does not involve continuous use of these resources as they would only be used during Project construction.

Energy consumed in developing and operating the Project would be considered a permanent investment. The Project includes an aboveground fuel storage tank with a capacity of 4,000 gallons and a non-public fuel pump to fuel inventory vehicles. The Project would be a relatively minor consumer of these supplies when compared to a regional context. Use of these resources would represent an incremental effect on the regional consumption of these commodities. As such, the Project would result in the long-term use of energy resources, and other nonrenewable resources such as fossil fuels.

6.4 Significant and Unavoidable Impacts

CEQA Guidelines Section 15126.2(a) and (b) requires an EIR to identify and focus on the significant environmental effects of the proposed project, including significant environmental effects due to wasteful, inefficient, or unnecessary use of energy or wasteful use of energy resources. Section 15126.2(c) of the CEQA Guidelines requires the discussion of significant environmental effects which cannot be avoided if the proposed project is implemented. This includes impacts which can be mitigated but not reduced to a level of insignificance.

Section 4.0 *Environmental Analysis*, of this EIR describes the potential environmental impacts of the Project and recommends mitigation measures to reduce potentially significant impacts. As discussed in this EIR, implementation of the Project would result in potentially significant impacts to biological resources, cultural resources, geology and soils, hydrology and water quality, land use and planning, and tribal cultural resources. This EIR identifies potential impacts of each of these environmental issue areas as well as mitigation measures designed to reduce such impacts. Each impact identified will be mitigated to below a level of significance with the required mitigation measures. An analysis of energy use was presented in Section 4.7.4 and concluded that impacts would be less than significant. The Project will not result in any significant unavoidable impacts.

CHAPTER 7.0 ALTERNATIVES TO THE PROPOSED PROJECT

7.1 Overview

CEQA Guidelines Section 15126.6 requires the discussion of alternatives to the project to be analyzed. The discussion of alternatives shall include a No Project Alternative as well as a "…range of reasonable alternatives to the proposed project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project…". The discussion of alternatives need not be exhaustive and is subject to the "rule of reason". The key issue is whether the selection of alternatives fosters informed decision-making and informed public participation.

As discussed in Chapter 4.0 *Environmental Analysis*, the Project would result in potentially significant environmental impacts related to biological resources, cultural resources, geology and soils, hydrology and water quality, land use, and tribal cultural resources. Mitigation measures have been identified that would reduce all impacts to below a level of significance.

In developing the alternatives to be addressed in this section, consideration was given to those alternatives with the ability to meet the basic objectives of the Project and eliminate or substantially reduce significant environmental impacts. As identified in Section 3.3 *Project Objectives,* the objectives of the Project are as follows:

7. Construct and operate a retail commercial facility providing local residents with convenient access to an automobile sales center and related services.

8. Develop a thoughtfully designed, visually appealing automobile sales facility that is aesthetically compatible with surrounding development.

9. Positively impact local economy by creating employment opportunities and generating tax revenue.

7.2 Requirements for Alternatives Analysis

Under CEQA, the discussion of alternatives to a proposed action takes on particular significance if the EIR concludes there are significant adverse environmental impacts that are not avoided or reduced below a level of significance. As stated in CEQA Section 21002:

> "[It] is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or mitigation measures available which would substantially lessen the significant environmental effects of such projects… The legislature further finds and declares that in the event specific economic, social, or other conditions make infeasible such project alternatives or mitigation measures, individual projects may be approved in spite of one or more significant effects thereof."

As required under CEQA Guidelines Section 15126.6(e)(2), the EIR must identify the environmentally superior alternative. Pursuant to the CEQA Guidelines, if the No Project Alternative is determined to be the most environmentally superior project, then another alternative among the alternatives evaluated

must be identified as the environmentally superior alternative. Section 7.6 discusses the Environmentally Superior Alternative.

7.3 Selection of Alternatives

Pursuant to the CEQA Guidelines stated above, a range of alternatives to the Project are considered and evaluated in this EIR. These alternatives were developed in the course of Project planning, environmental review, public scoping meetings, and public hearings. The discussion of alternatives in the subsequent sections provides the following:

1. A description of alternatives considered;

2. An analysis of how each alternative fulfills the objectives the Project;

3. Per CEQA Guidelines Section 15126.6(d), a comparative analysis of the Project and the alternatives under consideration. Per CEQA Guidelines Section 15126.6(c), the alternatives are chosen by considering whether they can meet the basic Project objectives, their feasibility, and their ability to avoid the Project's significant environmental effects.

Factors that may be taken into account when addressing the feasibility of alternatives include site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to alternative sites.

A range of alternatives have been considered in an effort to meet a majority of the basic Project objectives. The alternatives identified in this section are intended to further reduce or avoid significant environmental effects of the Project. Alternatives that are considered and evaluated in the EIR include:

- Alternative 1 – No Project Alternative
- Alternative 2 – Reduced Project Footprint Alternative
- Alternative 3 – Alternative Site Location
- Alternative 4 – Neighborhood Commercial Center Alternative

Alternatives Considered but Rejected

Factors that may be used to eliminate alternatives from detailed consideration in an EIR include failure to meet a majority of the basic Project objectives, infeasibility, and inability to avoid significant environmental impacts. Alternatives that were identified but not considered include the following:

- Mixed-Use Development Alternative
- Residential Development Alternative

Mixed-Use Development Alternative

The Mixed-Use Development Alternative would develop the Project Site with a mixture of land uses including residential and commercial uses. The mixed-use development would create a live/work environment for employees of the surrounding commercial uses and Tri-City Medical Center to the north. Compared to the Project, which consists primarily of vehicle display areas and parking, and

11,447 SF of buildings, a mixed-use development would have a larger building footprint and building height and would include parking for the commercial uses and residences. This Alternative estimates approximately 30,000 SF of retail space and approximately 100-200 residential units. Retail uses would be provided on the ground floor of the development with multi-family residential units on the above floors, resulting in a vertically integrated mixed-use building. For the purposes of this EIR alternative analysis, it is assumed that the mixed-use development would develop the entire 10.54-acre site, both the northern and southern parcels. Under the Mixed-Use Development Alternative, a zone change and General Plan amendment would be required, as the Project Site is zoned CC.

With the provision of a mixed-use development, this alternative would be expected to have similar impacts related to biological resources, cultural resources, geology and soils, hydrology and water quality and tribal cultural resources compared to the Project.

Due to the nature of a mixed-use development, it is expected that this alternative would generate a larger ADT compared to the Project. Based on the SANDAG *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, it is estimated that the Mixed-Use Alternative would generate anywhere from approximately 3,800 to 4,300 trips (110 trips/1,000 SF of retail and 5 trips/dwelling unit) based on the assumption that 30,000 SF of retail and 100-200 residential units would be developed. The Mixed-Use Development Alternative would provide much larger building square footages, increasing traffic impacts compared to the Project. An increase in ADT and building size would further increase impacts to air quality, energy, GHG emissions and noise. The Mixed-Use Alternative would also increase impacts to aesthetics due larger building heights and massing. Additionally, this alternative would increase the number of people residing in the area, further increasing the need for public services, including schools and recreation facilities, in which the Project would not. An increase in the need for utilities and service systems would also have a greater impact compared to the Project.

The Mixed-Use Development Alternative was eliminated from further analysis as it would not meet the Project objectives of development and operating an automobile sales facility. Further, this alternative would have greater environmental impacts compared to the Project.

Residential Development Alternative

Under the Residential Development Alternative, the 10.54-acre site would be developed solely as a residential development. In accordance with the surrounding multi-family developments, this alternative would most likely provide 60-100 multi-family or townhome units. This alternative would require a zone change and a General Plan amendment to allow for such uses.

With the development of residential units on the Project Site, the Residential Development Alternative would be expected to have similar impacts related to biological resources, cultural resources, geology and soils, hydrology and water quality and tribal cultural resources compared to the Project, as this alternative would disturb approximately the same area as the Project. It is anticipated that impacts related to noise would be similar or less than that of the Project.

Depending on the type of residential development (i.e., multi-story units), this alternative has the potential to have an increased impact on aesthetics compared to the Project. Based on the SANDAG *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* the Residential Development Alternative would generate anywhere from 480 to 800 trips (8 trips/ dwelling unit for condominium or multi-family units) based on the assumption that 60 to 100 residential units would be developed. This alternative would therefore have an increased impact on transportation compared to

the Project as a result of increased trip generation. Impacts to air quality, GHG, and energy would be greater than that of the Project due to the increase in traffic and based on the nature of the residential development that would have a greater use in electricity and gas. Additionally, this alternative would increase the number of people residing in the area, further increasing the need for public services, including schools and recreational facilities, in which the Project would not. An increase in the need for utilities and service systems would also have a greater impact compared to the Project.

The Residential Development Alternative was eliminated from further analysis as it would not meet the Project objectives of developing and operating an automobile sales facility. Further, the Residential Use Alternative as discussed above would have greater environmental impacts compared to the Project.

7.4 Alternatives Considered

This section also addresses Alternatives Considered including a No Project Alternative, Reduced Project Footprint Alternative, Alternative Site Location and Neighborhood Commercial Center Alternative. Each major environmental issue area included in the impact analysis of this EIR has been given consideration in the alternatives analysis as discussed below.

7.4.1 Alternative 1: No Project Alternative

The No Project Alternative assumes that the Project Site would not be developed and that the Project Site would remain vacant, as in its present condition. The purpose of the No Project Alternative analysis is to allow a lead agency to compare the impacts of approving the proposed project with the impacts of not approving the Project. Analysis of the No Project Alternative and the impacts associated with this alternative is provided below.

Environmental Analysis

Aesthetics

As discussed in Section 4.2 *Aesthetics,* the Project area is primarily developed and surrounding land uses consist of residential and commercial development. The Project Site is visible from adjacent residential developments, commercial developments, as well as adjacent roadways from Plaza Drive, Thunder Drive and SR-78. To viewers from adjacent properties and roadways, the Project Site appears as a set of vacant, disturbed lots dominated by non-native plant species with a few introduced tree species along the Project Site boundary. Long-distance views are generally constrained by intervening development and urban landscaping.

The Project is located 3.5 miles east of Buena Vista Lagoon, over four (4) miles east of the Pacific Ocean, 5.5 miles southeast of Oceanside Pier and over six (6) miles southeast of Oceanside Harbor. Due to the location of the Project Site, views of open space and designated visual open spaces areas are not visible from the vacant Project Site. Buena Vista Creek is not identified as an aesthetic resource in the City's LCP. The vacant Site is not visible from a designated state scenic highway and does not contain any scenic resources.

Under the No Project Alternative there would be no removal of existing vegetation, no grading or earthwork would be performed, and there would be no development of structures or parking facilities. Maintaining the Project Site in its existing condition under this alternative would result in no impact on

scenic vistas or scenic resources. Visual character and quality impacts would be slightly reduced compared to the Project as the existing condition of the disturbed lot and vegetation would remain and no new structures would be developed. The site would not conform to the visual character of the surrounding commercial and residential development.

The No Project Alternative would result in no light and glare impacts as the building and parking lot lighting would not be developed. Overall, the No Project Alternative impacts to aesthetics would be less than that of the Project.

Agriculture and Forestry Resources

A FMMP map was prepared for the Project and designates the project site as Urban and Built-Up Land. No prime farmland, unique farmland, or farmland of statewide importance is located onsite. Additionally, no forest land or timberland areas are located onsite and therefore no impacts to agriculture or forestry resources would occur as a result of the Project.

Under the No Project Alternative the site designation as Urban Built-Up Land would remain and no impacts to agriculture, forest land or timberland would occur. Impacts to agriculture and forestry resources would be similar to that of the Project.

Air Quality

Short-term construction emissions associated with grading and construction activities as well as long-term operational emissions associated with operation of the CarMax facility would be avoided under the No Project Alternative. Additionally, the project would remain under the CC zoning and land use designation and therefore is anticipated in the local plan and SANDAG's growth projections and would not conflict with the SIP or RAAQS.

Construction and operation of the Project would result in less than significant impacts to air quality, however, the No Project Alternative would avoid and construction and operation emissions entirely and therefore no impact to air quality would occur under this alternative. Thus, the No Project Alternative would avoid impacts to air quality and impacts would be less than the Project.

Biological Resources

The Project would result in potentially significant impacts to sensitive plant species and vegetation communities, jurisdictional resources, *Brodiaea* species, fairy shrimp, coastal California gnatcatcher, least Bell's vireo, other MBTA-covered species and disturbed Diegan coastal sage scrub. Implementation of mitigation measures MM-BIO-1 through MM-BIO-7 would reduce Project impacts to a level below significance.

The No Project Alternative would avoid all grading and construction of the Project and therefore, all impacts to biological resources would be avoided. No mitigation would be required under the No Project Alternative.

The Project has been designed to include the requisite 100-foot wetland buffer, which includes the required 50-foot biological buffer on the jurisdictional resources as well as the requisite 50-foot planning buffer. The riparian area and associated natural habitats within the 100-foot buffer will be designated as biological open space and incorporated into the Preserve per Section 5 of the Oceanside Subarea Plan.

Under the No Project Alternative, no riparian buffer to Buena Vista Creek would be provided and this area would not be designated into open space. Additionally, the chain link fence and retaining wall at the southwestern portion of the Project Site would not be provided under the No Project Alternative, providing an additional buffer and separation from the Buena Vista Creek.

Therefore, no impacts to biological resources would occur under the No Project Alternative, and impacts would be reduced compared to the Project.

Cultural Resources

No historical resources were identified on the Project Site, nor have any cultural resources been previously recorded within the Project Site area. No archaeological resources were identified during the pedestrian archaeological surveys. However, given the Project Site's close proximity to Buena Vista Creek, there is potential for buried cultural resources within the alluvial deposits along the creek and the Project would implement mitigation measures for the presence of archaeological and Native American monitors during ground disturbing activities. The Project would result in potentially significant impacts to human remains due to Project ground disturbing activities. The Project requires mitigation to reduce potential impacts to human remains.

In absence of grading under the No Project Alternative there would be no potential for the discovery of cultural resources or human remains. Any unknown buried cultural, archaeological or tribal resources, including human remains would remain buried and preserved in place. Therefore, impacts to cultural resources would be avoided under the No Project Alternative and would be less than the Project.

Energy

Short-term energy use associated with construction activities and long-term energy use associated with operation of the Project would be avoided under the No Project Alternative. As discussed in Section 4.7 *Energy,* impacts to energy use would be less than significant. The No Project Alternative would avoid all construction and operation activities and therefore, no energy use would occur under this alternative. Thus, the No Project Alternative would avoid impacts related to energy and would have less of an impact compared to the Project.

Geology and Soils

The CarMax Project would result in potentially significant impacts related to seismic ground shaking, erosion, and expansive soils. The Project would also result in potentially significant impacts related to paleontological resources. Impacts related to geology and soils would be mitigated to a level below significance.

The No Project Alternative would not include development or include any ground-disturbing activities. Therefore, the No Project Alternative would not expose people or structures to seismic ground shaking and would not include grading and excavation that could result in erosion, the discovery of paleontological resources or the effects of expansive soils. Therefore, no impacts related to geology and soils would occur and impacts would be less than that of the Project.

Greenhouse Gas Emissions

Construction of the Project would result in GHG emissions primarily associated with the use of off-road construction equipment, on-road hauling and vendor trucks and worker vehicle trips. The Project would generate construction emissions at a yearly average of 18.52 MT CO_2E over a 30-year period.

The Project would generate 308.36 MT CO_2E each year during a typical operational year. The Project would not exceed the City's 900 MT CO_2E screening threshold for projects that must assess project-induced emissions against CAP-aligned thresholds of significance and therefore would be in compliance with the City's CAP. Further, the Project would generate approximately 1.3 MT CO_2E/SP, which is less than the 3.5 MT CO_2E/SP CAP threshold for projects that will be implemented prior to year 2025. Project compliance with the City's CAP would further ensure compliance with state GHG reduction goals and policies as the CAP was developed to align with state efforts to reduce GHG emissions. The project would have a less than significant impact related to GHG emissions.

The No Project Alternative would not generate construction or operational GHG emissions and there would be no impact to GHG emissions. Therefore, impacts to GHG emissions would be less than that of the Project.

The Project is consistent with all applicable plans, policies and regulations adopted for the purpose of reducing GHG emissions at regional and state levels, and plan consistency impacts would be less than significant. The No Project Alternative would result in no development, and therefore, would not result in conflicts with applicable plans, policies and regulations related to GHG emissions and no impact would occur. Impacts related to GHG emissions under the No Project Alternative would be avoided and less than that of the Project.

Hazards and Hazardous Materials

The Project would comply with all applicable regulations for the handling of hazardous materials which would ensure that the Project would not create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials. The Project is not listed as a hazardous materials site compiled pursuant to Government Code Section 65962.5. The Project is not located within the Oceanside Municipal ALUCP nor would the Project interfere with an adopted emergency response or evacuation plan. The Project would not expose people or structures to risk of wildfires.

Under the No Project Alternative the Project Site would remain undeveloped and no risks associated with the routine transport, use, or disposal of hazardous materials would occur as no development or operation of facilities with such potentially hazardous materials would occur. The No Project Alternative would not risk people or structures to any wildfire hazards as no people or structures would inhabit the Project Site. Therefore, impacts would be avoided and less than that of the Project.

Hydrology and Water Quality

During construction and operation of the Project, there is potential to violate a water quality standard or waste discharge requirement. The Project also has the potential to result in exposed soils or changes in runoff that could result in erosion or siltation during the construction phase of the Project.

Under the No Project Alternative construction and operation of a CarMax Project would not occur and would not violate a water quality standard or waste discharge requirement or result in exposed soils or changes in runoff that could result in erosion or siltation. Leaving the Project Site in its existing condition

would allow for more water infiltration as there would not be any new impervious surfaces. Therefore, impacts to hydrology and water quality under the No Project Alternative would not occur and would be less than that of the Project.

Land Use and Planning

The Project does not include any features that would have the potential to physically divide an established community. The Project has the potential to conflict with a land use plan, policy or regulation including a local habitat conservation plan but would be mitigated to a level below significance. No impact to a local land use plan, policy, or regulation would occur under the No Project Alternative. The Project does not require any changes to the existing land use or zoning designation and therefore, impacts would be the same under the No Project Alternative. Therefore, impacts related to land use and planning would be less than that of the Project.

Mineral Resources

The Project Site is located within the Mineral Resource Zone-3 (MRZ-3), which indicates that there ae no known mineral resources present on the Project Site. The Project would not result in impacts to known mineral resources.

The Project Site in its existing condition under the No Project Alternative would remain in the MRZ-3 and therefore would not impact mineral resources. Impacts to mineral resources would be similar to that of the Project.

Noise

Noise associated with construction of the Project would be short-term and would vary hour-to-hour and day-to -day, depending on the equipment in use, the operations performed, and the distance between the source and receptor. The Project would not generate a substantial temporary increase in ambient noise levels in excess of local standards during construction. Operational noise associated with the CarMax Project would not generate substantial permanent increase in ambient noise levels in the vicinity. Vibration impacts as a result of construction and operation of the Project were determined to be less than significant. The Project was determined to have a less than significant noise impact.

Under the No Project Alternative, construction noise and noise associated with operation of a CarMax Project would not occur. Existing noise associated with vehicle traffic along SR-78 would remain under this alternative. Therefore, impacts related to noise and vibration would be avoided and less than that of the Project.

Population and Housing

The Project does not propose the development of housing, nor would the Project result in the displacement of people or housing. The Project would not result in impacts to population and housing.

No development or housing would occur under the No Project Alternative, and therefore no impacts to population and housing would occur. Impacts to population and housing would be similar to that of the Project.

Public Services

The Project would not require any new or physically altered fire or emergency medical facilities, police facilities, schools, parks or other public facilities and project impacts to public services and impacts would be less than significant. Under the No Project Alternative, demand for public services would be reduced as no development would occur. No impacts to public services would occur under the No Project Alternative and therefore, impacts would be less than that of the Project.

Recreation

The CarMax Project does not propose a use that would increase the use of existing neighborhood and regional parks or other recreational facilities in the area. Additionally, the Project does not propose recreational facilities that would have an effect on the environment. The Project would be subject to all required development fees, which would go towards funding of park and recreation facilities within the City. The Project would not have a significant impact on recreation.

Under the No Project Alternative, no impacts to recreational facilities would occur. No development fees for park and recreation funding would be required as no development would be proposed. Therefore, impacts to recreation under the No Project alternative would be similar to that of the Project.

Transportation

Under the Project, additional traffic would be generated along local intersections and street segments surrounding the Project Site. The Project would generate 475 ADT. The Project would not conflict with any applicable policies of the Circulation Element including the Master Transportation Roadway Plan. Prior to issuance of occupancy permits, the following roadway improvements would be constructed as part of the Project:

- Widen Thunder Drive along the Project frontage into the Project Site. Parking shall be restricted along the Project frontage side of Thunder Drive between the two Project driveways.
- Widen Plaza Drive along the Project frontage to the General Plan classification of a Secondary Collector. The Applicant shall stripe this segment with three (3) travel lanes (two eastbound lanes and one westbound lane).
- Provide a center two-way left turn lane on Plaza Drive in order to match the existing westbound single travel lane configuration adjacent to the DMV.
- Install sidewalks on both sides of Plaza Drive along the Project frontage.
- Include striping for bike lanes on both sides of Plaza Drive along the Project frontage.

Under the No Project Alternative existing traffic conditions would remain including street segments that already operate at low performance conditions. Project improvements would improve traffic along Plaza Drive along the Project frontage and Thunder Drive along the Project access points. No sidewalk improvements or bicycle lanes would be constructed under this alternative, benefiting pedestrians and bicyclists in the area. Existing traffic conditions would remain and therefore no impact to transportation would occur under this alternative. No impact would occur, and overall impacts under the No Project Alternative would be less than that of the Project.

Tribal Cultural Resources

Based on the data and information obtained, there is a low potential for impacts to cultural resources associated with implementation of the Project. However, due to the Project's proximity to Buena Vista Creek the potential for buried cultural resources within alluvial deposits along the creek exists. The Rincon Band of Luiseño Indians is traditionally and culturally affiliated to the Project area and the potential for the discovery of unknown tribal cultural resources exists. Potential impacts related to tribal cultural resources would be reduced to below a level of significance after incorporation of mitigation measures.

Under the No Project Alternative there would be no potential for the discovery of buried tribal cultural resources as no grading would occur. Therefore, impacts related to historic tribal resources would be avoided and would be less than that of the Project.

Utilities and Service Systems

The Project Site is located in a developed area surrounded by existing commercial and residential developments. Water supply is currently provided by the City of Oceanside Water Utilities Department who has indicated sufficient water supplies are available to serve the Project. The Project would include off-site improvements for the installation of water infrastructure.

Wastewater would be provided by the City Wastewater Division of the Water Utilities Department. Based on the available capacity of the system and treatment plant, along with the proposed onsite improvements, the wastewater facilities and infrastructure serving the Project would be able to handle the projected flow rates of the Project Site. Impacts associated with on- and off-site water and wastewater improvements would be mitigated by Project mitigation measures and impacts would be reduced to below a level of significance.

As part of the entitlement process, any off-site improvements to water and sewer systems that are necessary to accommodate the proposed Project that are included as part of the Project, will be set aside for the Project once approved. The City Water Utilities Department would have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Additionally, given the remaining lifespan of the El Sobrante Landfill and the Project's waste generation, the landfill would have sufficient permitted capacity remaining to serve the Project.

Under the No Project Alternative, no on- or off-site water or wastewater improvements would be required as no development would occur. Impacts related to water supplies and landfill capacity would not occur. Therefore, impacts related to utilities and service systems under the No Project Alternative would be avoided and less than that of the Project.

Wildfire

The Project is located in a developed area and is not located in a very high fire hazard severity zone within the Oceanside Local Responsibility Area as mapped by CAL FIRE, and the Project Site is not located within a SRA where CAL FIRE is the primary emergency response agency responsible for fire suppression and prevention. The Project would provide all required setbacks, fire truck access, fire hydrants, address numbers, sprinklers, Knox Box and an OPTICOM system on all gates in accordance with OFD requirements. The Project would not impair an adopted emergency or evacuation plan,

expose occupants to wildfire or require installation of infrastructure that would exacerbate fire risk. The Project would have a less than significant impact related to wildfire.

Under the No Project Alternative, the Project Site would remain in its existing condition and would not develop a site that would expose people to wildfire risks. Therefore, impacts related to wildfire under the No Project Alternative would be less than that of the Project.

Conclusion

Under implementation of the No Project Alternative, potentially significant project impacts associated with biological resources, cultural resources, geology and soils, hydrology and water quality, land use and planning, and tribal cultural resources would not occur. The No Project Alternative would maintain the existing undeveloped condition of the Project Site and would avoid potentially significant impacts; however, none of the Project objectives would be achieved as a result. Additionally, benefits of the Project such as roadway widening improvements, improved traffic conditions on Plaza Drive along the Project frontage, enhancement of pedestrian and bicyclist infrastructure and fencing for creek protection would not be realized under the No Project Alternative.

7.4.2 Alternative 2: Reduced Project Footprint Alternative

Environmental Analysis

The Reduced Project Footprint Alternative would construct a reduced size CarMax facility. For the purposes of this analysis, it is assumed that all buildings for sales and service would not change and the Project total building square footage would remain as 11,447 SF. Under this alternative, it is assumed that the vehicle sales display, sales and staging area, and customer and employee parking areas are reduced. Under this alternative an increased biological and planning buffer of 150 feet would be implemented. This increased buffer would provide a greater barrier between sensitive riparian areas of the Buena Vista Creek and the proposed CarMax operations. Under the Reduced Project Footprint Alternative, the proposed sewer re-alignment would not be required and the Project would utilize the existing sewer mains in their existing locations. The area of disturbance by grading and earthwork would also be reduced under this alternative, further reducing impacts to unknown cultural, tribal cultural and paleontological resources. The environmental impacts associated with the Reduced Project Footprint Alternative are further discussed below.

<u>Aesthetics</u>

The Reduced Project Footprint Alternative would reduce the parking areas for vehicle display and staging as well as customer and employee parking, thereby reducing the amount of change in the visual character of the site by a slight amount. Development of the site would be slightly less intense as a whole, although the building sizes would be unchanged. Less grading and disturbance would take place thereby increasing the amount of vegetation to remain onsite. The site under this alternative would conform to the developed characteristics of the surrounding area and would be consistent with the character and quality of the surrounding environment. Fewer lighting fixtures would be required around the site and within the associated parking areas. Overall, impacts to scenic resources, visual character, and lighting would be less than significant and slightly reduced compared to the Project.

<u>Agriculture and Forestry Resources</u>

A FMMP map was prepared for the Project and designates the project site as Urban and Built-Up Land. No prime farmland, unique farmland, or farmland of statewide importance is located onsite. Additionally, no forest land or timberland areas are located onsite and therefore no impacts to agriculture or forestry resources would occur as a result of the Project.

Similarly, no impacts to agriculture and forestry resources under the Reduced Project Footprint Alternative would occur and impacts would remain the same as the Project.

Air Quality

The Reduced Project Footprint Alternative would result in short-term air quality impacts during construction activities and long-term air quality impacts during operation of the CarMax Project. However, a reduced Project footprint and development area would reduce the amount of grading and short-term air quality impacts. The Project is expected to result in 475 ADT. A reduction in the Project footprint area would generate fewer trips to the site and fewer emissions than would be generated by the Project.

Under the Reduced Project Footprint Alternative, the Project would not conflict with implementation of local and regional air quality plans, would not contribute to air quality violations, and would not expose sensitive receptors to emissions or objectionable odors. Therefore, the Reduced Project Footprint Alternative would have fewer construction and operational emissions and would have a less than significant impact to air quality, which is less than that of the Project.

Biological Resources

Under this alternative an increased biological and planning buffer of a total of 150 feet would be implemented. This increased buffer would provide a greater buffer between sensitive riparian areas of the Buena Vista Creek and the CarMax Project. Under the Reduced Project Footprint Alternative, the proposed sewer re-alignment would not be required and the project would utilize the existing sewer mains in their existing locations. Therefore, temporary impacts to approximately 0.0008 acre (344 sf) of disturbed habitat within the planning buffer would not occur under this alternative.

The Reduced Project Alternative would still involve vegetation clearing, grading and other construction activities that have the potential to impact sensitive biological resources. Implementation of mitigation measures MM-BIO-1 through MM-BIO-7 would still be required under this alternative to further reduce potential impacts related to sensitive plant species and vegetation communities, jurisdictional resources, *Brodiaea* species, fairy shrimp, coastal California gnatcatcher, least Bell's vireo, and other MBTA-covered species. Under the Reduced Project Alternative, impacts would be less than significant after mitigation, and would be slightly reduced compared to the Project.

Cultural Resources

A reduced Project footprint would reduce the area of disturbance by grading and earthwork under this alternative, further reducing impacts to unknown cultural resources. However, due to the close proximity of the Project Site to Buena Vista Creek, potential for buried cultural resources, including human remains, to be unearthed during Project construction would still be considered potentially significant. Implementation of mitigation measures MM-CUL-1a through MM-CUL-1h and MM-CUL-2 would still be required under this alternative to further reduce potential impacts related to cultural

resources and human remains. Overall, impacts related to cultural resources under the Reduced Project Footprint Alternative would be less than significant with mitigation and impacts would be slightly reduced compared to the Project.

Energy

The Reduced Project Footprint Alternative would result in less short-term construction energy usage as less grading would take place within the Project footprint. Long-term energy usage would be reduced as vehicle trips to the Project Site would be less than that of the fully developed Site. Under this alternative the Project would not conflict with or obstruct a state or local plan or policy for renewable energy or energy efficiency. Therefore, the Reduced Project Footprint Alternative would have a less than significant impact to energy, which is less than that of the Project.

Geology and Soils

Although the Reduced Project Footprint Alternative would reduce the intensity of development compared to the Project, potential impacts related to geology and soils would remain. Compliance with the Project Geotechnical Evaluation, permanent storm water BMPs, the CBC and City regulations would be required to ensure that the Reduced Project Footprint Alternative would not expose people or structures to seismic hazards, unstable soils or erosion. The requirements set forth in mitigation measures MM-GEO-1, MM-HYDRO-1 through MM-HYDRO-3 would ensure impacts to geology and soils are reduced to a level below significance.

Potentially significant impacts to paleontological resources as a result of Project grading and ground disturbing activities would occur under this alternative. Implementation of mitigation measure MM-GEO-3a and MM-GEO-3b which requires a qualified paleontologist to be present during ground-disturbing activities and compliance with a PRIMP would be required under the Reduced Project Footprint Alternative. Impacts to geology and soils under this alternative would be less than significant with mitigation, similar to the Project.

Greenhouse Gas Emissions

GHG emissions during Project construction would be reduced under the Reduced Project Footprint Alternative as less grading would take place. As discussed previously, vehicle trips to the Project Site would be reduced further reducing GHG emissions as a result of this Project alternative. The size of the sales and service buildings would remain and therefore, GHG emissions associated with building operations would remain the same as the Project.

The Project would remain in compliance with local and regional policies and plans related to the reduction of GHG emissions. Impacts related to GHG emissions under the Reduced Project Footprint Alternative would be less than significant and less than that of the Project.

Hazards and Hazardous Materials

Under the Reduced Project Footprint Alternative construction activities would still involve the transportation of potentially hazardous materials. However, with less grading and a smaller development footprint, fewer hazardous materials such as gasoline, diesel fuel, oil, lubricants would be required compared to the Project. Compliance with proper BMPs and all applicable laws, ordinances,

rules and regulations would ensure significant impacts related to hazardous materials would be less than significant.

Operation of the Project under the Reduced Footprint Alternative would still include a service building, carwash, and an aboveground fuel storage tank. Under this alternative fewer inventory vehicles would be stored onsite and therefore less fuel would be required to fuel inventory vehicles. The Project would still comply with the County DEH HMD requirements for plan checks, UPFP, preparation of a SPCC Plan, and would be subject to all required inspections. Wastewater from the carwash would go through the onsite oil water separator and the oil would be transported off-site to be treated by a certified waste vendor.

The Project under the Reduced Project Footprint Alternative would not interfere with an adopted emergency response or evacuation plan. The Project would continue to incorporate all required setbacks and driveway and drive aisle widths in accordance with the fire department standards. Overall, the Project would have a less than significant impact related to hazards and hazardous materials under this alternative and impacts would be less than that of the Project.

Hydrology and Water Quality

Under the Reduced Project Footprint Alternative, Project construction would still require earth-moving activities, exposing soils which would cause pollutant discharge and potentially degrade water quality. However, less grading would occur and earth-moving activities and exposed soils would occur over a smaller area compared to the Project. The Project would still require construction BMPs and preparation of a SWPPP in order to reduce pollutant discharge during construction operations.

The Reduced Project Footprint Alternative would result in a reduction of impervious areas thereby reducing sources of pollutants from urban runoff. This alternative would not alter existing drainage patterns or increase net runoff after development. Under the Reduced Project Footprint Alternative, the Project would still require implementation of mitigation measures MM-HYDRO-1 through MM-HYDRO-3 in order to further reduce impacts to water quality and erosion. Overall, impacts to hydrology and water quality would be less than significant with mitigation and would be reduced compared to the Project.

Land Use and Planning

The Project under the Reduced Project Footprint Alternative would not physically divide an established community and adequate access for vehicles and pedestrians would be provided. The Project would remain in compliance with the zoning and land use designation as CC and would not conflict with the Zoning Ordinance or General Plan. Impacts related to Project compliance with the Subarea Plan of the MHCP would be reduced by mitigation measures MM-BIO-1 through MM-BIO-7. The Project would have a less than significant impact after mitigation to land use and planning under this alternative and impacts would be similar to that of the Project.

Mineral Resources

The Project Site is located within the Mineral Resource Zone-3 (MRZ-3), which indicates that there ae no known mineral resources present on the Project Site. The Project would not result in impacts to known mineral resources. Under the Reduced Project Footprint Alternative the Project not result in impacts to mineral resources. Impacts would be the same under the Reduced Project Footprint Alternative and the Project.

Noise

Under this alternative the Project would have a reduced Project footprint, reducing the customer and employee parking area as well as the area for vehicle display, staging and storage. The Project would result in short-term construction noise during site preparation and grading which would include heavy duty off-road equipment. With a reduced Project footprint grading and site preparation would occur over a shorter amount of time thereby reducing the amount of noise produced during construction operations. The Project would continue to comply with City ordinances related to hours of construction and construction noise level requirements.

Operation of the CarMax Project under the Reduced Project Footprint Alternative would result in noise produced from car carrier trucks, service building operations, carwash operations, Project-related traffic, test drives and HVAC units. Under this alternative reduced vehicle storage areas would result in fewer car carrier truck trips as fewer vehicles would be stored onsite compared to the Project. The Project under this alternative would have proportionately less noise during operation of the CarMax facility and the Project would continue to operate under the City noise standards. Noise impacts would be less than significant under this alternative and would be less than the Project.

Population and Housing

The Project does not propose the development of housing, nor would the Project result in the displacement of people or housing. No impacts to population and housing would occur under the Reduced Project Footprint Alternative or the Project. No impact would occur under the proposed Project or the Reduced Project Footprint Alternative.

Public Services

The Project would not require any new or physically altered fire or emergency medical facilities, police facilities, schools, parks or other public facilities and project impacts to public services would be less than significant.

Under the Reduced Project Footprint Alternative, demand for public services would be similar or slightly reduced compared to the Project. The Project under this alternative would still be required to contribute to all required development impact fees in accordance with the City's current requirements, which would be allocated to offset for any increase in demand for such public services. Overall, impacts to public services would be less than significant and slightly reduced under the Reduced Project Footprint Alternative compared to the Project.

Recreation

The CarMax Project does not propose a use that would increase the use of existing neighborhood and regional parks or other recreational facilities in the area. Additionally, the Project does not propose recreational facilities that would have an effect on the environment. The Project would be subject to all required development fees, which would go towards funding of park and recreation facilities within the City. The Project would have a less than significant impact on recreation.

Similarly, under the Reduced Project Footprint Alternative the Project would not increase the use of existing parks or recreational facilities and would be subject to all required development fees in

accordance with current City requirements. Therefore, a less than significant impact would occur and impacts to recreation under this alternative would be similar to that of the Project.

Transportation

Under the Project, additional traffic would be generated along local intersections and street segments surrounding the Project Site and would result in Project trip generation of 475 ADT. The Project would provide roadway improvements as part of the Project including widening improvements along Plaza Drive and Thunder Drive, a center two-way left turn lane on Plaza Drive, sidewalks along both sides of Plaza Drive, and striping for bike lanes on both sides of Plaza Drive

Under the Reduced Project Footprint Alternative, the Project would result in slightly fewer vehicle trips and fewer car carrier truck trips to the Project Site as a result of the reduced Project footprint. Impacts related to VMT would be slightly reduced compared to the Project and impacts to VMT would remain less than significant under this alternative. The Project under this alternative would still provide roadway improvements as part of the Project further improving traffic along the surrounding roadways of the Project Site. Overall impacts related to transportation would be less than significant and would be slightly less than the Project.

Tribal Cultural Resources

A reduced Project footprint would reduce the area of disturbance by grading and earthwork under this alternative, further reducing impacts to unknown tribal cultural resources. However, due to the close proximity of the Project Site to Buena Vista Creek, potential for buried tribal cultural resources to be unearthed during Project construction would still be considered potentially significant. Implementation of mitigation measure MM-CUL-1a through MM-CUL-1h would still be required under this alternative to further reduce potential impacts related to tribal cultural resources. Overall, impacts related to tribal cultural resources under the Reduced Project Footprint Alternative would be less than significant with mitigation and impacts would be reduced compared to the Project.

Utilities and Service Systems

Under the Reduced Project Footprint Alternative, the Project would still include off-site improvements for the installation of water infrastructure along Plaza Drive. The onsite water infrastructure improvements are considered within the Project footprint, as described in the Project Description (Section 3.0 of this EIR). These onsite water infrastructure improvements do not result in any new Project-footprint related impacts beyond those already disclosed in this document. The off-site improvements would be located within already disturbed/developed areas and would not result in impacts to sensitive resources.

An increased planning and biological buffer of 150 feet would be provided and the Project would no longer require the sewer realignment at the southern portion of the Project Site, thereby reducing impacts to biological resources, cultural resources, geology and soils and tribal cultural resources.

Water and wastewater facilities within the City would continue to have available capacity under this alternative and sufficient water supplies would be available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Additionally, less waste would be generated from the Project Site and therefore, the El Sobrante Landfill would continue to have sufficient permitted capacity to serve the Project under this alternative.

Impacts related to utilities and service systems under the Reduced Project Footprint Alternative would be less than significant and would be slightly reduced compared to the Project.

Wildfire

The Project Site is located in a developed area and is not located in a very high fire hazard severity zone within the Oceanside Local Responsibility Area as mapped by CAL FIRE, and is not located within a SRA where CAL FIRE is the primary emergency response agency responsible for fire suppression and prevention. The Project would continue to provide all required setbacks, fire truck access, fire hydrants, address numbers, sprinklers, Knox Box and an OPTICOM system on all gates in accordance with the OFD requirements under the Reduced Project Footprint Alternative. The Project would not impair an adopted emergency or evacuation plan, expose occupants to wildfire or require installation of infrastructure that would exacerbate fire risk. The Project would have a less than significant impact related to wildfire under this alternative, similar to that of the Project.

Conclusion

The Reduced Project Footprint Alternative would have minor reductions to Project impacts related to aesthetics, air quality, biological resources, cultural resources, energy, geology and soils, GHG, hydrology and water quality, noise, public services, transportation, tribal cultural resources and utilities and service systems. The Project under this alternative would still require all Project mitigation measures in order to reduce potentially significant impacts to a level below significant. All other impacts would be the same under the Reduced Project Footprint Alternative and the Project. Project objectives under this alternative would be partially.

7.4.3 Alternative 3: Alternative Site Location

CEQA Guidelines Section 15126.6(f)(2)(A) states that the key question and first step in the Alternative Location analysis is whether any of the significant effects of the Project would be avoided or substantially lessened by placing the Project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the Project need to be considered for inclusion in the EIR.

As analyzed in Chapter 4.0, the Project would result in potentially significant impacts to biological resources, cultural resources, geology and soils, hydrology and water quality, land use and planning, and tribal cultural resources. This section determines if an alternative site could be identified that would reduce impacts to any of the environmental issue areas above. Alternative Project Site locations were evaluated based on the following criteria:

- Provides adequate developable area and does not reduce the net developable acres below the minimum amount needed to build a CarMax facility.
- Would not substantially increase the cost of Project construction.
- Located on a major roadway with high travel volumes and that maximize the site's visibility from the vantages of surrounding roadways.
- Be located in proximity to major retailers, a mall, and/or other car dealers to create a symbiotic relationship between CarMax and other uses and customers are shared.

- Availability of the site to the applicant (owned or which could reasonably be obtained, utilized, expanded, or managed).
- The extent that an alternative site would reduce impacts to biological resources, cultural resources, geology and soils, hydrology and water quality, land use and planning, tribal cultural resources and utilities and service systems, while not substantially increasing the cost of constructing the Project and not substantially impacting additional environmental resources.

Table 7.4-1 provides a list of alternative site locations that were evaluated under this alternative analysis. As shown in **Table 7.4-1**, none of the alternative site locations would have met the basic operational requirements for a CarMax facility. The alternative sites were determined to be either financially infeasible, have land use or other site restrictions, or were not located within the intended market area. However, for the purpose of this alternatives analysis, the alternative site located at 1302 Encinitas Boulevard is used to analyze potential impacts related to the construction and operation of the CarMax Project at this location as it is the most feasible of the alternative site locations. The alternative site located at 1302 Encinitas Boulevard currently operates as a BMW dealership and any construction or demolition related to the current site is considered in this alternative analysis.

Table 7.4-1
Alternative Site Locations Considered

Alternative Site Location	Land Use	Acres	Meets Project Requirements?
Sites Within Car Country Carlsbad – South of Cannon Road, Along Paseo Del Norte	Commercial – Retail	Various	No – Several sites within the Car Country Carlsbad area were analyzed. Ultimately restrictions would not be lifted which prohibited used car-only facilities
5475 Car Country Drive, Carlsbad – Hoehn Motors Mercedes Benz	Commercial – Retail	5.9 Acres	No – This site would relocate the existing Mercedes dealership to a site adjacent to the existing Hoehn Porsche dealership located at 6800 Avenida Encinas in Carlsbad. However, the use was unable to be changed to automobile sales.
6070 Avenida Encinas, Carlsbad	Industrial	8.6 Acres	No – The site was encumbered by a numerous leases and would ultimately be costly to demolish.
Northeast Corner of Jefferson Street and SR-78, Oceanside	Commercial – Vacant	5.5 Acres	No – The site is now under construction by Sharp Healthcare.
1302 Encinitas Boulevard, Encinitas	Commercial – Retail	6.0 Acres	No – This site was deemed to be located too far south for the intended market area.

Environmental Analysis

Aesthetics

The Alternative Site Location alternative would operate the CarMax Project at a location where there is an existing car dealership with similar size and scale as a CarMax facility. Therefore, impacts related to scenic vista or scenic resources at this location would not exist as a similar use is already existent. The Project at the currently proposed location would change the existing character of the vacant site to one that is developed, whereas one already exists at the alternative site location. Therefore, impacts under the Alternative Site Location would be less than significant and would be reduced compared to the Project.

Agriculture and Forestry Resources

The Project Site is designated as Urban and Built-Up Land by the FMMP map prepared for the Project Site. Although the Project Site is vacant, no prime farmland, unique farmland, or farmland of statewide importance is located onsite. Additionally, no forest land or timberland areas are located onsite and therefore no impacts to agriculture or forestry resources would occur as a result of the Project.

Similarly, the alternative site location currently operates as a car dealership and therefore, is not likely to contain any agricultural, forestry or timberland resources. No impacts to agriculture and forestry resources under the Alternative Site Location alternative would occur and impacts would be the same compared to the Project.

Air Quality

The Alternative Site Location alternative would result in short-term air quality impacts during construction and demolition of the existing site and long-term air quality impacts during operation of the CarMax facility. This alternative would not require grading activities as the site is already developed however; demolition of existing buildings would be required in order for the site to conform to the typical layout of a CarMax facility. Operational emissions under the Alternative Site Location alternative would be slightly reduced as the alternative site location has a smaller land area and therefore smaller buildings and fewer vehicles would be stored at this location. Fewer employees would be warranted and fewer deliveries of vehicles would be made at this location due to the decrease in size compared to the Project. Therefore, fewer vehicles trips to the site would occur at the alternative site location compared to the proposed Project location.

Impacts to air quality as a result of the Project would remain as less than significant and impacts related to air quality at the alternative site location would result in a reduction in air quality impacts compared to the Project.

Biological Resources

Under the Alternative Site Location alternative, the CarMax Project would be constructed on a site with an existing car dealership. No grading or vegetation clearing would take place under this alternative. The alternative site location would not be expected to contain any sensitive biological resources as it is fully developed and operates as an existing car dealership.

The alternative site location contains undeveloped land to the southwest of the site and therefore may be subject to avoidance and mitigation measures. However, impacts would be mitigated to a level below significance and would be reduced compared to the Project.

Cultural Resources

The Project would result in potentially significant impacts to cultural resources as a result of disturbance by grading and earthwork activities. The Project would require implementation of mitigation measure MM-CUL-1a through MM-CUL-1h and MM-CUL-2 to reduce impacts to a level below significant.

The development of the CarMax facility at the alternative site location would not result in potential impacts to buried cultural resources, including human remains because the site has already been graded and developed as an existing car dealership. The Alternative Site Location alternative would not require

mitigation measures as a result. Impacts related to cultural resources under the Alternative Site Location alternative would be less than significant and would be reduced compared to the Project.

Energy

The Alternative Site Location alternative would result in short-term energy impacts during construction and demolition of the existing site and long-term energy impacts during operation of the CarMax facility. This alternative would not require grading activities as the site is already developed however; demolition of existing buildings would be required in order for the site to conform to the typical layout of a CarMax facility.

The alternative site location is 6.0 acres which is smaller than the 10.54-acre Project Site. Due to the difference in development area, it is anticipated that less energy would be required during construction and operation of the CarMax facility under the Alternative Site Location alternative. A less than significant impact to energy would occur as a result of the Project and impacts would be slightly reduced under the Alternative Site Location alternative.

Geology and Soils

The Project would result in potentially significant impacts related to seismic hazards, unstable soils, erosion and paleontological resources and would require mitigation measures in order to reduce impacts to a level below significance.

Under the Alternative Site Location alternative, a geotechnical assessment would be required for any proposed demolition and new construction and the development of the Project at this site would be required to comply with all recommendations set forth in the geotechnical assessment. Therefore, the Project under this alternative would have a potentially significant impact to geology and soils and mitigation measures would be required.

Impacts related to paleontological resources as a result of grading and ground disturbing activities would not occur under this alternative as the site has been previously graded and developed. No impacts related to paleontological resources would occur. Impacts related to geology and soils under the Alternative Site Location alternative would be less than significant with mitigation but would be reduced compared to the Project.

Greenhouse Gas Emissions

Under the Alternative Site Location alternative, the Project would result in construction GHG emissions during demolition and building construction. However, alternative site location would be located on a smaller parcel, resulting in a reduced development footprint. Therefore, construction GHG emissions would be reduced compared to the Project. Operational emissions under the Alternative Site Location alternative would be slightly reduced as smaller buildings and fewer vehicles would be stored at this location. Fewer employees would be warranted and fewer deliveries of vehicles would be made at this location due to the decrease in size compared to the Project. Therefore, fewer vehicles trips to the site would occur at the alternative site location compared to the proposed Project location.

The alternative site location would remain in use as vehicle sales and is anticipated to be in compliance with local and regional policies and plans related to the reduction of GHG emissions. However, the Project at this location would be subject to the plans, policies and regulations provided by the City of

Encinitas. Project impacts related to GHG emissions would be less than significant and impacts would be slightly reduced under the Alternative Site Location alternative.

Hazards and Hazardous Materials

Under the Alternative Site Location alternative construction activities would still involve the transportation of potentially hazardous materials. However, with a small development footprint, fewer hazardous materials such as gasoline, diesel fuel and oil lubricants would be required compared to the Project. Compliance with proper BMPs and all applicable laws, ordinances, rules and regulations would ensure significant impacts related to hazardous materials would be less than significant.

Operation of the Project at the alternative site location would still include a service building, carwash and an aboveground fuel storage tank. Under this alternative fewer inventory vehicles would be stored onsite and therefore less fuel would be required to fuel inventory vehicles. The Project would still comply with the DEH HMD requirements to plan checks, UPFP, preparation of a SPCC Plan and would be subject to all required inspections. An onsite oil water separator would still be located onsite to treat wastewater from the carwash and the separated oil would be transported off-site to be treated by a certified waste vendor.

The Project under the Alternative Site Location alternative would not interfere with an adopted emergency response or evacuation plan as the use would be similar to the existing dealership onsite. The Project would incorporate all required setbacks, driveway and drive aisle widths in accordance with the City of Encinitas Fire Department. Overall, the Project would have a less than significant impact related to hazards and hazardous materials under this alternative and impacts would be less than that of the Project.

Hydrology and Water Quality

Under the Alternative Site Location alternative, Project construction would not require earth-moving activities such as grading, which would expose soils and cause pollutant discharge and potentially degrade water quality. However, the Project would require construction BMPs in order to further reduce the potential for storm water pollution during construction.

The Alternative Site Location alternative would result in less impervious area thereby reducing sources of pollutants from urban runoff. This alternative would not alter existing drainage patters or increase net runoff after development as the Project would result in drainage similarly to that of the existing car dealership. Under the Alternative Site Location alternative, the Project would require mitigation measures for implementation and maintenance of required storm water BMPs. Overall, impacts to hydrology and water quality would be less than significant after mitigation and would be slightly reduced compared to the Project.

Land Use and Planning

The Project under the Alternative Site Location alternative would not physically divide an established community and adequate access for vehicles and pedestrians would be provided as the Project currently operates as a car dealership. The Project would comply with the existing zoning designation as the use of the site would not change. The alternative site location is not anticipated to contain sensitive biological resources as it is a developed site, and therefore no mitigation measures for biological

resources would be required. Impacts to land use and planning under this alternative would be less than significant and reduced compared to the Project.

Mineral Resources

The Alternative Site Location alternative would locate the Project on a developed site that contains and existing car dealership. Therefore, it is not likely that mineral resources would be present onsite. Therefore, no impact to mineral resources would occur under the Project and the Alternative Site Location alternative.

Noise

The Project under the Alternative Site location alternative would also be located in close proximity to both residential and commercial uses. This alternative would not require grading activities as the site is already developed however; demolition of existing buildings would be required in order for the site to conform to the typical layout of a CarMax facility. With a reduced development area at the alternative site location, building construction would occur over a shorter period of time thereby reducing the amount of noise produced during construction operations. The Project would continue to comply with all ordinances related to hours of construction and construction noise level requirements.

Operation of the Project at the alternative site location would still result in noise produced from car carrier trucks, service building operations, carwash operations and HVAC units. Under this alternative reduced vehicle storage areas would result in fewer car carrier truck trips as fewer vehicles would be stored at this location. The Project under this alternative would have proportionately less noise during operation of the CarMax facility and the Project would continue to operate under the required noise standards. Noise impacts under the Alternative Site Location alternative would be less than significant and would be slightly reduced compared to the Project.

Population and Housing

The Project does not include the development of housing, nor would the Project result in the displacement of people or housing onsite as the alternative site location does not include existing housing. No impacts to population and housing would occur under the Alternative Site Location alternative or the Project. No impact would occur as a result of the Project or as a result of the Project under the Alternative Site Location alternative.

Public Services

The alternative site location currently operates as an existing car dealership and is served by existing police, fire and emergency personnel and facilities, schools, parks and other public facilities. Therefore, the need of new or physically altered facilities as a result of the Project under this alternative would not occur. Under the Alternative Site Location alternative, demand for public services would be similar or slightly reduced compared to the Project as the alternative site location would contain a smaller development area. Overall, impacts to public services would be less than significant under this alternative and would be slightly reduced compared to the Project.

Recreation

The Project does not propose a use that would increase the use of existing neighborhood and regional parks or other recreational facilities in the area. The Project does not propose recreational facilities that would have an effect on the environment. Similarly, the Project under the Alternative Site Location alternative would not contain recreational facilities or increase the use of existing recreational facilities. Therefore, no impact to recreation would occur under the Project or under the Alternative Site Location alternative.

Transportation

Under the Alternative Site Location alternative, the Project would be developed on a site with an existing car dealership. Trips generated by the Project at this location are anticipated to be similar to the trips generated by the existing car dealership. Impacts related to VMT would be similar to that of the Project as a similar number of trips would be generated from the site. It is assumed that the Project would still be screened out of a VMT analysis. Therefore, impacts related to transportation would be less than significant and the construction of roadway improvements is not anticipated under this alternative. Impacts would be less than significant and less than that of the Project under the Alternative Site Location Alternative.

Tribal Cultural Resources

The Project under the Alternative Site Location alternative would be located on a developed site with an existing car dealership. The Project would not require grading and earthwork activities that would uncover buried tribal cultural resources under this alternative. The alternative site location does not contain a creek where the potential for buried tribal cultural resources could be unearthed. Therefore, impacts to tribal cultural resources under the Alternative Site Location alternative would be less than significant and would be reduced compared to the Project.

Utilities and Service Systems

Off-site water infrastructure improvements would not be required under the Alternative Site Location alternative as the Project would provide the same use as the existing car dealership and therefore existing water facilities exist in the vicinity. Similarly, the sewer realignment would not be required under this alternative as sewer services and facilities exist to serve the existing car dealership.

It is anticipated that the Project at the alternative site location would generate similar water, wastewater and waste as the existing car dealership and therefore, sufficient capacity exists for the Project at this location. Impacts related to utilities and service systems under the Alternative Site Location alternative would be less than significant and would be reduced compared to the Project.

Wildfire

The Project would be located in a developed area under Alternative Site Location and would not be located in an area that would have a very high fire hazard severity designation as it is surrounded by development. The Project would continue to comply with all required setbacks, fire truck access, fire hydrants, sprinklers, address numbers and Knox Box onsite in accordance with City of Encinitas Fire Department requirements. The Project would not impair an adopted emergency or evacuation plan as the Project would have the same use and intensity of development as the existing car dealership. Therefore, the Project would have a less than significant impact related to wildfire under this alternative, similar to that of the Project.

Conclusion

Development of the Project under the Alternative Site Location alternative would result in reduced impacts to aesthetics, air quality, biological resources, energy, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, public services, transportation, tribal cultural resources and utilities and service systems. The Project under this alternative would still require mitigation measures related to geology and soils and hydrology and water quality for compliance with all geotechnical recommendations and provision of storm water BMPs in order to reduce potential impacts to a level below significant. All other impacts under this alternative would be the same under the Alternative Site Location alternative and the Project. Project objectives under this alternative would be met to an extent, as the alternative site location would not provide the same development area as the proposed Project Site.

7.4.4 Alternative 4: Neighborhood Commercial Center Alternative

The Neighborhood Commercial Center Alternative would replace the proposed CarMax Project with another commercial use such as a neighborhood shopping center on the Project Site. Under the CC zone, uses such as retail sales, food and beverage, full service restaurants and restaurants with drive-thru services are permitted, some requiring a use permit. For the purposes of this EIR alternative analysis, it is assumed that the proposed retail center would develop the entire 10.54-acre Project Site, both the northern and southern parcels, and buildings would be a maximum of 55,000 SF total. This estimated building square footage is based on other commercial retail centers in the surrounding area. Uses within the shopping center could consist of retail ranging from grocery stores, drugstores, cleaners, beauty and barber shops and fast food services.

A neighborhood commercial center with a maximum building size of 55,000 SF would generate approximately 6,600 ADT based on the SANDAG *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (based on the generation rate of 120 trips/1,000 SF). This alternative would result in an intensity of approximately 13 times more vehicular trips compared to the Project.

Environmental Analysis

Aesthetics

Under the Neighborhood Commercial Center Alternative the Project Site would operate as a neighborhood shopping center similar to the Tri-City Crossroads shopping center located to the west of the Project Site. The visual character of the site would change from a vacant site to one that is comparable to the existing commercial uses. The site under this alternative would conform to the developed characteristic of the surrounding area and would be consistent with the character and quality of the surrounding environment. Increase in light and glare impacts from the development of a neighborhood shopping center would occur similarly to that of the Project. Overall impacts to scenic resources, visual character and lighting would be less than significant; however, due to the increase in building square footage and mass of a neighborhood commercial center building, impacts to aesthetics would be greater than the Project.

Agriculture and Forestry Resources

The development of a neighborhood commercial center on the Project Site would remain on a parcel that is designated as Urban Built-Up Land by the FMMP map prepared for the Project Site. No farmland, unique farmland, or farmland of statewide importance is located onsite. Additionally, no forest land or timberland areas are located onsite. Therefore impacts to agriculture and forestry resources would not occur as a result of this alternative.

Air Quality

The Neighborhood Commercial Center Alternative would result in short-term air quality impacts during construction activities and long-term air quality impacts during operation of the neighborhood commercial shopping center. Although this alternative would be developed with a similar development footprint, the neighborhood commercial center would have a larger building footprint and would operate as a more intense use compared to the Project. Therefore an increase in vehicle trips would result in greater air quality emissions and larger building footprints would result in greater operational emissions.

Under the Neighborhood Commercial Center Alternative, the Project would not conflict with implementation of local and regional air quality plans as it would comply with the CC zoning designation. The neighborhood commercial center would not expose sensitive receptors to emissions or objectionable odors. Therefore, the Neighborhood Commercial Center Alternative would have a less than significant air quality impact but would have a greater impact to air quality compared to the Project.

Biological Resources

The Neighborhood Commercial Center Alternative would require grading, vegetation clearing, and building construction similar to the Project, resulting in potentially significant impacts to sensitive biological resources. Therefore, implementation of mitigation measures MM-BIO-1 through MM-BIO-7 would still be required under this alternative.

Under this alternative it is assumed that the design features to include the 100-foot wetland buffer, which includes the required 50-foot biological buffer on the jurisdictional resources as well as the requisite 50-foot planning buffer, would still be implemented. Depending on the specific design of the neighborhood commercial center, the proposed sewer re-alignment may not be required and the Project would utilize the existing sewer mains in their existing locations. Therefore, temporary impacts to approximately 0.0008 acre (344 sf) of disturbed habitat within the planning buffer could not occur under this alternative.

Overall, impacts to biological resources under the Neighborhood Commercial Center Alternative would be less than significance with mitigation incorporated and would be similar to that of the Project.

Cultural Resources

Under the Neighborhood Commercial Center Alternative grading and ground disturbance would be required to develop the site. These activities would still occur in close proximity to the Buena Vista Creek resulting in potentially significant impacts to unknown cultural resources and human remains. Implementation of mitigation measures MM-CUL-1a through MM-CUL-1h and MM-CUL-2 would be required to reduce potential impacts to below a level of significance. Overall, impacts to cultural

resources under the Neighborhood Commercial Center Alternative would be less than significant with mitigation incorporated and impacts would be similar to that of the Project.

Energy

The Neighborhood Commercial Center Alternative would result in short-term construction usage similar to that of the Project. Long-term energy usage would be greater than that of the Project as a larger commercial building would be developed and therefore would require a greater demand in energy for electricity. Additionally, the neighborhood commercial center would be a more intense use compared to the Project, resulting in greater trips to the site and further increase energy usage. The neighborhood commercial center would generate approximately 6,600 ADT, which is 13 times more intense than the Project. Energy associated with fuel usage and vehicle miles traveled from delivery trucks and customer and employee trips would be greater under this alternative.

It is not anticipated that this alternative would result in wasteful, inefficient or unnecessary consumption of energy resources or conflict with or obstruct with a state or local plan for renewable energy, and therefore, the Neighborhood Commercial Center Alternative would result in a less than significant impact to energy, however, impacts would be greater than that of the Project.

Geology and Soils

The development of a neighborhood commercial center would have a similar development footprint as the Project, and therefore would result in potential impacts related to geology and soils. Compliance with the Geotechnical Evaluation, storm water BMPs, the CBC and City regulations would be required to ensure that the Neighborhood Commercial Center Alternative would not expose people or structures to seismic hazards, unstable soils or erosion. The requirements set forth in mitigation measures MM-GEO-1, MM-HYDRO-1 through MM-HYDRO-3 would ensure impacts to geology and soils are reduced to a level below significance.

Potentially significant impacts to paleontological resources as a result of Project grading and ground disturbing activities would remain under this alternative. Implementation of mitigation measure MM-GEO-3a and MM-GEO-3b would be required under this alternative. Impacts to geology and soils would be less than significant after mitigation, with impacts similar to that of the Project.

Greenhouse Gas Emissions

The development of a neighborhood commercial center would result in similar short-term GHG emissions associated with Project construction. Operation of the neighborhood commercial center would result in greater GHG emissions as the building footprint would be greater than that of the Project. Additionally, a more intensive use such as a neighborhood commercial center would result in an increased number of trips to the site resulting in greater GHG emissions. The neighborhood commercial center would generate approximately 6,600 ADT, which is 13 times more intense compared to the Project, resulting in an increase in corresponding GHG emissions.

The Neighborhood Commercial Center Alternative would comply with the existing CC zoning and land use designation and therefore would remain in compliance with local and regional policies and plans related to the reduction of GHG emissions. Impacts related to GHG emissions under the Neighborhood Commercial Center Alternative would be less than significant, but would be greater than that of the Project.

Hazards and Hazardous Materials

The Neighborhood Commercial Center Alternative would still involve the transportation of potentially hazardous materials during construction such as gasoline, diesel fuel, oil and lubricants. Compliance with proper BMPs and all applicable laws, ordinances, rules and regulations would ensure significant impacts related to hazards and hazardous materials would be less than significant.

Operation of the neighborhood commercial center would no longer include the aboveground fuel storage tank and carwash. Depending on the specific uses within the neighborhood commercial center, other potentially hazardous materials could be warranted onsite. However, compliance with all state and local regulations would reduce impacts to a level below significance.

The neighborhood commercial center would be subject to all required setbacks, driveway and drive aisle dimensions in accordance with OFD standards and would not interfere with an adopted emergency response or evacuation plan. Overall, a less than significant impact related to hazards and hazardous materials would occur under the Neighborhood Commercial Center Alternative and impacts would be less than the Project.

Hydrology and Water Quality

Under the Neighborhood Commercial Center Alternative construction would require earth-moving activities, exposing soils which would cause pollutant discharge and potentially degrade water quality. The development of the neighborhood commercial center would require construction BMPs and preparation of a SWPPP in order to reduce pollutant discharge during construction operations.

The Neighborhood Commercial Center Alternative would result in similar impervious areas resulting in sources of pollutants from urban runoff. The development under this alternative would not alter existing drainage patters or increase net runoff after development. The Neighborhood Commercial Center Alternative would still require implementation of mitigation measures MM-HYDRO-1 through MM-HYDRO-3 in order to further reduce impacts to water quality and erosion. Overall, impacts to hydrology and water quality would be less than significant after mitigation and would be similar to that of the Project.

Land Use and Planning

The development of a neighborhood commercial center on the Project Site would not divide an established community and adequate access for vehicles and pedestrians would be ensured. The neighborhood commercial center would comply with all requirements in the CC zone and would not conflict with the Zoning Ordinance or General Plan. Impacts related to Project compliance with the Subarea Plan of the MHCP would be reduced by mitigation measures MM-BIO-1 through MM-BIO-7. The Neighborhood Commercial Center Alternative would have a less than significant impact to land use and planning after mitigation and impacts would be similar to that of the Project.

Mineral Resources

The Project Site is located within the MRZ-3, which indicates that there are no known mineral resources present on the Project Site. Therefore development of the neighborhood commercial center would not

result in impacts to known mineral resources. No impact would occur under the Neighborhood Commercial Center Alternative, similar to that of the Project.

Noise

Under this alternative, the development of the neighborhood commercial center would result in similar short-term construction noise relating to grading and building construction. Construction would continue to comply with City ordinances related to hours of construction and construction noise level requirements.

Operation of the neighborhood commercial center would result in a larger building footprint and approximately 6,600 ADT, which is 13 times more intense compared to the Project, resulting in an increase in noise corresponding to the increase in vehicular trips. Development under the Neighborhood Commercial Center Alternative would be required to operate under the City noise standards. Noise impacts would be less than significant under the Neighborhood Commercial Center Alternative, but would be greater than that of the Project.

Population and Housing

The Neighborhood Commercial Center Alternative would not include the development of housing, nor would it result in the displacement of people or housing. Therefore, no impacts to population or housing would occur under this alternative, similar to that of the Project.

Public Services

The development of a neighborhood commercial center would not require new or physically altered fire or emergency medical facilities, police facilities, schools, parks or other public facilities. The Neighborhood Commercial Center Alternative would result in a greater number of people visiting the Project Site compared to the Project however; the demand for public services would not require new facilities. The development of the neighborhood commercial center would be required to contribute to all required development impact fees in accordance with the City's current requirements, which would be allocated to offset for any increase in demand for such public services. Overall, impacts to public services would be slightly greater compared to the Project, but impacts would remain less than significant.

Recreation

The Neighborhood Commercial Center Alternative would not include recreational facilities that would have an effect on the environmental and would not increase the use of existing neighborhood and regional parks or other recreational facilities in the area. The development of the neighborhood commercial center would be subject to all required development fees in accordance with the City's current requirements. The Neighborhood Commercial Center Alterative would have a less than significant impact to recreation, similar to that of the Project.

Transportation

The Neighborhood Commercial Center Alternative would be anticipated to generate an increase in ADT compared to the Project, due the nature of the use compared to the use as a CarMax facility. The

neighborhood commercial center would generate approximately 6,600 ADT, which is 13 more intense compared to the Project which would generate 475 ADT.

Under this alternative the construction of roadway improvements along Plaza Drive and Thunder Drive would be required and it is assumed that additional roadway improvements would be required along surrounding roadways as a result of increased traffic compared to the Project. The neighborhood commercial center under this alternative would also be subject to a VMT analysis as it is expected to generate greater than 1,000 ADT. Mitigation measures may be warranted as a result. Therefore, impacts related to transportation under the Neighborhood Commercial Center Alternative would be potentially significant and would require mitigation and would be greater than that of the Project.

Tribal Cultural Resources

The development of a neighborhood commercial center on the Project Site would include grading and ground disturbing activities in close proximity to Buena Vista Creek therefore resulting in the potential for buried tribal cultural resources. The Project Site is located within the culturally-affiliated territory of the Rincon Band of Luiseño Indians and therefore the discovery of unknown tribal cultural resources during grading activities would result in a significant impact. The Neighborhood Commercial Center Alternative would be required to implement mitigation measures MM-CUL-1a through MM-CUL-1h in order to reduce potential impacts to tribal cultural resources to a level below significance. Impacts would be less than significant after mitigation, similar to that of the Project.

Utilities and Service Systems

Under the Neighborhood Commercial Center Alternative, the Project would still include off-site improvements for the installation of water infrastructure along Plaza Drive. The onsite water infrastructure improvements are considered within the Alternative Project footprint. The off-site improvements would be located within already disturbed/developed areas and would not result in impacts to sensitive resources, similar to the Project.

The development of a neighborhood commercial center would be anticipated to generate a greater demand for water and wastewater facilities compared to the Project due to the larger building footprint. However, because the neighborhood commercial development would be located on the Project Site which is zoned as CC, it is anticipated that available wastewater capacity and sufficient water supplies would be available to serve the Project Site under this alternative. Water and wastewater demand assumptions for the Project Site in the SMP and UWMP would have been based on a commercial land use, since that was the land use designation at the time the SMP and UWMP were prepared. Therefore, water and wastewater demand under this alternative would have been assumed in the City planning documents for water and sewer.

Similarly, the neighborhood commercial center would be expected to generate more waste compared to the Project however, the El Sobrante Landfill is expected to have sufficient permitted capacity to serve the Project Site under this alternative.

Impacts related to utilities and service systems under the Neighborhood Commercial Center Alternative would be less than significant but would be slightly greater than the Project.

Wildfire

The Neighborhood Commercial Center Alternative would remain on the Project Site which is not located in a very high fire hazard severity zone and is not located within a SRA under CAL FIRE. The development of the neighborhood commercial center would be required to comply with all required setbacks, fire truck access, fire hydrants, address numbers, sprinklers, Knox Box and OPTICOM system in accordance with OFD requirements. The neighborhood commercial center would not impair an adopted emergency or evacuation plan, expose occupants to wildfire or require installation of infrastructure that would exacerbate fire risk. Therefore, the Neighborhood Commercial Center Alternative would have a less than significant impact to Wildfire and impacts would be similar to that of the Project.

Conclusion

The Neighborhood Commercial Center Alternative would have increased environmental impacts related to air quality, energy, GHG emissions, noise, public services, transportation and utilities and service systems due to an increase in building size with a maximum of 55,000 SF and increase in vehicle trips of 6,600 ADT compared to 475 ADT generated by the Project. Impacts to aesthetics, agriculture, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, recreation, tribal cultural resources and wildfire would be similar to that of the Project. All required mitigation measures under the Project would also be required under this alternative and would reduce potentially significant impacts to a level below significant. It is anticipated that transportation mitigation measures to offset VMT increases would be warranted as a result of such increases to traffic generated from the Project Site under this alternative. This alternative would not meet any of the Project objectives.

7.5 Summary of Alternatives Impacts

Table 7.5-1 below provides a summary of the effects of each alternative for each of the environmental impact areas addressed above.

Table 7.5-1
Comparison of Project and Alternatives Impacts

Environmental Issue Area	Project Impact	Alternative 1: No Project Alternative	Alternative 2: Reduced Project Alternative	Alternative 3: Alternative Site Location	Alternative 4: Neighborhood Commercial Center Alternative
Aesthetics	Less Than Significant	No Impact	Less Than Significant (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Less Than Significant (Greater Impact than Project)
Agriculture and Forestry Resources	No Impact	No Impact	No Impact (Similar Impact as Project)	No Impact (Similar Impact as Project)	No Impact (Similar Impact as Project)
Air Quality	Less Than Significant	No Impact	Less Than Significant (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Less Than Significant (Greater Impact than Project)
Biological Resources	Less Than Significant with	No Impact (No creek	Less Than Significant with	Less Than Significant with	Less Than Significant with

Environmental Issue Area	Project Impact	Alternative 1: No Project Alternative	Alternative 2: Reduced Project Alternative	Alternative 3: Alternative Site Location	Alternative 4: Neighborhood Commercial Center Alternative
	Mitigation Incorporated	protection measures would occur)	Mitigation Incorporated (Less Impact than Project)	Mitigation Incorporated (Less Impact than Project)	Mitigation Incorporated (Similar Impact as Project)
Cultural Resources	Less Than Significant with Mitigation Incorporated	No Impact	Less Than Significant with Mitigation Incorporated (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Less Than Significant with Mitigation Incorporated (Similar Impact as Project)
Energy	Less Than Significant	No Impact	Less Than Significant (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Less Than Significant (Greater Impact than Project)
Geology and Soils	Less Than Significant with Mitigation Incorporated	No Impact	Less Than Significant with Mitigation Incorporated (Similar Impact as Project)	Less Than Significant with Mitigation Incorporated (Less Impact than Project)	Less Than Significant with Mitigation Incorporated (Similar Impact as Project)
Greenhouse Gas Emissions	Less Than Significant	No Impact	Less Than Significant (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Less Than Significant (Greater Impact than Project)
Hazards and Hazardous Materials	Less Than Significant	No Impact	Less Than Significant (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Less Than Significant (Less Impact than Project)
Hydrology and Water Quality	Less Than Significant with Mitigation Incorporated	No Impact	Less Than Significant with Mitigation Incorporated (Less Impact than Project)	Less Than Significant with Mitigation Incorporated (Less Impact than Project)	Less Than Significant with Mitigation Incorporated (Similar Impact as Project)
Land Use and Planning	Less Than Significant with Mitigation Incorporated	No Impact	Less Than Significant with Mitigation Incorporated (Similar Impact as Project)	Less Than Significant (Less Impact than Project)	Less Than Significant with Mitigation Incorporated (Similar Impact as Project)
Mineral Resources	No Impact	No Impact	No Impact (Similar Impact as Project)	No Impact (Less Impact than Project)	No Impact (Similar Impact as Project)
Noise	Less Than	No Impact	Less Than	Less Than	Less Than

Environmental Issue Area	Project Impact	Alternative 1: No Project Alternative	Alternative 2: Reduced Project Alternative	Alternative 3: Alternative Site Location	Alternative 4: Neighborhood Commercial Center Alternative
	Significant		Significant (Less Impact than Project)	Significant (Less Impact than Project)	Significant (Greater Impact than Project)
Population and Housing	No Impact	No Impact	No Impact (Similar Impact as Project)	No Impact (Similar Impact as Project)	No Impact (Similar Impact as Project)
Public Services	Less Than Significant	No Impact	Less Than Significant (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Less Than Significant (Greater Impact than Project)
Recreation	Less Than Significant	No Impact	Less Than Significant (Similar Impact as Project)	No Impact (Similar Impact as Project)	Less Than Significant (Similar Impact as Project)
Transportation	Less Than Significant	No Impact (No roadway, sidewalk or bicycle lane improvements would occur)	Less Than Significant (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Potentially Significant Impact (Greater Impact than Project)
Tribal Cultural Resources	Less Than Significant with Mitigation Incorporated	No Impact	Less Than Significant with Mitigation Incorporated (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Less Than Significant with Mitigation Incorporated (Similar Impact as Project)
Utilities and Service Systems	Less Than Significant	No Impact	Less Than Significant (Less Impact than Project)	Less Than Significant (Less Impact than Project)	Less Than Significant (Greater Impact than Project)
Wildfire	Less Than Significant	No Impact	Less Than Significant (Similar Impact as Project)	Less Than Significant (Similar Impact as Project)	Less Than Significant (Similar Impact as Project)
Meets the Project Objectives?	Yes	No	Partially	Partially	No

7.6 Environmentally Superior Alternative

The Environmentally Superior Alternative is generally defined as the alternative which would result in the least adverse environmental impacts on the Project Site and the surrounding area. The No Project Alternative would be the Environmentally Superior Alternative as it would avoid impacts associated with all environmental issue areas. However, this alternative would not meet any of the Project objectives. In

accordance with CEQA Guidelines Section 15126.6(e)(2), if the Environmentally Superior Alternative is the No Project Alternative, the EIR shall also identify an Environmentally Superior Alternative among the other alternatives.

The Alternative Site Location alternative would be the Environmentally Superior Alternative due to its ability to reduce the severity of impacts to biological resources, cultural resources, land use and planning, and tribal cultural resources which were found to be potentially significant unless mitigated under the Project. The Alternative Site Location alternative would have reduced impacts to aesthetics, air quality, energy, GHG emissions, hazards and hazardous materials, noise, public services, transportation and utilities and service systems. Reduced impacts are generally due to the fact that the alternative site location has already been developed with an existing car dealership and therefore, impacts associated with grading have been reduced. The alternative site location would also be located on a smaller parcel and the Project would have a smaller development footprint, further reducing impacts compared to the Project. All other impacts would be less than significant or no impact, similar to that of the Project.

The Alternative Site Location alternative would not entirely meet the Project objectives. This alternative would only partially meet the objective of constructing and operating a retail commercial facility providing local residences with convenient access to an automobile sales center with related services. The Alternative Site Location alternative would only partially meet the objective of developing a thoughtfully designed and visually appealing automobile sale facility, as the development footprint would be reduced compared to the originally-designed Project. Lastly, the Alternative Site Location alternative would meet the objective of positively impacting the local economy by creating employment opportunities and generating tax revenue, however, would not meet this object to the fullest extent. Implementation of the Project at an alternative site location would not achieve the Project objectives to the same degree as the Project would due to the reduction in the site area, reducing vehicle storage and display areas resulting in a decrease in commercial activity. Lastly, the alternative site location was considered to be located too far south of the intended market area.

CHAPTER 8.0 LIST OF PREPARERS AND AGENCIES CONSULTED

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APPENDIX A
NOP and Public Scoping Comments

Appendix A
Notice of Preparation (NOP) Comments (Received August 11, 2020 – September 15, 2020)

Reference #	Date	Name	Group/ Association	Comment Format	CEQA Issue Area	Comment Summary	EIR Section Where Comment Addressed
1	8/24/2020	Christian Julliay	Individual	Email	Transportation	Consideration of traffic light at the corner of Thunder Drive and Tiberon Drive. Concerns regarding traffic from DMV to Tiberon Drive specifically during morning and evening peak hours. Addition of traffic from proposed entrances on Thunder Drive.	The transportation analysis for the Project is provided in Section 4.18 Transportation.
2	8/25/2020	Andrew Green	Native American Heritage Commission	Letter	Tribal Cultural Resources	Description of AB 52 and SB 18 requirements and timelines. Recommendations for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project.	The results of Tribal Consultation and the analysis of Project impacts to Tribal Cultural Resources are provided in Section 4.19 Tribal Cultural Resources.
3	8/25/2020	Patrick Brogan	Individual	Email	Transportation, Parking, Land Use, Aesthetics	1. Concerns regarding increase traffic along Plaza Drive and Thunder Drive and loss of parking along Thunder Drive. Mentions recent accidents at the Plaza Drive and Thunder Drive intersection. 2. Concerns regarding appropriateness of land use of the proposed project. Suggests more appropriate land uses such as residential, park, community garden, or selling a portion of the site to the DMV for additional parking. 3. Safety concerns for emergency vehicles from the nearby fire station. 4. Aesthetics concerns of a car dealership.	1. Section 4.18.5 Transportation 2. Section 4.12.4.b Land Use and Planning 3. Section 4.16.4 Public Services – Fire Protection. 4. Section 4.2.1 and 4.2.4 Aesthetics.
4	8/26/2020	Robert Rapista	County of San Diego Department of Environmental Health (DEH) Hazardous Materials Division (HMD)	Letter	Hazardous Materials	1. Required to Submit a Hazardous Materials Questionnaire to the HMD and complete HMD Hazardous Materials Plan Check application to see if a Unified Program Facility Permit (UPFP) is required. Required prior to issuance of certificate of occupancy by a Building Department. 2. If an underground storage tank (UST) is proposed, requirement of an UST installation permit before construction of the system. 3. If an aboveground petroleum tank with storage capacity of 1,320 gallons or more is proposed, a Spill Prevention Control and Countermeasures Plan (SPCC) and demonstration of compliance with the Aboveground Petroleum Storage Act is required. 4. Any and all construction-related hazardous waste (used oil, paint waste, lead pain debris, etc.) generated onsite must be properly classified, labeled and handled in a manner to prevent release to the environment. Contractor to ensure hazardous waste generated is properly classified, labeled, and disposed of. 5. HMD authority to regulate facilities that handle or store hazardous materials, and/or generate or treat hazardous waste.	1. Section 4.10.4.a Hazards and Hazardous Materials 2. An underground storage tank is not proposed. Therefore, this comment is not applicable. 3.Section 4.10.4.a Hazards and Hazardous Materials 4. Section 4.10.4.a Hazards and Hazardous Materials 5. Section 4.10.2 and 4.10.4.a Hazards and Hazardous Materials
5	8/26/2020	Diane Nygaard	Individual	Speaker Comment	Biological Resources, Transportation, Greenhouse Gas Emissions	1. What is allowed in the Planning Buffer? 2. Requests more-clear site plan. 3. Is VMT being used to analyze traffic? 4. Is the GHG analysis per the City's CAP? 5. Is anything being done to address the residential neighborhood to the east? 6. Where will test drives occur? How are they accounted in the traffic study?	1. Section 3.4 Project Characteristics – Open Space and Section 4.5 Biological Resources. 2. Additional plans and Figures were emailed to commenter on 8/27. 3. A VMT Analysis was prepared for the Project and is used in the preparation of Section 4.18.5 Transportation. 4. Section 4.9 Greenhouse Gas Emissions 5. Section 3.4 Project Characteristics 6. Section 3.0 Project Description and Section 4.18 Transportation.

Reference #	Date	Name	Group/ Association	Comment Format	CEQA Issue Area	Comment Summary	EIR Section Where Comment Addressed
6	8/28/2020	Diane Nygaard	Preserve Calavera	Email	Transportation/VMT, Greenhouse Gas/CAP, Biological Resources, Air Quality, Public Services	1. Transportation analysis to include VMT analysis. 2. Compliance with CAP and implementing ordinances. 3. Buffer along Buena Vista Creek. 4. Creek corridor restoration and management of public access. 5. Parking 6. Test drive routes and mileage and impacts related to GHG, VMT, Air Quality, and Public Safety.	1. Section 4.18 Transportation. The VMT Analysis is provided as Appendix N of the EIR. 2. Section 4.9.4.b Greenhouse Gas Emissions and Section 4.7.4.b Energy 3. Section 3.4 Project Characteristics – Open Space and Section 4.5 Biological Resources. 4. Section 3.4 Project Characteristics – Open Space 5. Section 3.0 Project Description 6. Section 4.4 Air Quality, Section 4.9 Greenhouse Gas Emissions, Section 4.18 Transportation
7	8/26/2020	Daniel Valdez	County of San Diego Department of Environmental Health (DEH) Vector Control Program (VCP)	Letter	Mosquito Breeding, Vector Control	1. Ensure construction-related depressions do not hold water. Any area that is capable of accumulating and holding at least ½ inch of water for more than 96 hours can support mosquito breeding and development. 2. Authority of VCP during construction and operation of the project. 3. Further information for significance guidelines and BMPs for mosquito control.	1. Section 3.4 Project Characteristics – Drainage and Hydrology and Section 4.11.4.a Hydrology and Water Quality 2. Section 4.11.2 Hydrology and Water Quality 3. This comment provides information only.
8	9/10/2020	Maurice Eaton	California Department of Transportation	Letter	Transportation, Noise	1. A Vehicle Miles Traveled based Traffic Impact Study should be provided. 2. Caltrans is not responsible for existing or future traffic noise impacts associated with the existing configuration of SR-78 3. Encroachment permit will be required for any work within the Caltrans right-of-way (ROW). 4. Recommends identification of impacts caused by the project that occur within the Caltrans ROW. 5. Perpetuation of survey monuments by a licensed land surveyor is required, if they are being destroyed by any construction. 6. Any work performed within the Caltrans ROW will require discretionary review and approval by Caltrans and an encroachment permit will be required for any work within the Caltrans ROW prior to construction.	1. A VMT Analysis (Append N) and a Local Transportation Study (Appendix O) were prepared for the Project and used in the preparation of this EIR. 2. This comment is noted by the Project applicant and does not require discussion within the EIR. 3. This comment is noted as the Project does not propose to encroach into the Caltrans ROW. 4. This comment is noted as the Project would not cause impacts within the Caltrans ROW. 5. This comment is noted. 6. This comment is noted as the Project would not require any work within the Caltrans ROW.
9	9/10/2020	Mitchell M. Tsai	Attorneys for Southwest Regional Council of Carpenters (SWRCC)	Letter	Energy, GHG	1. Recommendation for City to require project to be built to standards exceeding the 2019 California Green Building Code. 2. Recommends the City adopt a Mandatory Finding of Significance that the project may cause substantial adverse effect on human beings and mitigate COVID-19 impacts. This comment provides recommendations for construction site protocols during the COVID-19 crisis.	1. The Project would comply with the most recent adopted California Green Building Code. 2. At time of construction, current construction site and construction worker protocols would be followed in

Reference #	Date	Name	Group/ Association	Comment Format	CEQA Issue Area	Comment Summary	EIR Section Where Comment Addressed
							accordance with current state and local regulations. Section 4.10 Hazards and Hazardous Materials.
10	9/14/2020	Cheryl Madrigal	Rincon Band of Luiseño Indians	Letter	Tribal Cultural Resources	1. The project is located within the specific Area of Historic Interest (AHI) of the Rincon Band of Luiseño Indians. 2. Recommends archaeological study be conducted with tribal monitor from Rincon Band during survey. 3. Right of the Rincon Band to fully participate in the environmental review process and submittal of information.	1. Section 4.19 Tribal Cultural Resources. 2. Section 4.6 Cultural Resources and 4.19 Tribal Cultural Resources 3. This comment is noted.

Comment #1

Rayna del Rosario

From: Richard Greenbauer <RGreenbauer@oceansideca.org>
Sent: Tuesday, August 25, 2020 6:31 AM
To: Rayna del Rosario
Cc: Teala Cotter
Subject: Fwd: D19-00021

First Comment for EIR

Sent from my iPad

Begin forwarded message:

From: Christian Julliay <cmjulliay@yahoo.com>
Date: August 24, 2020 at 7:28:03 PM PDT
To: Richard Greenbauer <RGreenbauer@oceansideca.org>
Subject: D19-00021
Reply-To: Christian Julliay <willmake5@yahoo.com>

Warning: External Source

Hello Richard ; In regards to the Carmax Superstore with its two accesses on Thunder Dr., are there plans to place a traffic light at the corner of Thunder Dr. and Tiberon Dr. ? There should be consideration for a light there because there is already a lot of traffic coming from the DMV already making it a challenge for traffic coming out of Tiberon Dr., especially early morning and the after work period for jobs and school. Those two Carmax entrances will add a lot more traffic. Christian Julliay a resident there.

Comment #2

STATE OF CALIFORNIA — Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
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Chumash

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COMMISSIONER
William Mungary
Paiute/White Mountain Apache

COMMISSIONER
Julie Tumamait-Stenslie
Chumash

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August 13, 2020

Richard Greenbauer
City of Oceanside
300 N. Coast Highway
Oceanside, CA 92054

Re: 2020089012, CarMax Auto Superstore Oceanside; Development Plan (019-00021) and Conditional Use Permit (CUP19-00029) Project, San Diego County

Dear Mr. Greenbauer:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.

b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

cc: State Clearinghouse

Comment #3

Rayna del Rosario

From: Richard Greenbauer <RGreenbauer@oceansideca.org>
Sent: Tuesday, August 25, 2020 5:05 PM
To: Rayna del Rosario
Subject: Fwd: CarMax Auto Superstore Oceanside

So, the comments start coming in.... this one does state aesthetics so will need to be part of the EIR.

Sent from my iPad

Begin forwarded message:

> **From:** "patrickebrogan@yahoo.com" <patrickebrogan@yahoo.com>
> **Date:** August 25, 2020 at 5:01:31 PM PDT
> **To:** Richard Greenbauer <RGreenbauer@oceansideca.org>
> **Subject: CarMax Auto Superstore Oceanside**
>
> Warning: External Source
>
> ---
>
> Dear Mr. Greensburg:
>
> I am writing you today to offer my comments regarding the request for approval of the Development Plan and Conditional Use Permit for the above-referenced project and why strongly OPPOSE said project.
>
> I have been an Oceanside resident and owner at the below address since February 1979, and so I speak to the changes I have seen in this neighborhood over the past 41+ years.
>
> Traffic, and decrease in street parking, greatly increased with the construction of the DMV and the extension of Plaza Drive. This neighborhood has less of a residential feel, and more-and-more of a commercial feel.
>
> To build a used car lot would be an inappropriate land use. A more appropriate use of this property would be some combination of residential, park, or community garden. Even selling some of the property to the State to sift DMV traffic off the street would be an improvement!
>
> Examining the documents that I received yesterday shows that Thunder Drive would lose parking spaces, and increase traffic. Also, traffic would increase on Plaza Drive. I also would like to point out that in the past couple of weeks, a driver made an unsafe turn from Plaza Drive southbound on Thunder Drive driving onto the roof of a vehicle who was making a left turn from Thunder Drive to Plaza Drive. Increased traffic would also be a safety hazard to any EMS vehicles coming from the nearby fire station.
>
> The aesthetics of a large car lot would be a negative factor on my property value, and that of the two condo associations, and the several older single family residences on Thunder Drive.
>
> Your meeting on Wednesday evening, in my opinion, starts when many workers may be still

commuting home. Also, since there is a presentation first, time for public comment is very limited.

Finally, as a side note, on the envelope that was mailed from the City of Oceanside, there is a major spelling error:

There is no such word as "serviceses". The plural of service is services.

Thank you for your consideration in this matter.

Sincerely yours,

Patrick Eoin Brogan
3458 Thunder Drive
Oceanside, CA 92056-4744
760-758-7477 (home)

Comment #4

County of San Diego

DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
Phone: (858) 505-6700 or (800) 253-9933 Fax: (858) 505-6786
www.sdcdeh.org

AMY HARBERT
ASSISTANT DIRECTOR

Richard Greenbauer
Planning Division
300 N. Coast Highway
Oceanside, CA 92054
Sent via e-mail to: RGreenbauer@oceansideca.org

COMMENTS: CARMAX AUTO SUPERSTORE OCEANSIDE; DEVELOPMENT PLAN (019-00021) AND CONDITIONAL USE PERMIT (CUP19-00029)

Thank you for the opportunity to comment on the referenced project. The County of San Diego Hazardous Materials Division (HMD) is responsible for the protection of public health and the environment by ensuring hazardous materials, hazardous waste, medical waste, aboveground tanks and underground storage tanks are properly managed. The HMD has completed their review and has the following comments regarding the project.

The proposed project description as stated in the Notice:

The project is a request for approval of a Development Plan (D19- 000021) and Conditional Use Permit (CUP19-00029) to allow for the development and operation of a CarMax facility. The proposed development consists of the construction of a CarMax pre-owned automobile dealership, including a sales and administration building, service building, private carwash, associated access drives, landscaped areas, presentation area, staging area (93 spaces), sales display area (285 spaces), and a customer and employee parking lot (148 spaces). An additional sales display area would be provided on the northern parcel with a security gate and control island and would be developed as part of Phase II of the project.

City of Oceanside - Planning Division
Carmax Auto Superstore Oceanside; Development Plan (019-00021) And Conditional Use Permit (CUP19-00029)

COMMENTS:

1. According to the project description in the document, the proposed new construction of a CarMax pre-owned automobile dealership facility, will include a service building and private carwash. The facility may be handling and storing reportable quantities of hazardous materials and/or generating hazardous waste. The facility may need a Unified Program Facility Permit (UPFP).

   The facility operator is required to submit a Hazardous Materials Questionnaire to the HMD and complete an HMD Hazardous Materials Plan Check application to determine if a UPFP will be required. The HMD Hazardous Materials Plan Check review will be required prior to issuance of a certificate of occupancy by a Building Department.

   For your reference, information regarding the Hazardous Materials Plan Check plan check requirement can be reviewed at:
   https://www.sandiegocounty.gov/content/sdc/deh/hazmat/hazmat/hmd_plan_check.html

2. If the facility is planning on installing an underground storage tank (UST) system or underground sump/vault to collect and/or store a hazardous substance, a UST installation permit will be required by State law and County ordinance before construction of the system. Information about the permitting process and laws is found at:
   https://www.sandiegocounty.gov/content/sdc/deh/hazmat/ust.html

3. If the facility is planning on installing an aboveground petroleum tank with a storage capacity of ≥1,320 gallons, the facility would require a Spill Prevention Control and Countermeasures Plan (SPCC) and demonstrate compliance with the Aboveground Petroleum Storage Act, Cal. Health and Safety Code, sections 25270 etc. The facility operator shall complete the SPCC plan and retain a copy onsite for inspection by the HMD.

4. Please be advised, any and all construction-related hazardous waste (examples: used oil, paint waste, lead paint debris, etc.) generated onsite anytime during this project must be properly classified, labeled and handled in manner to prevent release to the environment. Contractor(s) must ensure hazardous waste generated during all construction project work is properly classified, labeled, and disposed by a California registered hazardous waste hauler. Unified Program Facility Permit may also be required for the accumulation and storage of these wastes. More information is found at this webpage:
   https://www.sandiegocounty.gov/content/sdc/deh/hazmat/hazwaste.html

5. Please note, anytime during construction and after completion of the project, the HMD has the authority pursuant to state law and County Code to regulate facilities that handle or store hazardous materials, and/or generate or treat hazardous waste. The HMD will apply that authority as necessary to protect public health and the environment. Additional regulatory guidance information can be found on our website at: https://www.sandiegocounty.gov/content/sdc/deh/hazmat.html.

The HMD appreciates the opportunity to participate in the environmental review process for this project. If you have any questions regarding these comments, please contact me at (858) 505-6818 or by e-mail at robert.rapista@sdcounty.ca.gov

Sincerely,

Robert Rapista

Robert Rapista, Supervising Environmental Health Specialist
Hazardous Materials Division

Email Ecc: Mary Bennett, DEH
Sande Pence, DEH-HMD
Ryan Forsyth, DEH-HMD

Comment #5

Speaker Comment

Comment #6

Rayna del Rosario

From: Richard Greenbauer <RGreenbauer@oceansideca.org>
Sent: Friday, August 28, 2020 3:02 PM
To: Rayna del Rosario
Subject: FW: Comments on CarMax NOP

Please see comments from Diane.

From: Diane Nygaard <dnygaard3@gmail.com>
Sent: Friday, August 28, 2020 1:57 PM
To: Richard Greenbauer <RGreenbauer@oceansideca.org>
Subject: Comments on CarMax NOP

Warning: External Source

Mr Greenbauer

Please reply to confirm timely receipt of these comments on the NOP for the CarMax project:

- Inadequate notice of public meeting/deadline for comments.

The NOP that I received in the mail was signed by you on August 10,2020. I received it on August 24th- for a community meeting on August 26th- which was difficult to access. I saved the envelope from the mailing- but it is using a postage permit and has no date stamp or postage cancellation. The notice says the deadline for comments is 30 days from receipt of the notice- but there is no way to determine when the notice was received. I believe these notices should actually provide a reasonable notice to the community of public meetings- and there should be a clearly stated date for when comments are due.

This is particularly important for this project which will require a CUP and is immediately adjacent to a residential neighborhood. Not one neighbor attended the meeting which by itself is a clear indication there were problems with the noticing. Greater outreach should be proved to this adjacent neighborhood.

- CUP is a discretionary action- allowing the city greater latitude in adding conditions of approval than would otherwise be the case

That procedural clarification is important public information and needs to be included in a way the public understands. I expect the city to carefully consider all conditions that would make this project a better fit with this commercial area and the adjacent residential neighborhood- and riparian corridor. The developer should not just do the minimum that is required- they should step up to do more- and the city should ask for more.

- transportation analysis needs to be based on VMT per guidelines recently adopted by the city.

SB 743 passed in 2013- with an implementation date of July 1, 2020. It is not acceptable to ignore this for a project that is just now doing its first public noticing for CEQA.

- Compliance with CAP implementing ordinances

At the scoping meeting it was stated that the project will comply with the adopted CAP. We assume that also means full compliance with the CAP implementing ordinances that were recently adopted- again before this public CEQA noticing for the project. The TDM ordinance is of particular concern.

- buffer along Buena Vista Creek

At the scoping meeting it was stated that there will be a 50' biological buffer and a 50' planning buffer- but nothing is being proposed in the planning buffer. The figures provided after the meeting identify a "100' buffer" along the creek- not making that same distinction. Several other recent projects along BV Creek have provided for a 100' biological buffer which provides much greater long term benefits to the riparian corridor. Since nothing is being proposed in this buffer we would encourage the entire 100' to be designated as a biological buffer.

- Creek corridor restoration

This is a highly degraded reach of the creek with long term problems of trash, pet waste and homeless encampments. The restoration should include the buffer area and include provisions for managing the necessary restrictions on public access to the area. We would also expect this will all be added to the city's hardline preserve with an appropriate endowment to ensure preservation of the biological function in perpetuity.

- parking

"Rightsizing " of parking lots is a key concern as we try to move away from car-centric travel and encourage fewer auto trips and more by alternative transportation. Generally we push for parking to be reduced. However on this site it is important to look at how development of this parcel can address chronic issues with parking in the area. The DMV facility results in parking on public streets already. The adjacent neighborhood parks along Thunder. There are some good examples in the region of shared parking arrangements that really should be considered here. It would be easy to facilitate some shared parking - especially for DMV employees along their fenceline, and for the adjacent neighborhood along Thunder. Angle in parking along Thunder would increase the number of spaces available for public use- and also serve this facility.

- mileage and location of routes for vehicle test drives

This needs to be included in the CEQA documents as it could have significant impacts on GHG, VMT, air quality, and public safety. Deferring this till later in the process fails to recognize /mitigate any potential adverse impacts from this activity that is part of site operations and would exclude the public from meaningful input.

Thank you for considering these comments.

Diane Nygaard
On Behalf of Preserve Calavera

Comment #7

County of San Diego

DEPARTMENT OF ENVIRONMENTAL HEALTH
VECTOR CONTROL PROGRAM
5570 OVERLAND AVENUE, SUITE 102, SAN DIEGO, CA 92123
Phone: (858) 694-2888 Fax: (858) 571-4268
www.SDVector.com

AMY HARBERT
ASSISTANT DIRECTOR

August 26, 2020

Planning Division
Attn: Richard Greenbauer, Principal Planner
300 N. Coast Hwy
Oceanside, California 92054

COMMENTS ON THE NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT FOR THE CARMAX AUTO SUPERSTORE PROJECT

Dear Mr. Greenbauer,

Thank you for the opportunity to comment on the Notice of Preparation of an Environmental Impact Report for the above referenced project. The County of San Diego Vector Control Program (VCP) is responsible for the protection of public health through the surveillance and control of mosquitoes that are vectors for human disease including West Nile virus (WNV). The VCP has completed their review and has the following comments regarding the proposed project.

1. The VCP respectfully requests that the project design features address potential impacts from possible mosquito breeding sources created by the project and that the project is constructed in a manner to minimize those impacts. Specifically, ensure construction-related depressions created by grading activities, vehicle tires, ditches, and landscaping do not result in depressions that will hold standing water. In addition, ensure drainage areas and other structures do not create a potential mosquito breeding source. Any area that is capable of accumulating and holding at least ½ inch of water for more than 96 hours can support mosquito breeding and development.

2. Please note, the VCP has the authority pursuant to state law and County Code to order the abatement of any mosquito breeding that does occur either during construction or after the project is completed that is determined to be a vector breeding public nuisance. The VCP will exert that authority as necessary to protect public health if the project is not designed and constructed to prevent such breeding.

3. For your information, the County of San Diego Guidelines for Determining Significance for Vectors can be accessed at http://www.sandiegocounty.gov/content/dam/sdc/pds/docs/vector_guidelines.pdf and the

California Department of Public Health Best Management Practices for Mosquito Control in California is available at https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/MosquitoesandMosquitoBorneDiseases.aspx#

The VCP appreciates the opportunity to participate in the environmental review process for this project. If you have any questions regarding these comments, please contact Daniel Valdez at 858-688-3722 or by e-mail at Daniel.Valdez@sdcounty.ca.gov.

Sinc ely,

DANIEL VALDEZ, Registered Environmental Health Specialist
Vector Control Program

Comment #8

DEPARTMENT OF TRANSPORTATION
DISTRICT 11
4050 TAYLOR STREET, MS-240
SAN DIEGO, CA 92110
PHONE (619) 688-3137
FAX (619) 688-4299
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life.

September 10, 2020

11-SD-78
PM 3.596
CarMax Auto Superstore Oceanside
NOP/SCH#2020089012

Mr. Richard Greenbauer
City of Oceanside
300 N Coast Highway
Oceanside, CA 92054

Dear Mr. Greenbauer:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the Notice of Preparation for the CarMax Auto Superstore Oceanside project located near State Route 78 (ISR-78). The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. The Local Development-Intergovernmental Review (LD-IGR) Program reviews land use projects and plans to ensure consistency with our mission and state planning priorities.

Caltrans has the following comments:

Traffic Impact Study

- A Vehicle Miles of Travel (VMT) based Traffic Impact Study (TIS) should be provided for this project. Please use the Governor's Office of Planning and Research Guidance to identify VMT related impacts.[i]

- The TIS may also need to identify the proposed project's near-term and long-term safety or operational issues, on or adjacent any existing or proposed State facilities.

[i] California Governor's Office of Planning and Research (OPR) 2018. "Technical Advisory on Evaluating Transportation Impacts in CEQA." http://opr.ca.gov/docs/20190 I 22-743_Technical_Advisory.pdf

Noise

The applicant must be informed that in accordance with 23 Code of Federal Regulations (CFR) 772, the Department of Transportation (Caltrans) is not responsible for existing or future traffic noise impacts associated with the existing configuration of SR-78.

Environmental

Caltrans welcomes the opportunity to be a Responsible Agency under the California Environmental Quality Act (CEQA), as we have some discretionary authority of a portion of the project that is in Caltrans' R/W through the form of an encroachment permit process. We look forward to the coordination of our efforts to ensure that Caltrans can adopt the alternative and/or mitigation measure for our R/W. We would appreciate meeting with you to discuss the elements of the EIR that Caltrans will use for our subsequent environmental compliance.

An encroachment permit will be required for any work within the Caltrans' R/W prior to construction. As part of the encroachment permit process, the applicant must provide approved final environmental documents for this project, corresponding technical studies, and necessary regulatory and resource agency permits. Specifically, CEQA determination or exemption. The supporting documents must address all environmental impacts within the Caltrans' R/W and address any impacts from avoidance and/or mitigation measures.

We recommend that this project specifically identifies and assesses potential impacts caused by the project or impacts from mitigation efforts that occur within Caltrans R/W that includes impacts to the natural environment, infrastructure (highways/roadways/on- and off-ramps) and appurtenant features (lighting/signs/guardrail/slopes). Caltrans is interested in any additional mitigation measures identified for the DEIR.

Right-of-Way

- Per Business and Profession Code 8771, perpetuation of survey monuments by a licensed land surveyor is required, if they are being destroyed by any construction.

- Any work performed within Caltrans R/W will require discretionary review and approval by Caltrans and an encroachment permit will be required for any work within the Caltrans R/W prior to construction.

Additional information regarding encroachment permits may be obtained by contacting the Caltrans Permits Office at (619) 688-6158 or by visiting the website at http://www.dot.ca.gov/trafficops/ep/index.html. Early coordination with Caltrans is strongly advised for all encroachment permits.

If you have any questions, please contact Kimberly Dodson, of the Caltrans Development Review Branch, at (619) 688-2510 or by e-mail sent to Kimberly.Dodson@dot.ca.gov.

Sincerely,

electronically signed by

MAURICE EATON, Branch Chief
Local Development and Intergovernmental Review

Comment #9

P: (626) 381-9248
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Attorney At Law

155 South El Molino Avenue
Suite 104
Pasadena, California 91101

VIA U.S. MAIL & E-MAIL

September 10, 2020

City of Oceanside, Planning Division
300 N. Coast Hwy.
Oceanside, CA 92054
Attn: Richard Greenbauer, Principal Planner

Email delivery to: RGreenbauer@oceansideca.org

RE: CarMax Auto Superstore Oceanside Notice of Preparation ("NOP"); Development Plan (D19-00021) and Conditional Use Permit (CUP19-00029)

Dear Mr. Greenbauer,

On behalf of the Southwest Regional Council of Carpenters ("**Commenter**" or "**Carpenters**"), my Office is submitting these comments on the City of Oceanside's ("**City**") Notice of Preparation of an Environmental Impact Report ("**NOP**") (SCH No. 2020089012) for the CarMax Auto Superstore Oceanside Project ("**Project**").

The Southwest Carpenters is a labor union representing 50,000 union carpenters in six states, including in southern California, and has a strong interest in well ordered land use planning and addressing the environmental impacts of development projects.

Individual members of the Southwest live, work and recreate in the City and surrounding communities and would be directly affected by the Project's environmental impacts.

Commenter expressly reserves the right to supplement these comments at or prior to hearings on the Project, and at any later hearings and proceedings related to this Project. Cal. Gov. Code § 65009(b); Cal. Pub. Res. Code § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield* (2004) 124 Cal. App. 4th 1184, 1199-1203; see *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal. App. 4th 1109, 1121.

Commenter incorporates by reference all comments raising issues regarding the environmental impact report ("**EIR**") submitted prior to certification of the EIR for the Project. *Citizens for Clean Energy v City of Woodland* (2014) 225 CA4th 173, 191 (finding that any party who has objected to the Project's environmental documentation may assert any issue timely raised by other parties).

Moreover, Commenter requests that the Lead Agency provide notice for any and all notices referring or related to the Project issued under the California Environmental Quality Act ("**CEQA**"), Cal Public Resources Code ("**PRC**") § 21000 *et seq*, and the California Planning and Zoning Law ("**Planning and Zoning Law**"), Cal. Gov't Code §§ 65000–65010. California Public Resources Code Sections 21092.2, and 21167(f) and Government Code Section 65092 require agencies to mail such notices to any person who has filed a written request for them with the clerk of the agency's governing body.

The City should seriously consider proposing that the Applicant provide additional community benefits such as requiring local hire and paying prevailing wages to benefit the City. Moreover, it would be beneficial for the City to require the Applicant to hire workers: (1) who have graduated from a Joint Labor Management apprenticeship training program approved by the State of California, or have at least as many hours of on-the-job experience in the applicable craft which would be required to graduate from such a state approved apprenticeship training program and; (2) who are registered apprentices in an apprenticeship training program approved by the State of California.

In addition, the City should require the Project to be built to standards exceeding the current 2019 California Green Building Code and 2020 County of Los Angeles Green Building Standards Code to mitigate the Project's environmental impacts and to advance progress towards the State of California's environmental goals.

I. THE PROJECT WOULD BE APPROVED IN VIOLATION OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

A. Background Concerning the California Environmental Quality Act

CEQA has two basic purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project. 14 California Code of Regulations ("**CCR**" or "**CEQA Guidelines**") § 15002(a)(1).[1] "Its

[1] The CEQA Guidelines, codified in Title 14 of the California Code of Regulations, section 150000 et seq, are regulatory guidelines promulgated by the state Natural Resources Agency

purpose is to inform the public and its responsible officials of the environmental consequences of their decisions *before* they are made. Thus, the EIR 'protects not only the environment but also informed self-government.' [Citation.]" *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 564. The EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return." *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal. App. 4th 1344, 1354 ("*Berkeley Jets")*; *County of Inyo v. Yorty* (1973) 32 Cal. App. 3d 795, 810.

Second, CEQA directs public agencies to avoid or reduce environmental damage when possible by requiring alternatives or mitigation measures. CEQA Guidelines § 15002(a)(2) and (3). *See also, Berkeley Jets,* 91 Cal. App. 4th 1344, 1354; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553; *Laurel Heights Improvement Ass'n v. Regents of the University of California* (1988) 47 Cal. 3d 376, 400. The EIR serves to provide public agencies and the public in general with information about the effect that a proposed project is likely to have on the environment and to "identify ways that environmental damage can be avoided or significantly reduced." CEQA Guidelines § 15002(a)(2). If the project has a significant effect on the environment, the agency may approve the project only upon finding that it has "eliminated or substantially lessened all significant effects on the environment where feasible" and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns" specified in CEQA section 21081. CEQA Guidelines § 15092(b)(2)(A–B).

While the courts review an EIR using an "abuse of discretion" standard, "the reviewing court is not to 'uncritically rely on every study or analysis presented by a project proponent in support of its position.' A 'clearly inadequate or unsupported study is entitled to no judicial deference.'" *Berkeley Jets*, 91 Cal. App. 4th 1344, 1355 (emphasis added) (quoting *Laurel Heights,* 47 Cal.3d at 391, 409 fn. 12). Drawing this line and determining whether the EIR complies with CEQA's information disclosure requirements presents a question of law subject to independent review by the courts. (*Sierra Club v. Cnty. of Fresno* (2018) 6 Cal. 5th 502, 515; *Madera Oversight Coalition, Inc. v.*

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for the implementation of CEQA. (Cal. Pub. Res. Code § 21083.) The CEQA Guidelines are given "great weight in interpreting CEQA except when . . . clearly unauthorized or erroneous." *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) 62 Cal. 4th 204, 217.

County of Madera (2011) 199 Cal. App. 4th 48, 102, 131.) As the court stated in *Berkeley Jets*, 91 Cal. App. 4th at 1355:

> A prejudicial abuse of discretion occurs "if the failure to include relevant information precludes informed decision-making and informed public participation, thereby thwarting the statutory goals of the EIR process.

The preparation and circulation of an EIR is more than a set of technical hurdles for agencies and developers to overcome. The EIR's function is to ensure that government officials who decide to build or approve a project do so with a full understanding of the environmental consequences and, equally important, that the public is assured those consequences have been considered. For the EIR to serve these goals it must present information so that the foreseeable impacts of pursuing the project can be understood and weighed, and the public must be given an adequate opportunity to comment on that presentation before the decision to go forward is made. *Communities for a Better Environment v. Richmond* (2010) 184 Cal. App. 4th 70, 80 (quoting *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 449–450).

B. The NOP Fails to Provide All Required Information

Notice of Preparations or NOPs must provide responsible and trustee agencies with sufficient information concerning the project and its potential environmental effects to enable them to make a "meaningful response." CEQA Guidelines § 15082(a)(1). CEQA Guidelines section 15082(a)(1) provides that at a minimum, the NOP must contain:

- A description of the project;
- The location of the project by street address and cross street (for a project in an urban area) or by attaching a specific map; and
- The project's probable environmental effects.

However, the City's two-page NOP merely provides the general description of the Project. While the NOP provides a list of "issues" the EIR will address in detail, the NOP does not provide what the Project's probable environmental effects would be in any detail.

Moreover, the NOP fails to list all "each responsible agency, the Office of Planning and Research, and those public agencies having jurisdiction by law over natural

resources affected by the project" as required by CEQA. PRC § 21080.4(a). While the State Clearinghouse webpage for the Project lists the responsible and trustee agencies, the NOP should provide such a list so the information can be readily available and referred to.

C. Due to the COVID-19 Crisis, the City Must Adopt a Mandatory Finding of Significance that the Project May Cause a Substantial Adverse Effect on Human Beings and Mitigate COVID-19 Impacts

CEQA requires that an agency make a finding of significance when a Project may cause a significant adverse effect on human beings. PRC § 21083(b)(3); CEQA Guidelines § 15065(a)(4).

Public health risks related to construction work requires a mandatory finding of significance under CEQA. Construction work has been defined as a Lower to High-risk activity for COVID-19 spread by the Occupations Safety and Health Administration. Recently, several construction sites have been identified as sources of community spread of COVID-19.[2]

SWRCC recommends that the Lead Agency adopt additional CEQA mitigation measures to mitigate public health risks from the Project's construction activities. SWRCC requests that the Lead Agency require safe on-site construction work practices as well as training and certification for any construction workers on the Project Site.

In particular, based upon SWRCC's experience with safe construction site work practices, SWRCC recommends that the Lead Agency require that while construction activities are being conducted at the Project Site:

Construction Site Design:

- The Project Site will be limited to two controlled entry points.
- Entry points will have temperature screening technicians taking temperature readings when the entry point is open.

[2] Santa Clara County Public Health (June 12, 2020) COVID-19 CASES AT CONSTRUCTION SITES HIGHLIGHT NEED FOR CONTINUED VIGILANCE IN SECTORS THAT HAVE REOPENED, *available at* https://www.sccgov.org/sites/covid19/Pages/press-release-06-12-2020-cases-at-construction-sites.aspx.

- The Temperature Screening Site Plan shows details regarding access to the Project Site and Project Site logistics for conducting temperature screening.
- A 48-hour advance notice will be provided to all trades prior to the first day of temperature screening.
- The perimeter fence directly adjacent to the entry points will be clearly marked indicating the appropriate 6-foot social distancing position for when you approach the screening area. Please reference the Apex temperature screening site map for additional details.
- There will be clear signage posted at the project site directing you through temperature screening.
- Provide hand washing stations throughout the construction site.

Testing Procedures:

- The temperature screening being used are non-contact devices.
- Temperature readings will not be recorded.
- Personnel will be screened upon entering the testing center and should only take 1-2 seconds per individual.
- Hard hats, head coverings, sweat, dirt, sunscreen or any other cosmetics must be removed on the forehead before temperature screening.
- Anyone who refuses to submit to a temperature screening or does not answer the health screening questions will be refused access to the Project Site.
- Screening will be performed at both entrances from 5:30 am to 7:30 am.; main gate [ZONE 1] and personnel gate [ZONE 2]
- After 7:30 am only the main gate entrance [ZONE 1] will continue to be used for temperature testing for anybody

gaining entry to the project site such as returning personnel, deliveries, and visitors.

- If the digital thermometer displays a temperature reading above 100.0 degrees Fahrenheit, a second reading will be taken to verify an accurate reading.
- If the second reading confirms an elevated temperature, DHS will instruct the individual that he/she will not be allowed to enter the Project Site. DHS will also instruct the individual to promptly notify his/her supervisor and his/her human resources (HR) representative and provide them with a copy of Annex A.

Planning

- Require the development of an Infectious Disease Preparedness and Response Plan that will include basic infection prevention measures (requiring the use of personal protection equipment), policies and procedures for prompt identification and isolation of sick individuals, social distancing (prohibiting gatherings of no more than 10 people including all-hands meetings and all-hands lunches) communication and training and workplace controls that meet standards that may be promulgated by the Center for Disease Control, Occupational Safety and Health Administration, Cal/OSHA, California Department of Public Health or applicable local public health agencies.[3]

The United Brotherhood of Carpenters and Carpenters International Training Fund has developed COVID-19 Training and Certification to ensure that Carpenter union members and apprentices conduct safe work practices. The Agency should require that

[3] *See also* The Center for Construction Research and Training, North America's Building Trades Unions (April 27 2020) NABTU and CPWR COVIC-19 Standards for U.S Constructions Sites, *available at* https://www.cpwr.com/sites/default/files/NABTU_CPWR_Standards_COVID-19.pdf; Los Angeles County Department of Public Works (2020) Guidelines for Construction Sites During COVID-19 Pandemic, *available at* https://dpw.lacounty.gov/building-and-safety/docs/pw_guidelines-construction-sites.pdf.

..

all construction workers undergo COVID-19 Training and Certification before being allowed to conduct construction activities at the Project Site.

If the City has any questions or concerns, feel free to contact my Office.

Sincerely,

_____

Mitchell M. Tsai
Attorneys for Southwest Regional
Council of Carpenters

Comment #10

Rincon Band of Luiseño Indians

CULTURAL RESOURCES DEPARTMENT

One Government Center Lane | Valley Center | CA 92082
(760) 749-1051 | Fax: (760) 749-8901 | rincon-nsn.gov

September 14, 2020

Sent via email only to: RGreenbauer@oceansideca.org
City of Oceanside
Planning Division
Attn.: Richard Greenbauer
300 N. Coast Hwy.
Oceanside, CA 92054

Re: CarMax Auto Superstore Oceanside; Development Plan (D19-00021) and Conditional Use Permit (CUP19-00029)

Dear Mr. Greenbauer,

This letter is written on behalf of the Rincon Band of Luiseño Indians ("Rincon Band" or "Band"), a federally recognized Indian Tribe and sovereign government. We have received your Notice of Preparation of an Environmental Impact Report (EIR) for the Car Max Auto Superstore. The identified location is within the Territory of the Luiseño people and within the Band's specific Area of Historic Interest (AHI). As such, Rincon is traditionally and culturally affiliated to the project area.

After review of the provided documents and our internal information, the Band has specific concerns that the project may impact tangible Tribal Cultural Resources. Embedded in these resources and within the AHI are Rincon's history, culture, and continuing traditional identity. The Rincon Band recommends that an archaeological/cultural resources study be conducted by a Secretary of the Interior qualified archaeologist to include an archeological record search and complete intensive survey of the property. A professional Tribal monitor from the Rincon Band should accompany the archaeologist during the survey.

The Rincon Band reserves its right to fully participate in the environmental review process and to review and submit additional information during our consultation meeting(s) with the City of Oceanside. If you have additional questions or concerns, please do not hesitate to contact our office at your convenience at (760) 297-2635 or via electronic mail at cmadrigal@rincon-nsn.gov. We look forward to working together to protect and preserve our cultural assets.

Sincerely,

Cheryl Madrigal
Tribal Historic Preservation Officer
Cultural Resources Manager

Bo Mazzetti, Chairman | Tishmall Turner, Vice Chair | Laurie E. Gonzalez, Council Member | Alfonso Kolb, Sr., Council Member | John Constantino, Council Member

APPENDIX B
Phase I Environmental Site Assessment

EnviroApplications, Inc.
Engineering & Consulting

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT FOR

PROPOSED OCEANSIDE CARMAX FACILITY
Vacant Commercial Property
3843-4003 Plaza Drive, 3441-3552 Thunder Drive
Oceanside, (North) San Diego County, CA 92056

EAI Project Number: 80.CARMAX1.19

September 11, 2019

APNs: 168-012-42 and -43-00

Prepared For:

CarMax c/o Centerpoint Integrated Solutions, LLC
Attn: Stacey Haggerson
355 Union Boulevard, Suite 301
Lakewood, Colorado 80228

Prepared by:

Frederic A. Allee
Chemical/Environmental Engineer

Reviewed by:

Craig A. Smith, PG
Principal Geologist

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LIST OF ATTACHMENTS

ATTACHMENT 1 - Photographs Of The Subject & Adjacent Properties
ATTACHMENT 2 - User Provided Information
ATTACHMENT 3 - Government Database Search Report
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EXECUTIVE SUMMARY

EnviroApplications, Inc. (*EAI*) is pleased to present this Phase I Environmental Site Assessment (ESA) report. The following table presents an overview of the project, including a summary of our significant findings:

Property Name (Subject Property):	Proposed Oceanside CarMax Facility (Vacant Commercial Property).
Subject Property Address (or Other Physical Location Description):	3843-4003 Plaza Drive and 3441-3552 Thunder Drive, Oceanside, (North) San Diego County, California (CA) 92056. Plaza Drive (south side), Thunder Drive (west side) approximately 300 feet southwest of their intersection.
Subject Property and Area Description:	According to information provided by the County of San Diego, the subject property consists of two parcels: Assessor's Parcel Number (APN) 168-012-42-00 (Lot 42) a roughly triangular, 1.1-acre, vacant, piece of land bound to the north by the east-bound lanes of State Route 78 and to the south by Plaza Drive, and APN 168-012-43-00 (Lot 43) a 9.42-acre, undeveloped, commercial lot bounded to the north by Plaza Drive and to the south by Buena Vista Creek. The subject property is located in southeastern Oceanside near its east boundary with the City of Vista in an area that is characterized by mixed residential, commercial and government land uses.
Observed Current Subject Property Use/Operations:	The subject property consists of vacant land with no business or other uses or operations occurring. The subject property appears to have been graded and crushed rock is present on its surface along the western boundary. Two rectangular-shaped mounds of fill soil appear to have been placed on the eastern portion of the subject property adjacent to Thunder Drive. Sampling is recommended.

Year	Summary of Subject Property History
Since at least as early as 1928 until circa 1966	Open, brush-covered, creek bottom land in a rural setting, located approximately 7-miles east of downtown Oceanside on the north bank of Buena Vista Creek. State Route 78 constructed through the area to the north circa 1964, but Plaza Drive and Thunder Drive not yet present.
1967 - circa 1978	Graded, vacant land with some trails across surface. Plaza Drive and Thunder Drive still not present.
1979 to 2019	Graded vacant land with Plaza Drive and Thunder Drive roadways present. Northwestern portion of Lot 43 occasionally used for temporary, seasonal purposes (Christmas tree lot, Halloween pumpkin patch, dairy products sales, kids playland).

CONCLUSIONS AND RECOMMENDATIONS

EAI has performed a Phase I ESA in conformance with the Scope of Work (SOW) required by Title 40 Code of Federal Regulations (CFR) Part 312 (All Appropriate Inquiry; AAI), ASTM International (ASTM) E1527-13 for a Phase I ESA of the Proposed Oceanside CarMax facility vacant commercial property in Oceanside, (North) San Diego County, CA 9205 (subject property). Any exceptions to, or deletions from the ASTM SOW are described in this report where applicable.

The subject property is not listed in the Environmental Data Resources Inc. (EDR) Report that was obtained and reviewed during this ESA. As far as could be determined, the subject property has never come to the attention of the Local, State or Federal environmental regulatory agencies that have jurisdiction over it. No building department, fire department or other governmental agency records were found.

No known environmental release sites located either hydrogeologically up or immediately side-gradient of the subject property that qualify as a potential adverse environmental contaminant impact source condition to the subject property were identified in the EDR Report. No non-ASTM environmental issues associated with the possible presence of lead-based paint (LBP), mold, radon gas or asbestos containing material (ACM) were identified. No evidence of waste building materials, trash or other illegal disposal was observed.

EAI performed a Vapor Encroachment Screen (VES) for the subject property, in accordance with ASTM E2600-15. The purpose was to evaluate whether sites (e.g., gas stations, dry cleaners, or other listings of environmental concern) that store or dispose of potential chemicals of concern or have documented releases, may migrate as vapors onto the property, as a result of contaminated soil and/or groundwater which may be present on or near the property (i.e., a Vapor Encroachment Condition or VEC). Based on *EAI's* Tier 1 Screening evaluation, presence of a potential VEC at the subject property can be ruled out, due to the lack of chemicals of concern.

The presence of two mounds of fill soil (apparently located to each side of a sewer easement, or possibly a buried city sewer main) on the eastern portion of the subject property does not qualify as an ASTM recognized environmental condition (REC), however, depending on the source of the soil and what, if anything it contains, it may be an adverse environmental issue associated with the subject property. Phase II soil sampling and analysis are recommended for the two soil mounds since information about them was not provided by the subject property owner.

This ESA has revealed no evidence of potential ASTM RECs, controlled RECs (CRECs) or historical (HRECs) associated with the subject property. See the definitions of these ASTM terms in Attachment 4.

1.0 INTRODUCTION

1.1 Subject Property Name and Location

Subject Property Name:	Proposed Oceanside CarMax Facility (Vacant Commercial Property).
Street Address:	3843-4003 Plaza Drive and 3441-3552 Thunder Drive Oceanside, (North) San Diego County, California (CA) 92056.
Physical Location:	Plaza Drive (south side), Thunder Drive (west side) approximately 300 feet southwest of their intersection.
Assessor's Parcel Nos.:	168-012-42 and -43-00.

1.2 Contact Information

Client (User):	CarMax c/o Centerpoint Integrated Solutions, LLC, Attn: Stacey Haggerson.
Subject Property Owner:	Plaza Thunder, LLC, a California limited liability company.
Key Site Manager:	None (vacant commercial property).
Date Project Authorized:	July 25, 2019.

1.3 Objective

This Phase I ESA has been completed in accordance with the practices identified in the ASTM *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, ASTM Designation E1527-13 and pursuant to the terms set forth in the Authorization for Environmental Investigation and contracting Services (AEICS) between the *EAI* and Centerpoint Integrated Services, LLC dated July 17, 2019.

1.4 Scope Of Work, Significant Assumptions, Terms and Conditions, Reliance

The scope of work, significant assumptions, and terms and conditions applicable to this Phase I ESA are identified in the following documents:
AEICS No. 01-080-19 and Centerpoint Integrated Solutions RFP SOW dated 12-30-2018.
ASTM E1527-13 and E2600-15.
Certifications are presented in Section 2 of this report.
This report was prepared for the exclusive use of the following:
CarMax c/o Centerpoint Integrated Solutions, LLC Attn: Stacey Haggerson.

2.0 SCOPE AND DECLARATIONS

2.1 Introduction

EAI has completed a Phase I ESA of the subject property. This Phase I ESA Report was prepared for CarMax c/o Centerpoint Integrated Solutions, LLC, Attn: Stacey Haggerson for real estate transaction due diligence purposes. Photographs of the subject and surrounding properties are provided in Attachment 1. The regional and community locations of the subject property are depicted on Figure 1 (Regional Site Location Map) and Figure 2 (Site Location Map). Figure 3 is a Site Plan of the proposed CarMax Oceanside facility provided by Ms. Haggerson. Figure 4 is a Site Plan based on a recent aerial photograph showing the subject property and adjacent property uses. Maps showing the subject property in its physiographic setting are presented in Attachment 6.

2.2 Scope

The objective of this ESA was to perform all appropriate inquiry (AAI) into the past ownership and uses of the subject property consistent with good commercial or customary practice as outlined by the ASTM in Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, Designation E1527-13. The purpose of this ESA work was to identify, to the extent feasible, adverse environmental conditions (including ASTM RECs) of the subject property that potentially have and/or may cause an adverse environmental impact to the subject property. The effective date of this ESA is the same as its date of issue. In accordance with ASTM E1527-13 Section 4.6, its continued viability extends to 180 days after its effective date. The viability of this ESA can be extended beyond 180 days, up to one (1) year, if the specific ESA components specified in ASTM E1527-13 Section 4.0 are updated.

2.3 Declarations

Frederic A. Allee and Craig A. Smith of *EAI* declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in Title 40 Code of Federal Regulations (CFR) Part 312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

The term REC is defined by ASTM Standard E 1527-13 as:

"…the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to release to the environment; under conditions indicative of a release to the environment or under conditions that pose a material threat of future release."

The term does not include de minimis conditions, which generally do not present a material risk to human health or the environment and would not likely be subject to enforcement action if brought to the attention of governmental agencies. An example of such a de minimis condition would be the engine oil stains typically present on the pavement surfaces of parking spaces due to minor leaks from parked vehicles.

The SOW for this ESA consisted of a visual reconnaissance of the subject property, interviews, review of historical aerial photographs, maps and telephone directories, a current Environmental Data Resources, Inc. Report (EDR Report), and, a review of the practically available pertinent records of local, state, and federal agencies. The SOW did not include an assessment for historical overall environmental regulatory compliance of every facility or entity that ever operated at the subject property or sampling and analyzing of environmental media. *EAI* was not contracted to perform any independent evaluation of the purchase or lease price of the subject property and its relationship to current fair market value. The conclusions presented in this ESA Report are professional opinions based on data described herein. Any data gaps resulting from the ESA described in this report are listed and discussed in the following table:

Deletions or Exceptions From Scope of Work Referenced in Section 1.4:	The ASTM User did not provide a copy of an environmental cleanup lien search report to *EAI* for review and summary. This ASTM data gap is not considered significant since the subject property is undeveloped land.
Weather-Related Restrictions to Site Reconnaissance:	None.
Facility Access Restrictions to Site Reconnaissance:	None.
Other Site Reconnaissance Restrictions:	None.
Data Gaps from Environmental Records Review:	None.
Data Gaps from Historical records Review:	No historical Sanborn fire insurance industry map coverage was found for the subject property and surrounding area. The Sanborn map ASTM data gap does not alter the conclusions of this report, since adequate historical aerial photograph coverage and other data were obtained.
Data Gaps from Interviews:	None.
Other Data Gaps:	None.

No other entity may rely on the information presented in the report without the expressed written consent of *EAI*. Any use of this Phase I ESA report constitutes acceptance of the terms and conditions under which it was prepared. *EAI*'s liability extends only to its Client, CarMax c/o Centerpoint Integrated Solutions, LLC, Attn: Stacey Haggerson and not to third or other parties who may obtain copies of this Phase I ESA Report.

3.0 USER-PROVIDED INFORMATION

Prior to initiating a reconnaissance visit to the subject property, *EAI* reviewed information relevant to performance of this Phase I ESA received from the Client/ASTM User CarMax c/o Centerpoint Integrated Solutions, LLC Attn: Stacey Haggerson for the subject property.

3.1 Information

1) Past Uses	Not stated in documents.
2) Current Conditions	Unoccupied commercial land.
Reason Why the User Wants to Have this Phase I ESA Performed:	Phase I ESA Report prepared as a requirement of Centerpoint Integrated Solutions, LLC, Attn: Stacey Haggerson, for real estate transaction due diligence purposes.

3.2 User-Provided Documents

The following documents were provided by CarMax c/o Centerpoint Integrated Solutions, LLC Attn: Stacey Haggerson, to *EAI* and are summarized as follows:

Proposed CarMax Oceanside Preliminary Site Plan, dated 06-04-2019.	Depicts the planned subject property improvements and surrounding land occupants. Identifies no potential environmental issues with the subject property (Figure 3).
Preliminary Title Insurance Report (PTIR) prepared by Chicago Title Insurance Company and dated 07-01-2019.	Provides ownership, legal description, APN, utility easements and other real estate information for the subject property along with size and use. Contains no information regarding the environmental condition of the subject property (Attachment 2).
Phase I ESA User's Questionnaire completed by Jason Pruitt, Real Estate Manager for CarMax, dated 08-12-2019.	Indicates no known environmental issues exist with subject property. Indicates subject property will be leased not purchased and that Mr. Pruitt has been familiar with it for approximately the last year (Attachment 2).

4.0 SUBJECT PROPERTY AND AREA RECONNAISSANCE

The reconnaissance visit to the subject property was conducted by *EAI* on July 29, 2019. The subject property is not fenced. No one accompanied *EAI* during the reconnaissance visit.

4.1 Site Reconnaissance Methodology

EAI utilized the following methodology to observe the subject property:
Traversed the central area of the subject property lots.
Walked the reasonably accessible boundary areas of the subject property.
Observed adjacent property areas from public thoroughfares.

4.2 General Description

Subject Property and Area Description:	According to information provided by the County of San Diego, the subject property consists of two parcels: APN 168-012-42-00 (Lot 42) a roughly triangular, 1.1-acre, vacant, piece of land bounded to the north by the east-bound lanes of State Route 78 and to the south by Plaza Drive, and APN 168-012-43-00 (Lot 43) an undeveloped commercial lot bounded to the north by Plaza Drive, to the east by the Oceanside CA DMV facility and Thunder Drive, to the south by Buena Vista Creek and to the west by a shopping center. The subject property is located in southeastern Oceanside near its east boundary with the City of Vista in an area that is characterized by mixed residential, commercial and government land uses.
Structures, Roads, Other Improvements:	The subject property appears to have been graded, but there are no structures, roads or other improvements.
Subject Property Size:	Approximately 1.1 acres (Lot 42) and 9.42 acres (Lot 43).
Estimated % of Property Covered by Buildings/Pavement:	None (0; based on the reconnaissance visit).
Observed Current Subject Property Use/Operations:	The subject property consists of vacant land with no business or other uses or operations occurring.
Observed Evidence of Past Subject Property Use(s):	The subject property appears to have been graded and crushed rock is present on its surface along the western boundary. Two rectangular-shaped mounds of fill soil appear to have been placed on the eastern portion of the subject property adjacent to Thunder Drive.

Sewage Disposal Method (and age):	Oceanside Water Utilities Division (OWUD) services the subject property area. No laterals have been installed.
Emergency Generator	None observed or reported to be present.
Potable Water Source:	OWUD provides water supply services to the subject property area. No landscaping or sprinklers were observed.
Electric and Natural Gas Utility:	San Diego Gas & Electric Co. (SDG&E) services the subject property area. No utilities were observed at the subject property.

4.3 Hazardous Substances and Petroleum Products

EAI made the following visual observations during the subject property reconnaissance visit and identified the following information about hazardous substances at the subject property during the interview/records review portions of the ESA:

Observation	Description
Hazardous Substances and Petroleum Products:	None observed.
Drums (≥ 5 gallons):	None observed.
Strong, Pungent, or Noxious Odors:	None observed.
Pools of Liquid:	None observed.
Unidentified Substance Containers:	None observed.
PCB-Containing Equipment:	None observed.
Other Observed Evidence of Hazardous Substances or Petroleum Products:	None.

4.4 Interior Observations

There are no structures on the subject property, therefore this ASTM ESA item is not applicable.

4.5 Exterior Observations

EAI made the following observations during the reconnaissance of exterior areas of the subject property and/or identified the following information during the interview or records review portions of the assessment:

Observation	Description
On-site Pits, Ponds, or Lagoons:	None observed.
Stained Soil or Pavement:	None observed.
Stressed Vegetation:	None observed.
Waste Streams and Waste Collection Areas:	None observed.
Solid Waste Disposal:	None observed.
Potential Areas of Fill Placement:	When the subject property was graded level, it is likely that fill soil was placed on its southern half where it originally sloped downwards to Buena Vista Creek. No retaining wall or other engineered fill soil retention systems were observed. The two rectangular-shaped mounds of fill soil placed on the eastern portion of the subject property adjacent to Thunder Drive appear to consist of several hundred cubic yards of soil.
Wastewater:	No sources observed. Both Oceanside and Vista sewer manholes were observed along the boundary with Buena Vista Creek.
Storm water:	Storm water appears to soak into the surface of the subject property. No ditches or swales (other than the area between the two previously indicated soil mounds) were observed. The subject property is not listed on the National Pollutant Discharge and Elimination System (NPDES) database in the EDR Report (Attachment 3). No indication of a discharge that would require a NPDES permit was observed.
Wells:	None observed.
Septic Systems:	None observed.
Electromagnetic Radiation Source:	No high-voltage electrical power transmission lines or other potential sources of elevated electromagnetic radiation observed.
Other Exterior Observations:	None.

4.6 Underground Storage Tanks/Structures

Existing USTs:	None observed.
Former USTs:	No evidence observed.

Other Underground Structures:	None observed.

4.7 Aboveground Storage Tanks

Existing ASTs:	None observed.
Former ASTs:	No evidence observed.

4.8 Adjoining Properties

4.8.1 Current Uses of Adjoining Properties

As viewed from the subject property and/or from public rights-of-way, *EAI* made the following observations about use and activities on adjoining properties:

North:	The east-bound lanes of State Route 78.
East:	From north to south: the Oceanside CA DMV facility at 4005 Plaza Drive then Thunder Drive followed by a residential neighborhood.
South:	Buena Vista Creek.
West:	A large, multi-tenant shopping center with nearest address being 3841 Plaza Drive (a vacant shop for lease).

4.8.2 Observed Evidence of Past Uses of Adjoining Properties

Observations of adjoining properties providing indications of past use and activities, if any, are described as follows:

North:	None observed.
South:	None observed.
East:	None observed.
West:	None observed.

4.8.3 Pits, Ponds or Lagoons on Adjoining Properties

As viewed from the subject property and/or from public right-of-ways, *EAI* made the following observations about the presence of pits, ponds and lagoons on adjoining properties:

North:	None observed.
South:	None observed.

East:	None observed.
West:	None observed.

4.9 Observed Physical Setting

Topography of the Subject Property and Surrounding Area:	The topography of the subject property area is hilly. The land to the north of the subject property is higher in elevation, the land to the south slopes downward toward Buena Vista Creek and the land to the east and west is similar in elevation.

4.10 Summary of Findings From Subject Property Reconnaissance

There were no observed potential adverse environmental conditions and no evidence of an ASTM REC or Historic REC (HREC) of the subject property based on the reconnaissance visit.

5.0 PHYSICAL SETTING

Topography:	The topography of the subject property area is hilly. The land to the north of the subject property is higher in elevation, the land to the south slopes downward toward Buena Vista Creek and the land to the east and west is similar in elevation. The subject property has an approximate surface elevation of 194 feet above mean sea level.
Soil/Bedrock Data:	The subject property is located within the coastal plain of Southern California. The subject property vicinity is underlain by two intermixed formations, the Tujunga: consisting of old lacustrine beach and estuarine deposits of fine-grained silt, sand and clay; and, Tertiary age Terrace Escarpments consisting primarily of sandstone and conglomerate. Both formations are overlain with recent alluvium (sand, silt and clay) deposited by Buena Vista Creek.
Estimated Depth to Groundwater:	Based on a review of the EDR Report and data on the California State GeoTracker database, the expected depth-to-groundwater beneath the subject property is 10 to 15 feet below ground surface (bgs).
Estimated Direction of Gradient:	Groundwater movement direction is to the south-southwest toward Buena Vista Creek. According to the San Diego Regional Water Quality Control Board (SDRWQCB), the subject property is located in Vista Hydrologic Sub Area of the Buena Vista Creek Hydrologic Area in the Carlsbad Hydrologic Unit (designated a beneficial ground and surface water use area for domestic, agricultural, industrial and process supply purposes).
Known Regional Groundwater Impairment:	None.

Sources of this information:

- USGS Topographic Map "San Luis Rey, CA" Quadrangle 7.5 Minute, 2012 (Attachment 6).
- San Diego Regional Water Quality Control Board, 2003, Basin Plan, Region 9.00.
- EDR Report (Attachment 3).

6.0 ENVIRONMENTAL RECORDS REVIEW

6.1 Federal, State and Tribal Environmental Records

A government agency database search report was obtained from Environmental Data Resources, Inc. (EDR), a third-party environmental database search firm. A complete copy of the database search report, including the date the report was prepared, the date the information was last updated, and the definition of databases searched, is provided in Attachment 3.

EAI evaluated the properties listed within the EDR Report on the basis of their potential to environmentally impact the subject property. As part of this process, inferences have been made regarding the likely groundwater movement direction (south-southwest toward Buena Vista Creek). The following table summarizes the listings:

Agency List/Database	Search Radius	Number of Listed Sites	ASTM REC?
Federal NPL Sites	1.0 mile	0	No.
Federal Delisted NPL Sites	1.0 mile	0	No.
Federal CERCLIS List	0.5 mile	0	No.
Federal CERCLIS NFRAP List	0.5 mile	0	No.
Federal RCRA CORRACTS Facilities	1.0 mile	0	No.
Federal RCRA Non-CORRACTS TSDF	0.5 mile	0	No.
Federal RCRA SQG Generators	0.25 mile	3	No.
Federal RCRA CESQG/LQG Generators	0.25 mile	1 (CESQG) 2 (LQG)	No.
Federal RCRA Non-Gen/NLR	0.25 mile	26	No.
Federal ERNS	Subject Property	Not Listed.	No.
State and Tribal - Equivalent NPL (a.k.a. RESPONSE)	1.0 mile	0	No.
State and Tribal - Equivalent CERCLIS (a.k.a. ENVIROSTOR)	1.0 mile	2	No.
State and Tribal Solid Waste Facilities (a.k.a. SWF/LF); Toxic Pits (TP)	0.5 mile	0	No.
State and Tribal Registered Storage Tank Sites (a.k.a. UST & AST)	0.25 mile	3 UST 2 AST	No.

Agency List/Database	Search Radius	Number of Listed Sites	ASTM REC?
State and Tribal Leaking Storage Tank Sites (a.k.a. SLIC & LUST)	0.5 mile	12 LUST 3 SLIC	No.
State and Tribal Voluntary Cleanup Sites	0.5 mile	0	No.
U.S. Brownfield Sites	0.5 mile	0	No.
Local Lists of Registered USTs (a.k.a. CA FID / HIST / SWEEPS / CERS)	0.5 mile Subject Property	0 / 1 / 4 / 3 Not Listed	No.
Local Lists of Hazardous Waste/Contaminated Sites (a.k.a. San Diego County HMMD & SAM)	Subject Property 0.25 mile 0.5 mile	Not Listed 12 HMMD 7 SAM	No.
Local Land Records (Liens 2)	Subject Property	Not Listed	No.
Drycleaners	0.25 mile	1	No.
EDR Historical Cleaners	0.25 mile	1	No.
EDR Historical Auto Stations	0.25 mile	0	No.
EPA FINDS, NPDES, EMI, HAZNET	Subject Property	Not Listed	No.

6.1.1 Listings For The Subject Property

The subject property is not listed in the EDR Report.

6.1.2 Listings for Nearby Sites with Potential to Impact Subject Property

The listings (including those with poor or inadequate address information a.k.a. Orphan Sites) in the EDR Report, provided in Attachment 3, were evaluated in accordance with the *Database Assessment Criteria* presented in Attachment 4 and determined to not qualify as potential sources of impact and/or ASTM RECs of the subject property (i.e. were not found to be adjacent, or hydrologically up-gradient with unassessed groundwater contaminant plumes).

Oil & Gas Wells

The EDR Report does not indicate any oil or gas well sites are located near the subject property. *EAI* also reviewed the California Department of Conservation, Division of Oil, Gas and Geothermal Resources database and confirmed that there are no existing or abandoned oil/gas wells or dry holes present on, or within a 1-mile radius of the subject property.

6.2 Local/Regional Environmental Records

EAI checked the following sources to obtain information pertaining to subject property use and/or indicative of potential RECs in connection with the subject property.

6.2.1 Local Environmental Health Department

Agency Name, Contact Information	Finding
San Diego County Department of Environmental Health (DEH): Edwin Andrus - Edwin.Andrus2@ sdcounty.ca.gov.	The DEH responded that they have no records associated with the subject property (Attachment 5).

6.2.2 Fire Department

Agency Name, Contact Information	Finding
Oceanside Fire Department (OFD): Hector Gomez - hegomez@ci.oceanside.ca.us	The OFD responded that they have no records for the subject property (Attachment 5).

6.2.3 Building Department

Agency Name, Contact Information	Finding
Oceanside Building Department (OBD): Hector Gomez - hegomez@ci.oceanside.ca.us	The OBD responded they have no records for the subject property (Attachment 5).

6.2.4 State Environmental Departments

Agency Name, Contact Information	Finding
DTSC (Cal/EPA): Jone Barrio - Jone.Barrio@dtsc.ca.gov	The response from the DTSC indicates they have no files pertaining to the subject property (Attachment 5).
SDRWQCB (Cal/EPA): Leah Lorch - RB9_Records@ waterboards.ca.gov	The SDRWQCB responded that they have no records associated with the subject property (Attachment 5).

6.2.5 Air District

Agency Name, Contact Information	Finding
San Diego County Air Pollution Control District (APCD): Cynthia Gould, Aide - Cynthia.Gould@sdcounty.ca.gov	The APCD responded that they have no records associated with the subject property (Attachment 5).

6.2.6 Industrial Wastewater Agency

Agency Name, Contact Information	Finding
OWUD: Hector Gomez - hegomez@ci.oceanside.ca.us	The OWUD indicated there are no discharge permit or other records for the subject property (Attachment 5).

6.3 Discussion and Summary of Findings from Environmental Records Review

The subject property was not identified in the EDR Report. No records were found for the subject property at the DEH, OBD, OFD, DTSC, SDRWQCB, APCD or OWUD. The environmental records review did not result in an indication of a potential ASTM HREC or REC of the subject property.

7.0 HISTORICAL RECORDS REVIEW

7.1 Land Title Records/Deeds

The San Diego County Assessor's Office was contacted and the subject property APNs were confirmed to be 168-012-42 and -43-00 and the owner was identified as Teresa M. Cannon.

7.2 Environmental Cleanup Lien Search

A search report for environmental cleanup lien(s) which might exist against the subject property parcel was not provided by the ASTM User, as they were not aware of any past releases.

7.3 Aerial Photographs

EAI contracted with EDR to provide historical aerial photographs of the subject property and surrounding area. The following table summarizes the features observed during a review of the photographs (all provided at a scale of 1"=500'):

Years	Observations, Subject Property and Adjoining Properties
1928 1939 1946 1953	The subject property and surrounding area appear to be open, hilly land in a rural, ranching setting. The currently existing roadways are not yet present. The subject property appears to be covered with brush and Buena Vista Creek is clearly visible to the south in its natural channel.
1964 1967 1970	The subject property still appears to be open, brush-covered land. State Route 78 has been constructed through the area to the north. Beyond the freeway further to the north are what appear to be a hospital campus and a drive-in movie theater. Thunder Drive (unpaved) is present along the eastern boundary of the subject property. By the time of the 1967 photo, the subject property and properties to the east appear to have been graded.
1979 1985	The subject property appears to be vacant, graded land crossed by several trails. The homes in the residential neighborhood across Thunder Drive to the east have been constructed. Land along Buena Vista Creek to the south appears to have been graded to control flooding. The land to the west of the subject property is still vacant. By the 1985 photo the currently existing CA DMV facility is present to the east of the subject property.
1989, 1990 1994, 2005 2009, 2012 2016	The subject and surrounding properties appear similar to the way they did during the reconnaissance visit for this ESA.

No conditions that might obviously affect the environmental condition of the subject property were observed in the photographs. Copies of the aerial photographs are included in Attachment 6.

7.4 City Directories

The subject property is undeveloped land with no associated address, therefore this ASTM ESA item is not applicable.

7.5 Historical Fire Insurance Maps

There is no historical fire insurance industry (Sanborn) map coverage for the subject property and surrounding area according to EDR. A copy of the map search information results notification is included in Attachment 6.

7.6 Historical Topographic Maps

EAI reviewed U.S. Geological Survey (USGS) maps of the subject property and surrounding area. The following table summarizes the information on the USGS maps reviewed:

Year(s)	Observations
1996 2012	The subject property is depicted as vacant hillside land with State Route 78 present to the north and Marron Canyon and Buena Vista Creek to the south. The surrounding area on the 1996 map is shaded pink, an indication of fully-developed land, with no features depicted.

There are no indicators of potential ASTM RECs depicted on the maps. Copies of the topographic maps are included in Attachment 6.

7.7 Other Historical Sources

No other historical sources were found during this ESA.

7.8 Summary of Findings from Historical Records Review

The historical records reviewed indicated that the subject property was historically open, hillside land to the north of Buena Vista Creek and south of State Route 78. The subject property and land to the east appear to have been mass graded circa 1967. No historic information reviewed indicated a potential ASTM HREC or current REC of the subject property.

8.0 INTERVIEWS

8.1 Findings From Interview With ASTM User

Responses to the AAI questions are summarized as follows:

Name, Title, Telephone, Years Familiar with subject property:	Jason Pruitt, Real Estate Manager for CarMax, Inc., (804) 747-0422, familiar with the subject property for the last year.
Are you aware of any environmental cleanup liens against the subject property that are filed or recorded under federal, tribal, state or local law? If yes, explain:	No.
Are you aware of any environmental cleanup liens against the subject property that are filed or recorded under federal, tribal, state or local law? If yes, explain:	No.
Are you aware or any activity and land use limitations (ALLs), such as engineering controls, land use restrictions or institutional controls that are in place at the subject property and/or have been filed or recorded in a registry under federal, tribal, state or local law? If yes, explain:	No.
Do you have any specialized knowledge or experience related to the subject property or nearby properties?	No.

In your opinion does the purchase price being paid for the subject property reasonable reflect the fair market value of the property?	Yes, but not a purchase, CarMax, Inc. will be renting.
Are you aware of commonly known or reasonably ascertainable information about the subject property that would help the environmental professional to identify conditions indicative of releases or threatened releases?	No.
Do you know anything about the past use of subject property?	No.
Do you know of specific chemicals that are present or once present at the subject property?	No.
Do you know of spills or other chemical releases that have taken place at the subject property?	No.
Do you know of any environmental cleanups that have taken place at the subject property?	No.

Based on your knowledge and experience related to the subject property, are there any obvious indicators that point to the presence or likely presence of contamination at the subject property?	No.
Are you aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the subject property?	No.
Are you aware of any correspondence from any government agency relating to past or current violations of environmental laws with respect to the subject property?	No.
Do you know whether any documents such as reports, environmental reports, permits, registrations, manifests exist related to the subject property? If so, list:	No.

8.2 Summary of Findings from Interview With Owner

Mr. John Hamby with Fortis Legacy Partners did not elect to represent the owners and be interviewed. Based on the interview responses described above, the information obtained does not indicate the existence of a potential ASTM REC and/or HREC of the subject property.

9.0 SUMMARY OF HISTORICAL SUBJECT AND ADJOINING PROPERTY USES

The following summary of the historical uses of the subject property and adjoining properties was compiled from the referenced materials and interviews detailed in Sections 5.0, 6.0, and 7.0.

9.1 Subject Property Use

Year	Summary of Subject Property Use
Since at least as early as 1928 until circa 1966	Open, brush-covered, creek bottom land in a rural setting, located approximately 7-miles east of downtown Oceanside on the north bank of Buena Vista Creek. State Route 78 constructed through the area to the north circa 1964, but Plaza Drive and Thunder Drive not yet present.
1967 - circa 1978	Graded, vacant land with some trails across surface. Plaza Drive and Thunder Drive still not present.
1979 to 2019	Graded vacant land with Plaza Drive and Thunder Drive roadways present. Northwestern portion of Lot 43 occasionally used for temporary, seasonal purposes (Christmas tree lot, Halloween pumpkin patch, dairy products sales, kids playland).

9.2 Surrounding Property Use

Direction	Summary of Historical Adjoining Property Use
North:	Originally open hillside land that became developed with the east-bound lanes of State Route 78.
East:	Originally open hillside land that became developed with, from north to south: the Oceanside CA DMV facility at 4005 Plaza Drive then Thunder Drive followed by a residential neighborhood.
South:	Always occupied by Buena Vista Creek, whose banks have undergone grading for flood control purposes.
West:	Originally open hillside land that became developed with a large, multi-tenant shopping center with nearest address being 3841 Plaza Drive (a vacant shop for lease).

10.0 OTHER (INCLUDING NON-ASTM) ENVIRONMENTAL ISSUES

10.1 Lead-Based Paint

The subject property has no structures, or known buried debris and there are no concerns regarding the presence of lead-based paint (LBP).

10.2 Asbestos

The subject property has no structures, or known buried debris and there are no concerns regarding the presence of asbestos containing materials (ACMs).

10.3 Flood Zones

EAI reviewed the Federal Emergency Management Agency (FEMA) flood insurance rate maps information for the subject property presented in the EDR Report. They indicate the subject property is not located in either a 100 or 500-year flood zone. There are 100-year and 500-year flood plains immediately south of the subject property that are associated with Buena Vista Creek. A copy of the EDR Report is included as Attachment 3 of this report. The information is summarized on the following table:

FLOOD INSURANCE RATE MAPS	
Map Source & Name:	EDR Report – FEMA Panel 06073C0766G - DFIRM Flood Data.
Subject Property Within 100-Year Flood Plain:	No.
Subject Property Within 500-Year Flood Plain:	No.

10.4 Wetlands

Wetlands cannot be definitively identified through visual observation alone. Defensible wetland delineations require taxonomic classification of subject site vegetation, an investigation into the surface and subsurface hydrology of the subject property, and identification of hydric soils. This level of delineation is outside of the scope or work for this assessment. However, *EAI* reviewed US Fish and Wildlife Service National Wetland Inventory maps and USDA Soil Survey reports included in the EDR Report. No wetlands are mapped on the subject property, but they are shown all along Buena Vista Creek immediately to the south (Attachment 3).

10.5 Vapor Encroachment And Indoor Air Quality

EAI did not identify any volatile organic compound (VOC) release sites located hydrogeologically up-gradient, or immediately side-gradient, of the subject property that could act as a source of contamination to soil gas underlying the subject property. Based on the data contained in the EDR Report (Attachment 3), the potential for subsurface contaminant vapor having reached the subject property boundaries, defined by ASTM Standard E2600-15 as a Vapor Encroachment Condition (VEC), is low. If it existed, an ASTM VEC would be of concern due to potential VOC

vapor intrusion from the subsurface upwards and into one or more future subject property buildings.

An assessment of indoor air quality issues by *EAI* was not included in the SOW for this ESA and there are currently no structures at the subject property.

10.6 Radon

Radon is a colorless, tasteless radioactive gas with a U.S. Environmental Protection Agency (EPA) specified action level of 4.0 picocuries per liter (pCi/L) of air. Radon gas has a very short half-life of 3.8 days. The health risk potential of radon is associated with its rate of accumulation within confined areas, particularly confined areas near to the ground, where vapors can readily transfer to indoor air from the ground through foundation cracks or other pathways. Large, adequately ventilated rooms generally present limited risk for radon exposure. According to the EPA, the radon concentrations in buildings and homes depend on many factors, including soil types, temperature, barometric pressure, and building construction.

EAI reviewed the California Department of Health Services (CDHS) Radon Database for California (last updated in May 2010) and found that in zip code area 92056 where the subject property is located, thirty-eight (38) tests were taken as part of the survey. The 92056 zip code test results indicated none (0) of the air samples had a radon level that was greater than 4.0 pCi/L, the concentration beyond which EPA recommends action be taken to lower radon gas exposure as indicated in the following summary table:

Subject property Location:	**State**	**County & Zip Code**
	California	San Diego 92056
EPA Radon Zones (with Average Measured Indoor Radon Concentrations)		
Zone 1 – High (> 4.0 pCi/L)	Zone 2 - Moderate (2 to 4 pCi/L)	Zone 3 – Low (< 2 pCi/L)
No.	No.	Yes.
Normally-occupied sub grade areas (i.e., basements, etc.)?		
Subject property has no structures.		

Information regarding the presence of radon gas at the subject property relies on regional data and does not represent site-specific data. Based on the Federal EPA Radon Zone rating and CDHS survey results, radon gas is not expected to represent an environmental impact risk at the subject property and no further consideration appears to be warranted.

10.7 Dry-Cleaning Operations

No dry-cleaning operations were reported or observed to be at or near the subject property. The EDR Report and historical review did not indicate a potential for past dry-cleaning operations on the subject property or in the immediate vicinity and no nearby historical dry cleaners were identified in the EDR Report (Attachment 3).

10.8 Pesticides & Other Agricultural Chemicals

The historical research for the subject property does not indicate that it was ever used for agricultural purposes. There are no concerns regarding residual pesticides or other agricultural chemicals presenting environmental impact issue for the subject property.

10.9 Mold

No structures or areas of moisture accumulation or readily evident/obvious mold-like substances were observed at the subject property.

11.0 OPINION AND CONCLUSIONS

EAI has performed a Phase I ESA in conformance with the SOW required by 40 CFR Part 312 AAI, ASTM E1527-13 of the Proposed Oceanside CarMax facility vacant commercial property in Oceanside, (North) San Diego County, CA 92056. Any exceptions to, or deletions from the ASTM SOW were described in this report where applicable.

The subject property is not listed in the EDR Report that was obtained and reviewed during this ESA. As far as could be determined, the subject property has never come to the attention of the Local, State or Federal environmental regulatory agencies that have jurisdiction over it. No building department, fire department or other governmental agency records were found.

No known environmental release sites located either hydrogeologically up or immediately side-gradient of the subject property that qualify as a potential adverse environmental contaminant impact source condition to the subject property were identified in the EDR Report that was obtained and reviewed during performance of this ESA. Based on *EAI's* Tier 1 Screening evaluation, presence of a potential ASTM VEC at the subject property can be ruled out, due to the lack of chemicals of concern.

No non-ASTM issues associated with the possible presence of LBP, radon gas, mold or ACM were identified.

The presence of two mounds of fill soil (apparently located to each side of a sewer easement, or possibly a buried city sewer main) on the eastern portion of the subject property does not qualify as an ASTM REC, however, based on the undetermined source of the soil, it may represent an adverse environmental issue associated with the subject property. Phase II soil sampling and analysis are recommended for the two soil mounds since information about them was not provided by the subject property owner.

This ESA has revealed no evidence of potential ASTM RECs, CRECs or HRECs associated with the subject property. See the definitions of these ASTM terms in Attachment 4.

12.0 LIMITATIONS

The conclusions and recommendations contained in this report/assessment are based upon professional opinions with regard to the subject matter. These opinions were prepared in accordance with generally accepted environmental consulting and engineering standards and practices applicable to this location and existing at this time. The use of this report is subject to the following limitations:

1. The data and findings presented in this report are valid as of the dates when the investigations were performed. The passage of time, manifestation of latent conditions or occurrence of future events may require further exploration at the Subject Property, analysis of the data, and reevaluation of the findings, observations, and conclusions expressed in the report.
2. The data reported and the findings, observations, and conclusions expressed in the report are limited by the Scope of Work, budget, site access and schedule, as defined in EnviroApplications's Proposal for the work.
3. This report is based, in part, on unverified information supplied to EnviroApplications by third-party sources, such as regulatory agencies, prior owners or operators of the property, analytical laboratories, subcontractors, etc. Whereas efforts may have been made to substantiate this third-party information, EnviroApplications cannot guarantee the completeness or accuracy of this information.
4. The findings, observations, and conclusions expressed by EnviroApplications in this report are not, and should not be, considered an opinion concerning the compliance of any past or present owner or operator of the Subject Property with any Federal, state or local law or regulation.
5. No warranty or guarantee, whether expressed or implied, is made with respect to the data or the reported findings, observations, and conclusions, which are based solely upon conditions in existence at the time of investigation.
6. EnviroApplications reports present professional opinions and findings of a scientific and technical nature. Whereas attempts were made to relate the data and findings to applicable environmental laws and regulations, the report shall not be construed to offer a legal opinion or representations as to the requirements of, nor compliance with, environmental laws, rules, regulations or policies of Federal, state or local governmental agencies. Issues raised by the report should be reviewed by appropriate legal counsel.
7. This report is intended for the use of EnviroApplications Client, CarMax c/o Centerpoint Integrated Solutions, LLC, Attn: Stacey Haggerson; any other use must be approved by EnviroApplications and the Client in writing. If any such unauthorized use occurs, it shall be at the user's sole risk without liability to EnviroApplications.

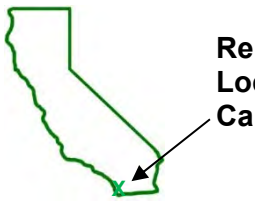
FIGURES

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Proposed Oceanside CarMax Facility
Vacant Commercial Property
3843-4003 Plaza Drive, Oceanside
(North) San Diego County, CA 92056

September 10, 2019

EAI Project No.: 80.CARMAX1.19
APNs: 168-012-42 & -43-00



Relative Location in California

Project No.: 01.CARMAX1.19

REGIONAL SITE LOCATION MAP

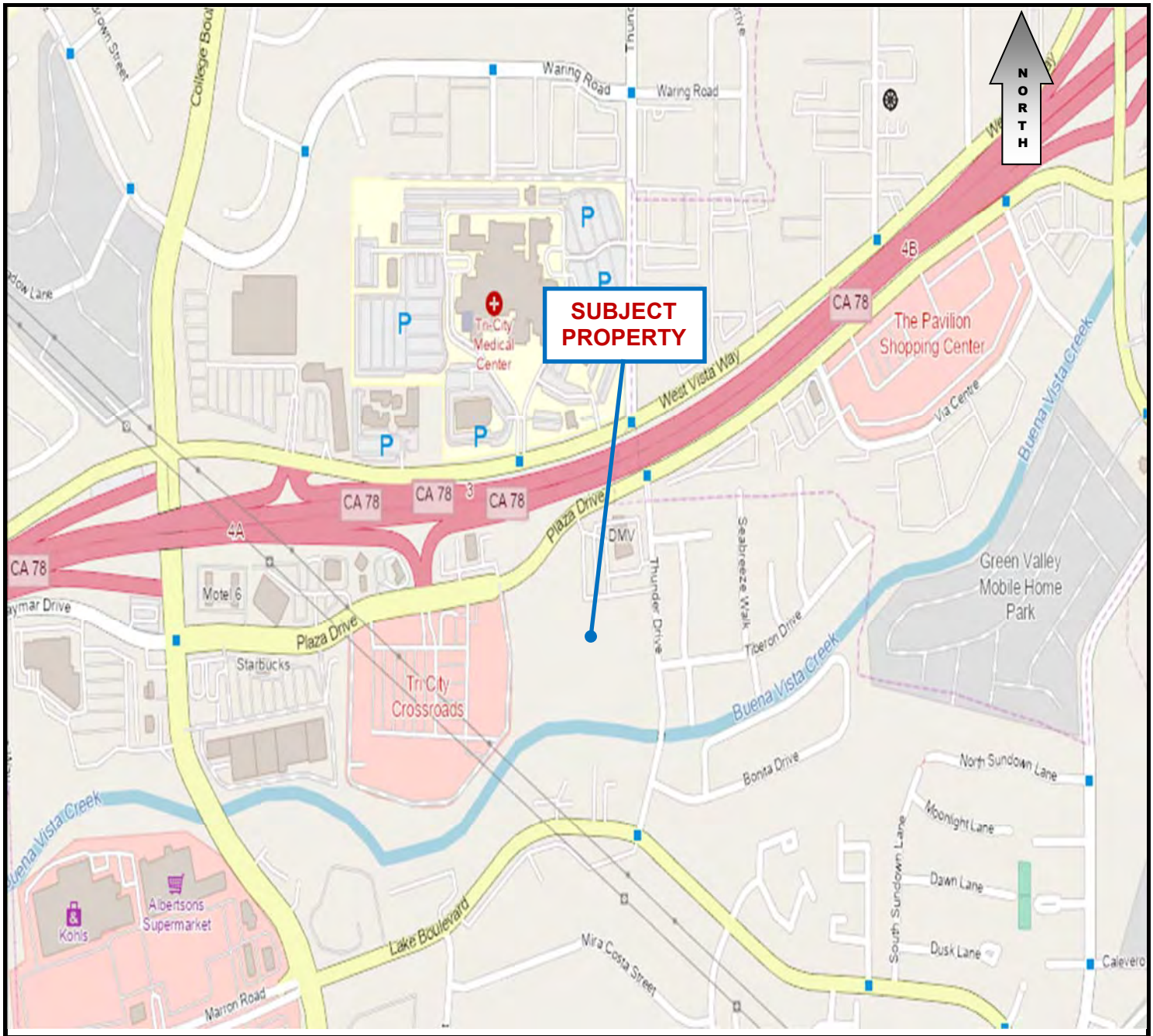
VACANT COMMERCIAL PROPERTY

3843-4003 Plaza Drive
3441-3552 Thunder Drive, Oceanside
(North) San Diego County, CA 92056

EnviroApplications, Inc.
Engineering & Consulting

Rio Sur Office Complex
2831 Camino Del Rio South
Suite 214, Mission Valley
San Diego, CA 92108-3828

Date: 07-25-2019	**Sources:** Reconnaissance Visit & ESRI, 2019	**Scale:** None.	**Figure: 1**
Client: CENTERPOINT INTEGRATED SOLUTIONS	**By:** Fred Allee **Checked:** Craig Smith		**Revision:** 0



Relative Location in California

Project No.: 01.CARMAX1.19

SITE LOCATION MAP

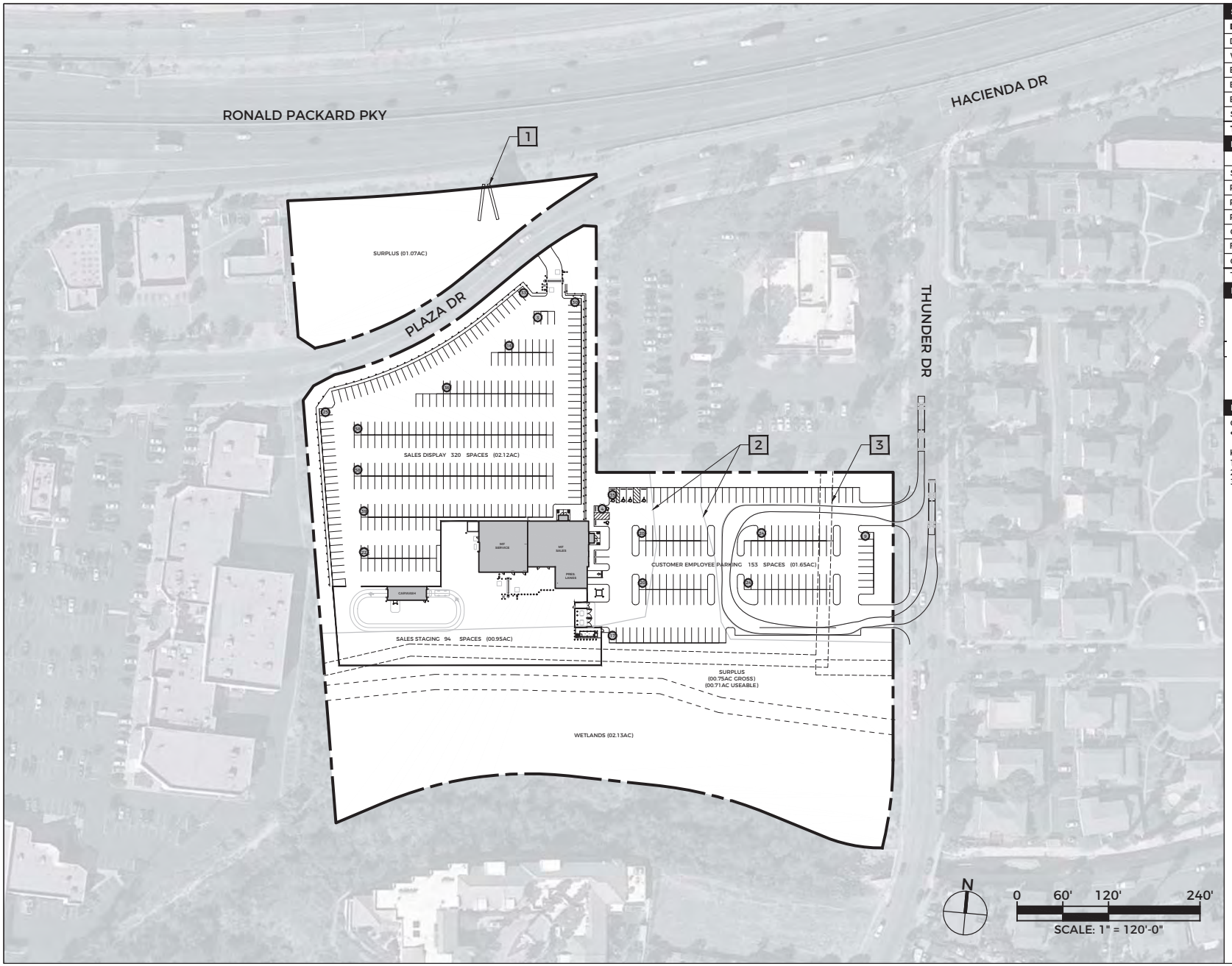
VACANT COMMERCIAL PROPERTY

3843-4003 Plaza Drive
3441-3552 Thunder Drive, Oceanside
(North) San Diego County, CA 92056

EnviroApplications, Inc.
Engineering & Consulting

Rio Sur Office Complex
2831 Camino Del Rio South
Suite 214, Mission Valley
San Diego, CA 92108-3828

Date: 07-25-2019	**Sources:** Reconnaissance Visit & ESRI, 2019	**Scale:** None.	**Figure: 2**
Client: CENTERPOINT INTEGRATED SOLUTIONS	**By:** Fred Allee **Checked:** Craig Smith		**Revision:** 0



SITE INFORMATION	
DEVELOPED	6.33
DETENTION	0
WETLANDS	2.13
EASEMENTS	0
BUFFERS	0
EXPANSION	0
SURPLUS	1.82
TOTAL	10.28

BUILDING INFORMATION	
	"MFS"
SALES	5,005 SF
PRESENTATION	1,197 SF
RETAIL SERVICE	4,309 SF
PRODUCTION	0
CARWASH	936 SF
FQC	0
OTHER	0
TOTAL	11,447 SF

DESIGN BASIS

NOTES

GENERAL
- CLIMATE ZONE 3

KEY
1. EXISTING BILLBOARD
2. APPROXIMATE TOP OF SLOPE
3. 16' SEWER EASEMENT

FIGURE: 3

CARMAX
12800 TUCKAHOE CREEK PKWY RICHMOND, VA 23238
804-747-0422 | CARMAX.COM

OCEANSIDE, CA

CONFIDENTIAL

NOT RELEASED FOR CONSTRUCTION

PROJECT NO. 6163

DATE 06.04.19

SHEET TITLE
PRELIM. SITE PLAN

SHEET NO.
SP-05

Notes: See Photos in Attachment 1. See Tax Map in Attachment 2 for Actual Property Boundaries.
Residential Across Thunder Drive to East and Further South Beyong Buena Vista Creek.
G = Gravel (Entire Gray Area, Still Present at Time of Reconnaissance Visit).
M = Mounded Side by Side Stockpiles of What Appeared to be Fill Soil.
No Dry Cleaners or Gas Station Observed at Multi-Tenant Commercial Property to West.
No Hazardous Materials or Hazardous Wastes Observed.

Relative Location in California

Project No.: 01.CARMAX1.19

SITE PLAN WITH ADJACENT PROPERTY USES

VACANT COMMERCIAL PROPERTY

3843-4003 Plaza Drive
3441-3552 Thunder Drive, Oceanside
(North) San Diego County, CA 92056

EnviroApplications, Inc.
Engineering & Consulting
Rio Sur Office Complex
2831 Camino Del Rio South
Suite 214, Mission Valley
San Diego, CA 92108-3828

Date: 07-31-2019	**Sources:** Reconnaissance Visit & ESRI, 2019	**Scale:** None.	**Figure: 4**
Client: CENTERPOINT INTEGRATED SOLUTIONS	**By:** Fred Allee **Checked:** Craig Smith		**Revision:** 1

ATTACHMENT 1

PHOTOGRAPHS OF THE SUBJECT & ADJACENT PROPERTIES

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Proposed Oceanside CarMax Facility
Vacant Commercial Property
3843-4003 Plaza Drive, Oceanside
(North) San Diego County, CA 92056

September 10, 2019

EAI Project No.: 80.CARMAX1.19
APNs: 168-012-42 & -43-00

ENVIROAPPLICATIONS, INC.
PHOTOGRAPHIC RECORD

Client:	CenterPoint Integrated Solutions, LLC	**Job Number:**	80.CARMAX1.19
Subject Name:	Proposed Oceanside CarMax Facility APNs: 168-012-42 & -43-00	**Location:**	3843-4003 Plaza Drive, 3441-3552 Thunder Drive, Oceanside, CA 92056
Photographer:	Fred Allee	**Date:**	July 29, 2019

Photograph No. 1 of 8

Looking eastward across subject property and gravel-covered area (due to temp uses) with CA DMV in background.

Photograph No. 2 of 8

Looking east along southern boundary of subject property with Buena Vista Creek (at right in photo).

ENVIROAPPLICATIONS, INC.
PHOTOGRAPHIC RECORD

Client:	CenterPoint Integrated Solutions, LLC	**Job Number:**	80.CARMAX1.19
Subject Name:	Proposed Oceanside CarMax Facility APNs: 168-012-42 & -43-00	**Location:**	3843-4003 Plaza Drive, 3441-3552 Thunder Drive, Oceanside, CA 92056
Photographer:	Fred Allee	**Date:**	July 29, 2019

Photograph No. 3 of 8

Looking north from main portion of subject property, across Plaza Drive to unuseable triangular-shaped portion.

Photograph No. 4 of 8

Looking south from CA DMV parking lot down gap between two large mounds of fill soil on eastern subject property.

ENVIROAPPLICATIONS, INC.
PHOTOGRAPHIC RECORD

Client:	CenterPoint Integrated Solutions, LLC	**Job Number:**	80.CARMAX1.19
Subject Name:	Proposed Oceanside CarMax Facility APNs: 168-012-42 & -43-00	**Location:**	3843-4003 Plaza Drive, 3441-3552 Thunder Drive, Oceanside, CA 92056
Photographer:	Fred Allee	**Date:**	July 29, 2019

Photograph No. 5 of 8

The front (east) side of the CA DMV facility located adjacent to the northeast area of the subject property.

Photograph No. 6 of 8

View of the back (east) side of the multi-tenant commercial buildings located to the west of the subject property.

ENVIROAPPLICATIONS, INC.
PHOTOGRAPHIC RECORD

Client:	CenterPoint Integrated Solutions, LLC	**Job Number:**	80.CARMAX1.19
Subject Name:	Proposed Oceanside CarMax Facility APNs: 168-012-42 & -43-00	**Location:**	3843-4003 Plaza Drive, 3441-3552 Thunder Drive, Oceanside, CA 92056
Photographer:	Fred Allee	**Date:**	July 29, 2019

Photograph No. 7 of 8

Looking northeast across the eastern portion of the subject property toward two mounds of fill soil.

Photograph No. 8 of 8

Looking southeast from subject property across Buena Vista Creek toward nearby residential buildings.

ATTACHMENT 2

ASTM USER PROVIDED INFORMATION

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Proposed Oceanside CarMax Facility
Vacant Commercial Property
3843-4003 Plaza Drive, Oceanside
(North) San Diego County, CA 92056

September 10, 2019

EAI Project No.: 80.CARMAX1.19
APNs: 168-012-42 & -43-00

PHASE I ESA USER'S QUESTIONNAIRE

In order to qualify for protection from land owner liability under CERCLA as an *innocent landowner, bona fide prospective purchaser,* or *contiguous property owner*, ASTM standard practice E1527-13 and the federal all appropriate inquiry (AAI) rule (40 CFR 312) require that the User of the Phase I ESA report provide certain information (if available) to the Environmental Professional completing the assessment. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete. Information that is not or cannot be provided to the Environmental Professional may be identified as a "data gap" in the Phase I ESA Report.

Please answer the following questions as completely as possible. Attach additional pages if needed. Return the completed questionnaire to EnviroApplications along with the executed authorization for services form.

1. **Property Information.** Property Name: CarMax – Oceanside

   Property Address: Vacant

   City: Oceanside State CA Zip _____

   Property Owner Name: Plaza Thunder, LLC

   Property Owner Phone #: Jon Hamby (advisor to owner) – 619-881-7875

2. **Contact For Site Access.** Name: no notice required

   Company/Organization/Title: _____

   Phone #: _____ E-Mail Address: _____

3. **Environmental Cleanup Liens.** Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

   _____ Yes ___X___ No

   If yes, describe or attach details of the lien _____

4. **Activity and Land Use Limitations.** Are you aware of any activity and use limitations, such as engineering controls, land use restrictions, or institutional controls that are in place at the property and/or have been filed or recorded as applicable to the property as a result of environmental contamination, investigation, cleanup, or related matters?

   _____ Yes ___X___ No

   If yes, describe or attach details of the limitations _____

5. **Specialized Knowledge or Experience.** As the User of this ESA, do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property, such that you would have specialized knowledge about chemicals and processes used by this type of business?

   _____ Yes ___X___ No

   If yes, describe or attach details of your specialized knowledge or experience _____

6. **Relationship of Purchase Price to Fair Market Value of Property.** Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, do you have any reason to believe that the reduced purchase price may be related to contamination known or believed to be present at the property?

_____ Yes, I have reason to believe that the purchase price for the property has been reduced in comparison with the fair market value due to contamination known or believed to be present at the property?

__X__ No, I have no reason to believe that the ~~purchase price~~ rent for the property has been reduced in comparison with the fair market value due to contamination known or believed to be present at the property?

_____ Not applicable. User is not involved in a purchase of the property.

7. **Commonly Known or Reasonably Ascertainable Information.** Are you aware of commonly known or reasonably ascertainable information about the property that would help the Environmental Professional to identify conditions indicative of releases or threatened releases of hazardous substances or petroleum products? For example:

Do you know the past uses of the property?
_____ Yes (describe) _____
__X__ No

Do you know of chemicals, hazardous substances or petroleum products that are present or once were present at the property?
_____ Yes (describe) _____
__X__ No

Do you know of spills or other releases of chemicals, hazardous substances or petroleum products that have taken place at the property?
_____ Yes (describe) _____
__X__ No

Do you know of any environmental cleanups that have taken place at the property?
_____ Yes (describe) _____
__X__ No

8. **The Degree of Obviousness of Contamination.** E1527-13 and the federal AAI rule (40 CFR 312.31) require that the Phase I ESA consider the degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation. Based on your knowledge and experience related to the property, are there any *obvious* indictors that point to the presence or likely presence of contamination at the property?
_____ Yes (describe) _____
_____
__X__ No

9. **Availability of Previous Environmental, Geotechnical and Preliminary Title Insurance Reports.** Are you aware of previous environmental site assessment reports, other environmental reports, documents, correspondence, etc. concerning the property and its environmental condition?
__X__ No
_____ Yes (please identify and provide copies, if available):
Environmental Site Assessment Reports_____
Environmental Compliance Audit Reports_____
Risk Assessments_____
Geotechnical Studies_____
Reports regarding hydrogeologic conditions on the property or surrounding area_____
Environmental permits or registrations for above and/or underground storage tanks, underground injection or waste water storage systems, hazardous materials handling, hazardous waste generation or disposal, wastewater treatment systems and NPDES permits._____

Signature: _____ **Name (printed):** Jason Pruitt

Title: Real Estate Mgr **Date:** 8/12/19 **Months/Years Familiar With Property:** 1 year

COMMITMENT FOR TITLE INSURANCE

Issued by

Chicago Title Insurance Company

NOTICE

IMPORTANT—READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I—Requirements; Schedule B, Part II—Exceptions; and the Commitment Conditions, **Chicago Title Insurance Company**, a Florida Corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I—Requirements have not been met within 180 Days after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

Countersigned:
By:

By

Randy Quirk, President

Attest

Michael Gravelle, Secretary

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Chicago Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I—Requirements; and Schedule B, Part II—Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

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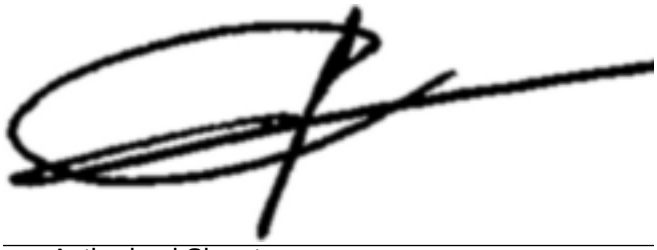
AMERICAN LAND TITLE ASSOCIATION



Authorized Signature

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COMMITMENT CONDITIONS

1. DEFINITIONS

(a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.

(b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.

(c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.

(d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.

(e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.

(f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.

(g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.

(h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I—Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:

(a) the Notice;
(b) the Commitment to Issue Policy;
(c) the Commitment Conditions;
(d) Schedule A;
(e) Schedule B, Part I—Requirements;
(f) Schedule B, Part II—Exceptions; and
(g) a counter-signature by the Company or its issuing agent that may be in electronic form.

4. COMPANY'S RIGHT TO AMEND

The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY

(a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:

(i) comply with the Schedule B, Part I—Requirements;
(ii) eliminate, with the Company's written consent, any Schedule B, Part II—Exceptions; or
(iii) acquire the Title or create the Mortgage covered by this Commitment.

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(b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.
(c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.
(d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.
(e) The Company shall not be liable for the content of the Transaction Identification Data, if any.
(f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I—Requirements have been met to the satisfaction of the Company.
(g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

(a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.
(b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.
(c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.
(d) The deletion or modification of any Schedule B, Part II—Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.
(e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.
(f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

9. ARBITRATION

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Policy Amount is $2,000,000 or less shall be arbitrated at the option of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at <http://www.alta.org/arbitration>.

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Transaction Identification Data for reference only:

Issuing Agent:	Chicago Title Company
Issuing Office:	725 South Figueroa Street, Suite 200, Los Angeles, CA 90017
ALTA® Universal ID:	
Loan ID Number:	
Commitment Number:	
Issuing Office File Number:	00101379-016-NJ-DB
Property Address:	apns: 168-012-42 & 168-012-43, Oceanside, CA
Revision Number:	

SCHEDULE A

AMERICAN LAND TITLE ASSOCIATION COMMITMENT

1. Commitment Date: **July 1, 2019**
2. Policy to be issued:
   (a) **ALTA Extended Owner's Policy (6-17-06) - Leasehold**

   Proposed Insured: **Carmax Auto Superstores California, LLC, a Virginia limited liability company**

   Proposed Policy Amount: **$10,000.00**

   (b) **None**

   Proposed Insured:

   Proposed Policy Amount: **$0.00**

   (c) **None**

   Proposed Insured:

   Proposed Policy Amount: **$0.00**
3. The estate or interest in the Land described or referred to in this Commitment is:

   A Fee
4. Title to the Fee estate or interest in the Land is at the Commitment Date vested in:

   Plaza Thunder, LLC, a California limited liability company
5. The Land is described as follows:

   See Exhibit A attached hereto and made a part hereof.

Countersigned:

By: _____
Authorized Signature

By
Randy Quirk, President

Attest
Michael Gravelle, Secretary

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Chicago Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I—Requirements; and Schedule B, Part II—Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

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EXHIBIT A

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF OCEANSIDE, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL 2 OF PARCEL MAP NO. 9096, IN THE CITY OF OCEANSIDE, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY AUGUST 30, 1979.

EXCEPTING THAT PORTION DESCRIBED IN FINAL ORDER OF CONDEMNATION TO THE CITY OF OCEANSIDE, RECORDED JULY 8, 1988 AS FILE NO. 88-272917, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID PARCEL 2; THENCE ALONG THE WESTERLY LINE OF SAID PARCEL 2 SOUTH 09° 00' 11" EAST 181.53 FEET (SOUTH 09° 02' 50" EAST PER SAID PARCEL MAP 9096) TO THE TRUE POINT OF BEGINNING; THENCE CONTINUING ALONG SAID WESTERLY LINE SOUTH 09° 00' 11" EAST, 84.46 FEET; THENCE LEAVING SAID WESTERLY LINE NORTH 30° 27' 44" EAST 23.73 FEET TO THE BEGINNING OF A NON-TANGENT 440.00 FOOT RADIUS CURVE, CONCAVE NORTHWESTERLY A RADIAL TO SAID POINT BEARS SOUTH 17° 29' 02" EAST; THENCE ALONG THE ARC OF SAID CURVE NORTHEASTERLY 112.83 FEET THROUGH A CENTRAL ANGLE OF 14° 41' 35" TO A POINT OF COMPOUND CURVE WITH A RADIUS OF 520.00 FEET CONCAVE NORTHWESTERLY; THENCE ALONG THE ARC OF SAID CURVE NORTHEASTERLY 108.08 FEET THROUGH A CENTRAL ANGLE OF 11° 54' 29"; THENCE NORTH 45° 54' 54" EAST 73.36 FEET TO THE BEGINNING OF A 480.00 FOOT CURVE CONCAVE SOUTHEASTERLY; THENCE ALONG THE ARC OF SAID CURVE NORTHEASTERLY 95.23 FEET THROUGH A CENTRAL ANGLE OF 11° 22' 03"; THENCE NORTH 88° 48' 06" EAST 16.42 FEET TO THE EASTERLY LINE OF SAID PARCEL 2; THENCE ALONG SAID EASTERLY LINE NORTH 04° 34' 36" WEST 65.64 FEET TO A POINT ON AN 1112.00 FOOT RADIUS CURVE, CONCAVE SOUTHEASTERLY, A RADIAL TO SAID POINT BEARS NORTH 36° 24' 56" WEST; THENCE ALONG THE ARC OF SAID CURVE SOUTHWESTERLY 148.85 FEET THROUGH A CENTRAL ANGLE OF 07° 40' 10"; THENCE SOUTH 45° 54' 54" WEST 73.36 FEET TO THE BEGINNING OF A 480.00 FOOT RADIUS CURVE, CONCAVE NORTHWESTERLY; THENCE ALONG THE ARC OF SAID CURVE SOUTHWESTERLY 99.76 FEET THROUGH A CENTRAL ANGLE OF 11° 54' 29" A POINT OF COMPOUND CURVE WITH A RADIUS OF 400.00 FEET CONCAVE NORTHWESTERLY; THENCE ALONG THE ARC OF SAID CURVE SOUTHWESTERLY 119.97 FEET THROUGH A CENTRAL ANGLE OF 17° 11' 04"; THENCE NORTH 61° 01' 02" WEST 26.57 FEET TO THE POINT OF BEGINNING.

APN: **168-012-42, 168-012-43**

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SCHEDULE B

PART I – REQUIREMENTS

All of the following Requirements must be met:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.

2. Pay the agreed amount for the estate or interest to be insured.

3. Pay the premiums, fees, and charges for the Policy to the Company.

4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.

5. For each policy to be issued as identified in Schedule A, Item 2; the Company shall not be liable under this commitment until it receives a designation for a Proposed Insured, acceptable to the Company. As provided in Commitment Condition 4, the Company may amend this commitment to add, among other things, additional exceptions or requirements after the designation of the Proposed Insured.

6. Release(s) or Reconveyance(s) of Item No(s). 17 and 18

7. Due to the special requirements of SB 50 (California Public Resources Code Section 8560 et seq.), any transaction that includes the conveyance of title by an agency of the United States must be approved in advance by the Company's State Counsel, Regional Counsel, or one of their designees.

8. The Company and its policy issuing agents are required by Federal law to collect additional information about certain transactions in specified geographic areas in accordance with the Bank Secrecy Act. If this transaction is required to be reported under a Geographic Targeting Order issued by FinCEN, the Company or its policy issuing agent must be supplied with a completed ALTA Information Collection Form ("ICF") prior to closing the transaction contemplated herein.

9. Unrecorded matters which may be disclosed by an Owner's Affidavit or Declaration. A form of the Owner's Affidavit/Declaration is attached to this Preliminary Report/Commitment. This Affidavit/Declaration is to be completed by the record owner of the land and submitted for review prior to the closing of this transaction. Your prompt attention to this requirement will help avoid delays in the closing of this transaction. Thank you.

   The Company reserves the right to add additional items or make further requirements after review of the requested Affidavit/Declaration.

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SCHEDULE B
PART I – Requirements
(Continued)

10. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance from the entity named below:

    Limited Liability Company: PLAZA THUNDER, LLC, a California limited liability company and CARMAX AUTO SUPERSTORES CALIFORNIA, LLC, a Virginia limited liability company

    a) A copy of its operating agreement, if any, and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member.

    b) If a domestic Limited Liability Company, a copy of its Articles of Organization and all amendments thereto with the appropriate filing stamps.

    c) If the Limited Liability Company is member-managed, a full and complete current list of members certified by the appropriate manager or member.

    d) A current dated certificate of good standing from the proper governmental authority of the state in which the entity is currently domiciled.

    e) If less than all members, or managers, as appropriate, will be executing the closing documents, furnish evidence of the authority of those signing.

    f) If Limited Liability Company is a Single Member Entity, a Statement of Information for the Single Member will be required.

    g) Each member and manager of the LLC without an Operating Agreement must execute in the presence of a notary public the Certificate of California LLC (Without an Operating Agreement) Status and Authority form.

11. Before the issuance of any title insurance under this application, the Company will require a full copy of the lease to be insured, together with all supplements, assignments and amendments for review. If a memorandum or short form of the lease is to be recorded, a full copy of the executed lease is still required.

    The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

END OF SCHEDULE B, PART I–REQUIREMENTS

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SCHEDULE B

PART II – EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

I. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records. Proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.

II. Any facts, rights, interests or claims which are not shown by the public records but which could be ascertained by an inspection of the land or which may be asserted by persons in possession thereof.

III. Easements, liens or encumbrances, or claims thereof, which are not shown by the public records.

IV. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.

V. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown by the public records.

VI. Any lien or right to a lien for services, labor or material not shown by the public records.

VII. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the Public Records or attaching to the subsequent effective date hereof but prior to the date the proposed Insured acquires of records for value the estate or interest or mortgage thereon covered by this Commitment.

A. Property taxes, which are a lien not yet due and payable, including any assessments collected with taxes to be levied for the fiscal year 2019-2020.

B. The lien of supplemental or escaped assessments of property taxes, if any, made pursuant to the provisions of Chapter 3.5 (commencing with Section 75) or Part 2, Chapter 3, Articles 3 and 4, respectively, of the Revenue and Taxation Code of the State of California as a result of the transfer of title to the vestee named in Schedule A or as a result of changes in ownership or new construction occurring prior to Date of Policy.

1. Water rights, claims or title to water, whether or not disclosed by the public records.

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SCHEDULE B
PART II – EXCEPTIONS
(Continued)

2. The following recitals contained in deed from Vista Irrigation District, recorded July 17, 1945 in Book 1901, page 429, of Official Records.

"That the discharge from the Vista Sanitary District Flows to, upon and across said premises and the right of such Sanitary District to continue such flowage permanently is hereby acknowledged and accepted by grantee and his successors in interest."

3. The fact that the ownership of said land does not include rights of access to or from the street, highway, or freeway abutting said land, such rights having been severed from said land by the document.

Recorded:	January 2, 1953 in Book 4703, page 99, of Official Records
Affects:	Highway 78 adjacent

4. An easement for the purpose shown below and rights incidental thereto as set forth in a document.

Granted To:	City of Oceanside
Purpose:	sewer pipeline purposes
Recorded:	June 29, 1961 as Instrument No. 111643, of Official Records
Affects:	as shown on Parcel Map 9096

5. An easement for the purpose shown below and rights incidental thereto as set forth in a document.

Granted To:	Contractors Asphalt Products Co., Inc., a California corporation
Purpose:	road purposes
Recorded:	March 24, 1964 as Instrument No. 53097, of Official Records
Affects:	The route thereof affects a portion of said land and is more fully described in said document.

6. An easement for the purpose shown below and rights incidental thereto as set forth in a document.

Granted To:	Vista Sanitation District
Purpose:	sewer lines and or mains, manholes, sewer lateral pipe lines
Recorded:	June 5, 1970 as Instrument No. 97873, of Official Records .
Affects:	The route thereof affects a portion of said land and is more fully described in said document.

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SCHEDULE B
PART II – EXCEPTIONS
(Continued)

7. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Purpose:	public highway
Recording Date:	March 5, 1971
Recording No:	42165, of Official Records
Affects:	a portion of said land

8. Covenants, conditions and restrictions but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, citizenship, immigration status, primary language, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth in the document

Recording Date:	October 21, 1971
Recording No:	243127, of Official Records

9. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Purpose:	grading
Recording Date:	October 21, 1971
Recording No:	243552, of Official Records
Affects:	a portion of said land

10. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Purpose:	sanitary sewer
Recording Date:	December 29, 1971
Recording No:	303607, of Official Records
Affects:	a portion of said land

11. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Purpose:	public highway
Recording Date:	June 27, 1972
Recording No:	164596, of Official Records
Affects:	a portion of said land

12. The fact that the ownership of said land does not include rights of access to or from the street, highway, or freeway abutting said land, such rights having been severed from said land by the document.

Recorded:	June 4, 1973 as Instrument No. 73-150978, of Official Records and recorded June 4, 1973 as Instrument No. 73-150979, of Official Records
Affects:	The adjacent state freeway

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SCHEDULE B
PART II – EXCEPTIONS
(Continued)

13. An easement for the purpose shown below and rights incidental thereto as set forth in a document.

Granted To:	City of Oceanside
Purpose:	sanitary sewer pipeline
Recorded:	August 20, 1973 as Instrument No. 73-233038, of Official Records
Affects:	as shown on Parcel Map No. 9096

14. An easement for the purpose shown below and rights incidental thereto as set forth in a document.

Granted To:	City of Oceanside
Purpose:	slope easements
Recorded:	June 8, 1988 as Instrument No. 88-272917, of Official Records
Affects:	The route thereof affects a portion of said land and is more fully described in said document.

15. A document entitled “License Agreement”, dated, November 16, 1999, executed by Teresa M. Cannon and Outdoor Media Group, Inc., subject to all the terms, provisions and conditions therein contained, recorded November 13, 2000 as Instrument No. 2000-0614748, of Official Records.

16. This exception has been intentionally deleted.

17. An abstract of judgment for the amount shown below and any other amounts due:

Amount:	$570.00
Debtor:	Theresa Cannon
Creditor:	The People of The State of California
Date entered:	June 26, 2013
County:	San Diego
Court:	Superior
Case No.:	SCD245388
Recording Date:	July 15, 2013
Recording No:	2013-440243, of Official Records

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SCHEDULE B
PART II – EXCEPTIONS
(Continued)

18. An abstract of judgment for the amount shown below and any other amounts due:

Amount:	$99.00
Debtor:	Theresa Cannon
Creditor:	The People of The State of California
Date entered:	June 26, 2013
County:	San Diego
Court:	Superior
Case No.:	SCD245388
Recording Date:	August 12, 2013
Recording No:	2013-503962, of Official Records

19. Please be advised that our search did not disclose any open Deeds of Trust of record. If you should have knowledge of any outstanding obligation, please contact the Title Department immediately for further review prior to closing.

20. Matters which may be disclosed by an inspection and/or by a correct ALTA/NSPS Land Title Survey of said Land that is satisfactory to the Company, and/or by inquiry of the parties in possession thereof.

21. Any rights of the parties in possession of a portion of, or all of, said Land, which rights are not disclosed by the public records.

    The Company will require, for review, a full and complete copy of any unrecorded agreement, contract, license and/or lease, together with all supplements, assignments and amendments thereto, before issuing any policy of title insurance without excepting this item from coverage.

    The Company reserves the right to except additional items and/or make additional requirements after reviewing said documents.

22. The Company will require that a full copy of any unrecorded lease referred to herein be furnished to the Company, together with all supplements, assignments and amendments for review.

    The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

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SCHEDULE B
PART II – EXCEPTIONS
(Continued)

23. Matters contained in that certain document

Entitled:	Memorandum of Option to Lease
Dated:	June 27, 2019
Executed by:	Plaza Thunder, LLC, a California limited liability company and Carmax Auto Superstores California, LLC, a Virginia limited liability company
Recording Date:	July 5, 2019
Recording No:	2019-0266580, of Official Records

Reference is hereby made to said document for full particulars.

END OF SCHEDULE B, PART II – EXCEPTIONS

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INFORMATIONAL NOTES

1. None of the items shown in this report will cause the Company to decline to attach ALTA Endorsement Form 9 to an Extended Coverage Loan Policy, when issued.

2. The Company is not aware of any matters which would cause it to decline to attach CLTA Endorsement Form 116 indicating that there is located on said Land Commercial properties, known as apns: 168-012-42 & 168-012-43, located within the city of Oceanside, California, , to an Extended Coverage Loan Policy.

3. Note: The policy of title insurance will include an arbitration provision. The Company or the insured may demand arbitration. Arbitrable matters may include, but are not limited to, any controversy or claim between the Company and the insured arising out of or relating to this policy, any service of the Company in connection with its issuance or the breach of a policy provision or other obligation. Please ask your escrow or title officer for a sample copy of the policy to be issued if you wish to review the arbitration provisions and any other provisions pertaining to your Title Insurance coverage.

4. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.

5. Pursuant to Government Code Section 27388.1, as amended and effective as of 1-1-2018, a Documentary Transfer Tax (DTT) Affidavit may be required to be completed and submitted with each document when DTT is being paid or when an exemption is being claimed from paying the tax. If a governmental agency is a party to the document, the form will not be required. DTT Affidavits may be available at a Tax Assessor-County Clerk-Recorder.

6. Due to the special requirements of SB 50 (California Public Resources Code Section 8560 et seq.), any transaction that includes the conveyance of title by an agency of the United States must be approved in advance by the Company's State Counsel, Regional Counsel, or one of their designees.

7. Note: Property taxes, including any personal property taxes and any assessments collected with taxes, are paid. For proration purposes the amounts were:

Tax Identification No.:	168-012-42-00
Fiscal Year:	2018-2019
1st Installment:	$283.80
2nd Installment:	$283.80
Exemption:	none
Code Area:	07018

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INFORMATIONAL NOTES
(Continued)

8. Note: Property taxes, including any personal property taxes and any assessments collected with taxes, are paid. For proration purposes the amounts were:

Tax Identification No.:	168-012-43-00
Fiscal Year:	2018-2019
1st Installment:	$2,412.41
2nd Installment:	$2,412.41
Exemption:	none
Code Area:	07018

END OF INFORMATIONAL NOTES

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Wire Fraud Alert

This Notice is not intended to provide legal or professional advice. If you have any questions, please consult with a lawyer.

All parties to a real estate transaction are targets for wire fraud and many have lost hundreds of thousands of dollars because they simply relied on the wire instructions received via email, without further verification. **If funds are to be wired in conjunction with this real estate transaction, we strongly recommend verbal verification of wire instructions through a known, trusted phone number prior to sending funds.**

In addition, the following non-exclusive self-protection strategies are recommended to minimize exposure to possible wire fraud.

- **NEVER RELY** on emails purporting to change wire instructions. Parties to a transaction rarely change wire instructions in the course of a transaction.
- **ALWAYS VERIFY** wire instructions, specifically the ABA routing number and account number, by calling the party who sent the instructions to you. DO NOT use the phone number provided in the email containing the instructions, use phone numbers you have called before or can otherwise verify. **Obtain the phone number of relevant parties to the transaction as soon as an escrow account is opened**. DO NOT send an email to verify as the email address may be incorrect or the email may be intercepted by the fraudster.
- **USE COMPLEX EMAIL PASSWORDS** that employ a combination of mixed case, numbers, and symbols. Make your passwords greater than eight (8) characters. Also, change your password often and do NOT reuse the same password for other online accounts.
- **USE MULTI-FACTOR AUTHENTICATION** for email accounts. Your email provider or IT staff may have specific instructions on how to implement this feature.

For more information on wire-fraud scams or to report an incident, please refer to the following links:

Federal Bureau of Investigation:
http://www.fbi.gov

Internet Crime Complaint Center:
http://www.ic3.gov

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FIDELITY NATIONAL FINANCIAL, INC.
PRIVACY NOTICE

Fidelity National Financial, Inc. and its majority-owned subsidiary companies (collectively, "FNF," "our," or "we") respect and are committed to protecting your privacy. This Privacy Notice explains how we collect, use, and protect personal information, when and to whom we disclose such information, and the choices you have about the use and disclosure of that information.

Types of Information Collected
We may collect two types of information from you: Personal Information and Browsing Information.

Personal Information. FNF may collect the following categories of Personal Information:
- contact information (*e.g.,* name, address, phone number, email address);
- demographic information (*e.g.,* date of birth, gender, marital status);
- identity information (*e.g.,* Social Security Number, driver's license, passport, or other government ID number);
- financial account information (*e.g.,* loan or bank account information); and
- other personal information necessary to provide products or services to you.

Browsing Information. FNF may automatically collect the following types of Browsing Information when you access an FNF website, online service, or application (each an "FNF Website") from your Internet browser, computer, and/or mobile device:
- Internet Protocol (IP) address and operating system;
- browser version, language, and type;
- domain name system requests; and
- browsing history on the FNF Website, such as date and time of your visit to the FNF Website and visits to the pages within the FNF Website

How Personal Information is Collected
We may collect Personal Information about you from:
- information we receive from you on applications or other forms;
- information about your transactions with FNF, our affiliates, or others; and
- information we receive from consumer reporting agencies and/or governmental entities, either directly from these entities or through others.

How Browsing Information is Collected
If you visit or use an FNF Website, Browsing Information may be collected during your visit. Like most websites, our servers automatically log each visitor to the FNF Website and may collect the Browsing Information described above. We use Browsing Information for system administration, troubleshooting, fraud investigation, and to improve our websites. Browsing Information generally does not reveal anything personal about you, though if you have created a user account for an FNF Website and are logged into that account, the FNF Website may be able to link certain browsing activity to your user account.

Other Online Specifics
Cookies. When you visit an FNF Website, a "cookie" may be sent to your computer. A cookie is a small piece of data that is sent to your Internet browser from a web server and stored on your computer's hard drive. Information gathered using cookies helps us improve your user experience. For example, a cookie can help the website load properly or can customize the display page based on your browser type and user preferences. You can choose whether or not to accept cookies by changing your Internet browser settings. Be aware that doing so may impair or limit some functionality of the FNF Website.

Web Beacons. We use web beacons to determine when and how many times a page has been viewed. This information is used to improve our websites.

Do Not Track. Currently our FNF Websites do not respond to "Do Not Track" features enabled through your browser.

Links to Other Sites. FNF Websites may contain links to other websites. FNF is not responsible for the privacy practices or the content of any of those other websites. We advise you to read the privacy policy of every website you visit.

Use of Personal Information
FNF uses Personal Information for three main purposes:
- To provide products and services to you or in connection with a transaction involving you.
- To improve our products and services.
- To communicate with you about our, our affiliates', and third parties' products and services, jointly or independently.

When Information Is Disclosed
We may make disclosures of your Personal Information and Browsing Information in the following circumstances:
- to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure;
- to nonaffiliated service providers who provide or perform services or functions on our behalf and who agree to use the information only to provide such services or functions;
- to nonaffiliated third party service providers with whom we perform joint marketing, pursuant to an agreement with them to jointly market financial products or services to you;

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- to law enforcement or authorities in connection with an investigation, or in response to a subpoena or court order; or
- in the good-faith belief that such disclosure is necessary to comply with legal process or applicable laws, or to protect the rights, property, or safety of FNF, its customers, or the public.

The law does not require your prior authorization and does not allow you to restrict the disclosures described above. Additionally, we may disclose your information to third parties for whom you have given us authorization or consent to make such disclosure. We do not otherwise share your Personal Information or Browsing Information with nonaffiliated third parties, except as required or permitted by law.

We reserve the right to transfer your Personal Information, Browsing Information, and any other information, in connection with the sale or other disposition of all or part of the FNF business and/or assets, or in the event of bankruptcy, reorganization, insolvency, receivership, or an assignment for the benefit of creditors. By submitting Personal Information and/or Browsing Information to FNF, you expressly agree and consent to the use and/or transfer of the foregoing information in connection with any of the above described proceedings.

Please see "**Choices With Your Information**" to learn the disclosures you can restrict.

Security of Your Information
We maintain physical, electronic, and procedural safeguards to guard your Personal Information. We limit access to nonpublic personal information about you to employees who need to know that information to do their job. When we provide Personal Information to others as discussed in this Privacy Notice, we expect that they process such information in compliance with our Privacy Notice and in compliance with applicable privacy laws.

Choices With Your Information
If you do not want FNF to share your information with our affiliates to directly market to you, you may send an "opt out" request by email, phone, or physical mail as directed at the end of this Privacy Notice. We do not share your Personal Information with nonaffiliates for their use to direct market to you.

Whether you submit Personal Information or Browsing Information to FNF is entirely up to you. If you decide not to submit Personal Information or Browsing Information, FNF may not be able to provide certain services or products to you.

For California Residents: We will not share your Personal Information and Browsing Information with nonaffiliated third parties, except as permitted by California law.

For Nevada Residents: You may be placed on our internal Do Not Call List by calling (888) 934-3354 or by contacting us via the information set forth at the end of this Privacy Notice. Nevada law requires that we also provide you with the following contact information: Bureau of Consumer Protection, Office of the Nevada Attorney General, 555 E. Washington St., Suite 3900, Las Vegas, NV 89101; Phone number: (702) 486-3132; email: BCPINFO@ag.state.nv.us.

For Oregon Residents: We will not share your Personal Information and Browsing Information with nonaffiliated third parties for marketing purposes, except after you have been informed by us of such sharing and had an opportunity to indicate that you do not want a disclosure made for marketing purposes.

For Vermont Residents: We will not share information about your creditworthiness to our affiliates and will not disclose your personal information, financial information, credit report, or health information to nonaffiliated third parties to market to you, other than as permitted by Vermont law, unless you authorize us to make those disclosures.

Information From Children
The FNF Websites are meant for adults and are not intended or designed to attract persons under the age of eighteen (18).We do not collect Personal Information from any person that we know to be under the age of thirteen (13) without permission from a parent or guardian.

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Jacksonville, Florida 32204
Attn: Chief Privacy Officer

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ATTACHMENT ONE (Revised 05-06-16)

CALIFORNIA LAND TITLE ASSOCIATION
STANDARD COVERAGE POLICY – 1990

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building or zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien, or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
   (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
   (c) resulting in no loss or damage to the insured claimant;
   (d) attaching or created subsequent to Date of Policy; or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable doing business laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any claim, which arises out of the transaction vesting in the insured the estate of interest insured by this policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

EXCEPTIONS FROM COVERAGE - SCHEDULE B, PART I

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
   Proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of the land or which may be asserted by persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown by the public records.
6. Any lien or right to a lien for services, labor or material not shown by the public records.

CLTA HOMEOWNER'S POLICY OF TITLE INSURANCE (12-02-13)
ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE

EXCLUSIONS

In addition to the Exceptions in Schedule B, You are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of those portions of any law or government regulation concerning:
   a. building;
   b. zoning;
   c. land use;
   d. improvements on the Land;
   e. land division; and
   f. environmental protection.
   This Exclusion does not limit the coverage described in Covered Risk 8.a., 14, 15, 16, 18, 19, 20, 23 or 27.
2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not limit the coverage described in Covered Risk 14 or 15.
3. The right to take the Land by condemning it. This Exclusion does not limit the coverage described in Covered Risk 17.
4. Risks:
   a. that are created, allowed, or agreed to by You, whether or not they are recorded in the Public Records;
   b. that are Known to You at the Policy Date, but not to Us, unless they are recorded in the Public Records at the Policy Date;

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c. that result in no loss to You; or
d. that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.e., 25, 26, 27 or 28.

5. Failure to pay value for Your Title.
6. Lack of a right:
   a. to any land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
   b. in streets, alleys, or waterways that touch the Land.
   This Exclusion does not limit the coverage described in Covered Risk 11 or 21.
7. The transfer of the Title to You is invalid as a preferential transfer or as a fraudulent transfer or conveyance under federal bankruptcy, state insolvency, or similar creditors' rights laws.
8. Contamination, explosion, fire, flooding, vibration, fracturing, earthquake, or subsidence.
9. Negligence by a person or an Entity exercising a right to extract or develop minerals, water, or any other substances.

LIMITATIONS ON COVERED RISKS

Your insurance for the following Covered Risks is limited on the Owner's Coverage Statement as follows:

- For Covered Risk 16, 18, 19, and 21 Your Deductible Amount and Our Maximum Dollar Limit of Liability shown in Schedule A.

The deductible amounts and maximum dollar limits shown on Schedule A are as follows:

	Your Deductible Amount	Our Maximum Dollar Limit of Liability
Covered Risk 16:	1.00% of Policy Amount Shown in Schedule A or $2,500.00 (whichever is less)	$ 10,000.00
Covered Risk 18:	1.00% of Policy Amount Shown in Schedule A or $5,000.00 (whichever is less)	$ 25,000.00
Covered Risk 19:	1.00% of Policy Amount Shown in Schedule A or $5,000.00 (whichever is less)	$ 25,000.00
Covered Risk 21:	1.00% of Policy Amount Shown in Schedule A or $2,500.00 (whichever is less)	$ 5,000.00

2006 ALTA LOAN POLICY (06-17-06)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;
   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13 or 14); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

{Except as provided in Schedule B - Part II,{ t{or T}his policy does not insure against loss or damage, and the Company will not pay costs, attorneys' fees or expenses, that arise by reason of:

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{PART I

{The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material not shown by the Public Records.}

PART II

In addition to the matters set forth in Part I of this Schedule, the Title is subject to the following matters, and the Company insures against loss or damage sustained in the event that they are not subordinate to the lien of the Insured Mortgage:}

2006 ALTA OWNER'S POLICY (06-17-06)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;
   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 and 10); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is
   (a) a fraudulent conveyance or fraudulent transfer; or
   (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage, and the Company will not pay costs, attorneys' fees or expenses, that arise by reason of:
{The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown in the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and that are not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material not shown by the Public Records. }
7. {Variable exceptions such as taxes, easements, CC&R's, etc. shown here.}

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ALTA EXPANDED COVERAGE RESIDENTIAL LOAN POLICY – ASSESSMENTS PRIORITY (04-02-15)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;
   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27 or 28); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury, or any consumer credit protection or truth-in-lending law. This Exclusion does not modify or limit the coverage provided in Covered Risk 26.
6. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to Advances or modifications made after the Insured has Knowledge that the vestee shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching subsequent to Date of Policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11(b) or 25.
8. The failure of the residential structure, or any portion of it, to have been constructed before, on or after Date of Policy in accordance with applicable building codes. This Exclusion does not modify or limit the coverage provided in Covered Risk 5 or 6.
9. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in Covered Risk 27(b) of this policy.
10. Contamination, explosion, fire, flooding, vibration, fracturing, earthquake, or subsidence.
11. Negligence by a person or an Entity exercising a right to extract or develop minerals, water, or any other substances.

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Insert Map Here

ATTACHMENT 3

GOVERNMENT AGENCY DATABASE SEARCH REPORT

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Proposed Oceanside CarMax Facility
Vacant Commercial Property
3843-4003 Plaza Drive, Oceanside
(North) San Diego County, CA 92056

September 10, 2019

EAI Project No.: 80.CARMAX1.19
APNs: 168-012-42 & -43-00

Proposed CarMax - Oceanside
CAMINO CREST DR
OCEANSIDE, CA 92056

Inquiry Number: 5717018.2s
July 15, 2019

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

CAMINO CREST DR
OCEANSIDE, CA 92056

COORDINATES

Latitude (North):	33.1819490 - 33° 10' 55.01''
Longitude (West):	117.2892250 - 117° 17' 21.21''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	473036.8
UTM Y (Meters):	3671303.5
Elevation:	194 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5641318 SAN LUIS REY, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140603
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
CAMINO CREST DR
OCEANSIDE, CA 92056

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	DMV OCEANSIDE	4005 PLAZA DR	CA HAZNET	Higher	1 ft.
A2	PERFORMANCE BICYCLE	3833 PLAZA DR STE 70	RCRA NonGen / NLR	Lower	50, 0.009, WSW
A3	GOODWILL INDUSTRIES	3841 PLAZA DRIVE #90	RCRA NonGen / NLR	Higher	89, 0.017, WNW
B4	ECONO LUBE & MAEINEQ	3844 PLAZA DR	CA AST	Higher	165, 0.031, NW
B5	ECONO LUBE-N-TUNE	3844 PLAZA DR	CA UST, CA AST, CA San Diego Co. HMMD, CA SWEEPS...	Higher	165, 0.031, NW
B6	MEINEKE / ECONO- LUB	3844 PLAZA DR	CA San Diego Co. HMMD, CA CERS HAZ WASTE, CA CERS...	Higher	165, 0.031, NW
B7	MEINEKE CAR CARE CEN	3844 PLAZA DR	RCRA NonGen / NLR	Higher	165, 0.031, NW
A8	DOLLAR TREE #03883	3825 PLAZA DR	CA San Diego Co. HMMD, CA CERS HAZ WASTE, CA...	Lower	182, 0.034, WSW
A9	DOLLAR TREE #03883	3825 PLAZA DR # 501	RCRA NonGen / NLR	Lower	182, 0.034, WSW
B10	O'REILLY AUTO PARTS	3840 PLAZA DR	CA CERS HAZ WASTE, CA HAZNET, CA CERS	Higher	223, 0.042, WNW
B11	O'REILLY AUTO PARTS	3840 PLAZA DR	RCRA NonGen / NLR	Higher	223, 0.042, WNW
C12	FAIRLANE CLEANERS	3821 PLAZA DR	CA San Diego Co. HMMD, CA CERS HAZ WASTE, CA CERS	Lower	324, 0.061, SW
C13	FAIRLANE CLEANERS &	3821 PLAZA DR STE 40	EDR Hist Cleaner	Lower	324, 0.061, SW
C14	FAIRLANE CLEANERS	3821 PLAZA DR #403	RCRA-SQG, CA EMI	Lower	324, 0.061, SW
C15	FAIRLANE CLEANERS	3821 PLAZA DR STE 40	CA DRYCLEANERS	Lower	324, 0.061, SW
D16	JOHN O'DER	3426 SEABREEZE WALK	RCRA NonGen / NLR	Higher	488, 0.092, ENE
C17	GOODWILL INDUSTRIES	3817 PLAZA DR STE B	RCRA NonGen / NLR	Higher	496, 0.094, WSW
C18	TJ MAXX 1059	3817 PLAZA DR	CA San Diego Co. HMMD, CA CERS HAZ WASTE, CA CERS	Higher	496, 0.094, WSW
C19	TJ MAXX 1059	3817 PLAZA DR	RCRA NonGen / NLR	Higher	496, 0.094, WSW
E20	HOME DEPOT #679 THE	4000 VISTA WY	RCRA-SQG	Higher	609, 0.115, NW
D21	GB AUTO SERVICES INC	2070 HACIENDA DR	RCRA NonGen / NLR	Higher	638, 0.121, NE
D22	FRAZEE PAINT	2070 HACIENDA DR	CA San Diego Co. HMMD, CA CERS HAZ WASTE, CA CERS	Higher	638, 0.121, NE
D23	EVANS TIRE & SERVICE	2070 HACIENDA DR	RCRA NonGen / NLR	Higher	638, 0.121, NE
D24	SHERIN WILLIAMS #152	2070 HACIENDA DR STE	RCRA NonGen / NLR	Higher	638, 0.121, NE
E25	TRI-CITY MEDICAL CEN	4002 VISTA WAY	RCRA-LQG, CA ENVIROSTOR, CA LUST, CA SAN DIEGO CO..	Higher	646, 0.122, NW
E26	TRI-CITY MEDICAL CEN	4002 VISTA	CA LUST, CA HIST CORTESE	Higher	646, 0.122, NW
F27	RITE AID #5635	3813 PLAZA DR	RCRA-CESQG, CA HAZNET	Higher	713, 0.135, WSW
F28	RITE AID #5635	3813 PLAZA DR	RCRA-LQG	Higher	713, 0.135, WSW
F29	RITE AID #5635	3813 PLAZA DR	CA CERS HAZ WASTE, CA HAZNET, CA CERS	Higher	713, 0.135, WSW
30	BEVERLY TATE	4032 MIRA COSTA STRE	RCRA NonGen / NLR	Higher	716, 0.136, South
G31	PLAZA DRIVE ARCO	3804 PLAZA DR	CA LUST, CA UST	Higher	762, 0.144, West
G32	ARCO PRODUCTS CO #53	3804 PLAZA DR	CA SAN DIEGO CO. SAM, CA SAN DIEGO CO LOP, CA CERS	Higher	762, 0.144, West
G33	ARCO #05350	3804 PLAZA DR	CA San Diego Co. HMMD, CA CERS HAZ WASTE, CA...	Higher	762, 0.144, West
G34	PLAZA DRIVE ARCO	3804 PLAZA DR	RCRA NonGen / NLR	Higher	762, 0.144, West
35	LORNA RODGERS	4102 LAKE BLVD	RCRA NonGen / NLR	Higher	827, 0.157, SE
E36	SCMC OB/GYN VISTA WA	3998 VISTA WAY STE C	CA San Diego Co. HMMD, CA CERS HAZ WASTE, CA CERS	Higher	879, 0.166, NW
E37	UPAC NEW LEAF RECOVE	3998 VISTA WAY STE E	RCRA NonGen / NLR	Higher	879, 0.166, NW
E38	SCRIPPS COASTAL MED	3998 VISTA WAY STE C	RCRA NonGen / NLR	Higher	879, 0.166, NW
H39	FIRESTONE COMPLETE A	2030 HACIENDA DR	RCRA NonGen / NLR	Higher	976, 0.185, NE

MAPPED SITES SUMMARY

Target Property Address:
CAMINO CREST DR
OCEANSIDE, CA 92056

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
H40	L&M TIRE COMPANY INC	2030 HACIENDA DR	RCRA NonGen / NLR	Higher	976, 0.185, NE
H41	L & M TIRE DBA EXPRE	2030 HACIENDA DR	CA CERS HAZ WASTE, CA HAZNET, CA CERS	Higher	976, 0.185, NE
I42	RICHARD D. MOHRLOCK,	2067 W VISTA WAY STE	CA San Diego Co. HMMD, CA CERS HAZ WASTE, CA CERS	Higher	1035, 0.196, NE
I43	RICHARD D MOHRLOCK D	2067 W VISTA WAY STE	RCRA NonGen / NLR	Higher	1035, 0.196, NE
I44	VISTA MEDICAL PLAZA	2067 W. VISTA WAY	RCRA NonGen / NLR	Higher	1035, 0.196, NE
I45	NORTH COUNTY INTERNA	2067 W VISTA WAY STE	RCRA NonGen / NLR	Higher	1035, 0.196, NE
I46	ALLERGY AND IMMUNOLO	2067 W VISTA WAY STE	RCRA NonGen / NLR	Higher	1035, 0.196, NE
J47	US HEALTH WORKS MEDI	3910 VISTA WAY STE 1	RCRA NonGen / NLR	Higher	1087, 0.206, WNW
J48	NORTH COAST DENTAL G	3910 VISTA WY	CA San Diego Co. HMMD, CA CERS HAZ WASTE, CA...	Higher	1087, 0.206, WNW
49	MG TENANT LLC DBA ME	3500 LAKE BLVD	RCRA NonGen / NLR	Lower	1142, 0.216, SW
K50	CA CANCER ASSOCIATES	161 THUNDER DR	CA San Diego Co. HMMD, CA CERS HAZ WASTE, CA CERS	Higher	1170, 0.222, NNE
K51	NCHS WOMEN'S HEALTH	161 THUNDER DR STE 2	RCRA NonGen / NLR	Higher	1170, 0.222, NNE
L52	PEP BOYS TRI-CITY #7	3752 PLAZA DR	CA SAN DIEGO CO. SAM	Higher	1186, 0.225, West
L53	PEP BOYS #742	3752 PLAZA DRIVE	RCRA-SQG, CA LUST	Higher	1186, 0.225, West
L54	PEP BOYS TRI-CITY #7	3752 PLAZA DR	CA LUST, CA San Diego Co. HMMD, CA CERS HAZ WASTE,...	Higher	1186, 0.225, West
M55	DICKS SPORTING GOODS	3514 COLLEGE BLVD	RCRA NonGen / NLR	Lower	1214, 0.230, WSW
M56	HOBBY LOBBY	3514 COLLEGE BLVD	CA San Diego Co. HMMD, CA CERS HAZ WASTE, CA...	Lower	1214, 0.230, WSW
57	REFLECT SHINE CAR WA	3528 COLLEGE BL	CA LUST, CA SAN DIEGO CO. SAM, CA CERS	Lower	1504, 0.285, WSW
N58	SHELL/SOUTHERN CA RE	3502 COLLEGE BL	CA LUST, CA SAN DIEGO CO. SAM	Lower	1668, 0.316, West
N59	SHELL/SOUTHERN CA RE	3502 COLLEGE BL	CA LUST, CA CPS-SLIC, CA HIST CORTESE, CA CERS	Lower	1668, 0.316, West
N60	COLLEGE BLVD EXXON	3401 COLLEGE BL	CA SAN DIEGO CO. SAM, CA EMI, CA HAZNET, CA CERS	Lower	1903, 0.360, West
N61	TEXAC0/COLLEGE BLVD	3401 COLLEGE BLVD	CA LUST	Lower	1903, 0.360, West
N62	UNITED #044	3401 COLLEGE BLVD	CA LUST, CA San Diego Co. HMMD, CA CERS HAZ WASTE,...	Lower	1903, 0.360, West
N63	COLLEGE BLVD EXXON	3401 COLLEGE BL	CA LUST, CA CPS-SLIC, CA HIST CORTESE	Lower	1903, 0.360, West
64	CONOCOPHILLIPS	3350 COLLEGE BL	CA LUST, CA SAN DIEGO CO. SAM, CA SAN DIEGO CO...	Higher	2052, 0.389, NW
65	ALBERTSON'S #6733	3450 MARRON RD	CA SWRCY, CA San Diego Co. HMMD, CA CERS HAZ...	Higher	2113, 0.400, WSW
66	VISTA SHOPPING CENTE	NONE W BROADWAY	CA CPS-SLIC, CA CERS	Higher	2632, 0.498, ENE
67	HANSON AGGREGATES PA	3701 HAYMAR DR	CA ENVIROSTOR, CA LUST, CA CPS-SLIC, CA HIST...	Lower	3803, 0.720, West

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State- and tribal - equivalent NPL

CA RESPONSE ---------- State Response Sites

EXECUTIVE SUMMARY

State and tribal landfill and/or solid waste disposal site lists

CA SWF/LF ---------- Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST ---------- Underground Storage Tank Listing
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

CA VCP ---------- Voluntary Cleanup Program Properties
INDIAN VCP ---------- Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

CA BROWNFIELDS ---------- Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

CA WMUDS/SWAT ---------- Waste Management Unit Database
CA HAULERS ---------- Registered Waste Tire Haulers Listing
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
ODI ---------- Open Dump Inventory
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register
CA HIST Cal-Sites ---------- Historical Calsites Database
CA SCH ---------- School Property Evaluation Program
CA CDL ---------- Clandestine Drug Labs
CA Toxic Pits ---------- Toxic Pits Cleanup Act Sites
US CDL ---------- National Clandestine Laboratory Register
CA PFAS ---------- PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

CA FID UST ---------- Facility Inventory Database

Local Land Records

CA LIENS ---------- Environmental Liens Listing

LIENS 2	CERCLA Lien Information
CA DEED	Deed Restriction Listing

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CA LDS	Land Disposal Sites Listing
CA MCS	Military Cleanup Sites Listing
CA SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
FINDS	Facility Index System/Facility Registry System
UXO	Unexploded Ordnance Sites
DOCKET HWC	Hazardous Waste Compliance Docket Listing
ECHO	Enforcement & Compliance History Information
FUELS PROGRAM	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
CA Cortese	"Cortese" Hazardous Waste & Substances Sites List
CA CUPA Listings	CUPA Resources List
CA ENF	Enforcement Action Listing
CA Financial Assurance	Financial Assurance Information Listing
CA ICE	ICE

CA HWP EnviroStor Permitted Facilities Listing
CA HWT Registered Hazardous Waste Transporter Database
CA MINES Mines Site Location Listing
CA MWMP Medical Waste Management Program Listing
CA NPDES NPDES Permits Listing
CA PEST LIC Pesticide Regulation Licenses Listing
CA PROC Certified Processors Database
CA Notify 65 Proposition 65 Records
CA UIC UIC Listing
CA UIC GEO UIC GEO (GEOTRACKER)
CA WASTEWATER PITS Oil Wastewater Pits Listing
CA WDS Waste Discharge System
CA WIP Well Investigation Program Case List
CA MILITARY PRIV SITES MILITARY PRIV SITES (GEOTRACKER)
CA PROJECT PROJECT (GEOTRACKER)
CA WDR Waste Discharge Requirements Listing
CA NON-CASE INFO NON-CASE INFO (GEOTRACKER)
CA OTHER OIL GAS OTHER OIL & GAS (GEOTRACKER)
CA PROD WATER PONDS PROD WATER PONDS (GEOTRACKER)
CA SAMPLING POINT SAMPLING POINT (GEOTRACKER)
CA WELL STIM PROJ Well Stimulation Project (GEOTRACKER)

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP EDR Proprietary Manufactured Gas Plants
EDR Hist Auto EDR Exclusive Historical Auto Stations

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

CA RGA LF Recovered Government Archive Solid Waste Facilities List
CA RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 03/25/2019 has revealed that there are 2 RCRA-LQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TRI-CITY MEDICAL CEN EPA ID:: CAD981167786	***4002 VISTA WAY***	***NW 0 - 1/8 (0.122 mi.)***	***E25***	***156***
RITE AID #5635 EPA ID:: CAL000379871	3813 PLAZA DR	WSW 1/8 - 1/4 (0.135 mi.)	F28	234

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 03/25/2019 has revealed that there are 3 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HOME DEPOT #679 THE EPA ID:: CAD981966922	4000 VISTA WY	NW 0 - 1/8 (0.115 mi.)	E20	136
PEP BOYS #742 EPA ID:: CAD982476079	***3752 PLAZA DRIVE***	***W 1/8 - 1/4 (0.225 mi.)***	***L53***	***388***

Lower Elevation	Address	Direction / Distance	Map ID	Page
FAIRLANE CLEANERS EPA ID:: CAD981972946	***3821 PLAZA DR #403***	***SW 0 - 1/8 (0.061 mi.)***	***C14***	***112***

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 03/25/2019 has revealed that there is

1 RCRA-CESQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RITE AID #5635	***3813 PLAZA DR***	***WSW 1/8 - 1/4 (0.135 mi.)***	***F27***	***228***
EPA ID:: CAR000212324				

State- and tribal - equivalent CERCLIS

CA ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the CA ENVIROSTOR list, as provided by EDR, and dated 04/29/2019 has revealed that there are 2 CA ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TRI-CITY MEDICAL CEN	***4002 VISTA WAY***	***NW 0 - 1/8 (0.122 mi.)***	***E25***	***156***
Facility Id: 71002729				
Status: Inactive - Needs Evaluation				

Lower Elevation	Address	Direction / Distance	Map ID	Page
HANSON AGGREGATES PA	***3701 HAYMAR DR***	***W 1/2 - 1 (0.720 mi.)***	***67***	***530***
Facility Id: 37290005				
Facility Id: 37500038				
Status: Refer: Other Agency				
Status: Refer: 1248 Local Agency				

State and tribal leaking storage tank lists

CA LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the CA LUST list, as provided by EDR, has revealed that there are 12 CA LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TRI-CITY MEDICAL CEN	***4002 VISTA WAY***	***NW 0 - 1/8 (0.122 mi.)***	***E25***	***156***
Database: LUST, Date of Government Version: 12/10/2018				
Database: LUST REG 9, Date of Government Version: 03/01/2001				
Status: Completed - Case Closed				

Status: Preliminary site assessment underway
Global Id: T0607302613
Global Id: T0607301001
Case Number: 9UT3854

TRI-CITY MEDICAL CEN ***4002 VISTA*** ***NW 0 - 1/8 (0.122 mi.)*** ***E26*** ***227***
Database: LUST REG 9, Date of Government Version: 03/01/2001
Status: Preliminary site assessment underway
Case Number: 9UT2236

PLAZA DRIVE ARCO ***3804 PLAZA DR*** ***W 1/8 - 1/4 (0.144 mi.)*** ***G31*** ***244***
Database: LUST, Date of Government Version: 12/10/2018
Status: Completed - Case Closed
Global Id: T0607391302

PEP BOYS #742 ***3752 PLAZA DRIVE*** ***W 1/8 - 1/4 (0.225 mi.)*** ***L53*** ***388***
Database: LUST REG 9, Date of Government Version: 03/01/2001
Status: Preliminary site assessment underway
Case Number: 9UT3695

PEP BOYS TRI-CITY #7 ***3752 PLAZA DR*** ***W 1/8 - 1/4 (0.225 mi.)*** ***L54*** ***391***
Database: LUST, Date of Government Version: 12/10/2018
Status: Completed - Case Closed
Global Id: T0607302463

CONOCOPHILLIPS ***3350 COLLEGE BL*** ***NW 1/4 - 1/2 (0.389 mi.)*** ***64*** ***510***
Database: LUST, Date of Government Version: 12/10/2018
Status: Completed - Case Closed
Global Id: T10000000292

Lower Elevation	Address	Direction / Distance	Map ID	Page

REFLECT SHINE CAR WA ***3528 COLLEGE BL*** ***WSW 1/4 - 1/2 (0.285 mi.)*** ***57*** ***443***
Database: LUST, Date of Government Version: 12/10/2018
Status: Completed - Case Closed
Global Id: T06019774905
Global Id: T0619761135

SHELL/SOUTHERN CA RE ***3502 COLLEGE BL*** ***W 1/4 - 1/2 (0.316 mi.)*** ***N58*** ***445***
Database: LUST REG 9, Date of Government Version: 03/01/2001
Status: Preliminary site assessment underway
Case Number: 9UT1385

SHELL/SOUTHERN CA RE ***3502 COLLEGE BL*** ***W 1/4 - 1/2 (0.316 mi.)*** ***N59*** ***446***
Database: LUST, Date of Government Version: 12/10/2018
Status: Completed - Case Closed
Global Id: T0607300225

TEXAC0/COLLEGE BLVD 3401 COLLEGE BLVD W 1/4 - 1/2 (0.360 mi.) N61 460
Database: LUST REG 9, Date of Government Version: 03/01/2001
Closed Date: 3/25/96
Status: Case Closed
Case Number: 9UT3236

UNITED #044 ***3401 COLLEGE BLVD*** ***W 1/4 - 1/2 (0.360 mi.)*** ***N62*** ***461***
Database: LUST REG 9, Date of Government Version: 03/01/2001

COLLEGE BLVD EXXON ***3401 COLLEGE BL*** ***W 1/4 - 1/2 (0.360 mi.)*** ***N63*** ***501***
Database: LUST, Date of Government Version: 12/10/2018
Status: Completed - Case Closed
Global Id: T06019720262

EXECUTIVE SUMMARY

Global Id: T0607300508
Global Id: T0607301989

CA SAN DIEGO CO. SAM: The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

A review of the CA SAN DIEGO CO. SAM list, as provided by EDR, and dated 03/23/2010 has revealed that there are 7 CA SAN DIEGO CO. SAM sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TRI-CITY MEDICAL CEN	***4002 VISTA WAY***	***NW 0 - 1/8 (0.122 mi.)***	***E25***	***156***
Case Number: H14248-001				
Case Number: H14248-002				
Facility Status: Remedial Investigation				
Facility Status: Closed Case				
ARCO PRODUCTS CO #53	***3804 PLAZA DR***	***W 1/8 - 1/4 (0.144 mi.)***	***G32***	***245***
Case Number: H20645-001				
Facility Status: Closed Case				
PEP BOYS TRI-CITY #7	3752 PLAZA DR	W 1/8 - 1/4 (0.225 mi.)	L52	387
Case Number: H24763-001				
Facility Status: Closed Case				
CONOCOPHILLIPS	***3350 COLLEGE BL***	***NW 1/4 - 1/2 (0.389 mi.)***	***64***	***510***
Case Number: 121464-001				
Facility Status: Preliminary Assessment				

Lower Elevation	Address	Direction / Distance	Map ID	Page
REFLECT SHINE CAR WA	***3528 COLLEGE BL***	***WSW 1/4 - 1/2 (0.285 mi.)***	***57***	***443***
Case Number: 126589-001				
Case Number: 126589-002				
Facility Status: Closed Case				
SHELL/SOUTHERN CA RE	***3502 COLLEGE BL***	***W 1/4 - 1/2 (0.316 mi.)***	***N58***	***445***
Case Number: H04104-001				
Case Number: H04104-002				
Facility Status: Closed Case				
COLLEGE BLVD EXXON	***3401 COLLEGE BL***	***W 1/4 - 1/2 (0.360 mi.)***	***N60***	***448***
Case Number: H12485-001				
Case Number: H12485-002				
Case Number: H12485-003				
Case Number: H12485-004				
Case Number: H12485-005				
**Additional key fields are available in the Map Findings section*				
Facility Status: Preliminary Assessment				
Facility Status: Closed Case				

EXECUTIVE SUMMARY

CA CPS-SLIC: Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the CA CPS-SLIC list, as provided by EDR, has revealed that there are 3 CA CPS-SLIC sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
VISTA SHOPPING CENTE	***NONE W BROADWAY***	***ENE 1/4 - 1/2 (0.498 mi.)***	***66***	***530***
Database: CPS-SLIC, Date of Government Version: 12/10/2018				
Facility Status: Completed - Case Closed				
Global Id: T0608153321				

Lower Elevation	Address	Direction / Distance	Map ID	Page
SHELL/SOUTHERN CA RE	***3502 COLLEGE BL***	***W 1/4 - 1/2 (0.316 mi.)***	***N59***	***446***
Database: CPS-SLIC, Date of Government Version: 12/10/2018				
Facility Status: Completed - Case Closed				
Global Id: T0608164335				
COLLEGE BLVD EXXON	***3401 COLLEGE BL***	***W 1/4 - 1/2 (0.360 mi.)***	***N63***	***501***
Database: CPS-SLIC, Date of Government Version: 12/10/2018				
Facility Status: Completed - Case Closed				
Global Id: T0608142935				
Global Id: T0608126493				
Global Id: T0608108958				
Global Id: T0608133767				
Global Id: T0608192490				

State and tribal registered storage tank lists

CA UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the CA UST list, as provided by EDR, has revealed that there are 3 CA UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ECONO LUBE-N-TUNE	***3844 PLAZA DR***	***NW 0 - 1/8 (0.031 mi.)***	***B5***	***12***
Database: UST, Date of Government Version: 12/10/2018				
Facility Id: H20646				
TRI-CITY MEDICAL CEN	***4002 VISTA WAY***	***NW 0 - 1/8 (0.122 mi.)***	***E25***	***156***
Database: UST, Date of Government Version: 12/10/2018				
Facility Id: 37-000-114248				
Facility Id: H14248				
PLAZA DRIVE ARCO	***3804 PLAZA DR***	***W 1/8 - 1/4 (0.144 mi.)***	***G31***	***244***
Database: UST, Date of Government Version: 12/10/2018				
Facility Id: 37-000-209418				
Facility Id: H20645				

CA AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the CA AST list, as provided by EDR, has revealed that there are 2 CA AST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ECONO LUBE & MAEINEQ Database: AST, Date of Government Version: 07/06/2016	3844 PLAZA DR	NW 0 - 1/8 (0.031 mi.)	B4	11
ECONO LUBE-N-TUNE Database: AST, Date of Government Version: 07/06/2016	***3844 PLAZA DR***	***NW 0 - 1/8 (0.031 mi.)***	***B5***	***12***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

CA SWRCY: A listing of recycling facilities in California.

A review of the CA SWRCY list, as provided by EDR, and dated 03/11/2019 has revealed that there is 1 CA SWRCY site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ALBERTSON'S #6733 Cert Id: RC156968.001	***3450 MARRON RD***	***WSW 1/4 - 1/2 (0.400 mi.)***	***65***	***517***

Local Lists of Hazardous waste / Contaminated Sites

CA CERS HAZ WASTE: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

A review of the CA CERS HAZ WASTE list, as provided by EDR, and dated 04/09/2019 has revealed that there are 16 CA CERS HAZ WASTE sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MEINEKE / ECONO- LUB	***3844 PLAZA DR***	***NW 0 - 1/8 (0.031 mi.)***	***B6***	***18***
O'REILLY AUTO PARTS	***3840 PLAZA DR***	***WNW 0 - 1/8 (0.042 mi.)***	***B10***	***88***
TJ MAXX 1059	***3817 PLAZA DR***	***WSW 0 - 1/8 (0.094 mi.)***	***C18***	***122***
FRAZEE PAINT	***2070 HACIENDA DR***	***NE 0 - 1/8 (0.121 mi.)***	***D22***	***138***
TRI-CITY MEDICAL CEN	***4002 VISTA WAY***	***NW 0 - 1/8 (0.122 mi.)***	***E25***	***156***
RITE AID #5635	***3813 PLAZA DR***	***WSW 1/8 - 1/4 (0.135 mi.)***	***F29***	***237***
ARCO #05350	***3804 PLAZA DR***	***W 1/8 - 1/4 (0.144 mi.)***	***G33***	***246***
SCMC OB/GYN VISTA WA	***3998 VISTA WAY STE C***	***NW 1/8 - 1/4 (0.166 mi.)***	***E36***	***318***
L & M TIRE DBA EXPRE	***2030 HACIENDA DR***	***NE 1/8 - 1/4 (0.185 mi.)***	***H41***	***335***
RICHARD D. MOHRLOCK,	***2067 W VISTA WAY STE***	***NE 1/8 - 1/4 (0.196 mi.)***	***I42***	***343***
NORTH COAST DENTAL G	***3910 VISTA WY***	***WNW 1/8 - 1/4 (0.206 mi.)***	***J48***	***368***
CA CANCER ASSOCIATES	***161 THUNDER DR***	***NNE 1/8 - 1/4 (0.222 mi.)***	***K50***	***377***
PEP BOYS TRI-CITY #7	***3752 PLAZA DR***	***W 1/8 - 1/4 (0.225 mi.)***	***L54***	***391***

Lower Elevation	Address	Direction / Distance	Map ID	Page
DOLLAR TREE #03883	***3825 PLAZA DR***	***WSW 0 - 1/8 (0.034 mi.)***	***A8***	***66***

Lower Elevation	Address	Direction / Distance	Map ID	Page
FAIRLANE CLEANERS	*3821 PLAZA DR*	*SW 0 - 1/8 (0.061 mi.)*	*C12*	*97*
HOBBY LOBBY	*3514 COLLEGE BLVD*	*WSW 1/8 - 1/4 (0.230 mi.)*	*M56*	*437*

Local Lists of Registered Storage Tanks

CA SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the CA SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 4 CA SWEEPS UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ECONO LUBE-N-TUNE Status: A Tank Status: A Comp Number: 20646	*3844 PLAZA DR*	*NW 0 - 1/8 (0.031 mi.)*	*B5*	*12*
TRI-CITY MEDICAL CEN Status: A Tank Status: A Comp Number: 14248	*4002 VISTA WAY*	*NW 0 - 1/8 (0.122 mi.)*	*E25*	*156*
ARCO #05350 Status: A Tank Status: A Comp Number: 20645	*3804 PLAZA DR*	*W 1/8 - 1/4 (0.144 mi.)*	*G33*	*246*
PEP BOYS TRI-CITY #7 Status: A Tank Status: A Comp Number: 24763	*3752 PLAZA DR*	*W 1/8 - 1/4 (0.225 mi.)*	*L54*	*391*

CA HIST UST: Historical UST Registered Database.

A review of the CA HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there is 1 CA HIST UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TRI-CITY MEDICAL CEN Facility Id: 00000030257	*4002 VISTA WAY*	*NW 0 - 1/8 (0.122 mi.)*	*E25*	*156*

CA CERS TANKS: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

A review of the CA CERS TANKS list, as provided by EDR, and dated 04/09/2019 has revealed that there are 3 CA CERS TANKS sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MEINEKE / ECONO- LUB	***3844 PLAZA DR***	***NW 0 - 1/8 (0.031 mi.)***	***B6***	***18***
TRI-CITY MEDICAL CEN	***4002 VISTA WAY***	***NW 0 - 1/8 (0.122 mi.)***	***E25***	***156***
ARCO #05350	***3804 PLAZA DR***	***W 1/8 - 1/4 (0.144 mi.)***	***G33***	***246***

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/25/2019 has revealed that there are 26 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GOODWILL INDUSTRIES EPA ID:: CAL000421079	3841 PLAZA DRIVE #90	WNW 0 - 1/8 (0.017 mi.)	A3	10
MEINEKE CAR CARE CEN EPA ID:: CAL000376881	3844 PLAZA DR	NW 0 - 1/8 (0.031 mi.)	B7	65
O'REILLY AUTO PARTS EPA ID:: CAL000392468	3840 PLAZA DR	WNW 0 - 1/8 (0.042 mi.)	B11	96
JOHN O'DER EPA ID:: CAC002986823	3426 SEABREEZE WALK	ENE 0 - 1/8 (0.092 mi.)	D16	120
GOODWILL INDUSTRIES EPA ID:: CAL000433738	3817 PLAZA DR STE B	WSW 0 - 1/8 (0.094 mi.)	C17	121
TJ MAXX 1059 EPA ID:: CAL000383034	3817 PLAZA DR	WSW 0 - 1/8 (0.094 mi.)	C19	134
GB AUTO SERVICES INC EPA ID:: CAL000440175	2070 HACIENDA DR	NE 0 - 1/8 (0.121 mi.)	D21	137
EVANS TIRE & SERVICE EPA ID:: CAL000260218	2070 HACIENDA DR	NE 0 - 1/8 (0.121 mi.)	D23	153
SHERIN WILLIAMS #152 EPA ID:: CAL000396094	2070 HACIENDA DR STE	NE 0 - 1/8 (0.121 mi.)	D24	154
BEVERLY TATE EPA ID:: CAC002996947	4032 MIRA COSTA STRE	S 1/8 - 1/4 (0.136 mi.)	30	243
PLAZA DRIVE ARCO EPA ID:: CAL000418960	3804 PLAZA DR	W 1/8 - 1/4 (0.144 mi.)	G34	316
LORNA RODGERS EPA ID:: CAC002974924	4102 LAKE BLVD	SE 1/8 - 1/4 (0.157 mi.)	35	317
UPAC NEW LEAF RECOVE EPA ID:: CAL000436263	3998 VISTA WAY STE E	NW 1/8 - 1/4 (0.166 mi.)	E37	330
SCRIPPS COASTAL MED EPA ID:: CAL000383634	3998 VISTA WAY STE C	NW 1/8 - 1/4 (0.166 mi.)	E38	331
FIRESTONE COMPLETE A	2030 HACIENDA DR	NE 1/8 - 1/4 (0.185 mi.)	H39	333

EPA ID:: CAL000440532				
L&M TIRE COMPANY INC EPA ID:: CAL000067237	2030 HACIENDA DR	NE 1/8 - 1/4 (0.185 mi.)	H40	334
RICHARD D MOHRLOCK D EPA ID:: CAL000386454	2067 W VISTA WAY STE	NE 1/8 - 1/4 (0.196 mi.)	I43	362
VISTA MEDICAL PLAZA EPA ID:: CAC002992685	2067 W. VISTA WAY	NE 1/8 - 1/4 (0.196 mi.)	I44	363
NORTH COUNTY INTERNA EPA ID:: CAL000433664	2067 W VISTA WAY STE	NE 1/8 - 1/4 (0.196 mi.)	I45	364
ALLERGY AND IMMUNOLO EPA ID:: CAL000398278	2067 W VISTA WAY STE	NE 1/8 - 1/4 (0.196 mi.)	I46	365
US HEALTH WORKS MEDI EPA ID:: CAL000373700	3910 VISTA WAY STE 1	WNW 1/8 - 1/4 (0.206 mi.)	J47	367
NCHS WOMEN'S HEALTH EPA ID:: CAL000418365	161 THUNDER DR STE 2	NNE 1/8 - 1/4 (0.222 mi.)	K51	386

Lower Elevation	Address	Direction / Distance	Map ID	Page
PERFORMANCE BICYCLE EPA ID:: CAL000307157	3833 PLAZA DR STE 70	WSW 0 - 1/8 (0.009 mi.)	A2	9
DOLLAR TREE #03883 EPA ID:: CAL000378430	3825 PLAZA DR # 501	WSW 0 - 1/8 (0.034 mi.)	A9	87
MG TENANT LLC DBA ME EPA ID:: CAL000436296	3500 LAKE BLVD	SW 1/8 - 1/4 (0.216 mi.)	49	376
DICKS SPORTING GOODS EPA ID:: CAL000396184	3514 COLLEGE BLVD	WSW 1/8 - 1/4 (0.230 mi.)	M55	436

CA DRYCLEANERS: A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

A review of the CA DRYCLEANERS list, as provided by EDR, has revealed that there is 1 CA DRYCLEANERS site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
FAIRLANE CLEANERS Database: DRYCLEANERS, Date of Government Version: 03/01/2019 EPA Id: CAD981972946	3821 PLAZA DR STE 40	SW 0 - 1/8 (0.061 mi.)	C15	119

CA HAZNET: The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests & continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method. The source is the Department of Toxic Substance Control is the agency. This database begins with calendar year 1993.

A review of the CA HAZNET list, as provided by EDR, and dated 12/31/2017 has revealed that there is 1

CA HAZNET site within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DMV OCEANSIDE GEPAID: CAC002578249	4005 PLAZA DR	0 - 1/8 (0.000 mi.)	1	9

CA HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the CA HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 4 CA HIST CORTESE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TRI-CITY MEDICAL CEN Reg Id: 9UT3854 Reg Id: 9UT2236	***4002 VISTA***	***NW 0 - 1/8 (0.122 mi.)***	***E26***	***227***
PEP BOYS TRI-CITY #7 Reg Id: 9UT3695	***3752 PLAZA DR***	***W 1/8 - 1/4 (0.225 mi.)***	***L54***	***391***

Lower Elevation	Address	Direction / Distance	Map ID	Page
SHELL/SOUTHERN CA RE Reg Id: 9UT1385	***3502 COLLEGE BL***	***W 1/4 - 1/2 (0.316 mi.)***	***N59***	***446***
COLLEGE BLVD EXXON Reg Id: 9UT171 Reg Id: 9UT3236	***3401 COLLEGE BL***	***W 1/4 - 1/2 (0.360 mi.)***	***N63***	***501***

NY MANIFEST: Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

A review of the NY MANIFEST list, as provided by EDR, and dated 01/01/2019 has revealed that there is 1 NY MANIFEST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TRI-CITY MEDICAL CEN EPA ID: CAD981167786	***4002 VISTA WAY***	***NW 0 - 1/8 (0.122 mi.)***	***E25***	***156***

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Cleaner: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash

& dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there is 1 EDR Hist Cleaner site within approximately 0.125 miles of the target property.

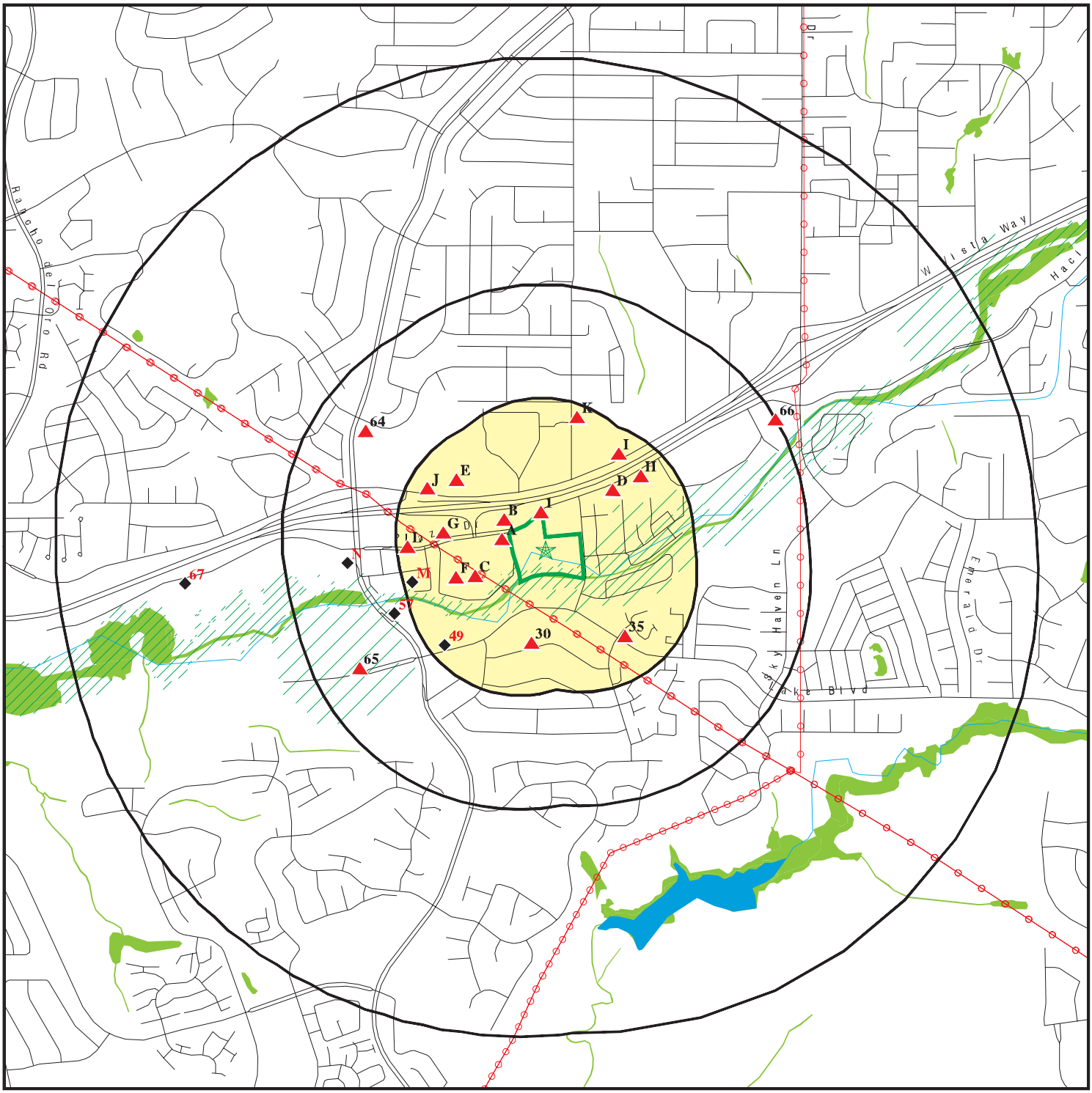
Lower Elevation	Address	Direction / Distance	Map ID	Page
FAIRLANE CLEANERS &	3821 PLAZA DR STE 40	SW 0 - 1/8 (0.061 mi.)	C13	111

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

Site Name	Database(s)
TRI-CITY CLEANERS	CA DRYCLEANERS

OVERVIEW MAP - 5717018.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

Areas of Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Proposed CarMax - Oceanside	CLIENT:	Enviroapplications Inc.
ADDRESS:	CAMINO CREST DR OCEANSIDE CA 92056	CONTACT:	Fred Allee
		INQUIRY #:	5717018.2s
LAT/LONG:	33.181949 / 117.289225	DATE:	July 15, 2019 6:04 pm

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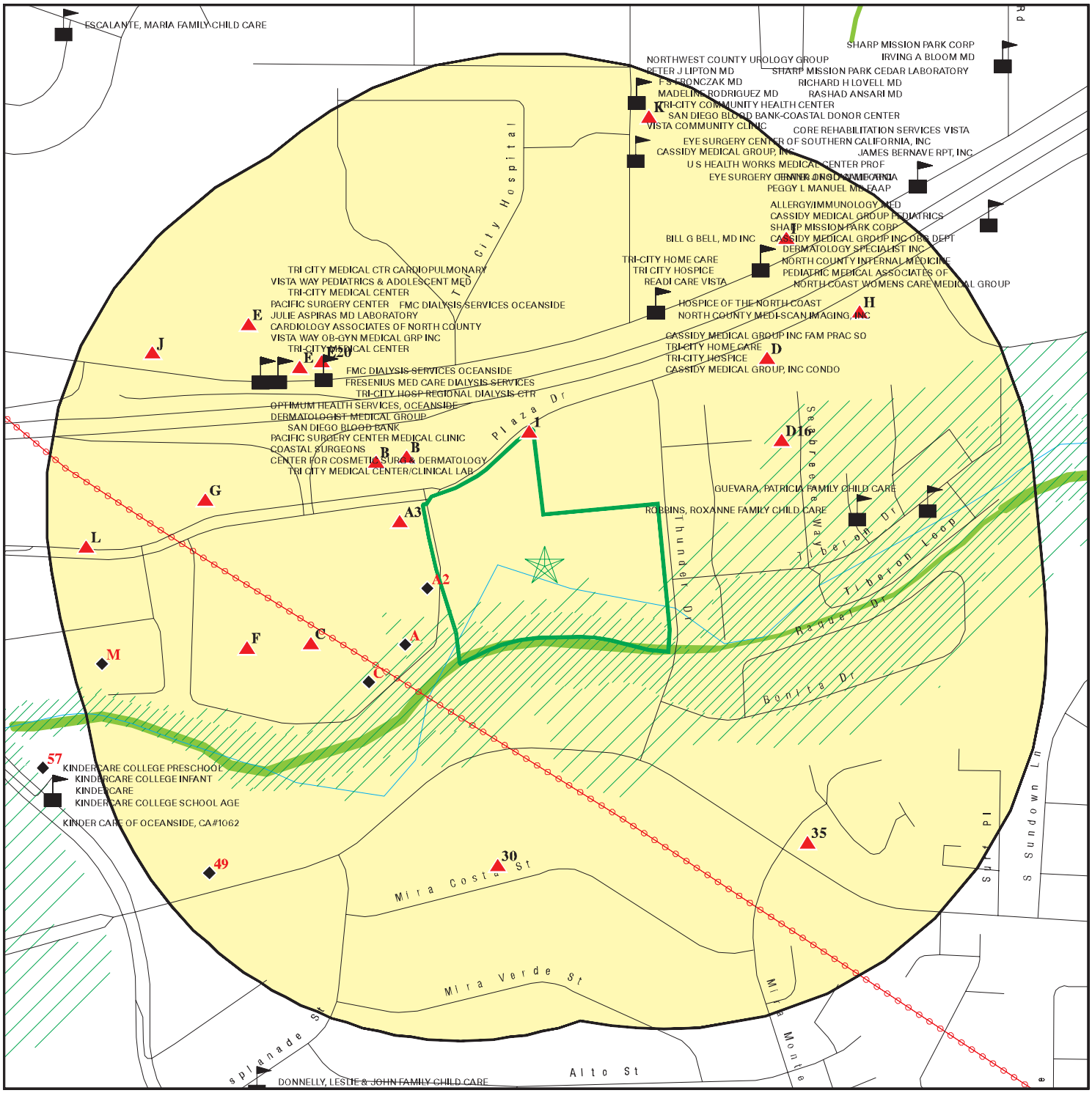
DETAIL MAP - 5717018.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Power transmission lines

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Proposed CarMax - Oceanside	CLIENT:	Enviroapplications Inc.
ADDRESS:	CAMINO CREST DR OCEANSIDE CA 92056	CONTACT:	Fred Allee
LAT/LONG:	33.181949 / 117.289225	INQUIRY #:	5717018.2s
		DATE:	July 15, 2019 6:06 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		1	1	NR	NR	NR	2
RCRA-SQG	0.250		2	1	NR	NR	NR	3
RCRA-CESQG	0.250		0	1	NR	NR	NR	1
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
CA RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
CA ENVIROSTOR	1.000		1	0	0	1	NR	2
State and tribal landfill and/or solid waste disposal site lists								
CA SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
CA LUST	0.500		2	3	7	NR	NR	12

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CA SAN DIEGO CO. SAM	0.500		1	2	4	NR	NR	7
INDIAN LUST	0.500		0	0	0	NR	NR	0
CA CPS-SLIC	0.500		0	0	3	NR	NR	3
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
CA UST	0.250		2	1	NR	NR	NR	3
CA AST	0.250		2	0	NR	NR	NR	2
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
CA VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
CA BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
CA WMUDS/SWAT	0.500		0	0	0	NR	NR	0
CA SWRCY	0.500		0	0	1	NR	NR	1
CA HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
CA HIST Cal-Sites	1.000		0	0	0	0	NR	0
CA SCH	0.250		0	0	NR	NR	NR	0
CA CDL	0.001		0	NR	NR	NR	NR	0
CA San Diego Co. HMMD	0.001		0	NR	NR	NR	NR	0
CA CERS HAZ WASTE	0.250		7	9	NR	NR	NR	16
CA Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
CA PFAS	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA SWEEPS UST	0.250		2	2	NR	NR	NR	4
CA HIST UST	0.250		1	0	NR	NR	NR	1
CA CERS TANKS	0.250		2	1	NR	NR	NR	3
CA FID UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
CA LIENS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	0.001		0	NR	NR	NR	NR	0
CA DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CA CHMIRS	0.001		0	NR	NR	NR	NR	0
CA LDS	0.001		0	NR	NR	NR	NR	0
CA MCS	0.001		0	NR	NR	NR	NR	0
CA SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		11	15	NR	NR	NR	26
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
CA Cortese	0.500		0	0	0	NR	NR	0
CA CUPA Listings	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CA DRYCLEANERS	0.250		1	0	NR	NR	NR	1
CA EMI	0.001		0	NR	NR	NR	NR	0
CA ENF	0.001		0	NR	NR	NR	NR	0
CA Financial Assurance	0.001		0	NR	NR	NR	NR	0
CA HAZNET	0.001		1	NR	NR	NR	NR	1
CA ICE	0.001		0	NR	NR	NR	NR	0
CA HIST CORTESE	0.500		1	1	2	NR	NR	4
CA HWP	1.000		0	0	0	0	NR	0
CA HWT	0.250		0	0	NR	NR	NR	0
NY MANIFEST	0.250		1	0	NR	NR	NR	1
CA MINES	0.001		0	NR	NR	NR	NR	0
CA MWMP	0.250		0	0	NR	NR	NR	0
CA NPDES	0.001		0	NR	NR	NR	NR	0
CA PEST LIC	0.001		0	NR	NR	NR	NR	0
CA PROC	0.500		0	0	0	NR	NR	0
CA Notify 65	1.000		0	0	0	0	NR	0
CA UIC	0.001		0	NR	NR	NR	NR	0
CA UIC GEO	0.001		0	NR	NR	NR	NR	0
CA WASTEWATER PITS	0.500		0	0	0	NR	NR	0
CA WDS	0.001		0	NR	NR	NR	NR	0
CA WIP	0.250		0	0	NR	NR	NR	0
CA MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
CA PROJECT	0.001		0	NR	NR	NR	NR	0
CA WDR	0.001		0	NR	NR	NR	NR	0
CA SAN DIEGO CO LOP	0.001		0	NR	NR	NR	NR	0
CA CIWQS	0.001		0	NR	NR	NR	NR	0
CA CERS	0.001		0	NR	NR	NR	NR	0
CA NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
CA OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
CA PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
CA SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
CA WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		1	NR	NR	NR	NR	1
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
CA RGA LF	0.001		0	NR	NR	NR	NR	0
CA RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	39	37	17	1	0	94

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
< 1/8
1 ft.

DMV OCEANSIDE
4005 PLAZA DR
OCEANSIDE, CA 92026

CA HAZNET

S112937994
N/A

Relative: Higher
Actual: 217 ft.

HAZNET:

Name:	DMV OCEANSIDE
Address:	4005 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92026
Year:	2004
GEPAID:	CAC002578249
Contact:	RICHARD WORREL
Telephone:	9166579809
Mailing Name:	Not reported
Mailing Address:	2415 FIRST AVE MS C156
Mailing City,St,Zip:	SACRAMENTO, CA 95818
Gen County:	San Diego
TSD EPA ID:	CAD009007626
TSD County:	Los Angeles
Tons:	3.3712
CA Waste Code:	151-Asbestos containing waste
Method:	D80-Disposal, Land Fill
Facility County:	San Diego

A2
WSW
< 1/8
0.009 mi.
50 ft.

PERFORMANCE BICYCLE SHOP #71
3833 PLAZA DR STE 701
OCEANSIDE, CA 92056

Site 1 of 4 in cluster A

RCRA NonGen / NLR

1024814010
CAL000307157

Relative: Lower
Actual: 188 ft.

RCRA NonGen / NLR:

Date form received by agency:	05/22/2006
Facility name:	PERFORMANCE BICYCLE SHOP #71
Facility address:	3833 PLAZA DR STE 701 OCEANSIDE, CA 92056-4624
EPA ID:	CAL000307157
Mailing address:	ONE PERFORMANCE WAY CHAPEL HILL, NC 27514-0000
Contact:	MARY TANNER
Contact address:	ONE PERFORMANCE WAY CHAPEL HILL, NC 27517
Contact country:	Not reported
Contact telephone:	919-913-3626
Contact email:	TAXINFO@PERFORMANCEINC.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	MARY TANNER
Owner/operator address:	ONE PERFORMANCE WAY CHAPEL HILL, NC 27517
Owner/operator country:	Not reported
Owner/operator telephone:	919-913-3626
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator

PERFORMANCE BICYCLE SHOP #71 (Continued) **1024814010**

Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: BITECH INC
Owner/operator address: ONE PERFORMANCE WAY
CHAPEL HILL, NC 27514
Owner/operator country: Not reported
Owner/operator telephone: 919-913-3626
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

A3 **GOODWILL INDUSTRIES OF SAN DIEGO COUNTY** **RCRA NonGen / NLR** **1024856773**
WNW **3841 PLAZA DRIVE #902** **CAL000421079**
< 1/8 **OCEANSIDE, CA 92056**
0.017 mi.
89 ft. **Site 2 of 4 in cluster A**

Relative:
Higher

Actual:
204 ft.

RCRA NonGen / NLR:
Date form received by agency: 10/13/2016
Facility name: GOODWILL INDUSTRIES OF SAN DIEGO COUNTY
Facility address: 3841 PLAZA DRIVE #902
OCEANSIDE, CA 92056
EPA ID: CAL000421079
Mailing address: 3663 ROSECRANS ST
SAN DIEGO, CA 92110
Contact: AMEER ALNASHI
Contact address: 960 SHERMAN ST SUITE C
SAN DIEGO, CA 92110
Contact country: Not reported
Contact telephone: 619-942-4579
Contact email: AALNASHI@SDGOODWILL.ORG
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

GOODWILL INDUSTRIES OF SAN DIEGO COUNTY (Continued) **1024856773**

Owner/Operator Summary:

Owner/operator name:	GOODWILL INDUSTRIES OF SAN DIEGO CO
Owner/operator address:	3663 ROSECRANS ST
	SAN DIEGO, CA 92110
Owner/operator country:	Not reported
Owner/operator telephone:	619-225-2200
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	AMEER ALNASHI
Owner/operator address:	960 SHERMAN ST SUITE C
	SAN DIEGO, CA 92110
Owner/operator country:	Not reported
Owner/operator telephone:	619-942-4579
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	Yes
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

B4 **ECONO LUBE & MAEINEQE CAR CARE CENTER** **CA AST** **A100345711**
NW **3844 PLAZA DR** **N/A**
< 1/8 **OCEANSIDE, CA**
0.031 mi.
165 ft. **Site 1 of 6 in cluster B**

Relative:
Higher

Actual:
216 ft.

AST:

Name:	ECONO LUBE & MAEINEQE CAR CARE CENTER
Address:	3844 PLAZA DR
City/Zip:	OCEANSIDE,
Certified Unified Program Agencies:	San Diego
Owner:	ECONO LUBE & MEINEKE CAR CARE CENTER

ECONO LUBE & MAEINEQE CAR CARE CENTER (Continued) **A100345711**

Total Gallons:	1580
CERSID:	Not reported
Facility ID:	Not reported
Business Name:	Not reported
Phone:	Not reported
Fax:	Not reported
Mailing Address:	Not reported
Mailing Address City:	Not reported
Mailing Address State:	Not reported
Mailing Address Zip Code:	Not reported
Operator Name:	Not reported
Operator Phone:	Not reported
Owner Phone:	Not reported
Owner Mail Address:	Not reported
Owner State:	Not reported
Owner Zip Code:	Not reported
Owner Country:	Not reported
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	Not reported

B5 **ECONO LUBE-N-TUNE** **CA UST** **U003789636**
NW **3844 PLAZA DR** **CA AST** **N/A**
< 1/8 **OCEANSIDE, CA 92056** **CA San Diego Co. HMMD**
0.031 mi. **CA SWEEPS UST**
165 ft. **Site 2 of 6 in cluster B**

Relative:
Higher

Actual:
216 ft.

UST:

Name:	ECONO LUBE-N-TUNE
Address:	3844 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Facility ID:	H20646
Permitting Agency:	SAN DIEGO COUNTY
Latitude:	33.184328
Longitude:	-117.289455

AST:

Name:	ECONO LUBE-N-TUNE
Address:	3844 PLAZA DR
City/Zip:	OCEANSIDE,
Certified Unified Program Agencies:	San Diego
Owner:	GEORGE M. SHORTLEY
Total Gallons:	1580
CERSID:	Not reported
Facility ID:	Not reported
Business Name:	Not reported
Phone:	Not reported
Fax:	Not reported
Mailing Address:	Not reported
Mailing Address City:	Not reported
Mailing Address State:	Not reported
Mailing Address Zip Code:	Not reported

ECONO LUBE-N-TUNE (Continued) **U003789636**

Operator Name:	Not reported
Operator Phone:	Not reported
Owner Phone:	Not reported
Owner Mail Address:	Not reported
Owner State:	Not reported
Owner Zip Code:	Not reported
Owner Country:	Not reported
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	Not reported

HMMD SAN DIEGO:

Name:	ECONO LUBE & MEINEKE CAR CARE CENTER
Address:	3844 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	209303
Business Type:	6HK26
EPA Id Number:	CAL00320133
APN:	168-012-21-00
Last HMMD Inspection:	01/27/2010
Facility Telephone:	760-945-1105
Permit Status:	CHNG
Permit Expiration:	09/30/2011
Date Last Updated:	11/02/2012
Facility Owner:	ECONO LUBE & MEINEKE CAR CARE CENTER
Facility Mailing Address:	3844 PLAZA DR
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	Not reported
Handle Regulated Hazmat:	Y
Own Or Operate UST:	N
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

UST:

UST Name:	UNDERGROUND TANK 120646 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	209303
Tank Type:	DOUBLE WALL
Additional Id:	AT4843
Capacity Gallons:	500
UST Contents:	Not reported
Other Content Info:	WASTE OIL
Reg Status:	REMOVED
Remove Close Date:	2002-12-23 00:00:00
Year Installed:	1987-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	GRAVITY
Monitor Code:	21

ECONO LUBE-N-TUNE (Continued) **U003789636**

UST Monitor Method: DW TANK DW SUCTION AND/ OR GRAVITY PIPING WITH INTERSTITIAL MONITORS: INTERSTITIAL.

Name: ECONO LUBE & MEINEKE CAR CARE CENTER
Address: 3844 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Permit Number: 209303
Business Type: 6HK26
EPA Id Number: CAL00320133
APN: 168-012-21-00
Last HMMD Inspection: 01/27/2010
Facility Telephone: 760-945-1105
Permit Status: CHNG
Permit Expiration: 09/30/2011
Date Last Updated: 11/02/2012
Facility Owner: ECONO LUBE & MEINEKE CAR CARE CENTER
Facility Mailing Address: 3844 PLAZA DR
Facility Mailing City: OCEANSIDE
Facility Mailing State: CA
Facility Mailing Zip: 92056
UST Owner: Not reported
Handle Regulated Hazmat: Y
Own Or Operate UST: N
Subject To APSA: Y
Generate Haz Waste: Y
Treat Haz Waste: Not reported
Generate Medical Waste: Not reported

UST:
UST Name: UNDERGROUND TANK 120646 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 209303
Tank Type: DOUBLE WALL
Additional Id: AT4843
Capacity Gallons: 500
UST Contents: Not reported
Other Content Info: WASTE OIL
Reg Status: REMOVED
Remove Close Date: 2002-12-23 00:00:00
Year Installed: 1987-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: GRAVITY
Monitor Code: 21
UST Monitor Method: DW TANK DW SUCTION AND/ OR GRAVITY PIPING WITH INTERSTITIAL MONITORS: INTERSTITIAL.

Name: ECONO LUBE-N-TUNE
Address: 3844 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Permit Number: 120646
Business Type: 6HK26
EPA Id Number: CAL000005554
APN: 168-012-21-00
Last HMMD Inspection: 07/10/2006
Facility Telephone: 760-945-1105
Permit Status: CHNG

ECONO LUBE-N-TUNE (Continued) **U003789636**

Permit Expiration:	03/31/2008
Date Last Updated:	11/02/2012
Facility Owner:	GEORGE M. SHORTLEY
Facility Mailing Address:	P.O.BOX 2251
Facility Mailing City:	RANCHO SANTA FE
Facility Mailing State:	CA
Facility Mailing Zip:	92067
UST Owner:	ECONO LUBE-N-TUNE
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Y
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

UST:

UST Name:	UNDERGROUND TANK 120646 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	120646
Tank Type:	DOUBLE WALL
Additional Id:	AT4843
Capacity Gallons:	500
UST Contents:	Not reported
Other Content Info:	WASTE OIL
Reg Status:	REMOVED
Remove Close Date:	2002-12-23 00:00:00
Year Installed:	1987-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	GRAVITY
Monitor Code:	21
UST Monitor Method:	DW TANK DW SUCTION AND/ OR GRAVITY PIPING WITH INTERSTITIAL MONITORS: INTERSTITIAL.

Name:	ECONO LUBE-N-TUNE
Address:	3844 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	120646
Business Type:	6HK26
EPA Id Number:	CAL000005554
APN:	168-012-21-00
Last HMMD Inspection:	07/10/2006
Facility Telephone:	760-945-1105
Permit Status:	CHNG
Permit Expiration:	03/31/2008
Date Last Updated:	11/02/2012
Facility Owner:	GEORGE M. SHORTLEY
Facility Mailing Address:	P.O.BOX 2251
Facility Mailing City:	RANCHO SANTA FE
Facility Mailing State:	CA
Facility Mailing Zip:	92067
UST Owner:	ECONO LUBE-N-TUNE
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Y
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

ECONO LUBE-N-TUNE (Continued) **U003789636**

UST:

UST Name:	UNDERGROUND TANK 120646 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	120646
Tank Type:	DOUBLE WALL
Additional Id:	AT4843
Capacity Gallons:	500
UST Contents:	Not reported
Other Content Info:	WASTE OIL
Reg Status:	REMOVED
Remove Close Date:	2002-12-23 00:00:00
Year Installed:	1987-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	GRAVITY
Monitor Code:	21
UST Monitor Method:	DW TANK DW SUCTION AND/ OR GRAVITY PIPING WITH INTERSTITIAL MONITORS: INTERSTITIAL.

Name:	ECONO LUBE & MEINEKE CAR CARE CENTER
Address:	3844 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	209303
Business Type:	6HK26
EPA Id Number:	CAL00320133
APN:	168-012-21-00
Last HMMD Inspection:	01/27/2010
Facility Telephone:	760-945-1105
Permit Status:	CHNG
Permit Expiration:	09/30/2011
Date Last Updated:	11/02/2012
Facility Owner:	ECONO LUBE & MEINEKE CAR CARE CENTER
Facility Mailing Address:	3844 PLAZA DR
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	Not reported
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Y
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

UST:

UST Name:	UNDERGROUND TANK 120646 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	209303
Tank Type:	DOUBLE WALL
Additional Id:	AT4843
Capacity Gallons:	500
UST Contents:	Not reported
Other Content Info:	WASTE OIL
Reg Status:	REMOVED
Remove Close Date:	2002-12-23 00:00:00
Year Installed:	1987-01-01 00:00:00
Pipe Type:	DOUBLE WALL

ECONO LUBE-N-TUNE (Continued) **U003789636**

Delivery System: GRAVITY
Monitor Code: 21
UST Monitor Method: DW TANK DW SUCTION AND/ OR GRAVITY PIPING WITH INTERSTITIAL MONITORS: INTERSTITIAL.

Name: ECONO LUBE & MEINEKE CAR CARE CENTER
Address: 3844 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Permit Number: 209303
Business Type: 6HK26
EPA Id Number: CAL00320133
APN: 168-012-21-00
Last HMMD Inspection: 01/27/2010
Facility Telephone: 760-945-1105
Permit Status: CHNG
Permit Expiration: 09/30/2011
Date Last Updated: 11/02/2012
Facility Owner: ECONO LUBE & MEINEKE CAR CARE CENTER
Facility Mailing Address: 3844 PLAZA DR
Facility Mailing City: OCEANSIDE
Facility Mailing State: CA
Facility Mailing Zip: 92056
UST Owner: Not reported
Handle Regulated Hazmat: Y
Own Or Operate UST: Y
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: Not reported
Generate Medical Waste: Not reported

UST:
UST Name: UNDERGROUND TANK 120646 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 209303
Tank Type: DOUBLE WALL
Additional Id: AT4843
Capacity Gallons: 500
UST Contents: Not reported
Other Content Info: WASTE OIL
Reg Status: REMOVED
Remove Close Date: 2002-12-23 00:00:00
Year Installed: 1987-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: GRAVITY
Monitor Code: 21
UST Monitor Method: DW TANK DW SUCTION AND/ OR GRAVITY PIPING WITH INTERSTITIAL MONITORS: INTERSTITIAL.

SWEEPS UST:
Name: ECONO LUBE-N-TUNE
Address: 3844 PLAZA DR
City: OCEANSIDE
Status: Active
Comp Number: 20646
Number: 9

ECONO LUBE-N-TUNE (Continued) **U003789636**

Board Of Equalization:	44-003197
Referral Date:	Not reported
Action Date:	06-26-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-020646-000001
Tank Status:	A
Capacity:	500
Active Date:	Not reported
Tank Use:	PETROLEUM
STG:	W
Content:	Not reported
Number Of Tanks:	1

B6 **MEINEKE / ECONO- LUBE** **CA San Diego Co. HMMD** **S113894666**
NW **3844 PLAZA DR** **CA CERS HAZ WASTE** **N/A**
< 1/8 **OCEANSIDE, CA 92056** **CA CERS TANKS**
0.031 mi. **CA CERS**
165 ft. **Site 3 of 6 in cluster B**

Relative: **Higher**
Actual: **216 ft.**

HMMD SAN DIEGO:

Name:	MEINEKE / ECONO- LUBE
Address:	3844 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	Not reported
Business Type:	Not reported
EPA Id Number:	cal000376881
APN:	Not reported
Last HMMD Inspection:	Not reported
Facility Telephone:	7609451105
Permit Status:	Permit Renewed
Permit Expiration:	Not reported
Date Last Updated:	01/23/2018
Facility Owner:	Not reported
Facility Mailing Address:	3844 PLAZA DR, OCEANSIDE, CA 92056
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	N
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	N
Generate Medical Waste:	Not reported

Inspection Violation:

Record ID:	DEH2012-HUPFP-216733
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216733
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	5386531
Return To Compliance Date:	2015-11-23T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Container/Tank Id:	Not reported
Last Update:	2019-01-29T00:00:00.000
Inspection Date:	2015-11-12T13:04:00.000
Violation Code:	1010001 HMBP not established/ implemented. HSC 25505(a) and 25507(a)
Record ID:	DEH2012-HUPFP-216733
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216733
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5386531
Return To Compliance Date:	2016-01-19T00:00:00.000
Nov:	Yes
Violation Classification:	Class I
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-01-29T00:00:00.000
Inspection Date:	2015-11-12T13:04:00.000
Violation Code:	3010001 Unified Program Facility (UPF) permit not obtained for the generation of hazardous waste. HSC 25404.1; SDCC 68.905
Record ID:	DEH2012-HUPFP-216733
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216733
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5386531
Return To Compliance Date:	2015-12-15T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-01-29T00:00:00.000
Inspection Date:	2015-11-12T13:04:00.000
Violation Code:	3010002 Failed to obtain and/or maintain an active EPA ID. 22 CCR 66262.12
Record ID:	DEH2012-HUPFP-216733
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216733
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5386531
Return To Compliance Date:	2015-11-20T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-01-29T00:00:00.000
Inspection Date:	2015-11-12T13:04:00.000
Violation Code:	3130012 Failed to conduct daily inspections and/or maintain the inspection records for hazardous waste tank system. 22 CCR 66265.195(a)(c)

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Record ID:	DEH2012-HUPFP-216733
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216733
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5386531
Return To Compliance Date:	2016-01-05T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-01-29T00:00:00.000
Inspection Date:	2015-11-12T13:04:00.000
Violation Code:	HMD0149 Failed to keep disposal receipts for drained used oil filters and/or drained fuel filters for 3 years. HSC 25250.22; 22 CCR 66266.130

Record ID:	DEH2012-HUPFP-216733
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216733
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5386531
Return To Compliance Date:	2015-11-22T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-01-29T00:00:00.000
Inspection Date:	2015-11-12T13:04:00.000
Violation Code:	3010010 Failed to maintain uniform hazardous waste manifest, consolidated manifest, or bills of lading copies for 3 years. HSC 25160.2(b)(3), 25185(a)(4); 22 CCR 66262.40(a)

Record ID:	DEH2012-HUPFP-216733
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216733
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5386531
Return To Compliance Date:	2015-12-02T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-01-29T00:00:00.000
Inspection Date:	2015-11-12T13:04:00.000
Violation Code:	3110013 Failed to obtain and maintain a written assessment certified by an independent, qualified, registered professional engineer for the hazardous waste tank system. 22 CCR 66265.192(a), 66265.192(h), or 66265.191(a)

Record ID:	DEH2012-HUPFP-216733
Permit Status:	Permit Renewed

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Active Permit:	Y
Facility Id Number:	37-000-216733
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5779043
Return To Compliance Date:	2017-08-22T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-01-29T00:00:00.000
Inspection Date:	2017-08-22T16:37:00.000
Violation Code:	3010002 Failed to obtain &/or maintain an active EPA ID Number. 22 CCR 66262.12(a)

Record ID:	DEH2012-HUPFP-216733
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216733
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5779043
Return To Compliance Date:	2017-09-04T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-01-29T00:00:00.000
Inspection Date:	2017-08-22T16:37:00.000
Violation Code:	3130012 Failed to conduct daily inspections and/or maintain the inspection records for hazardous waste tank system. 22 CCR 66265.195(a)(c)

Record ID:	DEH2012-HUPFP-216733
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216733
Program Element:	Aboveground Petroleum Storage Act
Inspection Type:	Routine
Inspection Number:	5386531
Return To Compliance Date:	2015-11-22T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-01-29T00:00:00.000
Inspection Date:	2015-11-12T13:04:00.000
Violation Code:	4010001 Failed to prepare and implement a written spill prevention control and countermeasures (SPCC) Plan in accordance with 40 CFR Part 112 (sec. 112.3). HSC 25270.4.5(a)

Record ID:	DEH2012-HUPFP-216733
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216733
Program Element:	Aboveground Petroleum Storage Act
Inspection Type:	Routine

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Inspection Number:	5779043
Return To Compliance Date:	2017-10-11T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-01-29T00:00:00.000
Inspection Date:	2017-08-22T16:37:00.000
Violation Code:	4010008 Failed to maintain a copy of the Plan on site (applies if facility is manned at least 4 hours/day). (40 CFR 112.3(e)(1).) HSC 25270.4.5(a)

Record ID:	DEH2012-HUPFP-216733
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216733
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	5386531
Return To Compliance Date:	2016-01-19T00:00:00.000
Nov:	Yes
Violation Classification:	Class I
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-01-29T00:00:00.000
Inspection Date:	2015-11-12T13:04:00.000
Violation Code:	HMD1001 Unified Program Facility permit not obtained for hazardous materials. SDCC 68.905

Record ID:	DEH2012-HUPFP-216733
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216733
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	5386531
Return To Compliance Date:	2015-11-23T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-01-29T00:00:00.000
Inspection Date:	2015-11-12T13:04:00.000
Violation Code:	1010002 HMBP not submitted to the CUPA in CERS. HSC 25508(a)(1)(A); HSC 25404(e)(4); 27 CCR 15188(a), (d)

Record ID:	DEH2012-HUPFP-216733
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216733
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	5386531
Return To Compliance Date:	2015-12-15T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported

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Container/Tank Id: Not reported
Last Update: 2019-01-29T00:00:00.000
Inspection Date: 2015-11-12T13:04:00.000
Violation Code: 1020002 Initial and/or annual employee training not conducted for hazardous materials management and/or employee training records not available or not maintained for 3 years. HSC 25505(a)(4)

Record ID: DEH2012-HUPFP-216733
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-216733
Program Element: Hazardous Materials Release Response Plans
Inspection Type: Routine
Inspection Number: 5779043
Return To Compliance Date: 2017-08-22T00:00:00.000
Nov: No
Violation Classification: Class II
Underground Storage Tank Id: Not reported
Container/Tank Id: Not reported
Last Update: 2019-01-29T00:00:00.000
Inspection Date: 2017-08-22T16:37:00.000
Violation Code: 1020002 Initial &/or annual employee training not conducted for hazardous materials management &/or employee training records not available or not maintained for 3 years. HSC 25505(a)(4); 19 CCR 2659(b)

UST DTL:
Record ID: DEH2012-HUPFP-216733
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-216733
Facility Type (Ust Facility): Not reported
Tank Owner Name: Joseph Drury
Tankid: 25753
Tank Status: Removed
Date Ust Permanently Closed: 12/23/2002
Tank Use: 04
Piping System Type: 03
Last Updated: 2019-01-29T02:36:15.000
Tank Capacityin Gallons: 500
Tank Contents: Not reported
Type Of Tank: 02

Waste and Materials:
Record ID: DEH2012-HUPFP-216733
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HCHEM-0151388
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2019-01-29T02:36:15.000
Chemical Name: New motor oil
Common Name: lubricating motor oil
Case Number: Not reported

Record ID: DEH2012-HUPFP-216733

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Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0129850
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-01-29T02:36:15.000
Chemical Name: used motor oil
Common Name: used motor oil
Case Number: Not reported

Record ID: DEH2012-HUPFP-216733
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0129851
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-01-29T02:36:15.000
Chemical Name: Ethylene Glycol
Common Name: Ethylene Glycol
Case Number: Not reported

Record ID: DEH2012-HUPFP-216733
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0129852
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-01-29T02:36:15.000
Chemical Name: Not reported
Common Name: used paper filters
Case Number: Not reported

Record ID: DEH2012-HUPFP-216733
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HCHEM-0086437
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2017-02-22T02:34:10.000
Chemical Name: New motor oil
Common Name: lubricating motor oil
Case Number: Not reported

Record ID: DEH2012-HUPFP-216733
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0068966
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-02-22T02:34:10.000
Chemical Name: Ethylene Glycol
Common Name: Ethylene Glycol
Case Number: Not reported

Record ID: DEH2012-HUPFP-216733
Permit Status: Permit Renewed
Active Permit: Y

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Child Record Id:	DEH2016-HWAST-0068967
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2017-02-22T02:34:10.000
Chemical Name:	used motor oil
Common Name:	used motor oil
Case Number:	Not reported

Name:	MEINEKE / ECONO- LUBE
Address:	3844 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	216733
Business Type:	6HK26
EPA Id Number:	CAL000374971
APN:	168-012-21-00
Last HMMD Inspection:	07/10/2012
Facility Telephone:	760-945-1105
Permit Status:	OPEN
Permit Expiration:	10/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	MEINEKE CARE CARE INC
Facility Mailing Address:	3844 PLAZA DR
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	Not reported
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Y
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	216733
Update Date:	11/02/2012
Case Number:	107-21-1
Name:	ETHYLENE GLYCOL
Other Information:	ANTIFREEZE
Material Waste:	Material
Hazardous Categories 1:	CHRONIC
Hazardous Categories 2:	Not reported

Permit Number:	216733
Update Date:	11/02/2012
Case Number:	8002-05-9
Name:	OILS
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	ACUTE

Permit Number:	216733
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 135 UNSPECIFIED AQUEOUS SOL'N
Other Information:	EAP: ANTIFREEZE WASTE

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Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 216733
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 221 WASTE OIL & MIXED OIL
Other Information: DOUBLE WALL AST
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 216733
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 223 UNSPEC OIL CONTAINING WASTE
Other Information: CLARIFIER WASTE
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 216733
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 888 USED OIL FILTERS
Other Information: USED OIL FILTERS-VORTEX
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:

Permit Number: 216733
Update Date: 11/02/2012
Inspection Date: 07/10/2012
Violation Code: 6HV1002
Violation: HMBP NOT ESTABISHED/IMPLEMENTED.
Violation Citation: Hazardous materials handler has not established/implemented a business plan. HSC 25503.5(a)
Activity: ACTIVE

Permit Number: 216733
Update Date: 11/02/2012
Inspection Date: 07/10/2012
Violation Code: 6HV1004
Violation: HMBP NOT SUBMITTED TO HMD
Violation Citation: Hazardous Materials Handler has not submitted a completed Business Plan to the HMMD. HSC 25505(a)
Activity: ACTIVE

Permit Number: 216733
Update Date: 11/02/2012
Inspection Date: 07/10/2012
Violation Code: 6HV1012
Violation: SPCC PLAN NOT PREPARED
Violation Citation: Spill Prevention Countermeasures & Control Plan not prepared as required. 25270.5 (c)

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Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1015
Violation:	EMPLOYEE TRAINING NOT ADEQUATE
Violation Citation:	Did not have adequate employee training program 2732 &/or 25504(c)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1017
Violation:	HMBP NOT CERTIFIED ANNUALLY
Violation Citation:	Business Plan not certified annually. 25505(d) & (e)(2)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0208
Violation:	STORAGE AREA: NO WEEKLY INSPECTION
Violation Citation:	Hazardous waste storage area is not being inspected weekly for deteriorated or leaking containers CCR 66265.174
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0235
Violation:	WASTE NOT ACCUMULATED IN CONTAINER/TANK
Violation Citation:	Did not accumulate waste in container or tank. 66262.34(a)(1)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0401
Violation:	TRAINING RECORDS UNAVAILABLE
Violation Citation:	Personnel training records are not maintained to document compliance with requirements for current and former employees. CCR 66265.16(d)&(e)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0402
Violation:	TRAINING PROGRAM NOT ADEQUATE
Violation Citation:	Personnel training is not adequate to ensure compliance with hazardous waste regulations. CCR 66265.16(a)&(b)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012

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Violation Code: 6HV0414
Violation: DID NOT TRAIN EMPLOYEES ANNUALLY
Violation Citation: Failed to train employees annually. 66265.16(c)
Activity: ACTIVE

Permit Number: 216733
Update Date: 11/02/2012
Inspection Date: 07/10/2012
Violation Code: 6HV1601
Violation: HAZWASTE TANKS W/O P.E. ASSESSMENT
Violation Citation: Failed to obtain a P.E. assessment for hazardous waste tank system. 66265.191(a) or 66265.192(a)
Activity: ACTIVE

Permit Number: 216733
Update Date: 11/02/2012
Inspection Date: 07/10/2012
Violation Code: 6HV1605
Violation: NO DAILY TANK INSPECTION/LOG
Violation Citation: Failed to inspect and/or document daily HW tank system inspections. 66265.195 (c)
Activity: ACTIVE

UST:
UST Name: UNDERGROUND TANK 120646 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 216733
Tank Type: DOUBLE WALL
Additional Id: AT4843
Capacity Gallons: 500
UST Contents: Not reported
Other Content Info: WASTE OIL
Reg Status: REMOVED
Remove Close Date: 2002-12-23 00:00:00
Year Installed: 1987-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: GRAVITY
Monitor Code: 21
UST Monitor Method: DW TANK DW SUCTION AND/ OR GRAVITY PIPING WITH INTERSTITIAL MONITORS: INTERSTITIAL.

Name: MEINEKE / ECONO- LUBE
Address: 3844 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Permit Number: 216733
Business Type: 6HK26
EPA Id Number: CAL000374971
APN: 168-012-21-00
Last HMMD Inspection: 07/10/2012
Facility Telephone: 760-945-1105
Permit Status: OPEN
Permit Expiration: 10/31/2013
Date Last Updated: 11/02/2012
Facility Owner: MEINEKE CARE CARE INC
Facility Mailing Address: 3844 PLAZA DR
Facility Mailing City: OCEANSIDE

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Facility Mailing State: CA
Facility Mailing Zip: 92056
UST Owner: Not reported
Handle Regulated Hazmat: Y
Own Or Operate UST: Y
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: Not reported
Generate Medical Waste: Not reported

Inventory Active Permits (not SQG Medical):
Permit Number: 216733
Update Date: 11/02/2012
Case Number: 107-21-1
Name: ETHYLENE GLYCOL
Other Information: ANTIFREEZE
Material Waste: Material
Hazardous Categories 1: CHRONIC
Hazardous Categories 2: Not reported

Permit Number: 216733
Update Date: 11/02/2012
Case Number: 8002-05-9
Name: OILS
Other Information: Not reported
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: ACUTE

Permit Number: 216733
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 135 UNSPECIFIED AQUEOUS SOL'N
Other Information: EAP: ANTIFREEZE WASTE
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 216733
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 221 WASTE OIL & MIXED OIL
Other Information: DOUBLE WALL AST
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 216733
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 223 UNSPEC OIL CONTAINING WASTE
Other Information: CLARIFIER WASTE
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 216733
Update Date: 11/02/2012

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Case Number:	Not reported
Name:	WASTE 888 USED OIL FILTERS
Other Information:	USED OIL FILTERS-VORTEX
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Violations Active Permits:

Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1002
Violation:	HMBP NOT ESTABISHED/IMPLEMENTED.
Violation Citation:	Hazardous materials handler has not established/implemented a business plan. HSC 25503.5(a)
Activity:	ACTIVE

Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1004
Violation:	HMBP NOT SUBMITTED TO HMD
Violation Citation:	Hazardous Materials Handler has not submitted a completed Business Plan to the HMMD. HSC 25505(a)
Activity:	ACTIVE

Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1012
Violation:	SPCC PLAN NOT PREPARED
Violation Citation:	Spill Prevention Countermeasures & Control Plan not prepared as required. 25270.5 (c)
Activity:	ACTIVE

Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1015
Violation:	EMPLOYEE TRAINING NOT ADEQUATE
Violation Citation:	Did not have adequate employee training program 2732 &/or 25504(c)
Activity:	ACTIVE

Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1017
Violation:	HMBP NOT CERTIFIED ANNUALLY
Violation Citation:	Business Plan not certified annually. 25505(d) & (e)(2)
Activity:	ACTIVE

Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0208
Violation:	STORAGE AREA: NO WEEKLY INSPECTION
Violation Citation:	Hazardous waste storage area is not being inspected weekly for

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	deteriorated or leaking containers CCR 66265.174
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0235
Violation:	WASTE NOT ACCUMULATED IN CONTAINER/TANK
Violation Citation:	Did not accumulate waste in container or tank. 66262.34(a)(1)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0401
Violation:	TRAINING RECORDS UNAVAILABLE
Violation Citation:	Personnel training records are not maintained to document compliance with requirements for current and former employees. CCR 66265.16(d)&(e)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0402
Violation:	TRAINING PROGRAM NOT ADEQUATE
Violation Citation:	Personnel training is not adequate to ensure compliance with hazardous waste regulations. CCR 66265.16(a)&(b)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0414
Violation:	DID NOT TRAIN EMPLOYEES ANNUALLY
Violation Citation:	Failed to train employees annually. 66265.16(c)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1601
Violation:	HAZWASTE TANKS W/O P.E. ASSESSMENT
Violation Citation:	Failed to obtain a P.E. assessment for hazardous waste tank system. 66265.191(a) or 66265.192(a)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1605
Violation:	NO DAILY TANK INSPECTION/LOG
Violation Citation:	Failed to inspect and/or document daily HW tank system inspections. 66265.195 (c)
Activity:	ACTIVE

MEINEKE / ECONO- LUBE (Continued) **S113894666**

UST:

UST Name:	UNDERGROUND TANK 120646 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	216733
Tank Type:	DOUBLE WALL
Additional Id:	AT4843
Capacity Gallons:	500
UST Contents:	Not reported
Other Content Info:	WASTE OIL
Reg Status:	REMOVED
Remove Close Date:	2002-12-23 00:00:00
Year Installed:	1987-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	GRAVITY
Monitor Code:	21
UST Monitor Method:	DW TANK DW SUCTION AND/ OR GRAVITY PIPING WITH INTERSTITIAL MONITORS: INTERSTITIAL.

Name:	MEINEKE / ECONO- LUBE
Address:	3844 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	216733
Business Type:	6HK26
EPA Id Number:	CAL000374971
APN:	168-012-21-00
Last HMMD Inspection:	07/10/2012
Facility Telephone:	760-945-1105
Permit Status:	OPEN
Permit Expiration:	10/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	MEINEKE CARE CARE INC
Facility Mailing Address:	3844 PLAZA DR
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	Not reported
Handle Regulated Hazmat:	Y
Own Or Operate UST:	N
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	216733
Update Date:	11/02/2012
Case Number:	107-21-1
Name:	ETHYLENE GLYCOL
Other Information:	ANTIFREEZE
Material Waste:	Material
Hazardous Categories 1:	CHRONIC
Hazardous Categories 2:	Not reported

Permit Number:	216733
Update Date:	11/02/2012
Case Number:	8002-05-9

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Name: OILS
Other Information: Not reported
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: ACUTE

Permit Number: 216733
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 135 UNSPECIFIED AQUEOUS SOL'N
Other Information: EAP: ANTIFREEZE WASTE
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 216733
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 221 WASTE OIL & MIXED OIL
Other Information: DOUBLE WALL AST
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 216733
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 223 UNSPEC OIL CONTAINING WASTE
Other Information: CLARIFIER WASTE
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 216733
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 888 USED OIL FILTERS
Other Information: USED OIL FILTERS-VORTEX
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:
Permit Number: 216733
Update Date: 11/02/2012
Inspection Date: 07/10/2012
Violation Code: 6HV1002
Violation: HMBP NOT ESTABISHED/IMPLEMENTED.
Violation Citation: Hazardous materials handler has not established/implemented a business plan. HSC 25503.5(a)
Activity: ACTIVE

Permit Number: 216733
Update Date: 11/02/2012
Inspection Date: 07/10/2012
Violation Code: 6HV1004
Violation: HMBP NOT SUBMITTED TO HMD

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Violation Citation:	Hazardous Materials Handler has not submitted a completed Business Plan to the HMMD. HSC 25505(a)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1012
Violation:	SPCC PLAN NOT PREPARED
Violation Citation:	Spill Prevention Countermeasures & Control Plan not prepared as required. 25270.5 (c)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1015
Violation:	EMPLOYEE TRAINING NOT ADEQUATE
Violation Citation:	Did not have adequate employee training program 2732 &/or 25504(c)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1017
Violation:	HMBP NOT CERTIFIED ANNUALLY
Violation Citation:	Business Plan not certified annually. 25505(d) & (e)(2)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0208
Violation:	STORAGE AREA: NO WEEKLY INSPECTION
Violation Citation:	Hazardous waste storage area is not being inspected weekly for deteriorated or leaking containers CCR 66265.174
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0235
Violation:	WASTE NOT ACCUMULATED IN CONTAINER/TANK
Violation Citation:	Did not accumulate waste in container or tank. 66262.34(a)(1)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0401
Violation:	TRAINING RECORDS UNAVAILABLE
Violation Citation:	Personnel training records are not maintained to document compliance with requirements for current and former employees. CCR 66265.16(d)&(e)
Activity:	ACTIVE
Permit Number:	216733

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0402
Violation:	TRAINING PROGRAM NOT ADEQUATE
Violation Citation:	Personnel training is not adequate to ensure compliance with hazardous waste regulations. CCR 66265.16(a)&(b)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0414
Violation:	DID NOT TRAIN EMPLOYEES ANNUALLY
Violation Citation:	Failed to train employees annually. 66265.16(c)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1601
Violation:	HAZWASTE TANKS W/O P.E. ASSESSMENT
Violation Citation:	Failed to obtain a P.E. assessment for hazardous waste tank system. 66265.191(a) or 66265.192(a)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1605
Violation:	NO DAILY TANK INSPECTION/LOG
Violation Citation:	Failed to inspect and/or document daily HW tank system inspections. 66265.195 (c)
Activity:	ACTIVE

UST:

UST Name:	UNDERGROUND TANK 120646 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	216733
Tank Type:	DOUBLE WALL
Additional Id:	AT4843
Capacity Gallons:	500
UST Contents:	Not reported
Other Content Info:	WASTE OIL
Reg Status:	REMOVED
Remove Close Date:	2002-12-23 00:00:00
Year Installed:	1987-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	GRAVITY
Monitor Code:	21
UST Monitor Method:	DW TANK DW SUCTION AND/ OR GRAVITY PIPING WITH INTERSTITIAL MONITORS: INTERSTITIAL.
Name:	MEINEKE / ECONO- LUBE
Address:	3844 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	216733

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Business Type:	6HK26
EPA Id Number:	CAL000374971
APN:	168-012-21-00
Last HMMD Inspection:	07/10/2012
Facility Telephone:	760-945-1105
Permit Status:	OPEN
Permit Expiration:	10/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	MEINEKE CARE CARE INC
Facility Mailing Address:	3844 PLAZA DR
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	Not reported
Handle Regulated Hazmat:	Y
Own Or Operate UST:	N
Subject To APSA:	Y
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	216733
Update Date:	11/02/2012
Case Number:	107-21-1
Name:	ETHYLENE GLYCOL
Other Information:	ANTIFREEZE
Material Waste:	Material
Hazardous Categories 1:	CHRONIC
Hazardous Categories 2:	Not reported

Permit Number:	216733
Update Date:	11/02/2012
Case Number:	8002-05-9
Name:	OILS
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	ACUTE

Permit Number:	216733
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 135 UNSPECIFIED AQUEOUS SOL'N
Other Information:	EAP: ANTIFREEZE WASTE
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	216733
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 221 WASTE OIL & MIXED OIL
Other Information:	DOUBLE WALL AST
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Permit Number:	216733
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 223 UNSPEC OIL CONTAINING WASTE
Other Information:	CLARIFIER WASTE
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	216733
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 888 USED OIL FILTERS
Other Information:	USED OIL FILTERS-VORTEX
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Violations Active Permits:

Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1002
Violation:	HMBP NOT ESTABISHED/IMPLEMENTED.
Violation Citation:	Hazardous materials handler has not established/implemented a business plan. HSC 25503.5(a)
Activity:	ACTIVE

Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1004
Violation:	HMBP NOT SUBMITTED TO HMD
Violation Citation:	Hazardous Materials Handler has not submitted a completed Business Plan to the HMMD. HSC 25505(a)
Activity:	ACTIVE

Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1012
Violation:	SPCC PLAN NOT PREPARED
Violation Citation:	Spill Prevention Countermeasures & Control Plan not prepared as required. 25270.5 (c)
Activity:	ACTIVE

Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1015
Violation:	EMPLOYEE TRAINING NOT ADEQUATE
Violation Citation:	Did not have adequate employee training program 2732 &/or 25504(c)
Activity:	ACTIVE

Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Violation Code:	6HV1017
Violation:	HMBP NOT CERTIFIED ANNUALLY
Violation Citation:	Business Plan not certified annually. 25505(d) & (e)(2)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0208
Violation:	STORAGE AREA: NO WEEKLY INSPECTION
Violation Citation:	Hazardous waste storage area is not being inspected weekly for deteriorated or leaking containers CCR 66265.174
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0235
Violation:	WASTE NOT ACCUMULATED IN CONTAINER/TANK
Violation Citation:	Did not accumulate waste in container or tank. 66262.34(a)(1)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0401
Violation:	TRAINING RECORDS UNAVAILABLE
Violation Citation:	Personnel training records are not maintained to document compliance with requirements for current and former employees. CCR 66265.16(d)&(e)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0402
Violation:	TRAINING PROGRAM NOT ADEQUATE
Violation Citation:	Personnel training is not adequate to ensure compliance with hazardous waste regulations. CCR 66265.16(a)&(b)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0414
Violation:	DID NOT TRAIN EMPLOYEES ANNUALLY
Violation Citation:	Failed to train employees annually. 66265.16(c)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1601
Violation:	HAZWASTE TANKS W/O P.E. ASSESSMENT
Violation Citation:	Failed to obtain a P.E. assessment for hazardous waste tank system. 66265.191(a) or 66265.192(a)
Activity:	ACTIVE

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1605
Violation:	NO DAILY TANK INSPECTION/LOG
Violation Citation:	Failed to inspect and/or document daily HW tank system inspections. 66265.195 (c)
Activity:	ACTIVE

UST:

UST Name:	UNDERGROUND TANK 120646 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	216733
Tank Type:	DOUBLE WALL
Additional Id:	AT4843
Capacity Gallons:	500
UST Contents:	Not reported
Other Content Info:	WASTE OIL
Reg Status:	REMOVED
Remove Close Date:	2002-12-23 00:00:00
Year Installed:	1987-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	GRAVITY
Monitor Code:	21
UST Monitor Method:	DW TANK DW SUCTION AND/ OR GRAVITY PIPING WITH INTERSTITIAL MONITORS: INTERSTITIAL.

Name:	MEINEKE / ECONO- LUBE
Address:	3844 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	216733
Business Type:	6HK26
EPA Id Number:	CAL000374971
APN:	168-012-21-00
Last HMMD Inspection:	07/10/2012
Facility Telephone:	760-945-1105
Permit Status:	OPEN
Permit Expiration:	10/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	MEINEKE CARE CARE INC
Facility Mailing Address:	3844 PLAZA DR
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	Not reported
Handle Regulated Hazmat:	Y
Own Or Operate UST:	N
Subject To APSA:	Y
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	216733
Update Date:	11/02/2012
Case Number:	107-21-1

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Name: ETHYLENE GLYCOL
Other Information: ANTIFREEZE
Material Waste: Material
Hazardous Categories 1: CHRONIC
Hazardous Categories 2: Not reported

Permit Number: 216733
Update Date: 11/02/2012
Case Number: 8002-05-9
Name: OILS
Other Information: Not reported
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: ACUTE

Permit Number: 216733
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 135 UNSPECIFIED AQUEOUS SOL'N
Other Information: EAP: ANTIFREEZE WASTE
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 216733
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 221 WASTE OIL & MIXED OIL
Other Information: DOUBLE WALL AST
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 216733
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 223 UNSPEC OIL CONTAINING WASTE
Other Information: CLARIFIER WASTE
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 216733
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 888 USED OIL FILTERS
Other Information: USED OIL FILTERS-VORTEX
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:
Permit Number: 216733
Update Date: 11/02/2012
Inspection Date: 07/10/2012
Violation Code: 6HV1002
Violation: HMBP NOT ESTABISHED/IMPLEMENTED.

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Violation Citation:	Hazardous materials handler has not established/implemented a business plan. HSC 25503.5(a)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1004
Violation:	HMBP NOT SUBMITTED TO HMD
Violation Citation:	Hazardous Materials Handler has not submitted a completed Business Plan to the HMMD. HSC 25505(a)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1012
Violation:	SPCC PLAN NOT PREPARED
Violation Citation:	Spill Prevention Countermeasures & Control Plan not prepared as required. 25270.5 (c)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1015
Violation:	EMPLOYEE TRAINING NOT ADEQUATE
Violation Citation:	Did not have adequate employee training program 2732 &/or 25504(c)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1017
Violation:	HMBP NOT CERTIFIED ANNUALLY
Violation Citation:	Business Plan not certified annually. 25505(d) & (e)(2)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0208
Violation:	STORAGE AREA: NO WEEKLY INSPECTION
Violation Citation:	Hazardous waste storage area is not being inspected weekly for deteriorated or leaking containers CCR 66265.174
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0235
Violation:	WASTE NOT ACCUMULATED IN CONTAINER/TANK
Violation Citation:	Did not accumulate waste in container or tank. 66262.34(a)(1)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Inspection Date:	07/10/2012
Violation Code:	6HV0401
Violation:	TRAINING RECORDS UNAVAILABLE
Violation Citation:	Personnel training records are not maintained to document compliance with requirements for current and former employees. CCR 66265.16(d)&(e)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0402
Violation:	TRAINING PROGRAM NOT ADEQUATE
Violation Citation:	Personnel training is not adequate to ensure compliance with hazardous waste regulations. CCR 66265.16(a)&(b)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV0414
Violation:	DID NOT TRAIN EMPLOYEES ANNUALLY
Violation Citation:	Failed to train employees annually. 66265.16(c)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1601
Violation:	HAZWASTE TANKS W/O P.E. ASSESSMENT
Violation Citation:	Failed to obtain a P.E. assessment for hazardous waste tank system. 66265.191(a) or 66265.192(a)
Activity:	ACTIVE
Permit Number:	216733
Update Date:	11/02/2012
Inspection Date:	07/10/2012
Violation Code:	6HV1605
Violation:	NO DAILY TANK INSPECTION/LOG
Violation Citation:	Failed to inspect and/or document daily HW tank system inspections. 66265.195 (c)
Activity:	ACTIVE

UST:

UST Name:	UNDERGROUND TANK 120646 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	216733
Tank Type:	DOUBLE WALL
Additional Id:	AT4843
Capacity Gallons:	500
UST Contents:	Not reported
Other Content Info:	WASTE OIL
Reg Status:	REMOVED
Remove Close Date:	2002-12-23 00:00:00
Year Installed:	1987-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	GRAVITY

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Monitor Code: 21
UST Monitor Method: DW TANK DW SUCTION AND/ OR GRAVITY PIPING WITH INTERSTITIAL MONITORS: INTERSTITIAL.

CERS HAZ WASTE:
Site ID: 47877
CERS ID: 10373734
CERS Description: Hazardous Waste Generator

Violations:
Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 11-12-2015
Citation: 22 CCR 15 66265.195(a) - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.195(a)
Violation Description: Failure of the owner or operator to conduct inspections and maintain inspection records at the facility of the following tank equipment: 1) Overfill/spill control equipment (e.g., waste-feed cutoff systems, bypass systems, and drainage systems) to ensure that it is in good working order; 2) The aboveground portions of the tank system, if any, to detect corrosion or releases of waste; 3) Data gathered from monitoring equipment and leak-detection equipment, (e.g., pressure and temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; 4) The construction materials and the area immediately surrounding the externally accessible portion of the tank system including secondary containment structures (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation); and 5) For uncovered tanks, the level of waste in the tank, to ensure compliance with section 66265.194(b)(3).
Violation Notes: Returned to compliance on 11/20/2015. Inspection Sequence ID:5386531
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 08-22-2017
Citation: 22 CCR 15 66265.195(c) - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.195(c)
Violation Description: Failure to conduct and document inspections of hazardous waste tank systems each operating day and retain records of those inspections at the facility.
Violation Notes: Returned to compliance on 09/04/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 11-12-2015
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 01/19/2016. Inspection Sequence ID:5386531;Violation:HMD1001 Unified Program Facility permit not

MEINEKE / ECONO- LUBE (Continued) **S113894666**

obtained for hazardous materials. SDCC 68.905
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 11-12-2015
Citation: HSC 6.11 25404.1 - California Health and Safety Code, Chapter 6.11, Section(s) 25404.1
Violation Description: Failure to obtain and/or maintain an active hazardous waste generator permit.
Violation Notes: Returned to compliance on 01/19/2016. Inspection Sequence ID:5386531
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 11-12-2015
Citation: 22 CCR 15 66265.192(h) - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.192(h)
Violation Description: Failure to obtain and maintain a written assessment reviewed and certified by an independent, qualified, professional engineer stating the new hazardous waste tank system has sufficient structural integrity, is acceptable for the transferring, storing and treating of hazardous waste, and that the tanks and containment system including the foundation, structural support, seams, connections, and pressure controls (if applicable) are suitably designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be transferred, stored or treated, and corrosion protection so that it will not collapse, rupture, or fail. This assessment shall be obtained prior to placing the tank system in service, and shall be kept on file at the facility. The tank assessment shall be good for five years. This assessment shall also include, at a minimum, the following information: (1) Design standard(s) according to which the tank(s) and ancillary equipment are or will be constructed; (2) Hazardous characteristics of the waste(s) to be handled; (3) For new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system is or will be in contact with the soil or with water, a determination by a corrosion expert of: (A) Factors affecting the potential for corrosion, including but not limited to: 1. Soil moisture content; 2. Soil pH; 3. Soil sulfides level; 4. Soil resistivity; 5. Structure to soil potential; 6. Influence of nearby underground metal structures (e.g., piping); 7. Stray electric current; and, 8. Existing corrosion-protection measures (e.g., coating, cathodic protection), and (B) The type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following: 1. Corrosion-resistant materials of construction such as special alloys or fiberglass-reinforced plastic; 2. Corrosion-resistant coating (such as epoxy or f
Violation Notes: Returned to compliance on 12/02/2015. Inspection Sequence ID:5386531
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	11-12-2015
Citation:	HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description:	Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 11/23/2015. Inspection Sequence ID:5386531
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	11-12-2015
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to prepare and implement a Spill Prevention Control and Countermeasure (SPCC) Plan .
Violation Notes:	Returned to compliance on 11/22/2015. Inspection Sequence ID:5386531
Violation Division:	San Diego County Department of Env Health
Violation Program:	APSA
Violation Source:	CERS

Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	08-22-2017
Citation:	22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description:	Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes:	Returned to compliance on 08/22/2017.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	11-12-2015
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description:	Haz Waste Generator Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 01/05/2016. Inspection Sequence ID:5386531;Violation:HMD0149 Failed to keep disposal receipts for drained used oil filters and/or drained fuel filters for 3 years. HSC 25250.22; 22 CCR 66266.130
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	11-12-2015
Citation:	22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Violation Description:	Failure to maintain uniform hazardous waste manifest, consolidated manifest, or bills of lading copies for three years.
Violation Notes:	Returned to compliance on 11/22/2015. Inspection Sequence ID:5386531
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	08-22-2017
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 08/22/2017.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	11-12-2015
Citation:	22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description:	Failure to obtain and/or maintain an Active EPA ID.
Violation Notes:	Returned to compliance on 12/15/2015. Inspection Sequence ID:5386531
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	08-22-2017
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to maintain a complete copy of the SPCC Plan at the facility if the facility is normally attended at least four hours per day, or at the nearest field office if the facility is not so attended.
Violation Notes:	Returned to compliance on 10/11/2017.
Violation Division:	San Diego County Department of Env Health
Violation Program:	APSA
Violation Source:	CERS
Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	11-12-2015
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 12/15/2015. Inspection Sequence ID:5386531
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 11-12-2015
Citation: HSC 6.95 25507 - California Health and Safety Code, Chapter 6.95, Section(s) 25507
Violation Description: Failure to adequately establish and implement a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 11/23/2015. Inspection Sequence ID:5386531
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-22-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5779043
Eval Division: San Diego County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-12-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:4957366
Eval Division: San Diego County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-12-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:5386531
Eval Division: San Diego County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-22-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5779043
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-22-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5779043

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-12-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:4957366
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-12-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:5386531
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-12-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:4957366
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-12-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:5386531
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Coordinates:
Site ID: 47877
Facility Name: MEINEKE / ECONO- LUBE
Env Int Type Code: HWG
Program ID: 10373734
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.182980
Longitude: -117.290800

Affiliation:
Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 3844 Plaza Dr
Affiliation City: oceanside

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	Meineke Car Care
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Document Preparer
Entity Name:	DEAN HERMAN
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Dean Herman
Entity Title:	Not reported
Affiliation Address:	3844 PLAZA DR
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Joseph Drury
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 802-2417
Affiliation Type Desc:	Property Owner
Entity Name:	DEAN HERMAN

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Entity Title:	Not reported
Affiliation Address:	3844 PLAZA DR
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(760) 533-2204
Affiliation Type Desc:	Identification Signer
Entity Name:	Dean Herman
Entity Title:	president
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Dean Herman
Entity Title:	Not reported
Affiliation Address:	30652 Red Hawk Rd
Affiliation City:	Valley Center
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92082
Affiliation Phone:	(760) 533-2204

CERS TANKS:

Name:	MEINEKE / ECONO- LUBE
Address:	3844 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Site ID:	47877
CERS ID:	10373734
CERS Description:	Aboveground Petroleum Storage

Violations:

Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	11-12-2015
Citation:	22 CCR 15 66265.195(a) - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.195(a)
Violation Description:	Failure of the owner or operator to conduct inspections and maintain inspection records at the facility of the following tank equipment: 1) Overfill/spill control equipment (e.g., waste-feed cutoff systems, bypass systems, and drainage systems) to ensure that it is in good working order; 2) The aboveground portions of the tank system, if any, to detect corrosion or releases of waste; 3) Data gathered from monitoring equipment and leak-detection equipment, (e.g., pressure and temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; 4) The construction materials and the area immediately surrounding the externally accessible portion of the tank system including secondary containment structures (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation); and 5) For uncovered tanks, the level of waste in the tank, to ensure compliance

MEINEKE / ECONO- LUBE (Continued) **S113894666**

	with section 66265.194(b)(3).
Violation Notes:	Returned to compliance on 11/20/2015. Inspection Sequence ID:5386531
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	08-22-2017
Citation:	22 CCR 15 66265.195(c) - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.195(c)
Violation Description:	Failure to conduct and document inspections of hazardous waste tank systems each operating day and retain records of those inspections at the facility.
Violation Notes:	Returned to compliance on 09/04/2017.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	11-12-2015
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 01/19/2016. Inspection Sequence ID:5386531;Violation:HMD1001 Unified Program Facility permit not obtained for hazardous materials. SDCC 68.905
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	11-12-2015
Citation:	HSC 6.11 25404.1 - California Health and Safety Code, Chapter 6.11, Section(s) 25404.1
Violation Description:	Failure to obtain and/or maintain an active hazardous waste generator permit.
Violation Notes:	Returned to compliance on 01/19/2016. Inspection Sequence ID:5386531
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	11-12-2015
Citation:	22 CCR 15 66265.192(h) - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.192(h)
Violation Description:	Failure to obtain and maintain a written assessment reviewed and certified by an independent, qualified, professional engineer stating the new hazardous waste tank system has sufficient structural integrity, is acceptable for the transferring, storing and treating of hazardous waste, and that the tanks and containment system including the foundation, structural support, seams, connections, and pressure controls (if applicable) are suitably designed and that the tank system has sufficient structural strength, compatibility with the

MEINEKE / ECONO- LUBE (Continued) **S113894666**

waste(s) to be transferred, stored or treated, and corrosion protection so that it will not collapse, rupture, or fail. This assessment shall be obtained prior to placing the tank system in service, and shall be kept on file at the facility. The tank assessment shall be good for five years. This assessment shall also include, at a minimum, the following information: (1) Design standard(s) according to which the tank(s) and ancillary equipment are or will be constructed; (2) Hazardous characteristics of the waste(s) to be handled; (3) For new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system is or will be in contact with the soil or with water, a determination by a corrosion expert of: (A) Factors affecting the potential for corrosion, including but not limited to: 1. Soil moisture content; 2. Soil pH; 3. Soil sulfides level; 4. Soil resistivity; 5. Structure to soil potential; 6. Influence of nearby underground metal structures (e.g., piping); 7. Stray electric current; and, 8. Existing corrosion-protection measures (e.g., coating, cathodic protection), and (B) The type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following: 1. Corrosion-resistant materials of construction such as special alloys or fiberglass-reinforced plastic; 2. Corrosion-resistant coating (such as epoxy or f

Violation Notes: Returned to compliance on 12/02/2015. Inspection Sequence ID:5386531
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 11-12-2015
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 11/23/2015. Inspection Sequence ID:5386531
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 11-12-2015
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description: Failure to prepare and implement a Spill Prevention Control and Countermeasure (SPCC) Plan .
Violation Notes: Returned to compliance on 11/22/2015. Inspection Sequence ID:5386531
Violation Division: San Diego County Department of Env Health
Violation Program: APSA
Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 08-22-2017
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter

MEINEKE / ECONO- LUBE (Continued) **S113894666**

	12, Section(s) 66262.12
Violation Description:	Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes:	Returned to compliance on 08/22/2017.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	11-12-2015
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description:	Haz Waste Generator Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 01/05/2016. Inspection Sequence ID:5386531;Violation:HMD0149 Failed to keep disposal receipts for drained used oil filters and/or drained fuel filters for 3 years. HSC 25250.22; 22 CCR 66266.130
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	11-12-2015
Citation:	22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)
Violation Description:	Failure to maintain uniform hazardous waste manifest, consolidated manifest, or bills of lading copies for three years.
Violation Notes:	Returned to compliance on 11/22/2015. Inspection Sequence ID:5386531
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	08-22-2017
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 08/22/2017.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	11-12-2015
Citation:	22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description:	Failure to obtain and/or maintain an Active EPA ID.
Violation Notes:	Returned to compliance on 12/15/2015. Inspection Sequence ID:5386531
Violation Division:	San Diego County Department of Env Health

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Violation Program: HW
Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 08-22-2017
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description: Failure to maintain a complete copy of the SPCC Plan at the facility if the facility is normally attended at least four hours per day, or at the nearest field office if the facility is not so attended.
Violation Notes: Returned to compliance on 10/11/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: APSA
Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 11-12-2015
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description: Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes: Returned to compliance on 12/15/2015. Inspection Sequence ID:5386531
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 11-12-2015
Citation: HSC 6.95 25507 - California Health and Safety Code, Chapter 6.95, Section(s) 25507
Violation Description: Failure to adequately establish and implement a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 11/23/2015. Inspection Sequence ID:5386531
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-22-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5779043
Eval Division: San Diego County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-12-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Eval Notes:	Inspector: Santos Steven Inspection ID:4957366
Eval Division:	San Diego County Department of Env Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-12-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Santos Steven Inspection ID:5386531
Eval Division:	San Diego County Department of Env Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-22-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Yousif Teaba Inspection ID:5779043
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-22-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Yousif Teaba Inspection ID:5779043
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-12-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector: Santos Steven Inspection ID:4957366
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-12-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Santos Steven Inspection ID:5386531
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-12-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector: Santos Steven Inspection ID:4957366
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-12-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:5386531
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Coordinates:
Site ID: 47877
Facility Name: MEINEKE / ECONO- LUBE
Env Int Type Code: HWG
Program ID: 10373734
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.182980
Longitude: -117.290800

Affiliation:
Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 3844 Plaza Dr
Affiliation City: oceanside
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92056
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: Meineke Car Care
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Document Preparer
Entity Name: DEAN HERMAN
Entity Title: Not reported
Affiliation Address: Not reported

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Dean Herman
Entity Title:	Not reported
Affiliation Address:	3844 PLAZA DR
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Joseph Drury
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 802-2417
Affiliation Type Desc:	Property Owner
Entity Name:	DEAN HERMAN
Entity Title:	Not reported
Affiliation Address:	3844 PLAZA DR
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(760) 533-2204
Affiliation Type Desc:	Identification Signer
Entity Name:	Dean Herman
Entity Title:	president
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Dean Herman
Entity Title:	Not reported
Affiliation Address:	30652 Red Hawk Rd
Affiliation City:	Valley Center
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92082
Affiliation Phone:	(760) 533-2204

MEINEKE / ECONO- LUBE (Continued) **S113894666**

CERS:
Name: MEINEKE / ECONO- LUBE
Address: 3844 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Site ID: 47877
CERS ID: 10373734
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 11-12-2015
Citation: 22 CCR 15 66265.195(a) - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.195(a)
Violation Description: Failure of the owner or operator to conduct inspections and maintain inspection records at the facility of the following tank equipment: 1) Overfill/spill control equipment (e.g., waste-feed cutoff systems, bypass systems, and drainage systems) to ensure that it is in good working order; 2) The aboveground portions of the tank system, if any, to detect corrosion or releases of waste; 3) Data gathered from monitoring equipment and leak-detection equipment, (e.g., pressure and temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; 4) The construction materials and the area immediately surrounding the externally accessible portion of the tank system including secondary containment structures (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation); and 5) For uncovered tanks, the level of waste in the tank, to ensure compliance with section 66265.194(b)(3).
Violation Notes: Returned to compliance on 11/20/2015. Inspection Sequence ID:5386531
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 08-22-2017
Citation: 22 CCR 15 66265.195(c) - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.195(c)
Violation Description: Failure to conduct and document inspections of hazardous waste tank systems each operating day and retain records of those inspections at the facility.
Violation Notes: Returned to compliance on 09/04/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 11-12-2015
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 01/19/2016. Inspection Sequence ID:5386531;Violation:HMD1001 Unified Program Facility permit not obtained for hazardous materials. SDCC 68.905
Violation Division: San Diego County Department of Env Health

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Violation Program: HMRRP
Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 11-12-2015
Citation: HSC 6.11 25404.1 - California Health and Safety Code, Chapter 6.11, Section(s) 25404.1
Violation Description: Failure to obtain and/or maintain an active hazardous waste generator permit.
Violation Notes: Returned to compliance on 01/19/2016. Inspection Sequence ID:5386531
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 11-12-2015
Citation: 22 CCR 15 66265.192(h) - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.192(h)
Violation Description: Failure to obtain and maintain a written assessment reviewed and certified by an independent, qualified, professional engineer stating the new hazardous waste tank system has sufficient structural integrity, is acceptable for the transferring, storing and treating of hazardous waste, and that the tanks and containment system including the foundation, structural support, seams, connections, and pressure controls (if applicable) are suitably designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be transferred, stored or treated, and corrosion protection so that it will not collapse, rupture, or fail. This assessment shall be obtained prior to placing the tank system in service, and shall be kept on file at the facility. The tank assessment shall be good for five years. This assessment shall also include, at a minimum, the following information: (1) Design standard(s) according to which the tank(s) and ancillary equipment are or will be constructed; (2) Hazardous characteristics of the waste(s) to be handled; (3) For new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system is or will be in contact with the soil or with water, a determination by a corrosion expert of: (A) Factors affecting the potential for corrosion, including but not limited to: 1. Soil moisture content; 2. Soil pH; 3. Soil sulfides level; 4. Soil resistivity; 5. Structure to soil potential; 6. Influence of nearby underground metal structures (e.g., piping); 7. Stray electric current; and, 8. Existing corrosion-protection measures (e.g., coating, cathodic protection), and (B) The type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following: 1. Corrosion-resistant materials of construction such as special alloys or fiberglass-reinforced plastic; 2. Corrosion-resistant coating (such as epoxy or f
Violation Notes: Returned to compliance on 12/02/2015. Inspection Sequence ID:5386531
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 47877

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	11-12-2015
Citation:	HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description:	Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 11/23/2015. Inspection Sequence ID:5386531
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	11-12-2015
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to prepare and implement a Spill Prevention Control and Countermeasure (SPCC) Plan .
Violation Notes:	Returned to compliance on 11/22/2015. Inspection Sequence ID:5386531
Violation Division:	San Diego County Department of Env Health
Violation Program:	APSA
Violation Source:	CERS
Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	08-22-2017
Citation:	22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description:	Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes:	Returned to compliance on 08/22/2017.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	11-12-2015
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description:	Haz Waste Generator Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 01/05/2016. Inspection Sequence ID:5386531;Violation:HMD0149 Failed to keep disposal receipts for drained used oil filters and/or drained fuel filters for 3 years. HSC 25250.22; 22 CCR 66266.130
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	47877
Site Name:	MEINEKE / ECONO- LUBE
Violation Date:	11-12-2015
Citation:	22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)
Violation Description:	Failure to maintain uniform hazardous waste manifest, consolidated

MEINEKE / ECONO- LUBE (Continued) **S113894666**

manifest, or bills of lading copies for three years.
Violation Notes: Returned to compliance on 11/22/2015. Inspection Sequence ID:5386531
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 08-22-2017
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description: Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes: Returned to compliance on 08/22/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 11-12-2015
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description: Failure to obtain and/or maintain an Active EPA ID.
Violation Notes: Returned to compliance on 12/15/2015. Inspection Sequence ID:5386531
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 08-22-2017
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description: Failure to maintain a complete copy of the SPCC Plan at the facility if the facility is normally attended at least four hours per day, or at the nearest field office if the facility is not so attended.
Violation Notes: Returned to compliance on 10/11/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: APSA
Violation Source: CERS

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 11-12-2015
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description: Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes: Returned to compliance on 12/15/2015. Inspection Sequence ID:5386531
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Site ID: 47877
Site Name: MEINEKE / ECONO- LUBE
Violation Date: 11-12-2015
Citation: HSC 6.95 25507 - California Health and Safety Code, Chapter 6.95, Section(s) 25507
Violation Description: Failure to adequately establish and implement a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 11/23/2015. Inspection Sequence ID:5386531
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-22-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5779043
Eval Division: San Diego County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-12-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:4957366
Eval Division: San Diego County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-12-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:5386531
Eval Division: San Diego County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-22-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5779043
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-22-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5779043
Eval Division: San Diego County Department of Env Health
Eval Program: HW

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-12-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:4957366
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-12-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:5386531
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-12-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:4957366
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-12-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:5386531
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Coordinates:
Site ID: 47877
Facility Name: MEINEKE / ECONO- LUBE
Env Int Type Code: HWG
Program ID: 10373734
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.182980
Longitude: -117.290800

Affiliation:
Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 3844 Plaza Dr
Affiliation City: oceanside
Affiliation State: CA
Affiliation Country: Not reported

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	Meineke Car Care
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Document Preparer
Entity Name:	DEAN HERMAN
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Dean Herman
Entity Title:	Not reported
Affiliation Address:	3844 PLAZA DR
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Joseph Drury
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 802-2417
Affiliation Type Desc:	Property Owner
Entity Name:	DEAN HERMAN
Entity Title:	Not reported
Affiliation Address:	3844 PLAZA DR

MEINEKE / ECONO- LUBE (Continued) **S113894666**

Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(760) 533-2204
Affiliation Type Desc:	Identification Signer
Entity Name:	Dean Herman
Entity Title:	president
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Dean Herman
Entity Title:	Not reported
Affiliation Address:	30652 Red Hawk Rd
Affiliation City:	Valley Center
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92082
Affiliation Phone:	(760) 533-2204

B7 **MEINEKE CAR CARE CENTER** **RCRA NonGen / NLR** **1024835191**
NW **3844 PLAZA DR** **CAL000376881**
< 1/8 **OCEANSIDE, CA 92056**
0.031 mi.
165 ft. **Site 4 of 6 in cluster B**

Relative:
Higher

Actual:
216 ft.

RCRA NonGen / NLR:

Date form received by agency:	08/01/2012
Facility name:	MEINEKE CAR CARE CENTER
Facility address:	3844 PLAZA DR OCEANSIDE, CA 92056
EPA ID:	CAL000376881
Mailing address:	306520 RED HAWK RD VALLEY CENTER, CA 92082
Contact:	JOSEPH DRURY
Contact address:	3844 PLAZA DR OCEANSIDE, CA 92056
Contact country:	Not reported
Contact telephone:	760-945-1105
Contact email:	SHOP.4068@MEINEKE.NET
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	DEAN HERMAN
Owner/operator address:	386520 RED HAWK RD VALLEY CENTER, CA 92082
Owner/operator country:	Not reported
Owner/operator telephone:	760-533-2204

MEINEKE CAR CARE CENTER (Continued) **1024835191**

Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	JOSEPH DRURY
Owner/operator address:	3844 PLAZA DR OCEANSIDE, CA 92056
Owner/operator country:	Not reported
Owner/operator telephone:	760-945-1105
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	Yes
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

A8 **DOLLAR TREE #03883** **CA San Diego Co. HMMD** **S117310759**
WSW **3825 PLAZA DR** **CA CERS HAZ WASTE** **N/A**
< 1/8 **OCEANSIDE, CA 92056** **CA HAZNET**
0.034 mi. **CA CERS**
182 ft. **Site 3 of 4 in cluster A**

Relative: **Lower**
Actual: **184 ft.**

HMMD SAN DIEGO:

Name:	DOLLAR TREE #03883
Address:	3825 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	Not reported
Business Type:	Not reported
EPA Id Number:	CAL000378430
APN:	Not reported
Last HMMD Inspection:	Not reported
Facility Telephone:	760-940-5289
Permit Status:	Permit Renewed
Permit Expiration:	Not reported

DOLLAR TREE #03883 (Continued) **S117310759**

Date Last Updated:	03/29/2018
Facility Owner:	Not reported
Facility Mailing Address:	500 Volvo Pkwy, Chesapeake, VA 23320
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	N
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	N
Generate Medical Waste:	Not reported

Inspection Violation:

Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216570
Program Element:	Hazardous Waste Generator
Inspection Type:	Status Verification
Inspection Number:	4838888
Return To Compliance Date:	2013-10-16T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2018-09-26T00:00:00.000
Inspection Date:	2013-06-26T10:29:00.000
Violation Code:	3020001 Failure to ensure employees are familiar with the handling and compliance of hazardous waste regulations and emergency response. 22 CCR 12 66262.34(d)(2); 40 CFR 1 262.34(d)(5)(iii)

Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216570
Program Element:	Hazardous Waste Generator
Inspection Type:	Status Verification
Inspection Number:	4838888
Return To Compliance Date:	2013-10-16T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2018-09-26T00:00:00.000
Inspection Date:	2013-06-26T10:29:00.000
Violation Code:	3010022 Failure to post, next to the telephone, Emergency Information (SQG) containing the location of emergency equipment, contact names and numbers. 22 CFR 12 66262.34(d)(2); 40 CFR 1 262.34(d)(5)(ii)

Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216570
Program Element:	Hazardous Waste Generator
Inspection Type:	Status Verification
Inspection Number:	4838888

DOLLAR TREE #03883 (Continued) **S117310759**

Return To Compliance Date:	2013-10-16T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2018-09-26T00:00:00.000
Inspection Date:	2013-06-26T10:29:00.000
Violation Code:	3030007 Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.; 22 CCR 12 66262.34(f).
Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216570
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5698703
Return To Compliance Date:	2013-10-16T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2018-09-26T00:00:00.000
Inspection Date:	2013-06-26T15:22:00.000
Violation Code:	3030007 Failed to properly label/date hazardous waste container and/or tank. 22 CCR 66262.34(f)
Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216570
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5698703
Return To Compliance Date:	2013-10-16T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2018-09-26T00:00:00.000
Inspection Date:	2013-06-26T15:22:00.000
Violation Code:	3020001 Failed to ensure employees are trained for hazardous waste handling, compliance with regulations, and emergency response procedures. (40 CFR 262.34(d)(5)(iii).) 22 CCR 66262.34(d)(2)
Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216570
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5698703
Return To Compliance Date:	2013-10-16T00:00:00.000
Nov:	No

DOLLAR TREE #03883 (Continued) **S117310759**

Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2018-09-26T00:00:00.000
Inspection Date:	2013-06-26T15:22:00.000
Violation Code:	3010022 Failed to post, next to the telephone, emergency information containing the location of emergency equipment, contact names, and numbers. (40 CFR 262.34(d)(5)(ii).) 22 CCR 66262.34(d)(2)
Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216570
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Status Verification
Inspection Number:	4838888
Return To Compliance Date:	2013-10-16T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2018-09-26T00:00:00.000
Inspection Date:	2013-06-26T10:29:00.000
Violation Code:	1010007 Failure to submit a revised business plan upon a substantial change in the handler's operations; HSC 6.95 25505(b).
Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216570
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Status Verification
Inspection Number:	4838888
Return To Compliance Date:	2013-10-16T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2018-09-26T00:00:00.000
Inspection Date:	2013-06-26T10:29:00.000
Violation Code:	1020001 Failure to include an adequate training program in the business plan, which is reasonable and appropriate for the size of the business and the nature of the hazardous material handled; 19 CCR 4 2732(a); HSC 6.95 25504(c).
Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216570
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	5698703
Return To Compliance Date:	2013-10-16T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported

DOLLAR TREE #03883 (Continued) **S117310759**

Last Update:	2018-09-26T00:00:00.000
Inspection Date:	2013-06-26T15:22:00.000
Violation Code:	1010007 HMBP not updated to reflect substantial change to the handler's operations. HSC 25508.1(f)
Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-216570
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	5698703
Return To Compliance Date:	2013-10-16T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2018-09-26T00:00:00.000
Inspection Date:	2013-06-26T15:22:00.000
Violation Code:	1020001 Employee training plan for hazardous materials management not adequate, not established or not submitted in CERS. HSC 25505(a)(4) and 25508(a)(1)(A)

Waste and Materials:

Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2017-HCHEM-0135751
Trade Secret:	N
Hazardous Material Type:	Pure
Last Updated:	2017-10-18T02:31:26.000
Chemical Name:	Helium
Common Name:	Helium
Case Number:	7440-59-7
Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2017-HWAST-0114071
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2017-10-18T02:31:26.000
Chemical Name:	Consumer Commodities
Common Name:	Waste Acidic Liquids, Corrosive
Case Number:	Not reported
Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2017-HWAST-0114072
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2017-10-18T02:31:26.000
Chemical Name:	Consumer Commodities
Common Name:	Waste Aerosols
Case Number:	Not reported

DOLLAR TREE #03883 (Continued) **S117310759**

Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2017-HWAST-0114073
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2017-10-18T02:31:26.000
Chemical Name:	Consumer Commodities
Common Name:	Waste Basic Liquids, Corrosive
Case Number:	Not reported

Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2017-HWAST-0114074
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2017-10-18T02:31:26.000
Chemical Name:	Consumer Commodities
Common Name:	Waste Flammable Liquids
Case Number:	Not reported

Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2017-HWAST-0114075
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2017-10-18T02:31:26.000
Chemical Name:	Consumer Commodities
Common Name:	Waste Flammable Solids
Case Number:	Not reported

Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2017-HWAST-0114076
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2017-10-18T02:31:26.000
Chemical Name:	Consumer Commodities
Common Name:	Waste Lighters
Case Number:	Not reported

Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2017-HWAST-0114077
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2017-10-18T02:31:26.000
Chemical Name:	Consumer Commodities
Common Name:	Waste Oxidizing Liquids
Case Number:	Not reported

Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed

DOLLAR TREE #03883 (Continued) **S117310759**

Active Permit: Y
Child Record Id: DEH2017-HWAST-0114078
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-10-18T02:31:26.000
Chemical Name: Consumer Commodities
Common Name: Waste State Regulated Liquids
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0114079
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-10-18T02:31:26.000
Chemical Name: Consumer Commodities
Common Name: Waste State Regulated Solids
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0114080
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-10-18T02:31:26.000
Chemical Name: Consumer Commodities
Common Name: Waste Toxic Liquids
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0114081
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-10-18T02:31:26.000
Chemical Name: Consumer Commodities
Common Name: Waste Toxic Solids
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0175839
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2018-09-26T02:34:06.000
Chemical Name: Helium
Common Name: Helium
Case Number: 7440-59-7

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0150561

DOLLAR TREE #03883 (Continued) **S117310759**

Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-09-26T02:34:06.000
Chemical Name: Consumer Commodities
Common Name: Waste Acidic Liquids, Corrosive
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0150562
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-09-26T02:34:06.000
Chemical Name: Consumer Commodities
Common Name: Waste Aerosols
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0150563
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-09-26T02:34:06.000
Chemical Name: Consumer Commodities
Common Name: Waste Basic Liquids, Corrosive
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0150564
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-09-26T02:34:06.000
Chemical Name: Consumer Commodities
Common Name: Waste Flammable Liquids
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0150565
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-09-26T02:34:06.000
Chemical Name: Consumer Commodities
Common Name: Waste Flammable Solids
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0150566
Trade Secret: N
Hazardous Material Type: Not reported

DOLLAR TREE #03883 (Continued) **S117310759**

Last Updated: 2018-09-26T02:34:06.000
Chemical Name: Consumer Commodities
Common Name: Waste Oxidizing Liquids
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0150567
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-09-26T02:34:06.000
Chemical Name: Consumer Commodities
Common Name: Waste State Regulated Liquids
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0150568
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-09-26T02:34:06.000
Chemical Name: Consumer Commodities
Common Name: Waste State Regulated Solids
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0150569
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-09-26T02:34:06.000
Chemical Name: Consumer Commodities
Common Name: Waste Toxic Liquids
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0150570
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-09-26T02:34:06.000
Chemical Name: Consumer Commodities
Common Name: Waste Toxic Solids
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HCHEM-0109293
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2016-10-05T02:31:11.000
Chemical Name: Helium

DOLLAR TREE #03883 (Continued) **S117310759**

Common Name: Helium
Case Number: 7440-59-7

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HCHEM-0109294
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2016-10-05T02:31:11.000
Chemical Name: Helium
Common Name: Helium
Case Number: 7440-59-7

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0090532
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-10-05T02:31:11.000
Chemical Name: Consumer Commodities
Common Name: Acidic Liquids, Corrosive
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0090533
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-10-05T02:31:11.000
Chemical Name: Consumer Commodities
Common Name: Aerosols
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0090534
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-10-05T02:31:11.000
Chemical Name: Consumer Commodities
Common Name: Basic Liquids, Corrosive
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0090535
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-10-05T02:31:11.000
Chemical Name: Consumer Commodities
Common Name: Consumer Electronics for Recycling
Case Number: Not reported

DOLLAR TREE #03883 (Continued) **S117310759**

Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0090536
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2016-10-05T02:31:11.000
Chemical Name:	Consumer Commodities
Common Name:	Flammable Compressed Gas
Case Number:	Not reported

Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0090537
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2016-10-05T02:31:11.000
Chemical Name:	Consumer Commodities
Common Name:	Flammable Liquids
Case Number:	Not reported

Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0090538
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2016-10-05T02:31:11.000
Chemical Name:	Consumer Commodities
Common Name:	Flammable Solids
Case Number:	Not reported

Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0090539
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2016-10-05T02:31:11.000
Chemical Name:	Consumer Commodities
Common Name:	Lighters
Case Number:	Not reported

Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0090540
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2016-10-05T02:31:11.000
Chemical Name:	Consumer Commodities
Common Name:	Oxidizing Liquids
Case Number:	Not reported

Record ID:	DEH2012-HUPFP-216570
Permit Status:	Permit Renewed

DOLLAR TREE #03883 (Continued) **S117310759**

Active Permit: Y
Child Record Id: DEH2016-HWAST-0090541
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-10-05T02:31:11.000
Chemical Name: Consumer Commodities
Common Name: Products Containing Lead
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0090542
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-10-05T02:31:11.000
Chemical Name: Consumer Commodities
Common Name: State Regulated Liquids
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0090543
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-10-05T02:31:11.000
Chemical Name: Consumer Commodities
Common Name: State Regulated Solids
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0090544
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-10-05T02:31:11.000
Chemical Name: Consumer Commodities
Common Name: Toxic Liquids
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0090545
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-10-05T02:31:11.000
Chemical Name: Consumer Commodities
Common Name: Toxic Solids
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0090546

DOLLAR TREE #03883 (Continued) **S117310759**

Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-10-05T02:31:11.000
Chemical Name: Consumer Commodities
Common Name: Universal Batteries
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0090547
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-10-05T02:31:11.000
Chemical Name: Consumer Commodities
Common Name: Universal Batts Auto
Case Number: Not reported

Record ID: DEH2012-HUPFP-216570
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0090548
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-10-05T02:31:11.000
Chemical Name: Consumer Commodities
Common Name: Universal Fluorescent Lamps
Case Number: Not reported

CERS HAZ WASTE:
Site ID: 112135
CERS ID: 10175961
CERS Description: Hazardous Waste Generator

Violations:
Site ID: 112135
Site Name: DOLLAR TREE #03883
Violation Date: 06-26-2013
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description: Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes: Returned to compliance on 10/16/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 112135
Site Name: DOLLAR TREE #03883
Violation Date: 06-26-2013
Citation: HSC 6.95 25504(c) - California Health and Safety Code, Chapter 6.95, Section(s) 25504(c)
Violation Description: Failure to include an adequate training program in the business plan, which is reasonable and appropriate for the size of the business and

DOLLAR TREE #03883 (Continued) **S117310759**

the nature of the hazardous material handled.
Violation Notes: Returned to compliance on 10/16/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 112135
Site Name: DOLLAR TREE #03883
Violation Date: 06-26-2013
Citation: HSC 6.95 25505(b) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(b)
Violation Description: Failure to submit a revised business plan upon a substantial change in the handler's operations.
Violation Notes: Returned to compliance on 10/16/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-05-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5692748
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-26-2013
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Marquez Marie Inspection ID:5698703
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-26-2013
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector: Marquez Marie Inspection ID:4838888
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-05-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5692748
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-26-2013

DOLLAR TREE #03883 (Continued) **S117310759**

Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Marquez Marie Inspection ID:5698703
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-26-2013
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector: Marquez Marie Inspection ID:4838888
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	Angela Jones
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Stephanie Caiati
Entity Title:	Not reported
Affiliation Address:	500 Volvo Pkwy
Affiliation City:	Chesapeake
Affiliation State:	VA
Affiliation Country:	Not reported
Affiliation Zip:	23320
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	VOC Realty Investments, Inc. c/o NewMark Merrill Companies
Entity Title:	Not reported
Affiliation Address:	5850 Canoga Avenue, Suite 650
Affiliation City:	Woodland Hills
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91367
Affiliation Phone:	(760) 630-8247
Affiliation Type Desc:	Operator
Entity Name:	Dollar Tree Stores, Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(757) 321-5000

DOLLAR TREE #03883 (Continued) **S117310759**

Affiliation Type Desc:	Parent Corporation
Entity Name:	Dollar Tree Stores, Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880

Affiliation Type Desc:	Legal Owner
Entity Name:	Dollar Tree Stores, Inc.
Entity Title:	Not reported
Affiliation Address:	500 Volvo Pkwy
Affiliation City:	Chesapeake
Affiliation State:	VA
Affiliation Country:	United States
Affiliation Zip:	23320-1604
Affiliation Phone:	(757) 321-5000

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	500 Volvo Pkwy EH&S
Affiliation City:	Chesapeake
Affiliation State:	VA
Affiliation Country:	Not reported
Affiliation Zip:	23320-1604
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	Angela Jones
Entity Title:	EH&S Specilist
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

HAZNET:

Name:	DOLLAR TREE #03883
Address:	3825 PLAZA DR # 501
City,State,Zip:	OCEANSIDE, CA 920564624
Year:	2017
GEPAID:	CAL000378430

DOLLAR TREE #03883 (Continued) **S117310759**

Contact:	ANGELA JONES
Telephone:	7573215761
Mailing Name:	Not reported
Mailing Address:	500 VOLVO PKWY
Mailing City,St,Zip:	CHESAPEAKE, VA 233201604
Gen County:	San Diego
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Tons:	0.009
CA Waste Code:	181-Other inorganic solid waste
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	San Diego

Name:	DOLLAR TREE #03883
Address:	3825 PLAZA DR # 501
City,State,Zip:	OCEANSIDE, CA 920564624
Year:	2017
GEPAID:	CAL000378430
Contact:	ANGELA JONES
Telephone:	7573215761
Mailing Name:	Not reported
Mailing Address:	500 VOLVO PKWY
Mailing City,St,Zip:	CHESAPEAKE, VA 233201604
Gen County:	San Diego
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Tons:	0.0095
CA Waste Code:	214-Unspecified solvent mixture
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	San Diego

Name:	DOLLAR TREE #03883
Address:	3825 PLAZA DR # 501
City,State,Zip:	OCEANSIDE, CA 920564624
Year:	2017
GEPAID:	CAL000378430
Contact:	ANGELA JONES
Telephone:	7573215761
Mailing Name:	Not reported
Mailing Address:	500 VOLVO PKWY
Mailing City,St,Zip:	CHESAPEAKE, VA 233201604
Gen County:	San Diego
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Tons:	0.093
CA Waste Code:	331-Off-specification, aged or surplus organics
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	San Diego

Name:	DOLLAR TREE #03883
Address:	3825 PLAZA DR # 501
City,State,Zip:	OCEANSIDE, CA 920564624
Year:	2017
GEPAID:	CAL000378430

DOLLAR TREE #03883 (Continued) **S117310759**

Contact:	ANGELA JONES
Telephone:	7573215761
Mailing Name:	Not reported
Mailing Address:	500 VOLVO PKWY
Mailing City,St,Zip:	CHESAPEAKE, VA 233201604
Gen County:	San Diego
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Tons:	0.006
CA Waste Code:	122-Alkaline solution without metals pH >= 12.5
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	San Diego

Name:	DOLLAR TREE #03883
Address:	3825 PLAZA DR # 501
City,State,Zip:	OCEANSIDE, CA 920564624
Year:	2016
GEPAID:	CAL000378430
Contact:	ANGELA JONES
Telephone:	7573215761
Mailing Name:	Not reported
Mailing Address:	500 VOLVO PKWY
Mailing City,St,Zip:	CHESAPEAKE, VA 233201604
Gen County:	San Diego
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Tons:	0.0045
CA Waste Code:	331-Off-specification, aged or surplus organics
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	San Diego

Click this hyperlink while viewing on your computer to access
19 additional CA_HAZNET: record(s) in the EDR Site Report.

CERS:

Name:	DOLLAR TREE #03883
Address:	3825 PLAZA DR # 501
City,State,Zip:	OCEANSIDE, CA 92056
Site ID:	112135
CERS ID:	10175961
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	112135
Site Name:	DOLLAR TREE #03883
Violation Date:	06-26-2013
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	Returned to compliance on 10/16/2013.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW

DOLLAR TREE #03883 (Continued) **S117310759**

Violation Source: CERS

Site ID: 112135
Site Name: DOLLAR TREE #03883
Violation Date: 06-26-2013
Citation: HSC 6.95 25504(c) - California Health and Safety Code, Chapter 6.95, Section(s) 25504(c)
Violation Description: Failure to include an adequate training program in the business plan, which is reasonable and appropriate for the size of the business and the nature of the hazardous material handled.
Violation Notes: Returned to compliance on 10/16/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 112135
Site Name: DOLLAR TREE #03883
Violation Date: 06-26-2013
Citation: HSC 6.95 25505(b) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(b)
Violation Description: Failure to submit a revised business plan upon a substantial change in the handler's operations.
Violation Notes: Returned to compliance on 10/16/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-05-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5692748
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-26-2013
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Marquez Marie Inspection ID:5698703
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-26-2013
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector: Marquez Marie Inspection ID:4838888
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-05-2017

DOLLAR TREE #03883 (Continued) **S117310759**

Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Yousif Teaba Inspection ID:5692748
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-26-2013
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Marquez Marie Inspection ID:5698703
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-26-2013
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector: Marquez Marie Inspection ID:4838888
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	Angela Jones
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Stephanie Caiati
Entity Title:	Not reported
Affiliation Address:	500 Volvo Pkwy
Affiliation City:	Chesapeake
Affiliation State:	VA
Affiliation Country:	Not reported
Affiliation Zip:	23320
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	VOC Realty Investments, Inc. c/o NewMark Merrill Companies
Entity Title:	Not reported
Affiliation Address:	5850 Canoga Avenue, Suite 650
Affiliation City:	Woodland Hills
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91367
Affiliation Phone:	(760) 630-8247
Affiliation Type Desc:	Operator

DOLLAR TREE #03883 (Continued) **S117310759**

Entity Name:	Dollar Tree Stores, Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(757) 321-5000
Affiliation Type Desc:	Parent Corporation
Entity Name:	Dollar Tree Stores, Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Legal Owner
Entity Name:	Dollar Tree Stores, Inc.
Entity Title:	Not reported
Affiliation Address:	500 Volvo Pkwy
Affiliation City:	Chesapeake
Affiliation State:	VA
Affiliation Country:	United States
Affiliation Zip:	23320-1604
Affiliation Phone:	(757) 321-5000
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	500 Volvo Pkwy EH&S
Affiliation City:	Chesapeake
Affiliation State:	VA
Affiliation Country:	Not reported
Affiliation Zip:	23320-1604
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Angela Jones
Entity Title:	EH&S Specilist
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported

DOLLAR TREE #03883 (Continued) **S117310759**

Affiliation Phone: Not reported

A9
WSW
< 1/8
0.034 mi.
182 ft.

DOLLAR TREE #03883 **RCRA NonGen / NLR** **1024835885**
3825 PLAZA DR # 501 **CAL000378430**
OCEANSIDE, CA 92056

Site 4 of 4 in cluster A

Relative:
Lower

Actual:
184 ft.

RCRA NonGen / NLR:

Date form received by agency:	09/20/2012
Facility name:	DOLLAR TREE #03883
Facility address:	3825 PLAZA DR # 501 OCEANSIDE, CA 92056-4624
EPA ID:	CAL000378430
Mailing address:	500 VOLVO PKWY CHESAPEAKE, VA 23320-1604
Contact:	ANGELA JONES
Contact address:	500 VOLVO PKWY CHESAPEAKE, VA 23320-1604
Contact country:	Not reported
Contact telephone:	757-321-5761
Contact email:	AJONES@DOLLARTREE.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	DOLLAR TREE STORES, INC.
Owner/operator address:	500 VOLVO PKWY CHESAPEAKE, VA 23320
Owner/operator country:	Not reported
Owner/operator telephone:	757-321-5000
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	ANGELA JONES
Owner/operator address:	500 VOLVO PKWY CHESAPEAKE, VA 23320
Owner/operator country:	Not reported
Owner/operator telephone:	757-321-5761
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No

DOLLAR TREE #03883 (Continued) **1024835885**

Recycler of hazardous waste:	No
Transporter of hazardous waste:	Yes
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

B10 **O'REILLY AUTO PARTS #2690** **CA CERS HAZ WASTE** **S113085143**
WNW **3840 PLAZA DR** **CA HAZNET** **N/A**
< 1/8 **OCEANSIDE, CA 92056** **CA CERS**
0.042 mi.
223 ft. **Site 5 of 6 in cluster B**

Relative:
Higher

Actual:
213 ft.

CERS HAZ WASTE:

Site ID:	53008
CERS ID:	10373242
CERS Description:	Hazardous Waste Generator

Violations:

Site ID:	53008
Site Name:	O'REILLY AUTO PARTS #2690
Violation Date:	09-24-2014
Citation:	40 CFR 1 265.173 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.173
Violation Description:	Failure to properly close hazardous waste containers when not in active use.
Violation Notes:	Returned to compliance on 09/24/2014.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	53008
Site Name:	O'REILLY AUTO PARTS #2690
Violation Date:	09-24-2014
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to establish and electronically submit an adequate training program in safety procedures in the event of a release or threatened release of a hazardous material.
Violation Notes:	Returned to compliance on 10/15/2014.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-12-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Thai Darren Inspection ID:5515602

O'REILLY AUTO PARTS #2690 (Continued) **S113085143**

Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-24-2014
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Campanella Luke Inspection ID:5124680
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-24-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Yousif Teaba Inspection ID:6018792
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-12-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Thai Darren Inspection ID:5515602
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-24-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Yousif Teaba Inspection ID:6018792
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-24-2014
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Campanella Luke Inspection ID:5124680
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Coordinates:

Site ID:	53008
Facility Name:	O'REILLY AUTO PARTS #2690
Env Int Type Code:	HWG
Program ID:	10373242
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.182930

O'REILLY AUTO PARTS #2690 (Continued) **S113085143**

Longitude: -117.291150

Affiliation:

Affiliation Type Desc: Environmental Contact
Entity Name: Verisk 3E, Regulatory Department/O'Reilly Auto Parts
Entity Title: Not reported
Affiliation Address: 3207 Grey Hawk Court, Suite 200
Affiliation City: Carlsbad
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92010
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Tristan Guison, Agent for O'Reilly Auto Enterprises, L.L.C.
Entity Title: Regulatory Compliance Specialist, Verisk 3E
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: O'Reilly Auto Enterprises, L.L.C.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (417) 862-3333

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: Verisk 3E, Regulatory/O'Reilly Auto Parts, 3207 Grey Hawk Ct, Ste 200
Affiliation City: Carlsbad
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92010
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: O'Reilly Auto Enterprises, L.L.C.
Entity Title: Not reported
Affiliation Address: 702 East Bethany Home Road

O'REILLY AUTO PARTS #2690 (Continued) **S113085143**

Affiliation City:	Phoenix
Affiliation State:	AZ
Affiliation Country:	United States
Affiliation Zip:	85014
Affiliation Phone:	(417) 862-3333
Affiliation Type Desc:	Parent Corporation
Entity Name:	O'Reilly Auto Parts
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	Tristan Guison, Agent for O'Reilly Auto Enterprises, L.L.C.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

HAZNET:

Name:	O'REILLY AUTO PARTS # 2690
Address:	3840 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 920564623
Year:	2009
GEPAID:	CAL000159807
Contact:	John Bounds
Telephone:	4175204589
Mailing Name:	Not reported
Mailing Address:	233 S PATTERSON AVE
Mailing City,St,Zip:	SPRINGFIELD, MO 658020000
Gen County:	San Diego
TSD EPA ID:	WIR000029751
TSD County:	99
Tons:	0.0625
CA Waste Code:	223-Unspecified oil-containing waste
Method:	H039-Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County:	San Diego
Name:	O'REILLY AUTO PARTS # 2690
Address:	3840 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 920564623
Year:	2008
GEPAID:	CAL000159807
Contact:	John Bounds
Telephone:	4175204589
Mailing Name:	Not reported
Mailing Address:	233 S PATTERSON AVE
Mailing City,St,Zip:	SPRINGFIELD, MO 658020000

O'REILLY AUTO PARTS #2690 (Continued) **S113085143**

Gen County: San Diego
TSD EPA ID: WIR000029751
TSD County: 99
Tons: 0.125
CA Waste Code: 223-Unspecified oil-containing waste
Method: H039-Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County: San Diego

Name: O'REILLY AUTO PARTS # 2690
Address: 3840 PLAZA DR
City,State,Zip: OCEANSIDE, CA 920564623
Year: 2007
GEPAID: CAL000159807
Contact: John Bounds
Telephone: 4175204589
Mailing Name: Not reported
Mailing Address: 233 S PATTERSON AVE
Mailing City,St,Zip: SPRINGFIELD, MO 658020000
Gen County: San Diego
TSD EPA ID: WIR000029751
TSD County: 99
Tons: 0.0375
CA Waste Code: 223-Unspecified oil-containing waste
Method: H039-Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County: San Diego

Name: O'REILLY AUTO PARTS # 2690
Address: 3840 PLAZA DR
City,State,Zip: OCEANSIDE, CA 920564623
Year: 2006
GEPAID: CAL000159807
Contact: John Bounds
Telephone: 4175204589
Mailing Name: Not reported
Mailing Address: 233 S PATTERSON AVE
Mailing City,St,Zip: SPRINGFIELD, MO 658020000
Gen County: San Diego
TSD EPA ID: WIR000029751
TSD County: 99
Tons: 0.025
CA Waste Code: 223-Unspecified oil-containing waste
Method: R01-Recycler
Facility County: San Diego

Name: O'REILLY AUTO PARTS # 2690
Address: 3840 PLAZA DR
City,State,Zip: OCEANSIDE, CA 920564623
Year: 2002
GEPAID: CAL000159807
Contact: John Bounds
Telephone: 4175204589
Mailing Name: Not reported
Mailing Address: 233 S PATTERSON AVE
Mailing City,St,Zip: SPRINGFIELD, MO 658020000
Gen County: San Diego

O'REILLY AUTO PARTS #2690 (Continued) **S113085143**

TSD EPA ID: CAT080013352
TSD County: Los Angeles
Tons: 0.02085
CA Waste Code: 223-Unspecified oil-containing waste
Method: R01-Recycler
Facility County: San Diego

Click this hyperlink while viewing on your computer to access
1 additional CA_HAZNET: record(s) in the EDR Site Report.

CERS:
Name: O'REILLY AUTO PARTS #2690
Address: 3840 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Site ID: 53008
CERS ID: 10373242
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 53008
Site Name: O'REILLY AUTO PARTS #2690
Violation Date: 09-24-2014
Citation: 40 CFR 1 265.173 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.173
Violation Description: Failure to properly close hazardous waste containers when not in active use.
Violation Notes: Returned to compliance on 09/24/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 53008
Site Name: O'REILLY AUTO PARTS #2690
Violation Date: 09-24-2014
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to establish and electronically submit an adequate training program in safety procedures in the event of a release or threatened release of a hazardous material.
Violation Notes: Returned to compliance on 10/15/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-12-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Thai Darren Inspection ID:5515602
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-24-2014
Violations Found: Yes

O'REILLY AUTO PARTS #2690 (Continued) **S113085143**

Eval Type: Routine done by local agency
Eval Notes: Inspector: Campanella Luke Inspection ID:5124680
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-24-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:6018792
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-12-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Thai Darren Inspection ID:5515602
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-24-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:6018792
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-24-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Campanella Luke Inspection ID:5124680
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Coordinates:
Site ID: 53008
Facility Name: O'REILLY AUTO PARTS #2690
Env Int Type Code: HWG
Program ID: 10373242
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.182930
Longitude: -117.291150

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: Verisk 3E, Regulatory Department/O'Reilly Auto Parts
Entity Title: Not reported

O'REILLY AUTO PARTS #2690 (Continued) **S113085143**

Affiliation Address:	3207 Grey Hawk Court, Suite 200
Affiliation City:	Carlsbad
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92010
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Tristan Guison, Agent for O'Reilly Auto Enterprises, L.L.C.
Entity Title:	Regulatory Compliance Specialist, Verisk 3E
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	O'Reilly Auto Enterprises, L.L.C.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(417) 862-3333
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	Verisk 3E, Regulatory/O'Reilly Auto Parts, 3207 Grey Hawk Ct, Ste 200
Affiliation City:	Carlsbad
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92010
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	O'Reilly Auto Enterprises, L.L.C.
Entity Title:	Not reported
Affiliation Address:	702 East Bethany Home Road
Affiliation City:	Phoenix
Affiliation State:	AZ
Affiliation Country:	United States
Affiliation Zip:	85014
Affiliation Phone:	(417) 862-3333

O'REILLY AUTO PARTS #2690 (Continued) **S113085143**

Affiliation Type Desc:	Parent Corporation
Entity Name:	O'Reilly Auto Parts
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Document Preparer
Entity Name:	Tristan Guison, Agent for O'Reilly Auto Enterprises, L.L.C.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

B11 **O'REILLY AUTO PARTS #2690** **RCRA NonGen / NLR** **1024842145**
WNW **3840 PLAZA DR** **CAL000392468**
< 1/8 **OCEANSIDE, CA 92056**
0.042 mi.
223 ft. **Site 6 of 6 in cluster B**

Relative:
Higher

Actual:
213 ft.

RCRA NonGen / NLR:

Date form received by agency:	01/08/2014
Facility name:	O'REILLY AUTO PARTS #2690
Facility address:	3840 PLAZA DR OCEANSIDE, CA 92056
EPA ID:	CAL000392468
Mailing address:	233 S PATTERSON SPRINGFIELD, MO 65802-0000
Contact:	JOHN BOUNDS
Contact address:	233 S. PATTERSON AVE. SPRINGFIELD, MO 65802
Contact country:	Not reported
Contact telephone:	417-520-4589
Contact email:	JBOUNDS2@OREILLYAUTO.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	JOHN BOUNDS
Owner/operator address:	233 S. PATTERSON AVE. SPRINGFIELD, MO 65802
Owner/operator country:	Not reported
Owner/operator telephone:	417-520-4589
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported

O'REILLY AUTO PARTS #2690 (Continued) **1024842145**

Owner/Op end date: Not reported

Owner/operator name: O'REILLY AUTO PARTS
Owner/operator address: 233 S PATTERSON
SPRINGFIELD, MO 65802
Owner/operator country: Not reported
Owner/operator telephone: 417-862-3333
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

C12 **FAIRLANE CLEANERS** **CA San Diego Co. HMMD** **S106062674**
SW **3821 PLAZA DR** **CA CERS HAZ WASTE** **N/A**
< 1/8 **OCEANSIDE, CA 92056** **CA CERS**
0.061 mi.
324 ft. **Site 1 of 7 in cluster C**

Relative: HMMD SAN DIEGO:
Lower
Name: FAIRLANE CLEANERS
Actual: Address: 3821 PLAZA DR 403
183 ft. City,State,Zip: OCEANSIDE, CA 92056
Permit Number: Not reported
Business Type: Not reported
EPA Id Number: CAD981972946
APN: Not reported
Last HMMD Inspection: Not reported
Facility Telephone: 760-724-8441
Permit Status: Permit Renewed
Permit Expiration: Not reported
Date Last Updated: 04/04/2018
Facility Owner: Not reported
Facility Mailing Address: 3821 PLAZA DR #403, OCEANSIDE, CA 92056-4624
Facility Mailing City: Not reported
Facility Mailing State: Not reported
Facility Mailing Zip: Not reported

FAIRLANE CLEANERS (Continued) **S106062674**

UST Owner: N
Handle Regulated Hazmat: Not reported
Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: N
Generate Medical Waste: Not reported

Inspection Violation:
Record ID: DEH2002-HUPFP-128505
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-128505
Program Element: Hazardous Materials Release Response Plans
Inspection Type: Routine
Inspection Number: 4280153
Return To Compliance Date: 2016-02-04T00:00:00.000
Nov: No
Violation Classification: Minor
Underground Storage Tank Id: Not reported
Container/Tank Id: Not reported
Last Update: 2018-10-19T00:54:10.000
Inspection Date: 2015-03-19T00:00:00.000
Violation Code: 1020001 Failure to include an adequate training program in the business plan, which is reasonable and appropriate for the size of the business and the nature of the hazardous material handled; HSC 6.95 25505(a)4

Record ID: DEH2002-HUPFP-128505
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-128505
Program Element: Hazardous Materials Release Response Plans
Inspection Type: Routine
Inspection Number: 4280153
Return To Compliance Date: 2016-02-04T00:00:00.000
Nov: No
Violation Classification: Minor
Underground Storage Tank Id: Not reported
Container/Tank Id: Not reported
Last Update: 2018-10-19T00:54:10.000
Inspection Date: 2015-03-19T00:00:00.000
Violation Code: 1010002 Owner/Operator failed to complete and/or submit a Hazardous Materials Business Plan when storing hazardous materials at or above the thresholds quantities of 55 gallons/500 lbs/200 cubic feet; HSC 6.95 25508(a)1A

Record ID: DEH2002-HUPFP-128505
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-128505
Program Element: Hazardous Materials Release Response Plans
Inspection Type: Re-inspection
Inspection Number: 5292893
Return To Compliance Date: 2015-07-14T00:00:00.000
Nov: Yes
Violation Classification: Class II
Underground Storage Tank Id: Not reported

FAIRLANE CLEANERS (Continued) **S106062674**

Container/Tank Id: Not reported
Last Update: 2018-10-19T00:54:10.000
Inspection Date: 2015-06-22T13:55:00.000
Violation Code: 1010002 HMBP not submitted to the CUPA in CERS. HSC 25508(a)(1)(A); HSC 25404(e)(4); 27 CCR 15188(a), (d)

Record ID: DEH2002-HUPFP-128505
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-128505
Program Element: Hazardous Materials Release Response Plans
Inspection Type: Routine
Inspection Number: 5685468
Return To Compliance Date: 2017-06-20T00:00:00.000
Nov: No
Violation Classification: Minor
Underground Storage Tank Id: Not reported
Container/Tank Id: Not reported
Last Update: 2018-10-19T00:54:10.000
Inspection Date: 2017-05-18T10:59:00.000
Violation Code: 1010008 HMBP not certified annually as complete and accurate in CERS. HSC 25508.2

Waste and Materials:
Record ID: DEH2002-HUPFP-128505
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HCHEM-0089418
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2016-04-05T02:30:17.000
Chemical Name: Petroleum Naphtha, Hydrotreated Heavy
Common Name: Petroleum Naphtha, Hydrotreated Heavy
Case Number: 64742-48-9

Record ID: DEH2002-HUPFP-128505
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0071663
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-04-05T02:30:17.000
Chemical Name: WASTE 351 ORGANIC SOLIDS WITH HALOGENS
Common Name: FILTER CARTRIDGES
Case Number: Not reported

Record ID: DEH2002-HUPFP-128505
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0071664
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-04-05T02:30:17.000
Chemical Name: WASTE 251 STILL BOTTOMS W/HALOG ORGANICS
Common Name: STILL OIL & SLUDGE
Case Number: Not reported

FAIRLANE CLEANERS (Continued) **S106062674**

Record ID:	DEH2002-HUPFP-128505
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2017-HCHEM-0147801
Trade Secret:	N
Hazardous Material Type:	Pure
Last Updated:	2018-04-04T02:30:13.000
Chemical Name:	Petroleum Naphtha, Hydrotreated Heavy
Common Name:	Petroleum Naphtha, Hydrotreated Heavy
Case Number:	64742-48-9

Record ID:	DEH2002-HUPFP-128505
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2017-HWAST-0126317
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-04-04T02:30:13.000
Chemical Name:	WASTE 251 STILL BOTTOMS W/HALOG ORGANICS
Common Name:	STILL OIL & SLUDGE
Case Number:	Not reported

Record ID:	DEH2002-HUPFP-128505
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HCHEM-0197982
Trade Secret:	N
Hazardous Material Type:	Pure
Last Updated:	2018-10-19T00:54:15.000
Chemical Name:	Petroleum Naphtha, Hydrotreated Heavy
Common Name:	Petroleum Naphtha, Hydrotreated Heavy
Case Number:	64742-48-9

Record ID:	DEH2002-HUPFP-128505
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0170627
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-10-19T00:54:15.000
Chemical Name:	WASTE 251 STILL BOTTOMS W/HALOG ORGANICS
Common Name:	STILL OIL & SLUDGE
Case Number:	Not reported

Name:	FAIRLANE CLEANERS
Address:	3821 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	128505
Business Type:	6HK53
EPA Id Number:	CAD981972946
APN:	168-012-04-00
Last HMMD Inspection:	02/21/2012
Facility Telephone:	760-724-8441
Permit Status:	OPEN
Permit Expiration:	03/31/2013
Date Last Updated:	11/02/2012

FAIRLANE CLEANERS (Continued) **S106062674**

Facility Owner:	VICTOR JAUREGUI
Facility Mailing Address:	3821 PLAZA DR #403
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056-4624
UST Owner:	Not reported
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	128505
Update Date:	11/02/2012
Case Number:	127-18-4
Name:	PERCHLOROETHYLENE
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	ACUTE
Hazardous Categories 2:	CHRONIC

Permit Number:	128505
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 251 STILL BOTTOMS W/HALOG ORGANICS
Other Information:	STILL OIL & SLUDGE
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	128505
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 351 ORGANIC SOLIDS WITH HALOGENS
Other Information:	FILTER CARTRIDGES
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

CERS HAZ WASTE:

Site ID:	29476
CERS ID:	10373221
CERS Description:	Hazardous Waste Generator

Violations:

Site ID:	29476
Site Name:	FAIRLANE CLEANERS
Violation Date:	03-19-2015
Citation:	HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description:	Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 02/04/2016.
Violation Division:	San Diego County Department of Env Health

FAIRLANE CLEANERS (Continued) **S106062674**

Violation Program: HMRRP
Violation Source: CERS

Site ID: 29476
Site Name: FAIRLANE CLEANERS
Violation Date: 03-19-2015
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to establish and electronically submit an adequate training program in safety procedures in the event of a release or threatened release of a hazardous material.
Violation Notes: Returned to compliance on 02/04/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 29476
Site Name: FAIRLANE CLEANERS
Violation Date: 05-18-2017
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 06/20/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-19-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Burke Mike Inspection ID:4280153
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-18-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5685468
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-19-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Burke Mike Inspection ID:4280153
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

FAIRLANE CLEANERS (Continued) **S106062674**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-18-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Yousif Teaba Inspection ID:5685468
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Coordinates:

Site ID:	29476
Facility Name:	FAIRLANE CLEANERS
Env Int Type Code:	HWG
Program ID:	10373221
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.180810
Longitude:	-117.291240

Affiliation:

Affiliation Type Desc:	Legal Owner
Entity Name:	Victor Jauregui
Entity Title:	Not reported
Affiliation Address:	3821 Plaza Dr. #403
Affiliation City:	Oceanside
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90256
Affiliation Phone:	(760) 630-8247

Affiliation Type Desc:	Operator
Entity Name:	Victor Jauregui
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 807-7587

Affiliation Type Desc:	Environmental Contact
Entity Name:	Victor Jauregui
Entity Title:	Not reported
Affiliation Address:	3821 Plaza Dr #403
Affiliation City:	Oceanside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	3821 PLAZA DR #403
Affiliation City:	OCEANSIDE
Affiliation State:	CA

FAIRLANE CLEANERS (Continued) **S106062674**

Affiliation Country: Not reported
Affiliation Zip: 92056-4624
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: VOC REALTY INVESTMENTS INC
Entity Title: Not reported
Affiliation Address: 5850 CANOGA AVE #650
Affiliation City: WOODLAND HILLS
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 91367
Affiliation Phone: (760) 630-8247

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Environmental Contact
Entity Name: VICTOR JAUREGUI
Entity Title: Not reported
Affiliation Address: 3821 PLAZA DR 403
Affiliation City: OCEANSIDE
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: FAIRLANE CLEANERS
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: VOC RLTY INVESTMENTS
Entity Title: Not reported
Affiliation Address: 5850 CANOGA AVE 650
Affiliation City: WOODLANDHILLS
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

CERS:
Name: FAIRLANE CLEANERS

FAIRLANE CLEANERS (Continued) **S106062674**

Address: 3821 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Site ID: 29476
CERS ID: 110040875416
CERS Description: US EPA Air Emission Inventory System (EIS)

Violations:

Site ID: 29476
Site Name: FAIRLANE CLEANERS
Violation Date: 03-19-2015
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 02/04/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 29476
Site Name: FAIRLANE CLEANERS
Violation Date: 03-19-2015
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to establish and electronically submit an adequate training program in safety procedures in the event of a release or threatened release of a hazardous material.
Violation Notes: Returned to compliance on 02/04/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 29476
Site Name: FAIRLANE CLEANERS
Violation Date: 05-18-2017
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 06/20/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-19-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Burke Mike Inspection ID:4280153
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection

FAIRLANE CLEANERS (Continued) **S106062674**

Eval Date: 05-18-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5685468
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-19-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Burke Mike Inspection ID:4280153
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-18-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5685468
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Coordinates:
Site ID: 29476
Facility Name: FAIRLANE CLEANERS
Env Int Type Code: HWG
Program ID: 10373221
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.180810
Longitude: -117.291240

Affiliation:
Affiliation Type Desc: Legal Owner
Entity Name: Victor Jauregui
Entity Title: Not reported
Affiliation Address: 3821 Plaza Dr. #403
Affiliation City: Oceanside
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 90256
Affiliation Phone: (760) 630-8247

Affiliation Type Desc: Operator
Entity Name: Victor Jauregui
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 807-7587

FAIRLANE CLEANERS (Continued) **S106062674**

Affiliation Type Desc:	Environmental Contact
Entity Name:	Victor Jauregui
Entity Title:	Not reported
Affiliation Address:	3821 Plaza Dr #403
Affiliation City:	Oceanside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	3821 PLAZA DR #403
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056-4624
Affiliation Phone:	Not reported

Affiliation Type Desc:	Property Owner
Entity Name:	VOC REALTY INVESTMENTS INC
Entity Title:	Not reported
Affiliation Address:	5850 CANOGA AVE #650
Affiliation City:	WOODLAND HILLS
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91367
Affiliation Phone:	(760) 630-8247

Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880

Affiliation Type Desc:	Environmental Contact
Entity Name:	VICTOR JAUREGUI
Entity Title:	Not reported
Affiliation Address:	3821 PLAZA DR 403
Affiliation City:	OCEANSIDE
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	FAIRLANE CLEANERS
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported

FAIRLANE CLEANERS (Continued) **S106062674**

Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: VOC RLTY INVESTMENTS
Entity Title: Not reported
Affiliation Address: 5850 CANOGA AVE 650
Affiliation City: WOODLANDHILLS
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: FAIRLANE CLEANERS
Address: 3821 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Site ID: 29476
CERS ID: 10373221
CERS Description: Chemical Storage Facilities

Violations:

Site ID: 29476
Site Name: FAIRLANE CLEANERS
Violation Date: 03-19-2015
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 02/04/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 29476
Site Name: FAIRLANE CLEANERS
Violation Date: 03-19-2015
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to establish and electronically submit an adequate training program in safety procedures in the event of a release or threatened release of a hazardous material.
Violation Notes: Returned to compliance on 02/04/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 29476
Site Name: FAIRLANE CLEANERS
Violation Date: 05-18-2017
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 06/20/2017.
Violation Division: San Diego County Department of Env Health

FAIRLANE CLEANERS (Continued) **S106062674**

Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-19-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Burke Mike Inspection ID:4280153
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-18-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5685468
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-19-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Burke Mike Inspection ID:4280153
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-18-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5685468
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Coordinates:
Site ID: 29476
Facility Name: FAIRLANE CLEANERS
Env Int Type Code: HWG
Program ID: 10373221
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.180810
Longitude: -117.291240

Affiliation:
Affiliation Type Desc: Legal Owner
Entity Name: Victor Jauregui
Entity Title: Not reported
Affiliation Address: 3821 Plaza Dr. #403
Affiliation City: Oceanside

FAIRLANE CLEANERS (Continued) **S106062674**

Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90256
Affiliation Phone:	(760) 630-8247
Affiliation Type Desc:	Operator
Entity Name:	Victor Jauregui
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 807-7587
Affiliation Type Desc:	Environmental Contact
Entity Name:	Victor Jauregui
Entity Title:	Not reported
Affiliation Address:	3821 Plaza Dr #403
Affiliation City:	Oceanside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	3821 PLAZA DR #403
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056-4624
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	VOC REALTY INVESTMENTS INC
Entity Title:	Not reported
Affiliation Address:	5850 CANOGA AVE #650
Affiliation City:	WOODLAND HILLS
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91367
Affiliation Phone:	(760) 630-8247
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Environmental Contact
Entity Name:	VICTOR JAUREGUI

FAIRLANE CLEANERS (Continued) **S106062674**

Entity Title:	Not reported
Affiliation Address:	3821 PLAZA DR 403
Affiliation City:	OCEANSIDE
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	FAIRLANE CLEANERS
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	VOC RLTY INVESTMENTS
Entity Title:	Not reported
Affiliation Address:	5850 CANOGA AVE 650
Affiliation City:	WOODLANDHILLS
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

C13 **FAIRLANE CLEANERS & LAUNDRY** **EDR Hist Cleaner** **1018555935**
SW **3821 PLAZA DR STE 403** **N/A**
< 1/8 **OCEANSIDE, CA 92056**
0.061 mi.
324 ft. **Site 2 of 7 in cluster C**

Relative: EDR Hist Cleaner
Lower

Actual: **183 ft.**

Year:	Name:	Type:
1989	FAIRLANE CLEANERS & LAUNDRY	Garment Pressing And Cleaners' Agents
1994	FAIRLANE CLEANERS & LAUNDRY	Garment Pressing And Cleaners' Agents
1995	FAIRLANE CLEANERS & LAUNDRY	Garment Pressing And Cleaners' Agents
1996	FAIRLANE CLEANERS & LAUNDRY	Garment Pressing And Cleaners' Agents
1997	FAIRLANE CLEANERS & LAUNDRY	Garment Pressing And Cleaners' Agents
1998	FAIRLANE CLEANERS & LAUNDRY	Garment Pressing And Cleaners' Agents
1999	FAIRLANE CLEANERS & LAUNDRY	Garment Pressing And Cleaners' Agents
2000	FAIRLANE CLEANERS & LAUNDRY	Garment Pressing And Cleaners' Agents
2001	FAIRLANE CLEANERS & LAUNDRY	Garment Pressing And Cleaners' Agents
2002	FAIRLANE CLEANERS & LAUNDRY	Garment Pressing And Cleaners' Agents
2003	FAIRLANE CLEANERS & LAUNDRY	Garment Pressing And Cleaners' Agents
2004	FAIRLANE CLEANERS & LAUNDRY	Garment Pressing And Cleaners' Agents
2005	FAIRLANE CLEANERS & LAUNDRY	Garment Pressing And Cleaners' Agents
2006	FAIRLANE CLEANERS & LAUNDRY	Garment Pressing And Cleaners' Agents
2007	FAIRLANE CLEANERS & LAUNDRY	Laundry And Drycleaner Agents
2008	FAIRLANE CLEANERS & LAUNDRY	Laundry And Drycleaner Agents

C14
SW
< 1/8
0.061 mi.
324 ft.

FAIRLANE CLEANERS
3821 PLAZA DR #403
OCEANSIDE, CA 92056

Site 3 of 7 in cluster C

RCRA-SQG **1000363920**
CA EMI **CAD981972946**

Relative:
Lower

Actual:
183 ft.

RCRA-SQG:

Date form received by agency:	09/01/1996
Facility name:	FAIRLANE CLEANERS
Facility address:	3821 PLAZA DR #403 OCEANSIDE, CA 92056
EPA ID:	CAD981972946
Mailing address:	PLAZA DR #FOURTH HUNDRED OCEANSIDE, CA 92056
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	CLANCY MONAGHAN
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	415-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	415-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No

FAIRLANE CLEANERS (Continued) **1000363920**

Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 04/12/2004
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State Contractor/Grantee

EMI:
Name: FAIRLANE CLEANERS
Address: 3821 PLAZA DR #403
City,State,Zip: OCEANSIDE, CA 92056
Year: 2000
County Code: 37
Air Basin: SD
Facility ID: 86164
Air District Name: SD
SIC Code: 7216
Air District Name: SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: FAIRLANE CLEANERS
Address: 3821 PLAZA DR #403
City,State,Zip: OCEANSIDE, CA 92056
Year: 2001
County Code: 37
Air Basin: SD
Facility ID: 86164
Air District Name: SD
SIC Code: 7216
Air District Name: SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported

FAIRLANE CLEANERS (Continued) **1000363920**

Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAIRLANE CLEANERS
Address:	3821 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2002
County Code:	37
Air Basin:	SD
Facility ID:	86164
Air District Name:	SD
SIC Code:	7216
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAIRLANE CLEANERS
Address:	3821 PLAZA DR #403
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2003
County Code:	37
Air Basin:	SD
Facility ID:	86164
Air District Name:	SD
SIC Code:	7216
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAIRLANE CLEANERS
Address:	3821 PLAZA DR #403
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2004
County Code:	37
Air Basin:	SD
Facility ID:	86164
Air District Name:	SD
SIC Code:	7216

FAIRLANE CLEANERS (Continued) **1000363920**

Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.874125
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAIRLANE CLEANERS
Address:	3821 PLAZA DR #403
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2005
County Code:	37
Air Basin:	SD
Facility ID:	86164
Air District Name:	SD
SIC Code:	7216
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAIRLANE CLEANERS
Address:	3821 PLAZA DR #403
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2006
County Code:	37
Air Basin:	SD
Facility ID:	86164
Air District Name:	SD
SIC Code:	7216
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.37
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAIRLANE CLEANERS
Address:	3821 PLAZA DR #403
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2007
County Code:	37
Air Basin:	SD

FAIRLANE CLEANERS (Continued) **1000363920**

Facility ID: 86164
Air District Name: SD
SIC Code: 7216
Air District Name: SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: .37
Reactive Organic Gases Tons/Yr: .258482
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: FAIRLANE CLEANERS
Address: 3821 PLAZA DR #403
City,State,Zip: OCEANSIDE, CA 92056
Year: 2008
County Code: 37
Air Basin: SD
Facility ID: 86164
Air District Name: SD
SIC Code: 7216
Air District Name: SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: .37
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: FAIRLANE CLEANERS
Address: 3821 PLAZA DR #403
City,State,Zip: OCEANSIDE, CA 92056
Year: 2009
County Code: 37
Air Basin: SD
Facility ID: 86164
Air District Name: SD
SIC Code: 7216
Air District Name: SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.37
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: FAIRLANE CLEANERS
Address: 3821 PLAZA DR #403
City,State,Zip: OCEANSIDE, CA 92056

FAIRLANE CLEANERS (Continued) **1000363920**

Year:	2010
County Code:	37
Air Basin:	SD
Facility ID:	86164
Air District Name:	SD
SIC Code:	7216
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.37
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAIRLANE CLEANERS
Address:	3821 PLAZA DR #403
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2011
County Code:	37
Air Basin:	SD
Facility ID:	86164
Air District Name:	SD
SIC Code:	7216
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.37
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAIRLANE CLEANERS
Address:	3821 PLAZA DR #403
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2012
County Code:	37
Air Basin:	SD
Facility ID:	86164
Air District Name:	SD
SIC Code:	7216
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.37
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

FAIRLANE CLEANERS (Continued) **1000363920**

Name:	FAIRLANE CLEANERS
Address:	3821 PLAZA DR #403
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2013
County Code:	37
Air Basin:	SD
Facility ID:	86164
Air District Name:	SD
SIC Code:	7216
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.37
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAIRLANE CLEANERS
Address:	3821 PLAZA DR #403
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2014
County Code:	37
Air Basin:	SD
Facility ID:	86164
Air District Name:	SD
SIC Code:	7216
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.37
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	FAIRLANE CLEANERS
Address:	3821 PLAZA DR #403
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2015
County Code:	37
Air Basin:	SD
Facility ID:	86164
Air District Name:	SD
SIC Code:	7216
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.37
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0

FAIRLANE CLEANERS (Continued) **1000363920**

Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0
Name:	FAIRLANE CLEANERS
Address:	3821 PLAZA DR #403
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2016
County Code:	37
Air Basin:	SD
Facility ID:	86164
Air District Name:	SD
SIC Code:	7216
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.37
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	Not reported
NOX - Oxides of Nitrogen Tons/Yr:	Not reported
SOX - Oxides of Sulphur Tons/Yr:	Not reported
Particulate Matter Tons/Yr:	Not reported
Part. Matter 10 Micrometers and Smllr Tons/Yr:	Not reported

C15 **FAIRLANE CLEANERS** **CA DRYCLEANERS** **S103656441**
SW **3821 PLAZA DR STE 403** **N/A**
< 1/8 **OCEANSIDE, CA 92056**
0.061 mi.
324 ft. **Site 4 of 7 in cluster C**

Relative: **Lower**
Actual: **183 ft.**

DRYCLEANERS:

Name:	FAIRLANE CLEANERS
Address:	3821 PLAZA DR STE 403
City,State,Zip:	OCEANSIDE, CA 920560000
EPA Id:	CAD981972946
NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Description:	Power Laundries, Family and Commercial
Create Date:	07/03/1987
Facility Active:	Yes
Inactive Date:	Not reported
Facility Addr2:	Not reported
Owner Name:	VICTOR JAUREGUI
Owner Address:	3821 PLAZA DR STE 403
Owner Address 2:	Not reported
Owner Telephone:	7607248441
Contact Name:	VICTOR JAUREGUI
Contact Address:	3821 PLAZA DR STE 403
Contact Address 2:	Not reported
Contact Telephone:	7607248441
Mailing Name:	Not reported
Mailing Address 1:	3821 PLAZA DR STE 403
Mailing Address 2:	Not reported
Mailing City:	OCEANSIDE
Mailing State:	CA
Mailing Zip:	920560000
Owner Fax:	0000000000
Region Code:	4

D16 **JOHN O'DER** **RCRA NonGen / NLR** **1024766951**
ENE **3426 SEABREEZE WALK** **CAC002986823**
< 1/8 **OCEANSIDE, CA 92056**
0.092 mi.
488 ft. **Site 1 of 5 in cluster D**

Relative:
Higher

Actual:
203 ft.

RCRA NonGen / NLR:

Date form received by agency:	10/29/2018
Facility name:	JOHN O'DER
Facility address:	3426 SEABREEZE WALK OCEANSIDE, CA 92056
EPA ID:	CAC002986823
Contact:	JOHN O'DER
Contact address:	3426 SEABREEZE WALK OCEANSIDE, CA 92056
Contact country:	Not reported
Contact telephone:	858-675-8115
Contact email:	INFO@JJANDSCONSTRUCTION.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	JOHN O'DER
Owner/operator address:	3426 SEABREEZE WALK OCEANSIDE, CA 92056
Owner/operator country:	Not reported
Owner/operator telephone:	858-675-8115
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	JOHN O'DER
Owner/operator address:	3426 SEABREEZE WALK OCEANSIDE, CA 92056
Owner/operator country:	Not reported
Owner/operator telephone:	858-675-8115
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

JOHN O'DER (Continued) **1024766951**

Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

C17 **GOODWILL INDUSTRIES OF SAN DIEGO COUNTY** **RCRA NonGen / NLR** **1024865168**
WSW **3817 PLAZA DR STE B** **CAL000433738**
< 1/8 **OCEANSIDE, CA 92056**
0.094 mi.
496 ft. **Site 5 of 7 in cluster C**

Relative:
Higher

Actual:
195 ft.

RCRA NonGen / NLR:

Date form received by agency:	02/16/2018
Facility name:	GOODWILL INDUSTRIES OF SAN DIEGO COUNTY
Facility address:	3817 PLAZA DR STE B OCEANSIDE, CA 92056
EPA ID:	CAL000433738
Mailing address:	3663 ROSECRANS ST SAN DIEGO, CA 92110
Contact:	AMEER ALNASHI
Contact address:	960 SHERMAN ST STE C SAN DIEGO, CA 92110
Contact country:	Not reported
Contact telephone:	619-942-4579
Contact email:	AALNASH@SDGOODWILL.ORG
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	GOODWILL INDUSTRIES OF SAN DIEGO CO
Owner/operator address:	3663 ROSECRANS ST SAN DIEGO, CA 92110
Owner/operator country:	Not reported
Owner/operator telephone:	619-225-2200
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	AMEER ALNASHI
Owner/operator address:	960 SHERMAN ST STE C SAN DIEGO, CA 92110
Owner/operator country:	Not reported
Owner/operator telephone:	619-942-4579
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator

GOODWILL INDUSTRIES OF SAN DIEGO COUNTY (Continued) **1024865168**

Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

C18 **TJ MAXX 1059** **CA San Diego Co. HMMD** **S106068357**
WSW **3817 PLAZA DR** **CA CERS HAZ WASTE** **N/A**
< 1/8 **OCEANSIDE, CA 92056** **CA CERS**
0.094 mi.
496 ft. **Site 6 of 7 in cluster C**

Relative: **Higher**
Actual: **195 ft.**

HMMD SAN DIEGO:
Name: TJ MAXX 1059
Address: 3817 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056-4624
Permit Number: Not reported
Business Type: Not reported
EPA Id Number: CAL000383034
APN: Not reported
Last HMMD Inspection: Not reported
Facility Telephone: 760 630-1887
Permit Status: Permit Renewed
Permit Expiration: Not reported
Date Last Updated: 03/29/2018
Facility Owner: Not reported
Facility Mailing Address: 770 Cochituate Road, Framingham, MA 01701
Facility Mailing City: Not reported
Facility Mailing State: Not reported
Facility Mailing Zip: Not reported
UST Owner: N
Handle Regulated Hazmat: Not reported
Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: N
Generate Medical Waste: Not reported

Waste and Materials:
Record ID: DEH2014-HUPFP-001084
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0114024

TJ MAXX 1059 (Continued) **S106068357**

Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-11-01T02:35:33.000
Chemical Name: Aerosols
Common Name: Spray Glue/ Spray Paint/ Personal Care Items
Case Number: Not reported

Record ID: DEH2014-HUPFP-001084
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0114025
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-11-01T02:35:33.000
Chemical Name: Corrosive Acids
Common Name: Color Remover, Cleaners
Case Number: Not reported

Record ID: DEH2014-HUPFP-001084
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0114026
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-11-01T02:35:33.000
Chemical Name: Corrosive Bases
Common Name: Cleaners, Paint Stripper (Onsite Maintenance)
Case Number: Not reported

Record ID: DEH2014-HUPFP-001084
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0114027
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-11-01T02:35:33.000
Chemical Name: Flammable Liquids
Common Name: Nail Polish/ Removers, Goof Off Cleaners, Cologne
Case Number: Not reported

Record ID: DEH2014-HUPFP-001084
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0114028
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-11-01T02:35:33.000
Chemical Name: Toxic Solids
Common Name: Pyrethroids
Case Number: Not reported

Record ID: DEH2014-HUPFP-001084
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HWAST-0178762
Trade Secret: N
Hazardous Material Type: Not reported

TJ MAXX 1059 (Continued) **S106068357**

Last Updated:	2019-02-07T01:51:58.000
Chemical Name:	Aerosols
Common Name:	Spray Glue/ Spray Paint/ Personal Care Items
Case Number:	Not reported
Record ID:	DEH2014-HUPFP-001084
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2019-HWAST-0178763
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2019-02-07T01:51:58.000
Chemical Name:	Corrosive Acids
Common Name:	Color Remover, Cleaners
Case Number:	Not reported
Record ID:	DEH2014-HUPFP-001084
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2019-HWAST-0178764
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2019-02-07T01:51:58.000
Chemical Name:	Corrosive Bases
Common Name:	Cleaners, Paint Stripper (Onsite Maintenance)
Case Number:	Not reported
Record ID:	DEH2014-HUPFP-001084
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2019-HWAST-0178765
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2019-02-07T01:51:58.000
Chemical Name:	Flammable Liquids
Common Name:	Nail Polish/ Removers, Goof Off Cleaners, Cologne
Case Number:	Not reported
Record ID:	DEH2014-HUPFP-001084
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2019-HWAST-0178766
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2019-02-07T01:51:58.000
Chemical Name:	Toxic Solids
Common Name:	Pyrethroids
Case Number:	Not reported
Record ID:	DEH2014-HUPFP-001084
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0150665
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-03-29T04:11:38.000
Chemical Name:	Aerosols

TJ MAXX 1059 (Continued) **S106068357**

Common Name:	Spray Glue/ Spray Paint/ Personal Care Items
Case Number:	Not reported
Record ID:	DEH2014-HUPFP-001084
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0150666
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-03-29T04:11:38.000
Chemical Name:	Corrosive Acids
Common Name:	Color Remover, Cleaners
Case Number:	Not reported
Record ID:	DEH2014-HUPFP-001084
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0150667
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-03-29T04:11:38.000
Chemical Name:	Corrosive Bases
Common Name:	Cleaners, Paint Stripper (Onsite Maintenance)
Case Number:	Not reported
Record ID:	DEH2014-HUPFP-001084
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0150668
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-03-29T04:11:38.000
Chemical Name:	Flammable Liquids
Common Name:	Nail Polish/ Removers, Goof Off Cleaners, Cologne
Case Number:	Not reported
Record ID:	DEH2014-HUPFP-001084
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0150669
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-03-29T04:11:38.000
Chemical Name:	Toxic Solids
Common Name:	Pyrethroids
Case Number:	Not reported
Record ID:	DEH2014-HUPFP-001084
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0078954
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2016-11-23T02:33:29.000
Chemical Name:	Aerosols
Common Name:	Spray Glue/ Spray Paint/ Personal Care Items
Case Number:	Not reported

TJ MAXX 1059 (Continued) **S106068357**

Record ID: DEH2014-HUPFP-001084
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0078955
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-11-23T02:33:29.000
Chemical Name: Corrosive Acids
Common Name: Color Remover, Cleaners
Case Number: Not reported

Record ID: DEH2014-HUPFP-001084
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0078956
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-11-23T02:33:29.000
Chemical Name: Corrosive Bases
Common Name: Cleaners, Paint Stripper (Onsite Maintenance)
Case Number: Not reported

Record ID: DEH2014-HUPFP-001084
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0078957
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-11-23T02:33:29.000
Chemical Name: Flammable Liquids
Common Name: Nail Polish/ Removers, Goof Off Cleaners, Cologne
Case Number: Not reported

Record ID: DEH2014-HUPFP-001084
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0078958
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-11-23T02:33:29.000
Chemical Name: Toxic Solids
Common Name: Pyrethroids
Case Number: Not reported

Name: SAN DIEGO ORTHODONTIC SPECIALI
Address: 3817 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Permit Number: 153460
Business Type: 6HK10
EPA Id Number: Not reported
APN: 168-012-03-00
Last HMMD Inspection: 08/31/1999
Facility Telephone: 619-726-9797
Permit Status: INAC
Permit Expiration: 08/31/1999
Date Last Updated: 11/02/2012

TJ MAXX 1059 (Continued) **S106068357**

Facility Owner: ORTHODONTIC CENTERS OF AMERICA
Facility Mailing Address: 3817 PLAZA DR #401
Facility Mailing City: OCEANSIDE
Facility Mailing State: CA
Facility Mailing Zip: 92056-
UST Owner: Not reported
Handle Regulated Hazmat: Not reported
Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: Not reported
Generate Medical Waste: Not reported

CERS HAZ WASTE:
Site ID: 439692
CERS ID: 10765933
CERS Description: Hazardous Waste Generator

Affiliation:
Affiliation Type Desc: Parent Corporation
Entity Name: GOODWILL INDUSTRIES OF SAN DIEGO COUNTY
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 3663 Rosecrans St,
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92110
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: GOODWILL INDUSTRIES OF SAN DIEGO COUNTY
Entity Title: Not reported
Affiliation Address: 3663 Rosecrans St,
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92110

TJ MAXX 1059 (Continued) **S106068357**

Affiliation Phone:	(619) 225-2200
Affiliation Type Desc:	Document Preparer
Entity Name:	Ameer Alnashi
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Ameer Alnashi
Entity Title:	Not reported
Affiliation Address:	3663 Rosecrans St,
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92110
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Ameer Alnashi
Entity Title:	Environmental Services Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Ameer Alnashi
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(619) 942-4579
Site ID:	76742
CERS ID:	10492726
CERS Description:	Hazardous Waste Generator

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-08-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Yousif Teaba Inspection ID:5736448
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection

TJ MAXX 1059 (Continued) **S106068357**

Eval Date: 09-10-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Khan Steven Inspection ID:5342545
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-10-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Khan Steven Inspection ID:5342545
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Coordinates:
Site ID: 76742
Facility Name: TJ Maxx 1059
Env Int Type Code: HWG
Program ID: 10492726
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.181180
Longitude: -117.291880

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: Paul Kangas
Entity Title: Not reported
Affiliation Address: 770 Cochituate Road
Affiliation City: Framingham
Affiliation State: MA
Affiliation Country: Not reported
Affiliation Zip: 01701
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Paul Kangas
Entity Title: SVP, Chief Compliance Officer
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261

TJ MAXX 1059 (Continued) **S106068357**

Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Parent Corporation
Entity Name:	The TJX Companies, Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	Susan Allen
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	770 Cochituate Road
Affiliation City:	Framingham
Affiliation State:	MA
Affiliation Country:	Not reported
Affiliation Zip:	01701
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	TJ Maxx of CA, LLC
Entity Title:	Not reported
Affiliation Address:	770 Cochituate Road
Affiliation City:	Framingham
Affiliation State:	MA
Affiliation Country:	United States
Affiliation Zip:	01701
Affiliation Phone:	(774) 308-3651
Affiliation Type Desc:	Operator
Entity Name:	TJ Maxx
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(774) 308-3651

CERS:

Name:	TJ MAXX 1059
Address:	3817 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056

TJ MAXX 1059 (Continued) **S106068357**

Site ID: 76742
CERS ID: 10492726
CERS Description: Chemical Storage Facilities

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-08-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5736448
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-10-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Khan Steven Inspection ID:5342545
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-10-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Khan Steven Inspection ID:5342545
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Coordinates:
Site ID: 76742
Facility Name: TJ Maxx 1059
Env Int Type Code: HWG
Program ID: 10492726
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.181180
Longitude: -117.291880

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: Paul Kangas
Entity Title: Not reported
Affiliation Address: 770 Cochituate Road
Affiliation City: Framingham
Affiliation State: MA
Affiliation Country: Not reported
Affiliation Zip: 01701
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Paul Kangas
Entity Title: SVP, Chief Compliance Officer
Affiliation Address: Not reported

TJ MAXX 1059 (Continued) **S106068357**

Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Parent Corporation
Entity Name:	The TJX Companies, Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	Susan Allen
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	770 Cochituate Road
Affiliation City:	Framingham
Affiliation State:	MA
Affiliation Country:	Not reported
Affiliation Zip:	01701
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	TJ Maxx of CA, LLC
Entity Title:	Not reported
Affiliation Address:	770 Cochituate Road
Affiliation City:	Framingham
Affiliation State:	MA
Affiliation Country:	United States
Affiliation Zip:	01701
Affiliation Phone:	(774) 308-3651
Affiliation Type Desc:	Operator

TJ MAXX 1059 (Continued) **S106068357**

Entity Name: TJ Maxx
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (774) 308-3651

Name: GOODWILL INDUSTRIES OF SAN DIEGO COUNTY #028
Address: 3817 PLAZA DR STE B
City,State,Zip: OCEANSIDE, CA 92056
Site ID: 439692
CERS ID: 10765933
CERS Description: Chemical Storage Facilities

Affiliation:
Affiliation Type Desc: Parent Corporation
Entity Name: GOODWILL INDUSTRIES OF SAN DIEGO COUNTY
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 3663 Rosecrans St,
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92110
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: GOODWILL INDUSTRIES OF SAN DIEGO COUNTY
Entity Title: Not reported
Affiliation Address: 3663 Rosecrans St,
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92110
Affiliation Phone: (619) 225-2200

TJ MAXX 1059 (Continued) **S106068357**

Affiliation Type Desc:	Document Preparer
Entity Name:	Ameer Alnashi
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Ameer Alnashi
Entity Title:	Not reported
Affiliation Address:	3663 Rosecrans St,
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92110
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Ameer Alnashi
Entity Title:	Environmental Services Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Ameer Alnashi
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(619) 942-4579

C19 **TJ MAXX 1059** **RCRA NonGen / NLR** **1024837520**
WSW **3817 PLAZA DR** **CAL000383034**
< 1/8 **OCEANSIDE, CA 92056**
0.094 mi.
496 ft. **Site 7 of 7 in cluster C**

Relative:
Higher

Actual:
195 ft.

RCRA NonGen / NLR:

Date form received by agency:	03/01/2013
Facility name:	TJ MAXX 1059
Facility address:	3817 PLAZA DR OCEANSIDE, CA 92056
EPA ID:	CAL000383034
Mailing address:	770 COCHITUATE RD 300.1AN FRAMINGHAM, MA 01701
Contact:	PAUL KANGAS
Contact address:	770 COCHITUATE RD 300.1AN

TJ MAXX 1059 (Continued) **1024837520**

FRAMINGHAM, MA 01701
Contact country: Not reported
Contact telephone: 774-308-3651
Contact email: PAUL_KANGAS@TJX.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: TJ MAXX OF CA LLC
Owner/operator address: 770 COCHITUATE RD
FRAMINGHAM, MA 01701
Owner/operator country: Not reported
Owner/operator telephone: 774-308-3651
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: PAUL KANGAS
Owner/operator address: 770 COCHITUATE RD 300.1AN
FRAMINGHAM, MA 01701
Owner/operator country: Not reported
Owner/operator telephone: 774-308-3651
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

E20
NW
< 1/8
0.115 mi.
609 ft.

HOME DEPOT #679 THE
4000 VISTA WY
OCEANSIDE, CA 92056

Site 1 of 6 in cluster E

RCRA-SQG **1000196415**
CAD981966922

Relative:
Higher

Actual:
232 ft.

RCRA-SQG:

Date form received by agency:	01/29/1987
Facility name:	HOME DEPOT #679 THE
Facility address:	4000 VISTA WY OCEANSIDE, CA 92056
EPA ID:	CAD981966922
Contact:	ENVIRONMENTAL MANAGER
Contact address:	4000 VISTA WY OCEANSIDE, CA 92056
Contact country:	US
Contact telephone:	415-555-1212
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	THE HOME DEPOT
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	415-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	415-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No

HOME DEPOT #679 THE (Continued) **1000196415**

Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

D21 **GB AUTO SERVICES INC** **RCRA NonGen / NLR** **1024871530**
NE **2070 HACIENDA DR** **CAL000440175**
< 1/8 **VISTA, CA 92081**
0.121 mi.
638 ft. **Site 2 of 5 in cluster D**

Relative:
Higher

Actual:
220 ft.

RCRA NonGen / NLR:

Date form received by agency:	10/26/2018
Facility name:	GB AUTO SERVICES INC
Facility address:	2070 HACIENDA DR VISTA, CA 92081
EPA ID:	CAL000440175
Mailing address:	2520 PIONEER AVE VISTA, CA 92081
Contact:	JOHN MARCHIONE
Contact address:	2520 PIONEER AVE VISTA, CA 92081
Contact country:	Not reported
Contact telephone:	760-520-3957
Contact email:	JMARCHIONE@EVANTIRE.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	MATTHEW BURKE
Owner/operator address:	2520 PIONEER AVE VISTA, CA 92081
Owner/operator country:	Not reported
Owner/operator telephone:	760-520-3657
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	JOHN MARCHIONE
Owner/operator address:	2520 PIONEER AVE VISTA, CA 92081
Owner/operator country:	Not reported
Owner/operator telephone:	760-520-3957
Owner/operator email:	Not reported

GB AUTO SERVICES INC (Continued) **1024871530**

Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

D22 **FRAZEE PAINT** **CA San Diego Co. HMMD** **S106062200**
NE **2070 HACIENDA DR** **CA CERS HAZ WASTE** **N/A**
< 1/8 **VISTA, CA 92083** **CA CERS**
0.121 mi.
638 ft. **Site 3 of 5 in cluster D**

Relative:
Higher

Actual:
220 ft.

HMMD SAN DIEGO:
Name: FRAZEE PAINT
Address: 2070 HACIENDA DR
City,State,Zip: VISTA, CA 92083
Permit Number: 206683
Business Type: 6HK18
EPA Id Number: CAL000229652
APN: 166-054-08-00
Last HMMD Inspection: 12/16/2010
Facility Telephone: 760-758-0444
Permit Status: OPEN
Permit Expiration: 11/30/2012
Date Last Updated: 11/02/2012
Facility Owner: FRAZEE INDUSTRIES, INC
Facility Mailing Address: PO BOX 4028
Facility Mailing City: GREENWOOD VILLAGE
Facility Mailing State: CO
Facility Mailing Zip: 80155
UST Owner: Not reported
Handle Regulated Hazmat: N
Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: Not reported
Generate Medical Waste: Not reported

FRAZEE PAINT (Continued) **S106062200**

Inventory Active Permits (not SQG Medical):

Permit Number:	206683
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 461 PAINT SLUDGE
Other Information:	OIL BASED PAINTS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Name:	WINSTON TIRES NO.167
Address:	2070 HACIENDA DR
City,State,Zip:	VISTA, CA 92083
Permit Number:	124514
Business Type:	6HK26
EPA Id Number:	CAL000015431
APN:	166-054-08-00
Last HMMD Inspection:	09/05/2002
Facility Telephone:	760-726-2514
Permit Status:	CHNG
Permit Expiration:	03/31/2003
Date Last Updated:	11/02/2012
Facility Owner:	SAM WINSTON
Facility Mailing Address:	2070 HACIENDA DR #A
Facility Mailing City:	VISTA
Facility Mailing State:	CA
Facility Mailing Zip:	92083
UST Owner:	Not reported
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Name:	SHERWIN-WILLIAMS #1520
Address:	2070 HACIENDA DR L
City,State,Zip:	VISTA, CA 92083
Permit Number:	Not reported
Business Type:	Not reported
EPA Id Number:	CAL000396094
APN:	Not reported
Last HMMD Inspection:	Not reported
Facility Telephone:	760-758-0444
Permit Status:	Permit Renewed
Permit Expiration:	Not reported
Date Last Updated:	06/22/2018
Facility Owner:	Not reported
Facility Mailing Address:	2070 HACIENDA DR, VISTA, CA 92083
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	N
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported

FRAZEE PAINT (Continued) **S106062200**

Generate Haz Waste: Y
Treat Haz Waste: N
Generate Medical Waste: Not reported

Inspection Violation:
Record ID: DEH2006-HUPFP-206683
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-206683
Program Element: Hazardous Waste Generator
Inspection Type: Routine
Inspection Number: 4113735
Return To Compliance Date: 2014-10-07T00:00:00.000
Nov: No
Violation Classification: Minor
Underground Storage Tank Id: Not reported
Container/Tank Id: Not reported
Last Update: 2019-01-30T00:00:00.000
Inspection Date: 2014-10-07T13:36:00.000
Violation Code: 3030017 Failure to properly close hazardous waste containers when not in active use.; 22 CCR 12 66262.34(d)(2); 40 CFR 1 265.173.

Record ID: DEH2006-HUPFP-206683
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-206683
Program Element: Hazardous Waste Generator
Inspection Type: Routine
Inspection Number: 4113735
Return To Compliance Date: 2014-10-15T00:00:00.000
Nov: No
Violation Classification: Minor
Underground Storage Tank Id: Not reported
Container/Tank Id: Not reported
Last Update: 2019-01-30T00:00:00.000
Inspection Date: 2014-10-07T13:36:00.000
Violation Code: 3030007 Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.; 22 CCR 12 66262.34(f).

Waste and Materials:
Record ID: DEH2006-HUPFP-206683
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0140354
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-02-27T02:30:39.000
Chemical Name: NonRCRA Waste Empty Toner Bottles
Common Name: NonRCRA Waste Empty Toner Bottles
Case Number: Not reported

Record ID: DEH2006-HUPFP-206683
Permit Status: Permit Renewed
Active Permit: Y

FRAZEE PAINT (Continued) **S106062200**

Child Record Id: DEH2018-HWAST-0161633
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-01-30T02:36:55.000
Chemical Name: NonRCRA Waste Debris contaminated with water-based coatings
Common Name: NonRCRA Waste Debris contaminated with water-based coatings
Case Number: Not reported

Record ID: DEH2006-HUPFP-206683
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0161634
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-01-30T02:36:55.000
Chemical Name: NonRCRA Waste Empty Toner Bottles
Common Name: NonRCRA Waste Empty Toner Bottles
Case Number: Not reported

Record ID: DEH2006-HUPFP-206683
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0161635
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-01-30T02:36:55.000
Chemical Name: RCRA Waste Debris contaminated with Solvent-based paint
Common Name: RCRA Waste Debris contaminated with solvent-based paint
Case Number: Not reported

Record ID: DEH2006-HUPFP-206683
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0140353
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-02-27T02:30:39.000
Chemical Name: NonRCRA Waste Debris contaminated with water-based coatings
Common Name: NonRCRA Waste Debris contaminated with water-based coatings
Case Number: Not reported

Record ID: DEH2006-HUPFP-206683
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0140355
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-02-27T02:30:39.000
Chemical Name: RCRA Waste Debris contaminated with Solvent-based paint
Common Name: RCRA Waste Debris contaminated with solvent-based paint
Case Number: Not reported

CERS HAZ WASTE:
Site ID: 117817
CERS ID: 10378909
CERS Description: Hazardous Waste Generator

FRAZEE PAINT (Continued) **S106062200**

Violations:

Site ID:	117817
Site Name:	SHERWIN-WILLIAMS #1520
Violation Date:	10-07-2014
Citation:	40 CFR 1 265.173 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.173
Violation Description:	Failure to properly close hazardous waste containers when not in active use.
Violation Notes:	Returned to compliance on 10/07/2014.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	117817
Site Name:	SHERWIN-WILLIAMS #1520
Violation Date:	10-07-2014
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	Returned to compliance on 10/15/2014.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-07-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Vue Cher Inspection ID:4113735
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-07-2014
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Vue Cher Inspection ID:4113735
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-06-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Villalvazo Olivia Inspection ID:5715351
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

FRAZEE PAINT (Continued) **S106062200**

Affiliation:

Affiliation Type Desc:	Parent Corporation
Entity Name:	Sherwin-Williams Company
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880

Affiliation Type Desc:	Document Preparer
Entity Name:	Yenny Khuu
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Environmental Contact
Entity Name:	Yenny Khuu
Entity Title:	Not reported
Affiliation Address:	2100 W. Orangewood Ave Ste100
Affiliation City:	Orange
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92868
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	2070 HACIENDA DR
Affiliation City:	VISTA
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92083
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	The Sherwin-Williams Co
Entity Title:	Not reported
Affiliation Address:	101 W Prospect Ave. 1000 Midland Building
Affiliation City:	Cleveland
Affiliation State:	OH

FRAZEE PAINT (Continued) **S106062200**

Affiliation Country: United States
Affiliation Zip: 44115
Affiliation Phone: (216) 566-1710

Affiliation Type Desc: Identification Signer
Entity Name: Yenny Khuu
Entity Title: Area EHS Manager
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: THE SHERWIN-WILLIAMS CO
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (216) 566-1710

Site ID: 115088
CERS ID: 10378759
CERS Description: Hazardous Waste Generator

Violations:
Site ID: 115088
Site Name: GB Auto Service dba Evans Tire & Service Centers #18
Violation Date: 07-14-2015
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description: Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes: Returned to compliance on 07/29/2015.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 115088
Site Name: GB Auto Service dba Evans Tire & Service Centers #18
Violation Date: 07-18-2017
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 01/26/2018.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 115088

FRAZEE PAINT (Continued) **S106062200**

Site Name: GB Auto Service dba Evans Tire & Service Centers #18
Violation Date: 07-14-2015
Citation: HSC 6.95 25508.1(a)-(e) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(e)
Violation Description: Failure to electronically update business plan within 30 days of any one of the following events: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials at or above reportable quantities. A change of business address, business ownership, or business name.
Violation Notes: Returned to compliance on 07/29/2015.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 115088
Site Name: GB Auto Service dba Evans Tire & Service Centers #18
Violation Date: 07-18-2017
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description: Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes: Returned to compliance on 08/18/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-14-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Jaramillo Marcie Inspection ID:4087723
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-18-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Villalvazo Olivia Inspection ID:5699762
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-18-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Villalvazo Olivia Inspection ID:5699762
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection

FRAZEE PAINT (Continued) **S106062200**

Eval Date: 07-14-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Jaramillo Marcie Inspection ID:4087723
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Affiliation:

Affiliation Type Desc: Document Preparer
Entity Name: Starr Hunter
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: Starr Hunter
Entity Title: Not reported
Affiliation Address: 2520 Pioneer Ave
Affiliation City: Vista
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92081
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: John Marchioni
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 579-4470

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 2520 Pioneer Ave
Affiliation City: Vista
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92081

FRAZEE PAINT (Continued) **S106062200**

Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Starr Hunter
Entity Title: Customer Service
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: GB Auto Service Inc.
Entity Title: Not reported
Affiliation Address: 2520 Pioneer Ave
Affiliation City: Vista
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92081
Affiliation Phone: (760) 579-4470

Affiliation Type Desc: Parent Corporation
Entity Name: GB Auto Services Inc., dba Evans Tire and Service Centers
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

CERS:
Name: GB AUTO SERVICE DBA EVANS TIRE & SERVICE CENTERS #18
Address: 2070 HACIENDA DR
City,State,Zip: VISTA, CA 92083
Site ID: 115088
CERS ID: 10378759
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 115088
Site Name: GB Auto Service dba Evans Tire & Service Centers #18
Violation Date: 07-14-2015
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description: Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes: Returned to compliance on 07/29/2015.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 115088

FRAZEE PAINT (Continued) **S106062200**

Site Name: GB Auto Service dba Evans Tire & Service Centers #18
Violation Date: 07-18-2017
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 01/26/2018.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 115088
Site Name: GB Auto Service dba Evans Tire & Service Centers #18
Violation Date: 07-14-2015
Citation: HSC 6.95 25508.1(a)-(e) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(e)
Violation Description: Failure to electronically update business plan within 30 days of any one of the following events: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials at or above reportable quantities. A change of business address, business ownership, or business name.
Violation Notes: Returned to compliance on 07/29/2015.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 115088
Site Name: GB Auto Service dba Evans Tire & Service Centers #18
Violation Date: 07-18-2017
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description: Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes: Returned to compliance on 08/18/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-14-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Jaramillo Marcie Inspection ID:4087723
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-18-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Villalvazo Olivia Inspection ID:5699762
Eval Division: San Diego County Department of Env Health

FRAZEE PAINT (Continued) **S106062200**

Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-18-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Villalvazo Olivia Inspection ID:5699762
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-14-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Jaramillo Marcie Inspection ID:4087723
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Document Preparer
Entity Name: Starr Hunter
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: Starr Hunter
Entity Title: Not reported
Affiliation Address: 2520 Pioneer Ave
Affiliation City: Vista
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92081
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: John Marchioni
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 579-4470

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego

FRAZEE PAINT (Continued) **S106062200**

Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 2520 Pioneer Ave
Affiliation City: Vista
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92081
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Starr Hunter
Entity Title: Customer Service
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: GB Auto Service Inc.
Entity Title: Not reported
Affiliation Address: 2520 Pioneer Ave
Affiliation City: Vista
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92081
Affiliation Phone: (760) 579-4470

Affiliation Type Desc: Parent Corporation
Entity Name: GB Auto Services Inc., dba Evans Tire and Service Centers
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: SHERWIN-WILLIAMS #1520
Address: 2070 HACIENDA DR
City,State,Zip: VISTA, CA 92083
Site ID: 117817
CERS ID: 10378909
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 117817
Site Name: SHERWIN-WILLIAMS #1520
Violation Date: 10-07-2014
Citation: 40 CFR 1 265.173 - U.S. Code of Federal Regulations, Title 40, Chapter

FRAZEE PAINT (Continued) **S106062200**

1, Section(s) 265.173
Violation Description: Failure to properly close hazardous waste containers when not in active use.
Violation Notes: Returned to compliance on 10/07/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 117817
Site Name: SHERWIN-WILLIAMS #1520
Violation Date: 10-07-2014
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description: Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes: Returned to compliance on 10/15/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-07-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Vue Cher Inspection ID:4113735
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-07-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Vue Cher Inspection ID:4113735
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-06-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Villalvazo Olivia Inspection ID:5715351
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Parent Corporation
Entity Name: Sherwin-Williams Company
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported

FRAZEE PAINT (Continued) **S106062200**

Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Document Preparer
Entity Name: Yenny Khuu
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: Yenny Khuu
Entity Title: Not reported
Affiliation Address: 2100 W. Orangewood Ave Ste100
Affiliation City: Orange
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92868
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 2070 HACIENDA DR
Affiliation City: VISTA
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92083
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: The Sherwin-Williams Co
Entity Title: Not reported
Affiliation Address: 101 W Prospect Ave. 1000 Midland Building
Affiliation City: Cleveland
Affiliation State: OH
Affiliation Country: United States
Affiliation Zip: 44115
Affiliation Phone: (216) 566-1710

Affiliation Type Desc: Identification Signer
Entity Name: Yenny Khuu

FRAZEE PAINT (Continued) **S106062200**

Entity Title: Area EHS Manager
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: THE SHERWIN-WILLIAMS CO
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (216) 566-1710

D23 **EVANS TIRE & SERVICE CENTER #18** **RCRA NonGen / NLR** **1024804798**
NE **2070 HACIENDA DR** **CAL000260218**
< 1/8 **VISTA, CA 92081**
0.121 mi.
638 ft. **Site 4 of 5 in cluster D**

Relative:
Higher

Actual:
220 ft.

RCRA NonGen / NLR:
Date form received by agency: 10/03/2002
Facility name: EVANS TIRE & SERVICE CENTER #18
Facility address: 2070 HACIENDA DR
VISTA, CA 92081-6043
EPA ID: CAL000260218
Mailing address: 2520 PIONEER AVE
VISTA, CA 92081-0000
Contact: STACI PEARCEY
Contact address: 2520 PIONEER AVE
VISTA, CA 92081
Contact country: Not reported
Contact telephone: 760-579-4470
Contact email: CUSTOMERCARE@EVANSTIRE.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: STACI PEARCEY
Owner/operator address: 2520 PIONEER AVE
VISTA, CA 92081
Owner/operator country: Not reported
Owner/operator telephone: 760-579-4470
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

EVANS TIRE & SERVICE CENTER #18 (Continued) **1024804798**

Owner/operator name: JOHN ANDONIAN
Owner/operator address: 2520 PIONEER AVE
VISTA, CA 92081
Owner/operator country: Not reported
Owner/operator telephone: 760-579-4470
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

D24
NE
< 1/8
0.121 mi.
638 ft.

SHERIN WILLIAMS #1520 **RCRA NonGen / NLR** **1024844046**
2070 HACIENDA DR STE L **CAL000396094**
VISTA, CA 92081

Site 5 of 5 in cluster D

Relative:
Higher

Actual:
220 ft.

RCRA NonGen / NLR:
Date form received by agency: 04/23/2014
Facility name: SHERIN WILLIAMS #1520
Facility address: 2070 HACIENDA DR STE L
VISTA, CA 92081
EPA ID: CAL000396094
Mailing address: 101 W PROSPECT AVE
1000 MIDLAND BUILDING
CLEVELAND, OH 44115-1027
Contact: CAROL F. DOE
Contact address: 101 PROSPECT AVE NW 1000 MIDLAND BUILDING
CLEVELAND, OH 44115
Contact country: Not reported
Contact telephone: 216-566-1710
Contact email: CAROL.F.DOE@SHERWIN.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

SHERIN WILLIAMS #1520 (Continued) **1024844046**

Owner/Operator Summary:

Owner/operator name:	THE SHERWIN WILLIAMS COMPANY
Owner/operator address:	101 W PROSPECT AVE 1000 MIDLAND BUILDING CLEVELAND, OH 44115
Owner/operator country:	Not reported
Owner/operator telephone:	216-566-1710
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	CAROL F. DOE
Owner/operator address:	101 PROSPECT AVE NW 1000 MIDLAND BUILDING CLEVELAND, OH 44115
Owner/operator country:	Not reported
Owner/operator telephone:	216-566-1710
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	Yes
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

E25
NW
< 1/8
0.122 mi.
646 ft.

Relative:
Higher

Actual:
233 ft.

TRI-CITY MEDICAL CENTER
4002 VISTA WAY
OCEANSIDE, CA 92056

Site 2 of 6 in cluster E

RCRA-LQG **1000138565**
CA ENVIROSTOR **CAD981167786**
CA LUST
CA SAN DIEGO CO. SAM
CA UST
CA CERS HAZ WASTE
CA SWEEPS UST
CA HIST UST
CA CERS TANKS
CA EMI
CA HAZNET
NY MANIFEST
CA CERS

RCRA-LQG:

Date form received by agency:	02/29/2016
Facility name:	TRI-CITY MEDICAL CENTER
Facility address:	4002 VISTA WAY OCEANSIDE, CA 92056
EPA ID:	CAD981167786
Mailing address:	VISTA WAY OCEANSIDE, CA 92056
Contact:	KEVIN M MCQUEEN
Contact address:	VISTA WAY OCEANSIDE, CA 92056
Contact country:	US
Contact telephone:	760-940-3076
Contact email:	MCQUEENKM@TCMC.COM
EPA Region:	09
Land type:	District
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	TRI-CITY HEALTHCARE DISTRICT
Owner/operator address:	VISTA WAY OCEANSIDE, CA 92056
Owner/operator country:	US
Owner/operator telephone:	760-724-8411
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1961
Owner/Op end date:	Not reported

Owner/operator name:	TRI-CITY HEALTHCARE DISTRICT

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: District
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1961
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: DISTRICT HOSPITAL
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): Yes
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Date form received by agency: 09/01/1996
Site name: TRI-CITY MEDICAL CTR
Classification: Small Quantity Generator

Date form received by agency: 12/19/1985
Site name: TRI-CITY MEDICAL CTR
Classification: Large Quantity Generator

Hazardous Waste Summary:

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 214
. Waste name: Unspecified solvent mixture

. Waste code: 221
. Waste name: Waste oil and mixed oil

. Waste code: 311
. Waste name: Pharmaceutical waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 343
. Waste name: Unspecified organic liquid mixture

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 513
. Waste name: Empty containers less than 30 gallons

. Waste code: 551
. Waste name: Laboratory waste chemicals

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D003
. Waste name: REACTIVE WASTE

. Waste code: D009
. Waste name: MERCURY

. Waste code: F002
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: U002
. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U023
. Waste name: BENZENE, (TRICHLOROMETHYL)- (OR) BENZOTRICHLORIDE (C,R,T)

. Waste code: U123
. Waste name: FORMIC ACID (C,T)

. Waste code: U154
. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U220
. Waste name: BENZENE, METHYL- (OR) TOLUENE

Biennial Reports:

Last Biennial Reporting Year: 2017

Annual Waste Handled:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs): 12381

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Amount (Lbs): 240

Waste code: D003
Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.
Amount (Lbs): 20

Waste code: D009
Waste name: MERCURY
Amount (Lbs): 5

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 250

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 11260

Waste code: U023
Waste name: BENZENE, (TRICHLOROMETHYL)-
Amount (Lbs): 45

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 08/01/2003
Date achieved compliance: 11/01/2003
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.10-12.A
Area of violation: Generators - General
Date violation determined: 07/06/1994
Date achieved compliance: 07/06/1999
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.10-12.A
Area of violation: Generators - General
Date violation determined: 03/17/1994
Date achieved compliance: 07/06/1994
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.10-12.A
Area of violation: Generators - General
Date violation determined: 02/03/1993
Date achieved compliance: 03/17/1994
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 10/16/2015
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 08/01/2003
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Area of violation: Generators - General
Date achieved compliance: 11/01/2003
Evaluation lead agency: State Contractor/Grantee

Evaluation date: 07/06/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 07/06/1999
Evaluation lead agency: State Contractor/Grantee

Evaluation date: 03/17/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 07/06/1994
Evaluation lead agency: State Contractor/Grantee

Evaluation date: 02/03/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 03/17/1994
Evaluation lead agency: State Contractor/Grantee

ENVIROSTOR:
Name: TRI-CITY MEDICAL CENTER
Address: 4002 VISTA WAY
City,State,Zip: OCEANSIDE, CA 92056
Facility ID: 71002729
Status: Inactive - Needs Evaluation
Status Date: Not reported
Site Code: Not reported
Site Type: Tiered Permit
Site Type Detailed: Tiered Permit
Acres: Not reported
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: Not reported
Division Branch: Cleanup Cypress
Assembly: 75
Senate: 36
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Not reported
Latitude: 33.18529
Longitude: -117.2907
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: CAD981167786
Alias Type: EPA Identification Number
Alias Name: 110002680457
Alias Type: EPA (FRS #)
Alias Name: 71002729
Alias Type: Envirostor ID Number

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Completed Info:
Completed Area Name: Not reported
Completed Sub Area Name: Not reported
Completed Document Type: Not reported
Completed Date: Not reported
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

LUST:
Name: TRI-CITY MEDICAL CENTER
Address: 4002 VISTA WY
City,State,Zip: OCEANSIDE, CA 920564506
Lead Agency: SAN DIEGO COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607302613
Global Id: T0607302613
Latitude: 33.1840451
Longitude: -117.2961002
Status: Completed - Case Closed
Status Date: 01/19/2010
Case Worker: Not reported
RB Case Number: 9UT3854
Local Agency: Not reported
File Location: Local Agency
Local Case Number: H14248-002
Potential Media Affect: Soil
Potential Contaminants of Concern: Diesel
Site History: This case (H14248-002) was consolidated with case H14248-001. Please see case H14248-001 for any information regarding this case.

LUST:
Global Id: T0607302613
Action Type: Other
Date: 02/08/1999
Action: Leak Discovery

Global Id: T0607302613
Action Type: ENFORCEMENT
Date: 03/08/1999
Action: Notice of Responsibility

Global Id: T0607302613
Action Type: Other
Date: 02/08/1999
Action: Leak Stopped

Global Id: T0607302613
Action Type: ENFORCEMENT

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Date: 12/05/2008
Action: Letter - Notice

Global Id: T0607302613
Action Type: Other
Date: 03/01/1999
Action: Leak Reported

Global Id: T0607302613
Action Type: ENFORCEMENT
Date: 07/09/2009
Action: Letter - Notice

Global Id: T0607302613
Action Type: ENFORCEMENT
Date: 01/14/2010
Action: Closure/No Further Action Letter

Global Id: T0607302613
Action Type: Other
Date: 02/08/1999
Action: Leak Began

LUST:
Global Id: T0607302613
Status: Completed - Case Closed
Status Date: 01/19/2010

Global Id: T0607302613
Status: Open - Case Begin Date
Status Date: 02/08/1999

Global Id: T0607302613
Status: Open - Site Assessment
Status Date: 03/08/1999

Name: TRI-CITY MEDICAL CENTER
Address: 4002 VISTA WY
City,State,Zip: OCEANSIDE, CA 920564506
Lead Agency: SAN DIEGO COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607301001
Global Id: T0607301001
Latitude: 33.1840491
Longitude: -117.2961272
Status: Completed - Case Closed
Status Date: 08/14/2013
Case Worker: CF
RB Case Number: 9UT2236
Local Agency: SAN DIEGO COUNTY LOP
File Location: Local Agency
Local Case Number: H14248-001
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Diesel
Site History: In February 1992, diesel was discovered in the trench backfill (sand and gravel) of the existing main sewer that parallels the access road

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

serving the east side of Tri-City Medical Center (the hospital) in Oceanside, California. Emergency response actions were initiated, reportedly including the removal of 5 to 15 gallons of product using a vacuum truck. A temporary sump was installed to collect a fuel/water mixture that had accumulated in the main sewer trench backfill. The fuel/water mixture was periodically pumped into 55-gallon drums over a six-month period. A concrete cut-off wall was also constructed in the main sewer trench to mitigate further seepage of the release within the trench backfill. A soil sample, collected from the sewer trench backfill approximately 150 feet up-gradient of the location where the release was discovered, indicated diesel impacts up to 6,104 milligrams per kilogram (mg/kg). Upon confirming a report of the unauthorized release, DEH opened Case #H14248-001 on February 20, 1992. During a 1992 expansion of the surgical center on the east-central side of the hospital, one or two, 2-inch-diameter diesel pipelines were reportedly punctured by steel stakes driven to mark the perimeter of the surgical additions foundation. The diesel pipelines had previously supplied two boilers inside the hospitals former Central Plant addition. The pipeline corridor originated at two, fiberglass, single-walled, 10,000-gallon-capacity diesel underground storage tanks (USTs) located beneath a paved parking lot adjoining the eastern access road. The pipeline corridor extended northwest of the USTs approximately 110 feet, then angled north to tie in with the boilers inside the former Central Plant addition. In 1993, the diesel pipelines from the two, existing 10,000-gallon diesel USTs, located beneath the paved parking lot adjoining the eastern access road, were re-routed to the Electrical Service Building, which adjoined the south side of the former Central Plant. TPH-impacted materials were encountered during trenching for the new pipelines, but were removed. Once the new diesel pipelines were in operation, a 2,000-gallon fiberglass UST that had contained diesel was removed from the area south of the Electrical Service Building, which was also slated for construction of an addition. The former UST, which was removed on June 16, 1993, had supplied emergency generators. Although there was no direct evidence that the UST had leaked, TPH-impacted materials were encountered beneath a concrete pad underlying the UST. Approximately 200 yd3 of impacted soils were excavated, removed, and stockpiled at an unspecified location. [Note: the stockpile location was later found to be west the hospital in a vacant portion of the property]. Based on the RPA reports, the consultant estimated that 617 yd3 of diesel-impacted materials remain in place. The case was revisited in 1999 when remote fill piping near the existing 10,000-gallon capacity USTs was upgraded. Diesel was detected in a soil sample and a second DEH unauthorized release case was opened (#H14248-002). [Note: the second case was consolidated into #H14248-001 on January 14, 2010, because the diesel occurrence was attributed to the initial release]. In late 2004 and early 2005, diesel pipelines from the 10,000-gallon USTs, that appear to have been routed to a new, stand-alone, Central Plant building located east of the USTs, were closed. Diesel was detected in one soil sample collected from the pipe trench, but was deemed part of the initial release discovered in 1992. In October 2011, two monitoring wells were installed approximately 10 feet southwest of the 10,000-gallon capacity diesel USTs. The wells were positioned down-gradient of the junctions of the abandoned diesel pipeline corridor with several sewer laterals from the former Central Plant area, as well as the main sewer. One well was screened from 15 to 25 feet bgs and the

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

other well was screened from 35 to 45 feet bgs. The Santiago Formation was encountered in the well boring at approximately 16 feet bgs, beneath silty sand/clay overburden. Soil/weathered bedrock samples collected at depths of 16 - 21 feet bgs from the well borings indicated impacts (200 to 240 mg/kg) from diesel-range organics. However, petroleum hydrocarbons, including diesel-range organics, were not detected in the groundwater samples collected from the wells. According to the consultant, the groundwater samples collected from the paired site monitoring wells appear to represent two different groundwater zones. Although the static water levels measured in the wells differed by only 0.54-foot, the conductivity of the water in the deeper zone was more than twice that measured in the shallow zone. Although the medical center is located in a groundwater basin with beneficial uses, there are no drinking water supply wells within a half-mile of the site and the City of Oceanside has no plans to use groundwater in the basin sub-area. Based on excavation of diesel-impacted soils and the lack of petroleum hydrocarbon impacts to groundwater, the diesel release does not pose a human health risk to potential receptors. Global Hydrogeology recommends no further action at the site and case closure. DEH concurs with these recommendations. In February 1992, diesel was discovered in the trench backfill (sand and gravel) of the existing main sewer that parallels the access road serving the east side of Tri-City Medical Center (the hospital) in Oceanside, California. Emergency response actions were initiated, reportedly including the removal of 5 to 15 gallons of product using a vacuum truck. A temporary sump was installed to collect a fuel/water mixture that had accumulated in the main sewer trench backfill. The fuel/water mixture was periodically pumped into 55-gallon drums over a six-month period. A concrete cut-off wall was also constructed in the main sewer trench to mitigate further seepage of the release within the trench backfill. A soil sample, collected from the sewer trench backfill approximately 150 feet up-gradient of the location where the release was discovered, indicated diesel impacts up to 6,104 milligrams per kilogram (mg/kg). Upon confirming a report of the unauthorized release, DEH opened Case #H14248-001 on February 20, 1992. During a 1992 expansion of the surgical center on the east-central side of the hospital, one or two, 2-inch-diameter diesel pipelines were reportedly punctured by steel stakes driven to mark the perimeter of the surgical additions foundation. The diesel pipelines had previously supplied two boilers inside the hospitals former Central Plant addition. The pipeline corridor originated at two, fiberglass, single-walled, 10,000-gallon-capacity diesel underground storage tanks (USTs) located beneath a paved parking lot adjoining the eastern access road. The pipeline corridor extended northwest of the USTs approximately 110 feet, then angled north to tie in with the boilers inside the former Central Plant addition. In 1993, the diesel pipelines from the two, existing 10,000-gallon diesel USTs beneath the paved parking lot adjoining the eastern access road were re-routed to the Electrical Service Building, which adjoined the south side of the former Central Plant. TPH-impacted materials were encountered during trenching for the new pipelines, but were removed. Once the new diesel pipelines were in operation, a 2,000-gallon fiberglass UST that had contained diesel was removed from the area south of the Electrical Service Building, which was also slated for construction of an addition. The former UST, which was removed on June 16, 1993, had supplied emergency generators. Although there was

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

no direct evidence that the UST had leaked, TPH-impacted materials were encountered beneath a concrete pad underlying the UST. Approximately 200 yd3 of impacted soils were excavated, removed, and stockpiled at an unspecified location. [Note: the stockpile location was later found to be west the hospital in a vacant portion of the property]. Based on the RPA reports, the consultant estimated that 617 yd3 of diesel-impacted materials remain in place. The case was revisited in 1999 when remote fill piping near the existing 10,000-gallon capacity USTs was upgraded. Diesel was detected in a soil sample and a second DEH unauthorized release case was opened (#H14248-002). [Note: the second case was consolidated into #H14248-001 on January 14, 2010, because the diesel occurrence was attributed to the initial release]. In late 2004 and early 2005, diesel pipelines from the 10,000-gallon USTs, that appear to have been routed to a new, stand-alone, Central Plant building located east of the USTs, were closed. Diesel was detected in one soil sample collected from the pipe trench, but was deemed part of the initial release discovered in 1992. In October 2011, two monitoring wells were installed approximately 10 feet southwest of the 10,000-gallon capacity diesel USTs. The wells were positioned down-gradient of the junctions of the abandoned diesel pipeline corridor with several sewer laterals from the former Central Plant area, as well as the main sewer. One well was screened from 15 to 25 feet bgs and the other well was screened from 35 to 45 feet bgs. The Santiago Formation was encountered in the well boring at approximately 16 feet bgs, beneath silty sand/clay overburden. Soil/formation samples collected at depths of 16 - 21 feet bgs from the well borings indicated impacts (200 to 240 mg/kg) from diesel-range organics. However, petroleum hydrocarbons, including diesel-range organics, were not detected in the groundwater samples collected from the wells. According to the consultant, the groundwater samples collected from the paired site monitoring wells appear to represent two different groundwater zones. Although the static water levels measured in the wells differed by only 0.54-foot, the conductivity of the water in the deeper zone was more than twice that measured in the shallow zone. Although the medical center is located in a groundwater basin with beneficial uses, there are no drinking water supply wells within a half-mile of the site and the City of Oceanside has no plans to use groundwater in the basin sub-area. Based on excavation of diesel-impacted soils and the lack of petroleum hydrocarbon impacts to groundwater, the diesel release does not pose a human health risk to potential receptors. Global Hydrogeology recommends no further action at the site and case closure. DEH concurs with these recommendations.

LUST:

Global Id:	T0607301001
Contact Type:	Local Agency Caseworker
Contact Name:	CAROL FENNER
Organization Name:	SAN DIEGO COUNTY LOP
Address:	P.O. Box 129261
City:	San Diego
Email:	carol.fenner@sdcounty.ca.gov
Phone Number:	Not reported

LUST:

Global Id:	T0607301001

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Action Type: Other
Date: 02/20/1992
Action: Leak Discovery

Global Id: T0607301001
Action Type: ENFORCEMENT
Date: 05/05/1992
Action: Notice of Responsibility

Global Id: T0607301001
Action Type: Other
Date: 02/20/1992
Action: Leak Stopped

Global Id: T0607301001
Action Type: RESPONSE
Date: 12/06/2010
Action: Soil and Water Investigation Workplan - Regulator Responded

Global Id: T0607301001
Action Type: RESPONSE
Date: 07/12/2013
Action: Site Assessment Report - Regulator Responded

Global Id: T0607301001
Action Type: ENFORCEMENT
Date: 12/05/2008
Action: Letter - Notice

Global Id: T0607301001
Action Type: Other
Date: 02/20/1992
Action: Leak Reported

Global Id: T0607301001
Action Type: ENFORCEMENT
Date: 07/09/2009
Action: Letter - Notice

Global Id: T0607301001
Action Type: ENFORCEMENT
Date: 01/14/2010
Action: Letter - Notice

Global Id: T0607301001
Action Type: ENFORCEMENT
Date: 12/17/2010
Action: Technical Correspondence / Assistance / Other

Global Id: T0607301001
Action Type: ENFORCEMENT
Date: 08/18/2011
Action: Letter - Notice

Global Id: T0607301001
Action Type: ENFORCEMENT
Date: 06/18/2010

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Action: Letter - Notice

Global Id: T0607301001
Action Type: ENFORCEMENT
Date: 09/14/2010
Action: Letter - Notice

Global Id: T0607301001
Action Type: ENFORCEMENT
Date: 10/08/2010
Action: Letter - Notice

Global Id: T0607301001
Action Type: ENFORCEMENT
Date: 08/14/2013
Action: Closure/No Further Action Letter

Global Id: T0607301001
Action Type: ENFORCEMENT
Date: 12/27/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0607301001
Action Type: Other
Date: 02/20/1992
Action: Leak Began

LUST:
Global Id: T0607301001
Status: Completed - Case Closed
Status Date: 08/14/2013

Global Id: T0607301001
Status: Open - Case Begin Date
Status Date: 02/20/1992

Global Id: T0607301001
Status: Open - Eligible for Closure
Status Date: 05/16/2013

Global Id: T0607301001
Status: Open - Eligible for Closure
Status Date: 07/16/2013

Global Id: T0607301001
Status: Open - Remediation
Status Date: 10/31/1994

Global Id: T0607301001
Status: Open - Remediation
Status Date: 05/07/2013

LUST REG 9:
Region: 9
Status: Preliminary site assessment underway

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Case Number: 9UT3854
Local Case: H14248-002
Substance: Diesel
Qty Leaked: 0
Abate Method: Not reported
Local Agency: San Diego
How Found: Other Means
How Stopped: Other Means
Source: Unknown
Cause: Unknown
Lead Agency: Local Agency
Case Type: Soil only
Date Found: 02/08/1999
Date Stopped: 02/08/1999
Confirm Date: / /
Submit Workplan: Not reported
Prelim Assess: 03/08/1999
Desc Pollution: Not reported
Remed Plan: / /
Remed Action: Not reported
Began Monitor: Not reported
Release Date: 03/01/1999
Enforce Date: 3/8/99
Closed Date: Not reported
Enforce Type: SEL
Pilot Program: LOP
Basin Number: 904.21
GW Depth: Not reported
Beneficial Use: MUNBU
NPDES Number: Not reported
Priority: 2B
File Dispn: Administratively opened on database, however no file physically exists
Interim Remedial Actions: Not reported
Cleanup and Abatement order Number: Not reported
Waste Discharge Requirement Number: Not reported

SAN DIEGO CO. SAM:
Name: TRI-CITY MEDICAL CENTER
Address: 4002 VISTA WY
City,State,Zip: OCEANSIDE, CA 920564506
Case Number: H14248-001
Agency: DEH Site Assessment & Mitigation
Funding: **LOP - State Fund**
Facility Type: Drinking Water Aquifer Impacted
Facility Status: Remedial Investigation
Date: 10/31/1994
Date Began: 2/20/1992

Name: TRI-CITY MEDICAL CENTER
Address: 4002 VISTA WY
City,State,Zip: OCEANSIDE, CA 920564506
Case Number: H14248-002
Agency: DEH Site Assessment & Mitigation
Funding: **LOP - State Fund**
Facility Type: Soils Only
Facility Status: Closed Case
Date: 1/14/2010

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Date Began: 2/8/1999

UST:
Name: TRI-CITY MEDICAL CENTER
Address: 4002 VISTA WAY
City,State,Zip: OCEANSIDE, CA 92056
Facility ID: H14248
Permitting Agency: SAN DIEGO COUNTY
Latitude: 33.1867495
Longitude: -117.2895333

Name: TRI-CITY MEDICAL CENTER
Address: 4002 VISTA WAY
City,State,Zip: OCEANSIDE, CA 92056
Facility ID: 37-000-114248
Permitting Agency: San Diego County Department of Environmental Health
Latitude: 33.1837
Longitude: -117.29282

CERS HAZ WASTE:
Site ID: 163360
CERS ID: 10373308
CERS Description: Hazardous Waste Generator

Violations:
Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-16-2015
Citation: 22 CCR 15 66265.173 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.173
Violation Description: Failure to properly close hazardous waste containers when not in active use.
Violation Notes: Returned to compliance on 11/02/2015.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description: Failure to maintain on site an approved monitoring plan.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 40 CFR 1 262.34(d)(5)(iii) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 262.34(d)(5)(iii)
Violation Description: Failure to ensure employees are familiar with the handling and compliance of hazardous waste regulations and emergency response.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Violation Program: HW
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-09-2017
Citation: HSC 6.5 25201(a) - California Health and Safety Code, Chapter 6.5, Section(s) 25201(a)
Violation Description: Failure to obtain a permit or grant of interim status to accumulate hazardous waste longer than 90 days.
Violation Notes: Returned to compliance on 10/11/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2715(b) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(b)
Violation Description: Failure to submit statement of UST compliance and/or Designated Operator current certification.
Violation Notes: Returned to compliance on 10/25/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description: Failure to prepare, maintain, and submit accurate CUPA UST Operating Permit Application for Facility information and/or Tank information.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-24-2014
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to establish and electronically submit an adequate emergency response plan and procedures for a release or threatened release of a hazardous material.
Violation Notes: Returned to compliance on 11/06/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2711(a)(8) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2711(a)(8)

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Violation Description: Failure to submit, obtain approval, or maintain a complete/accurate plot plan.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description: Failure to submit, obtain approval, or maintain a complete/accurate response plan.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2637 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637
Violation Description: Failure to comply with one or more of the following: conduct secondary containment testing, within six months of installation and every 36 months thereafter, conducted in accordance with proper practices, protocols, or test methods.
Violation Notes: Returned to compliance on 10/25/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-16-2015
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description: Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes: Returned to compliance on 11/02/2015.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 19 CCR 4 2729.5 - California Code of Regulations, Title 19, Chapter 4, Section(s) 2729.5
Violation Description: Failure to submit inventory reports (Activities, Owner/Operator, Hazardous Materials Descriptions and Map pages, if required. Documentation must be resubmitted (for facilities which exceed EPCRA thresholds) or re-certified (for facilities which do not exceed EPCRA thresholds) by March 1.

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Violation Notes:	Returned to compliance on 09/25/2014.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-18-2013
Citation:	HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description:	Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes:	Returned to compliance on 10/25/2013.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-18-2013
Citation:	23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description:	Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 10/18/2013.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-16-2015
Citation:	22 CCR 23 66273.34 - California Code of Regulations, Title 22, Chapter 23, Section(s) 66273.34
Violation Description:	Failure to properly label the following categories of universal waste as: 1) Each batteries or the container in which the batteries are contained as "Universal Waste-Battery(ies)". 2) Each mercury-containing equipment or the container in which the mercury-containing equipment is contained as "Universal Waste -Mercury-Containing Equipment". 3) Each Florescent lamp or the container or package in which the lamps are contained as "Universal Waste-Lamp(s)". 4) Each electronic devices or the container or pallet in or on which the electronic devices are contained as "Universal Waste-Electronic Device(s)". 5) Each CRTs or the container or pallet in or on which the CRTs are contained as "Universal Waste-CRT(s)". 6) A container of CRT glass shall be labeled or marked clearly with the following phrase: "Universal Waste-CRT glass". 7) In lieu of labeling individual electronic devices, CRTs, and/or containers of CRT glass pursuant to subsections d) through f) of this section, a universal waste handler may combine, package, and accumulate those universal wastes in appropriate containers or within a designated area demarcated by boundaries that are clearly labeled with the applicable portion(s) of the following phrase: "Universal Waste-Electronic Device(s)/Universal Waste - CRT(s)/Universal Waste-CRT Glass".
Violation Notes:	Returned to compliance on 11/02/2015.
Violation Division:	San Diego County Department of Env Health

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Violation Program: HW
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2715(a) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(a)
Violation Description: The owner/operator has failed to designate an UST operator or to inform the CUPA or any change in the designated UST operator(s) within 30 days after a change.
Violation Notes: Returned to compliance on 10/25/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5158617
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5158617
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-18-2013
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Chairs Michelle Inspection ID:4086233
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-09-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5739482
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-09-2017
Violations Found: No
Eval Type: Routine done by local agency

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Eval Notes:	Inspector: Griffith Gary Inspection ID:5739482
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-09-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Griffith Gary Inspection ID:5739482
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-18-2013
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Chairs Michelle Inspection ID:4086233
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-18-2013
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Chairs Michelle Inspection ID:4086233
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-19-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Calcagno Leonardo Inspection ID:5993850
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-24-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Chairs Michelle Inspection ID:5151697
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-16-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Griffith Gary Inspection ID:5158617
Eval Division:	San Diego County Department of Env Health
Eval Program:	HWLQG

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5158617
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-24-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Chairs Michelle Inspection ID:5151697
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Coordinates:
Site ID: 163360
Facility Name: TRI CITY MEDICAL CENTER
Env Int Type Code: HWG
Program ID: 10373308
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.183700
Longitude: -117.292820

Affiliation:
Affiliation Type Desc: Operator
Entity Name: TRI-CITY HOSPITAL DISTRICT
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 940-7709

Affiliation Type Desc: Parent Corporation
Entity Name: TRI-CITY MEDICAL CENTER
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: UST Tank Owner
Entity Name: TRI-CITY MEDICAL CENTER
Entity Title: Not reported
Affiliation Address: 4002 Vista Way
Affiliation City: Oceanside

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Affiliation State:	Ca
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(760) 940-7148
Affiliation Type Desc:	Environmental Contact
Entity Name:	CASEY FATCHNA COO
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WY
Affiliation City:	OCEANSIDE
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Jeff Surowiec
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056-4506
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Jeff Surowiec
Entity Title:	Manager of Safety/EOC
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	TRI-CITY HOSPITAL DISTRICT
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(760) 724-8411
Affiliation Type Desc:	Property Owner
Entity Name:	TRI-CITY HOSPITAL DISTRICT

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Entity Title:	Not reported
Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92029
Affiliation Phone:	(760) 724-8411
Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Kevin McQueen
Entity Title:	Director of Safety/EOC
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 940-3076
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Document Preparer
Entity Name:	Jeff Surowiec
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	CAROL FENNER SAN DIEGO CNTY LOP
Entity Title:	Not reported
Affiliation Address:	POBOX 129261
Affiliation City:	SANDIEGO
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	TRI CITY HOSP DIST
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WY
Affiliation City:	OCEANSIDE
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Affiliation Type Desc: UST PO Name
Entity Name: TRI CITY HOSP DIST
Entity Title: Not reported
Affiliation Address: 4002 VISTA WY
Affiliation City: OCEANSIDE
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: UST Property Owner Name
Entity Name: Tri-City Medical Center
Entity Title: Not reported
Affiliation Address: 4002 Vista Way
Affiliation City: Oceanside
Affiliation State: Ca
Affiliation Country: United States
Affiliation Zip: 92056
Affiliation Phone: (760) 940-7148

Affiliation Type Desc: UST Tank Operator
Entity Name: TRI-CITY MEDICAL CENTER
Entity Title: Not reported
Affiliation Address: 4002 Vista Way
Affiliation City: Oceanside
Affiliation State: Ca
Affiliation Country: United States
Affiliation Zip: 92056
Affiliation Phone: (760) 940-7148

Site ID: 163360
CERS ID: 10373308
CERS Description: RCRA LQ HW Generator

Violations:

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-16-2015
Citation: 22 CCR 15 66265.173 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.173
Violation Description: Failure to properly close hazardous waste containers when not in active use.
Violation Notes: Returned to compliance on 11/02/2015.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description: Failure to maintain on site an approved monitoring plan.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 40 CFR 1 262.34(d)(5)(iii) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 262.34(d)(5)(iii)
Violation Description: Failure to ensure employees are familiar with the handling and compliance of hazardous waste regulations and emergency response.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-09-2017
Citation: HSC 6.5 25201(a) - California Health and Safety Code, Chapter 6.5, Section(s) 25201(a)
Violation Description: Failure to obtain a permit or grant of interim status to accumulate hazardous waste longer than 90 days.
Violation Notes: Returned to compliance on 10/11/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2715(b) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(b)
Violation Description: Failure to submit statement of UST compliance and/or Designated Operator current certification.
Violation Notes: Returned to compliance on 10/25/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description: Failure to prepare, maintain, and submit accurate CUPA UST Operating Permit Application for Facility information and/or Tank information.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-24-2014
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to establish and electronically submit an adequate emergency response plan and procedures for a release or threatened release of a hazardous material.
Violation Notes: Returned to compliance on 11/06/2014.

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2711(a)(8) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2711(a)(8)
Violation Description: Failure to submit, obtain approval, or maintain a complete/accurate plot plan.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description: Failure to submit, obtain approval, or maintain a complete/accurate response plan.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2637 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637
Violation Description: Failure to comply with one or more of the following: conduct secondary containment testing, within six months of installation and every 36 months thereafter, conducted in accordance with proper practices, protocols, or test methods.
Violation Notes: Returned to compliance on 10/25/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-16-2015
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description: Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes: Returned to compliance on 11/02/2015.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 163360

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 19 CCR 4 2729.5 - California Code of Regulations, Title 19, Chapter 4, Section(s) 2729.5
Violation Description: Failure to submit inventory reports (Activities, Owner/Operator, Hazardous Materials Descriptions and Map pages, if required. Documentation must be resubmitted (for facilities which exceed EPCRA thresholds) or re-certified (for facilities which do not exceed EPCRA thresholds) by March 1.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description: Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes: Returned to compliance on 10/25/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description: Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes: Returned to compliance on 10/18/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-16-2015
Citation: 22 CCR 23 66273.34 - California Code of Regulations, Title 22, Chapter 23, Section(s) 66273.34
Violation Description: Failure to properly label the following categories of universal waste as: 1) Each batteries or the container in which the batteries are contained as "Universal Waste-Battery(ies)". 2) Each mercury-containing equipment or the container in which the mercury-containing equipment is contained as "Universal Waste -Mercury-Containing Equipment". 3) Each Florescent lamp or the container or package in which the lamps are contained as "Universal Waste-Lamp(s)". 4) Each electronic devices or the container or pallet in or on which the electronic devices are contained as "Universal Waste-Electronic Device(s)". 5) Each CRTs or the container or pallet in or on which the CRTs are contained as "Universal Waste-CRT(s)". 6) A container of CRT glass shall be labeled or marked clearly with the following phrase: "Universal Waste-CRT glass". 7) In lieu of labeling

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

	individual electronic devices, CRTs, and/or containers of CRT glass pursuant to subsections d) through f) of this section, a universal waste handler may combine, package, and accumulate those universal wastes in appropriate containers or within a designated area demarcated by boundaries that are clearly labeled with the applicable portion(s) of the following phrase: "Universal Waste-Electronic Device(s)/Universal Waste - CRT(s)/Universal Waste-CRT Glass".
Violation Notes:	Returned to compliance on 11/02/2015.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-18-2013
Citation:	23 CCR 16 2715(a) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(a)
Violation Description:	The owner/operator has failed to designate an UST operator or to inform the CUPA or any change in the designated UST operator(s) within 30 days after a change.
Violation Notes:	Returned to compliance on 10/25/2013.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-16-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Griffith Gary Inspection ID:5158617
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-16-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Griffith Gary Inspection ID:5158617
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-18-2013
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Chairs Michelle Inspection ID:4086233
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-09-2017
Violations Found:	No
Eval Type:	Routine done by local agency

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Eval Notes:	Inspector: Griffith Gary Inspection ID:5739482
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-09-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Griffith Gary Inspection ID:5739482
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-09-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Griffith Gary Inspection ID:5739482
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-18-2013
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Chairs Michelle Inspection ID:4086233
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-18-2013
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Chairs Michelle Inspection ID:4086233
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-19-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Calcagno Leonardo Inspection ID:5993850
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-24-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Chairs Michelle Inspection ID:5151697
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5158617
Eval Division: San Diego County Department of Env Health
Eval Program: HWLQG
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5158617
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-24-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Chairs Michelle Inspection ID:5151697
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Coordinates:
Site ID: 163360
Facility Name: TRI CITY MEDICAL CENTER
Env Int Type Code: HWG
Program ID: 10373308
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.183700
Longitude: -117.292820

Affiliation:
Affiliation Type Desc: Operator
Entity Name: TRI-CITY HOSPITAL DISTRICT
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 940-7709

Affiliation Type Desc: Parent Corporation
Entity Name: TRI-CITY MEDICAL CENTER
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Tank Owner
Entity Name:	TRI-CITY MEDICAL CENTER
Entity Title:	Not reported
Affiliation Address:	4002 Vista Way
Affiliation City:	Oceanside
Affiliation State:	Ca
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(760) 940-7148
Affiliation Type Desc:	Environmental Contact
Entity Name:	CASEY FATCHNA COO
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WY
Affiliation City:	OCEANSIDE
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Jeff Surowiec
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056-4506
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Jeff Surowiec
Entity Title:	Manager of Safety/EOC
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	TRI-CITY HOSPITAL DISTRICT
Entity Title:	Not reported

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(760) 724-8411
Affiliation Type Desc:	Property Owner
Entity Name:	TRI-CITY HOSPITAL DISTRICT
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92029
Affiliation Phone:	(760) 724-8411
Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Kevin McQueen
Entity Title:	Director of Safety/EOC
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 940-3076
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Document Preparer
Entity Name:	Jeff Surowiec
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	CAROL FENNER SAN DIEGO CNTY LOP
Entity Title:	Not reported
Affiliation Address:	POBOX 129261
Affiliation City:	SANDIEGO
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Affiliation Type Desc:	Property Owner
Entity Name:	TRI CITY HOSP DIST
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WY
Affiliation City:	OCEANSIDE
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	UST PO Name
Entity Name:	TRI CITY HOSP DIST
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WY
Affiliation City:	OCEANSIDE
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	UST Property Owner Name
Entity Name:	Tri-City Medical Center
Entity Title:	Not reported
Affiliation Address:	4002 Vista Way
Affiliation City:	Oceanside
Affiliation State:	Ca
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(760) 940-7148

Affiliation Type Desc:	UST Tank Operator
Entity Name:	TRI-CITY MEDICAL CENTER
Entity Title:	Not reported
Affiliation Address:	4002 Vista Way
Affiliation City:	Oceanside
Affiliation State:	Ca
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(760) 940-7148

SWEEPS UST:

Name:	TRI-CITY MEDICAL CENTER
Address:	4002 VISTA WAY
City:	OCEANSIDE
Status:	Active
Comp Number:	14248
Number:	9
Board Of Equalization:	44-022859
Referral Date:	Not reported
Action Date:	06-26-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-014248-000001
Tank Status:	A
Capacity:	10500
Active Date:	Not reported

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Tank Use: CHEMICAL
STG: W
Content: Not reported
Number Of Tanks: 5

Name: TRI-CITY MEDICAL CENTER
Address: 4002 VISTA WAY
City: OCEANSIDE
Status: Active
Comp Number: 14248
Number: 9
Board Of Equalization: 44-022859
Referral Date: Not reported
Action Date: 06-26-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 37-000-014248-000002
Tank Status: A
Capacity: 8600
Active Date: Not reported
Tank Use: CHEMICAL
STG: P
Content: Not reported
Number Of Tanks: Not reported

Name: TRI-CITY MEDICAL CENTER
Address: 4002 VISTA WAY
City: OCEANSIDE
Status: Active
Comp Number: 14248
Number: 9
Board Of Equalization: 44-022859
Referral Date: Not reported
Action Date: 06-26-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 37-000-014248-000003
Tank Status: A
Capacity: 2000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: P
Content: OTHER
Number Of Tanks: Not reported

Name: TRI-CITY MEDICAL CENTER
Address: 4002 VISTA WAY
City: OCEANSIDE
Status: Active
Comp Number: 14248
Number: 9
Board Of Equalization: 44-022859
Referral Date: Not reported
Action Date: 06-26-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 37-000-014248-000004

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Tank Status: A
Capacity: 10000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: P
Content: OTHER
Number Of Tanks: Not reported

Name: TRI-CITY MEDICAL CENTER
Address: 4002 VISTA WAY
City: OCEANSIDE
Status: Active
Comp Number: 14248
Number: 9
Board Of Equalization: 44-022859
Referral Date: Not reported
Action Date: 06-26-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 37-000-014248-000005
Tank Status: A
Capacity: 10000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: P
Content: OTHER
Number Of Tanks: Not reported

HIST UST:
Name: TRI-CITY HOSPITAL
Address: 4002 VISTA WAY
City,State,Zip: OCEANSIDE, CA 92056
File Number: 0002F446
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002F446.pdf
Region: STATE
Facility ID: 00000030257
Facility Type: Other
Other Type: HOSPITAL
Contact Name: S.A. RITTER, CHIEF ENGINEER
Telephone: 6199407219
Owner Name: TRI-CITY HOSPITAL DISTRICT
Owner Address: 4002 VISTA WAY
Owner City,St,Zip: OCEANSIDE, CA 92056
Total Tanks: 0005

Tank Num: 001
Container Num: 1
Year Installed: 1969
Tank Capacity: 00010500
Tank Used for: WASTE
Type of Fuel: Not reported
Container Construction Thickness: 12
Leak Detection: Visual

Tank Num: 002
Container Num: 2
Year Installed: 1977

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Tank Capacity: 00008600
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: 12
Leak Detection: Visual

Tank Num: 003
Container Num: 3
Year Installed: 1977
Tank Capacity: 00002000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: None

Tank Num: 004
Container Num: 4
Year Installed: 1977
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: None

Tank Num: 005
Container Num: 5
Year Installed: 1977
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: None

Click here for Geo Tracker PDF:

CERS TANKS:
Name: TRI CITY MEDICAL CENTER
Address: 4002 VISTA WAY
City,State,Zip: OCEANSIDE, CA 92056
Site ID: 163360
CERS ID: 10373308
CERS Description: Underground Storage Tank

Violations:
Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-16-2015
Citation: 22 CCR 15 66265.173 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.173
Violation Description: Failure to properly close hazardous waste containers when not in active use.
Violation Notes: Returned to compliance on 11/02/2015.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 163360

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-18-2013
Citation:	23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description:	Failure to maintain on site an approved monitoring plan.
Violation Notes:	Returned to compliance on 09/25/2014.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-18-2013
Citation:	40 CFR 1 262.34(d)(5)(iii) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 262.34(d)(5)(iii)
Violation Description:	Failure to ensure employees are familiar with the handling and compliance of hazardous waste regulations and emergency response.
Violation Notes:	Returned to compliance on 09/25/2014.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-09-2017
Citation:	HSC 6.5 25201(a) - California Health and Safety Code, Chapter 6.5, Section(s) 25201(a)
Violation Description:	Failure to obtain a permit or grant of interim status to accumulate hazardous waste longer than 90 days.
Violation Notes:	Returned to compliance on 10/11/2017.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-18-2013
Citation:	23 CCR 16 2715(b) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(b)
Violation Description:	Failure to submit statement of UST compliance and/or Designated Operator current certification.
Violation Notes:	Returned to compliance on 10/25/2013.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-18-2013
Citation:	HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description:	Failure to prepare, maintain, and submit accurate CUPA UST Operating Permit Application for Facility information and/or Tank information.
Violation Notes:	Returned to compliance on 09/25/2014.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-24-2014
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to establish and electronically submit an adequate emergency response plan and procedures for a release or threatened release of a hazardous material.
Violation Notes:	Returned to compliance on 11/06/2014.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-18-2013
Citation:	23 CCR 16 2711(a)(8) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2711(a)(8)
Violation Description:	Failure to submit, obtain approval, or maintain a complete/accurate plot plan.
Violation Notes:	Returned to compliance on 09/25/2014.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-18-2013
Citation:	23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description:	Failure to submit, obtain approval, or maintain a complete/accurate response plan.
Violation Notes:	Returned to compliance on 09/25/2014.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-18-2013
Citation:	23 CCR 16 2637 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637
Violation Description:	Failure to comply with one or more of the following: conduct secondary containment testing, within six months of installation and every 36 months thereafter, conducted in accordance with proper practices, protocols, or test methods.
Violation Notes:	Returned to compliance on 10/25/2013.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-16-2015
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers with

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

	the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	Returned to compliance on 11/02/2015.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-18-2013
Citation:	19 CCR 4 2729.5 - California Code of Regulations, Title 19, Chapter 4, Section(s) 2729.5
Violation Description:	Failure to submit inventory reports (Activities, Owner/Operator, Hazardous Materials Descriptions and Map pages, if required. Documentation must be resubmitted (for facilities which exceed EPCRA thresholds) or re-certified (for facilities which do not exceed EPCRA thresholds) by March 1.
Violation Notes:	Returned to compliance on 09/25/2014.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-18-2013
Citation:	HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description:	Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes:	Returned to compliance on 10/25/2013.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-18-2013
Citation:	23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description:	Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 10/18/2013.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-16-2015
Citation:	22 CCR 23 66273.34 - California Code of Regulations, Title 22, Chapter 23, Section(s) 66273.34
Violation Description:	Failure to properly label the following categories of universal waste as: 1) Each batteries or the container in which the batteries are contained as "Universal Waste-Battery(ies)". 2) Each mercury-containing equipment or the container in which the

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

mercury-containing equipment is contained as "Universal Waste -Mercury-Containing Equipment". 3) Each Florescent lamp or the container or package in which the lamps are contained as "Universal Waste-Lamp(s)". 4) Each electronic devices or the container or pallet in or on which the electronic devices are contained as "Universal Waste-Electronic Device(s)". 5) Each CRTs or the container or pallet in or on which the CRTs are contained as "Universal Waste-CRT(s)". 6) A container of CRT glass shall be labeled or marked clearly with the following phrase: "Universal Waste-CRT glass". 7) In lieu of labeling individual electronic devices, CRTs, and/or containers of CRT glass pursuant to subsections d) through f) of this section, a universal waste handler may combine, package, and accumulate those universal wastes in appropriate containers or within a designated area demarcated by boundaries that are clearly labeled with the applicable portion(s) of the following phrase: "Universal Waste-Electronic Device(s)/Universal Waste - CRT(s)/Universal Waste-CRT Glass".

Violation Notes: Returned to compliance on 11/02/2015.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2715(a) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(a)
Violation Description: The owner/operator has failed to designate an UST operator or to inform the CUPA or any change in the designated UST operator(s) within 30 days after a change.
Violation Notes: Returned to compliance on 10/25/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5158617
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5158617
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-18-2013
Violations Found: Yes
Eval Type: Routine done by local agency

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Eval Notes:	Inspector: Chairs Michelle Inspection ID:4086233
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-09-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Griffith Gary Inspection ID:5739482
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-09-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Griffith Gary Inspection ID:5739482
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-09-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Griffith Gary Inspection ID:5739482
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-18-2013
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Chairs Michelle Inspection ID:4086233
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-18-2013
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Chairs Michelle Inspection ID:4086233
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-19-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Calcagno Leonardo Inspection ID:5993850
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-24-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Chairs Michelle Inspection ID:5151697
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5158617
Eval Division: San Diego County Department of Env Health
Eval Program: HWLQG
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5158617
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-24-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Chairs Michelle Inspection ID:5151697
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Coordinates:
Site ID: 163360
Facility Name: TRI CITY MEDICAL CENTER
Env Int Type Code: HWG
Program ID: 10373308
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.183700
Longitude: -117.292820

Affiliation:
Affiliation Type Desc: Operator
Entity Name: TRI-CITY HOSPITAL DISTRICT
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Affiliation Zip:	Not reported
Affiliation Phone:	(760) 940-7709
Affiliation Type Desc:	Parent Corporation
Entity Name:	TRI-CITY MEDICAL CENTER
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Tank Owner
Entity Name:	TRI-CITY MEDICAL CENTER
Entity Title:	Not reported
Affiliation Address:	4002 Vista Way
Affiliation City:	Oceanside
Affiliation State:	Ca
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(760) 940-7148
Affiliation Type Desc:	Environmental Contact
Entity Name:	CASEY FATCHNA COO
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WY
Affiliation City:	OCEANSIDE
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Jeff Surowiec
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056-4506
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Jeff Surowiec
Entity Title:	Manager of Safety/EOC
Affiliation Address:	Not reported

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	TRI-CITY HOSPITAL DISTRICT
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(760) 724-8411

Affiliation Type Desc:	Property Owner
Entity Name:	TRI-CITY HOSPITAL DISTRICT
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92029
Affiliation Phone:	(760) 724-8411

Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Kevin McQueen
Entity Title:	Director of Safety/EOC
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 940-3076

Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880

Affiliation Type Desc:	Document Preparer
Entity Name:	Jeff Surowiec
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Local Agency Caseworker

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Entity Name: CAROL FENNER SAN DIEGO CNTY LOP
Entity Title: Not reported
Affiliation Address: POBOX 129261
Affiliation City: SANDIEGO
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: TRI CITY HOSP DIST
Entity Title: Not reported
Affiliation Address: 4002 VISTA WY
Affiliation City: OCEANSIDE
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: UST PO Name
Entity Name: TRI CITY HOSP DIST
Entity Title: Not reported
Affiliation Address: 4002 VISTA WY
Affiliation City: OCEANSIDE
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: UST Property Owner Name
Entity Name: Tri-City Medical Center
Entity Title: Not reported
Affiliation Address: 4002 Vista Way
Affiliation City: Oceanside
Affiliation State: Ca
Affiliation Country: United States
Affiliation Zip: 92056
Affiliation Phone: (760) 940-7148

Affiliation Type Desc: UST Tank Operator
Entity Name: TRI-CITY MEDICAL CENTER
Entity Title: Not reported
Affiliation Address: 4002 Vista Way
Affiliation City: Oceanside
Affiliation State: Ca
Affiliation Country: United States
Affiliation Zip: 92056
Affiliation Phone: (760) 940-7148

EMI:
Name: TRI CITY MEDICAL CENTER
Address: 4002 VISTA WY
City,State,Zip: OCEANSIDE, CA 920564506
Year: 1998
County Code: 37
Air Basin: SD

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Facility ID:	393
Air District Name:	SD
SIC Code:	8062
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	TRI CITY MEDICAL CENTER
Address:	4002 VISTA WY
City,State,Zip:	OCEANSIDE, CA 920564506
Year:	1999
County Code:	37
Air Basin:	SD
Facility ID:	393
Air District Name:	SD
SIC Code:	8062
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	TRI CITY MEDICAL CENTER
Address:	4002 VISTA WY
City,State,Zip:	OCEANSIDE, CA 920564506
Year:	2000
County Code:	37
Air Basin:	SD
Facility ID:	393
Air District Name:	SD
SIC Code:	8062
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	TRI CITY MEDICAL CENTER
Address:	4002 VISTA WY
City,State,Zip:	OCEANSIDE, CA 920564506

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Year:	2001
County Code:	37
Air Basin:	SD
Facility ID:	393
Air District Name:	SD
SIC Code:	8062
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	TRI CITY MEDICAL CENTER
Address:	4002 VISTA WY
City,State,Zip:	OCEANSIDE, CA 920564506
Year:	2002
County Code:	37
Air Basin:	SD
Facility ID:	393
Air District Name:	SD
SIC Code:	8062
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	TRI CITY MEDICAL CENTER
Address:	4002 VISTA WY
City,State,Zip:	OCEANSIDE, CA 920564506
Year:	2003
County Code:	37
Air Basin:	SD
Facility ID:	393
Air District Name:	SD
SIC Code:	8062
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Name:	TRI CITY MEDICAL CENTER
Address:	4002 VISTA WY
City,State,Zip:	OCEANSIDE, CA 920564506
Year:	2004
County Code:	37
Air Basin:	SD
Facility ID:	393
Air District Name:	SD
SIC Code:	8062
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.292065825
Reactive Organic Gases Tons/Yr:	0.19060075
Carbon Monoxide Emissions Tons/Yr:	0.6752462
NOX - Oxides of Nitrogen Tons/Yr:	2.58096375
SOX - Oxides of Sulphur Tons/Yr:	0.05204025
Particulate Matter Tons/Yr:	0.210757625
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.202890875

Name:	TRI CITY MEDICAL CENTER
Address:	4002 VISTA WY
City,State,Zip:	OCEANSIDE, CA 920564506
Year:	2005
County Code:	37
Air Basin:	SD
Facility ID:	393
Air District Name:	SD
SIC Code:	8062
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.2493388
Reactive Organic Gases Tons/Yr:	.167811
Carbon Monoxide Emissions Tons/Yr:	.646055
NOX - Oxides of Nitrogen Tons/Yr:	2.54953
SOX - Oxides of Sulphur Tons/Yr:	.05075
Particulate Matter Tons/Yr:	.1976806693989071038
Part. Matter 10 Micrometers and Smllr Tons/Yr:	.19527

Name:	TRI CITY MEDICAL CENTER
Address:	4002 VISTA WY
City,State,Zip:	OCEANSIDE, CA 920564506
Year:	2006
County Code:	37
Air Basin:	SD
Facility ID:	393
Air District Name:	SD
SIC Code:	8062
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.24933625
Reactive Organic Gases Tons/Yr:	.16781075
Carbon Monoxide Emissions Tons/Yr:	.646055
NOX - Oxides of Nitrogen Tons/Yr:	2.549525
SOX - Oxides of Sulphur Tons/Yr:	.05074025

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Particulate Matter Tons/Yr: .198027625
Part. Matter 10 Micrometers and Smllr Tons/Yr:.195260875

HAZNET:

Name:	TRI-CITY MEDICAL CTR
Address:	4002 VISTA WAY
City,State,Zip:	OCEANSIDE, CA 920560000
Year:	2017
GEPAID:	CAD981167786
Contact:	KEVIN MCQUEEN
Telephone:	7609403076
Mailing Name:	Not reported
Mailing Address:	4002 VISTA WAY
Mailing City,St,Zip:	OCEANSIDE, CA 920564506
Gen County:	San Diego
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Tons:	0.0585
CA Waste Code:	352-Other organic solids
Method:	H061-Fuel Blending Prior To Energy Recovery At Another Site
Facility County:	San Diego

Name:	TRI-CITY MEDICAL CTR
Address:	4002 VISTA WAY
City,State,Zip:	OCEANSIDE, CA 920560000
Year:	2017
GEPAID:	CAD981167786
Contact:	KEVIN MCQUEEN
Telephone:	7609403076
Mailing Name:	Not reported
Mailing Address:	4002 VISTA WAY
Mailing City,St,Zip:	OCEANSIDE, CA 920564506
Gen County:	San Diego
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Tons:	0.0515
CA Waste Code:	331-Off-specification, aged or surplus organics
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	San Diego

Name:	TRI-CITY MEDICAL CTR
Address:	4002 VISTA WAY
City,State,Zip:	OCEANSIDE, CA 920560000
Year:	2017
GEPAID:	CAD981167786
Contact:	KEVIN MCQUEEN
Telephone:	7609403076
Mailing Name:	Not reported
Mailing Address:	4002 VISTA WAY
Mailing City,St,Zip:	OCEANSIDE, CA 920564506
Gen County:	San Diego
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Tons:	0.0115
CA Waste Code:	331-Off-specification, aged or surplus organics
Method:	H041-

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Facility County: San Diego

Name: TRI-CITY MEDICAL CTR
Address: 4002 VISTA WAY
City,State,Zip: OCEANSIDE, CA 920560000
Year: 2017
GEPAID: CAD981167786
Contact: KEVIN MCQUEEN
Telephone: 7609403076
Mailing Name: Not reported
Mailing Address: 4002 VISTA WAY
Mailing City,St,Zip: OCEANSIDE, CA 920564506
Gen County: San Diego
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Tons: 0.014
CA Waste Code: 122-Alkaline solution without metals pH >= 12.5
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: San Diego

Name: TRI-CITY MEDICAL CTR
Address: 4002 VISTA WAY
City,State,Zip: OCEANSIDE, CA 920560000
Year: 2017
GEPAID: CAD981167786
Contact: KEVIN MCQUEEN
Telephone: 7609403076
Mailing Name: Not reported
Mailing Address: 4002 VISTA WAY
Mailing City,St,Zip: OCEANSIDE, CA 920564506
Gen County: San Diego
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Tons: 0.001
CA Waste Code: 181-Other inorganic solid waste
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: San Diego

Click this hyperlink while viewing on your computer to access
288 additional CA_HAZNET: record(s) in the EDR Site Report.

NY MANIFEST:
Name: TRI CITY MEDICAL CENTER
Address: 4002 VISTA WAY
City,State,Zip: OCEANSIDE, CA 92056
Country: USA
EPA ID: CAD981167786
Facility Status: Not reported
Location Address 1: 4002 VISTA WAY
Code: BP
Location Address 2: Not reported
Total Tanks: Not reported
Location City: OCEANSIDE
Location State: CA
Location Zip: 92056

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Location Zip 4: Not reported

NY MANIFEST:
EPAID: CAD981167786
Mailing Name: TRI CITY MEDICAL CENTER
Mailing Contact: TRI CITY MEDICAL CENTER
Mailing Address 1: 4002 VISTA WAY
Mailing Address 2: Not reported
Mailing City: OCEANSIDE
Mailing State: CA
Mailing Zip: 92056
Mailing Zip 4: Not reported
Mailing Country: USA
Mailing Phone: 6199407294

NY MANIFEST:
Document ID: NYB1552464
Manifest Status: C
seq: Not reported
Year: 1989
Trans1 State ID: 008659
Trans2 State ID: 0209PNY
Generator Ship Date: 11/09/1989
Trans1 Recv Date: 11/09/1989
Trans2 Recv Date: / /
TSD Site Recv Date: 11/27/1989
Part A Recv Date: 11/29/1989
Part B Recv Date: 12/04/1989
Generator EPA ID: CAD981167786
Trans1 EPA ID: NYD980769947
Trans2 EPA ID: Not reported
TSDF ID 1: NYD000632372
TSDF ID 2: Not reported
Manifest Tracking Number: Not reported
Import Indicator: Not reported
Export Indicator: Not reported
Discr Quantity Indicator: Not reported
Discr Type Indicator: Not reported
Discr Residue Indicator: Not reported
Discr Partial Reject Indicator: Not reported
Discr Full Reject Indicator: Not reported
Manifest Ref Number: Not reported
Alt Facility RCRA ID: Not reported
Alt Facility Sign Date: Not reported
MGMT Method Type Code: Not reported
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Quantity: 00030
Units: P - Pounds
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Click this hyperlink while viewing on your computer to access
-1 additional NY MANIFEST: record(s) in the EDR Site Report.

CERS:

Name:	TRI CITY MEDICAL CENTER
Address:	4002 VISTA WAY
City,State,Zip:	OCEANSIDE, CA 92056
Site ID:	163360
CERS ID:	10373308
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-16-2015
Citation:	22 CCR 15 66265.173 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.173
Violation Description:	Failure to properly close hazardous waste containers when not in active use.
Violation Notes:	Returned to compliance on 11/02/2015.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-18-2013
Citation:	23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description:	Failure to maintain on site an approved monitoring plan.
Violation Notes:	Returned to compliance on 09/25/2014.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-18-2013
Citation:	40 CFR 1 262.34(d)(5)(iii) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 262.34(d)(5)(iii)
Violation Description:	Failure to ensure employees are familiar with the handling and compliance of hazardous waste regulations and emergency response.
Violation Notes:	Returned to compliance on 09/25/2014.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	163360
Site Name:	TRI CITY MEDICAL CENTER
Violation Date:	10-09-2017
Citation:	HSC 6.5 25201(a) - California Health and Safety Code, Chapter 6.5, Section(s) 25201(a)
Violation Description:	Failure to obtain a permit or grant of interim status to accumulate hazardous waste longer than 90 days.
Violation Notes:	Returned to compliance on 10/11/2017.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2715(b) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(b)
Violation Description: Failure to submit statement of UST compliance and/or Designated Operator current certification.
Violation Notes: Returned to compliance on 10/25/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description: Failure to prepare, maintain, and submit accurate CUPA UST Operating Permit Application for Facility information and/or Tank information.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-24-2014
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to establish and electronically submit an adequate emergency response plan and procedures for a release or threatened release of a hazardous material.
Violation Notes: Returned to compliance on 11/06/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2711(a)(8) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2711(a)(8)
Violation Description: Failure to submit, obtain approval, or maintain a complete/accurate plot plan.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description: Failure to submit, obtain approval, or maintain a complete/accurate

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

response plan.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2637 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637
Violation Description: Failure to comply with one or more of the following: conduct secondary containment testing, within six months of installation and every 36 months thereafter, conducted in accordance with proper practices, protocols, or test methods.
Violation Notes: Returned to compliance on 10/25/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-16-2015
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description: Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes: Returned to compliance on 11/02/2015.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 19 CCR 4 2729.5 - California Code of Regulations, Title 19, Chapter 4, Section(s) 2729.5
Violation Description: Failure to submit inventory reports (Activities, Owner/Operator, Hazardous Materials Descriptions and Map pages, if required. Documentation must be resubmitted (for facilities which exceed EPCRA thresholds) or re-certified (for facilities which do not exceed EPCRA thresholds) by March 1.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description: Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes: Returned to compliance on 10/25/2013.

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description: Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes: Returned to compliance on 10/18/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-16-2015
Citation: 22 CCR 23 66273.34 - California Code of Regulations, Title 22, Chapter 23, Section(s) 66273.34
Violation Description: Failure to properly label the following categories of universal waste as: 1) Each batteries or the container in which the batteries are contained as "Universal Waste-Battery(ies)". 2) Each mercury-containing equipment or the container in which the mercury-containing equipment is contained as "Universal Waste -Mercury-Containing Equipment". 3) Each Florescent lamp or the container or package in which the lamps are contained as "Universal Waste-Lamp(s)". 4) Each electronic devices or the container or pallet in or on which the electronic devices are contained as "Universal Waste-Electronic Device(s)". 5) Each CRTs or the container or pallet in or on which the CRTs are contained as "Universal Waste-CRT(s)". 6) A container of CRT glass shall be labeled or marked clearly with the following phrase: "Universal Waste-CRT glass". 7) In lieu of labeling individual electronic devices, CRTs, and/or containers of CRT glass pursuant to subsections d) through f) of this section, a universal waste handler may combine, package, and accumulate those universal wastes in appropriate containers or within a designated area demarcated by boundaries that are clearly labeled with the applicable portion(s) of the following phrase: "Universal Waste-Electronic Device(s)/Universal Waste - CRT(s)/Universal Waste-CRT Glass".
Violation Notes: Returned to compliance on 11/02/2015.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2715(a) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(a)
Violation Description: The owner/operator has failed to designate an UST operator or to inform the CUPA or any change in the designated UST operator(s) within 30 days after a change.
Violation Notes: Returned to compliance on 10/25/2013.
Violation Division: San Diego County Department of Env Health

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5158617
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5158617
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-18-2013
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Chairs Michelle Inspection ID:4086233
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-09-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5739482
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-09-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5739482
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-09-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5739482
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-18-2013
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Chairs Michelle Inspection ID:4086233
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-18-2013
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Chairs Michelle Inspection ID:4086233
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-19-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Calcagno Leonardo Inspection ID:5993850
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-24-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Chairs Michelle Inspection ID:5151697
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5158617
Eval Division: San Diego County Department of Env Health
Eval Program: HWLQG
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5158617
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-24-2014
Violations Found: Yes

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Eval Type: Routine done by local agency
Eval Notes: Inspector: Chairs Michelle Inspection ID:5151697
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Coordinates:
Site ID: 163360
Facility Name: TRI CITY MEDICAL CENTER
Env Int Type Code: HWG
Program ID: 10373308
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.183700
Longitude: -117.292820

Affiliation:
Affiliation Type Desc: Operator
Entity Name: TRI-CITY HOSPITAL DISTRICT
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 940-7709

Affiliation Type Desc: Parent Corporation
Entity Name: TRI-CITY MEDICAL CENTER
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: UST Tank Owner
Entity Name: TRI-CITY MEDICAL CENTER
Entity Title: Not reported
Affiliation Address: 4002 Vista Way
Affiliation City: Oceanside
Affiliation State: Ca
Affiliation Country: United States
Affiliation Zip: 92056
Affiliation Phone: (760) 940-7148

Affiliation Type Desc: Environmental Contact
Entity Name: CASEY FATCHNA COO
Entity Title: Not reported
Affiliation Address: 4002 VISTA WY
Affiliation City: OCEANSIDE
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Affiliation Type Desc:	Environmental Contact
Entity Name:	Jeff Surowiec
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056-4506
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	Jeff Surowiec
Entity Title:	Manager of Safety/EOC
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	TRI-CITY HOSPITAL DISTRICT
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(760) 724-8411

Affiliation Type Desc:	Property Owner
Entity Name:	TRI-CITY HOSPITAL DISTRICT
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92029
Affiliation Phone:	(760) 724-8411

Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Kevin McQueen
Entity Title:	Director of Safety/EOC
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Affiliation Zip: Not reported
Affiliation Phone: (760) 940-3076

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Document Preparer
Entity Name: Jeff Surowiec
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Local Agency Caseworker
Entity Name: CAROL FENNER SAN DIEGO CNTY LOP
Entity Title: Not reported
Affiliation Address: POBOX 129261
Affiliation City: SANDIEGO
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: TRI CITY HOSP DIST
Entity Title: Not reported
Affiliation Address: 4002 VISTA WY
Affiliation City: OCEANSIDE
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: UST PO Name
Entity Name: TRI CITY HOSP DIST
Entity Title: Not reported
Affiliation Address: 4002 VISTA WY
Affiliation City: OCEANSIDE
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: UST Property Owner Name
Entity Name: Tri-City Medical Center
Entity Title: Not reported
Affiliation Address: 4002 Vista Way

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Affiliation City: Oceanside
Affiliation State: Ca
Affiliation Country: United States
Affiliation Zip: 92056
Affiliation Phone: (760) 940-7148

Affiliation Type Desc: UST Tank Operator
Entity Name: TRI-CITY MEDICAL CENTER
Entity Title: Not reported
Affiliation Address: 4002 Vista Way
Affiliation City: Oceanside
Affiliation State: Ca
Affiliation Country: United States
Affiliation Zip: 92056
Affiliation Phone: (760) 940-7148

Name: TRI-CITY MEDICAL CENTER
Address: 4002 VISTA WY
City,State,Zip: OCEANSIDE, CA 920564506
Site ID: 240685
CERS ID: T0607301001
CERS Description: Leaking Underground Storage Tank Cleanup Site

Coordinates:
Site ID: 240685
Facility Name: TRI-CITY MEDICAL CENTER
Env Int Type Code: LUSTCS
Program ID: T0607301001
Coord Name: Not reported
Ref Point Type Desc: Unknown
Latitude: 33.184049
Longitude: -117.296127

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: CAROL FENNER - SAN DIEGO COUNTY LOP
Entity Title: Not reported
Affiliation Address: P.O. Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: TRI-CITY MEDICAL CENTER
Address: 4002 VISTA WY
City,State,Zip: OCEANSIDE, CA 920564506
Site ID: 240685
CERS ID: T0607302613
CERS Description: Leaking Underground Storage Tank Cleanup Site

Coordinates:
Site ID: 240685
Facility Name: TRI-CITY MEDICAL CENTER
Env Int Type Code: LUSTCS
Program ID: T0607301001

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Coord Name: Not reported
Ref Point Type Desc: Unknown
Latitude: 33.184049
Longitude: -117.296127

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: CAROL FENNER - SAN DIEGO COUNTY LOP
Entity Title: Not reported
Affiliation Address: P.O. Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: TRI CITY MEDICAL CENTER
Address: 4002 VISTA WAY
City,State,Zip: OCEANSIDE, CA 92056
Site ID: 163360
CERS ID: 110002680457
CERS Description: US EPA Air Emission Inventory System (EIS)

Violations:
Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-16-2015
Citation: 22 CCR 15 66265.173 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.173
Violation Description: Failure to properly close hazardous waste containers when not in active use.
Violation Notes: Returned to compliance on 11/02/2015.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description: Failure to maintain on site an approved monitoring plan.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 40 CFR 1 262.34(d)(5)(iii) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 262.34(d)(5)(iii)
Violation Description: Failure to ensure employees are familiar with the handling and compliance of hazardous waste regulations and emergency response.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Violation Program: HW
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-09-2017
Citation: HSC 6.5 25201(a) - California Health and Safety Code, Chapter 6.5, Section(s) 25201(a)
Violation Description: Failure to obtain a permit or grant of interim status to accumulate hazardous waste longer than 90 days.
Violation Notes: Returned to compliance on 10/11/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2715(b) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(b)
Violation Description: Failure to submit statement of UST compliance and/or Designated Operator current certification.
Violation Notes: Returned to compliance on 10/25/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description: Failure to prepare, maintain, and submit accurate CUPA UST Operating Permit Application for Facility information and/or Tank information.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-24-2014
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to establish and electronically submit an adequate emergency response plan and procedures for a release or threatened release of a hazardous material.
Violation Notes: Returned to compliance on 11/06/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2711(a)(8) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2711(a)(8)

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Violation Description: Failure to submit, obtain approval, or maintain a complete/accurate plot plan.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description: Failure to submit, obtain approval, or maintain a complete/accurate response plan.
Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2637 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637
Violation Description: Failure to comply with one or more of the following: conduct secondary containment testing, within six months of installation and every 36 months thereafter, conducted in accordance with proper practices, protocols, or test methods.
Violation Notes: Returned to compliance on 10/25/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-16-2015
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description: Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes: Returned to compliance on 11/02/2015.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 19 CCR 4 2729.5 - California Code of Regulations, Title 19, Chapter 4, Section(s) 2729.5
Violation Description: Failure to submit inventory reports (Activities, Owner/Operator, Hazardous Materials Descriptions and Map pages, if required. Documentation must be resubmitted (for facilities which exceed EPCRA thresholds) or re-certified (for facilities which do not exceed EPCRA thresholds) by March 1.

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Violation Notes: Returned to compliance on 09/25/2014.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description: Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes: Returned to compliance on 10/25/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description: Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes: Returned to compliance on 10/18/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-16-2015
Citation: 22 CCR 23 66273.34 - California Code of Regulations, Title 22, Chapter 23, Section(s) 66273.34
Violation Description: Failure to properly label the following categories of universal waste as: 1) Each batteries or the container in which the batteries are contained as "Universal Waste-Battery(ies)". 2) Each mercury-containing equipment or the container in which the mercury-containing equipment is contained as "Universal Waste -Mercury-Containing Equipment". 3) Each Florescent lamp or the container or package in which the lamps are contained as "Universal Waste-Lamp(s)". 4) Each electronic devices or the container or pallet in or on which the electronic devices are contained as "Universal Waste-Electronic Device(s)". 5) Each CRTs or the container or pallet in or on which the CRTs are contained as "Universal Waste-CRT(s)". 6) A container of CRT glass shall be labeled or marked clearly with the following phrase: "Universal Waste-CRT glass". 7) In lieu of labeling individual electronic devices, CRTs, and/or containers of CRT glass pursuant to subsections d) through f) of this section, a universal waste handler may combine, package, and accumulate those universal wastes in appropriate containers or within a designated area demarcated by boundaries that are clearly labeled with the applicable portion(s) of the following phrase: "Universal Waste-Electronic Device(s)/Universal Waste - CRT(s)/Universal Waste-CRT Glass".
Violation Notes: Returned to compliance on 11/02/2015.
Violation Division: San Diego County Department of Env Health

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Violation Program: HW
Violation Source: CERS

Site ID: 163360
Site Name: TRI CITY MEDICAL CENTER
Violation Date: 10-18-2013
Citation: 23 CCR 16 2715(a) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(a)
Violation Description: The owner/operator has failed to designate an UST operator or to inform the CUPA or any change in the designated UST operator(s) within 30 days after a change.
Violation Notes: Returned to compliance on 10/25/2013.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5158617
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5158617
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-18-2013
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Chairs Michelle Inspection ID:4086233
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-09-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5739482
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-09-2017
Violations Found: No
Eval Type: Routine done by local agency

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Eval Notes:	Inspector: Griffith Gary Inspection ID:5739482
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-09-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Griffith Gary Inspection ID:5739482
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-18-2013
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Chairs Michelle Inspection ID:4086233
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-18-2013
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Chairs Michelle Inspection ID:4086233
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-19-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Calcagno Leonardo Inspection ID:5993850
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-24-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Chairs Michelle Inspection ID:5151697
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-16-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Griffith Gary Inspection ID:5158617
Eval Division:	San Diego County Department of Env Health
Eval Program:	HWLQG

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffith Gary Inspection ID:5158617
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-24-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Chairs Michelle Inspection ID:5151697
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Coordinates:
Site ID: 163360
Facility Name: TRI CITY MEDICAL CENTER
Env Int Type Code: HWG
Program ID: 10373308
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.183700
Longitude: -117.292820

Affiliation:
Affiliation Type Desc: Operator
Entity Name: TRI-CITY HOSPITAL DISTRICT
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 940-7709

Affiliation Type Desc: Parent Corporation
Entity Name: TRI-CITY MEDICAL CENTER
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: UST Tank Owner
Entity Name: TRI-CITY MEDICAL CENTER
Entity Title: Not reported
Affiliation Address: 4002 Vista Way
Affiliation City: Oceanside

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Affiliation State:	Ca
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(760) 940-7148
Affiliation Type Desc:	Environmental Contact
Entity Name:	CASEY FATCHNA COO
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WY
Affiliation City:	OCEANSIDE
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Jeff Surowiec
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056-4506
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Jeff Surowiec
Entity Title:	Manager of Safety/EOC
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	TRI-CITY HOSPITAL DISTRICT
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WAY
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(760) 724-8411
Affiliation Type Desc:	Property Owner
Entity Name:	TRI-CITY HOSPITAL DISTRICT

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Entity Title: Not reported
Affiliation Address: 4002 VISTA WAY
Affiliation City: OCEANSIDE
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92029
Affiliation Phone: (760) 724-8411

Affiliation Type Desc: UST Permit Applicant
Entity Name: Kevin McQueen
Entity Title: Director of Safety/EOC
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 940-3076

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Document Preparer
Entity Name: Jeff Surowiec
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Local Agency Caseworker
Entity Name: CAROL FENNER SAN DIEGO CNTY LOP
Entity Title: Not reported
Affiliation Address: POBOX 129261
Affiliation City: SANDIEGO
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: TRI CITY HOSP DIST
Entity Title: Not reported
Affiliation Address: 4002 VISTA WY
Affiliation City: OCEANSIDE
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

TRI-CITY MEDICAL CENTER (Continued) **1000138565**

Affiliation Type Desc:	UST PO Name
Entity Name:	TRI CITY HOSP DIST
Entity Title:	Not reported
Affiliation Address:	4002 VISTA WY
Affiliation City:	OCEANSIDE
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	UST Property Owner Name
Entity Name:	Tri-City Medical Center
Entity Title:	Not reported
Affiliation Address:	4002 Vista Way
Affiliation City:	Oceanside
Affiliation State:	Ca
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(760) 940-7148

Affiliation Type Desc:	UST Tank Operator
Entity Name:	TRI-CITY MEDICAL CENTER
Entity Title:	Not reported
Affiliation Address:	4002 Vista Way
Affiliation City:	Oceanside
Affiliation State:	Ca
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(760) 940-7148

E26 **TRI-CITY MEDICAL CENTER** **CA LUST** **S101301849**
NW **4002 VISTA** **CA HIST CORTESE** **N/A**
< 1/8 **OCEANSIDE, CA 92056**
0.122 mi.
646 ft. **Site 3 of 6 in cluster E**

Relative:
Higher

Actual:
233 ft.

LUST REG 9:

Region:	9
Status:	Preliminary site assessment underway
Case Number:	9UT2236
Local Case:	H14248-001
Substance:	Diesel
Qty Leaked:	Not reported
Abate Method:	Not reported
Local Agency:	San Diego
How Found:	Other Means
How Stopped:	Other Means
Source:	Unknown
Cause:	Unknown
Lead Agency:	Local Agency
Case Type:	Aquifer affected
Date Found:	02/20/1992
Date Stopped:	02/20/1992
Confirm Date:	02/20/1992
Submit Workplan:	5/11/92
Prelim Assess:	11/18/1992
Desc Pollution:	Not reported

TRI-CITY MEDICAL CENTER (Continued) **S101301849**

Remed Plan: / /
Remed Action: Not reported
Began Monitor: Not reported
Release Date: 02/20/1992
Enforce Date: Not reported
Closed Date: Not reported
Enforce Type: Not reported
Pilot Program: LOP
Basin Number: 904.21
GW Depth: 33'
Beneficial Use: Municipal groundwater use
NPDES Number: Not reported
Priority: 2B
File Dispn: Not reported
Interim Remedial Actions: No
Cleanup and Abatement order Number: Not reported
Waste Discharge Requirement Number: Not reported

HIST CORTESE:
edr_fname: TRI-CITY MEDICAL CENTER
edr_fadd1: 4002 VISTA
City,State,Zip: OCEANSIDE, CA 92056
Region: CORTESE
Facility County Code: 37
Reg By: LTNKA
Reg Id: 9UT3854

edr_fname: TRI CITY HOSPITAL
edr_fadd1: 4002 VISTA
City,State,Zip: OCEANSIDE, CA 92056
Region: CORTESE
Facility County Code: 37
Reg By: LTNKA
Reg Id: 9UT2236

F27 **RITE AID #5635** **RCRA-CESQG 1014387661**
WSW **3813 PLAZA DR** **CA HAZNET CAR000212324**
1/8-1/4 **OCEANSIDE, CA 92056**
0.135 mi.
713 ft. **Site 1 of 3 in cluster F**

Relative:
Higher

Actual:
194 ft.

RCRA-CESQG:
Date form received by agency: 04/14/2017
Facility name: RITE AID #5635
Facility address: 3813 PLAZA DR
OCEANSIDE, CA 92056-0000
EPA ID: CAR000212324
Mailing address: HUNTER LN
CAMP HILL, PA 17011
Contact: DAVID W CROZIER
Contact address: HUNTER LN
CAMP HILL, PA 17011
Contact country: US
Contact telephone: 717-975-8643
Contact email: EHS@RITEAID.COM
EPA Region: 09
Classification: Conditionally Exempt Small Quantity Generator

RITE AID #5635 (Continued) **1014387661**

Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name: NFNY BUSINESS TRUST
Owner/operator address: COOPER CREEK BLVD STE 100
UNIVERSITY PARK, FL 34201
Owner/operator country: US
Owner/operator telephone: 717-761-2633
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 02/25/1998
Owner/Op end date: Not reported

Owner/operator name: THRIFTY PAYLESS INC
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 02/24/1997
Owner/Op end date: Not reported

Owner/operator name: RITE AID CORP
Owner/operator address: 30 HUNTER LN
CAMP HILL, PA 17011
Owner/operator country: US
Owner/operator telephone: 717-730-8225
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 09/01/1962
Owner/Op end date: Not reported

Owner/operator name: RITE AID CORP
Owner/operator address: 30 HUNTER LN

RITE AID #5635 (Continued) **1014387661**

CAMP HILL, PA 17011
Owner/operator country: US
Owner/operator telephone: 717-730-8225
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 09/01/1962
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 07/30/2014
Site name: RITE AID NO 5635
Classification: Large Quantity Generator

Date form received by agency: 09/02/2010
Site name: RITE AID 5635
Classification: Conditionally Exempt Small Quantity Generator

Hazardous Waste Summary:

. Waste code: 122
. Waste name: Alkaline solution without metals (pH > 12.5)

. Waste code: 131
. Waste name: Aqueous solution (2 < pH < 12.5) containing reactive anions (azide, bromate, chlorate, cyanide, fluoride, hypochlorite, nitrite, perchlorate, and sulfide anions)

. Waste code: 141
. Waste name: Off-specification, aged, or surplus inorganics

. Waste code: 214
. Waste name: Unspecified solvent mixture

. Waste code: 223
. Waste name: Unspecified oil-containing waste

RITE AID #5635 (Continued) **1014387661**

. Waste code: 232
. Waste name: Pesticides and other waste associated with pesticide production

. Waste code: 261
. Waste name: Polychlorinated biphenyls and material containing PCB's

. Waste code: 291
. Waste name: Latex waste

. Waste code: 311
. Waste name: Pharmaceutical waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 343
. Waste name: Unspecified organic liquid mixture

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 541
. Waste name: Photochemicals / photo processing waste

. Waste code: 561
. Waste name: Detergent and soap

. Waste code: 791
. Waste name: Liquids with pH < 2

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

. Waste code: D011
. Waste name: SILVER

RITE AID #5635 (Continued) **1014387661**

. Waste code: D016
. Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

. Waste code: D024
. Waste name: M-CRESOL

. Waste code: D026
. Waste name: CRESOL

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P075
. Waste name: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

. Waste code: U002
. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U080
. Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

. Waste code: U160
. Waste name: 2-BUTANONE, PEROXIDE (R,T) (OR) METHYL ETHYL KETONE PEROXIDE (R,T)

. Waste code: U165
. Waste name: NAPHTHALENE

. Waste code: U188
. Waste name: PHENOL

. Waste code: U279
. Waste name: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

Violation Status: No violations found

HAZNET:

Name:	RITE AID #5635
Address:	3813 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 920560000
Year:	2017
GEPAID:	CAR000212324
Contact:	DAVID CROZIER
Telephone:	7179758643
Mailing Name:	Not reported
Mailing Address:	30 HUNTER LN
Mailing City,St,Zip:	CAMP HILL, PA 17011
Gen County:	San Diego
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Tons:	0.0205
CA Waste Code:	343-Unspecified organic liquid mixture
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery

RITE AID #5635 (Continued) **1014387661**

(H010-H129) Or (H131-H135)
Facility County: San Diego

Name: RITE AID #5635
Address: 3813 PLAZA DR
City,State,Zip: OCEANSIDE, CA 920560000
Year: 2017
GEPAID: CAR000212324
Contact: DAVID CROZIER
Telephone: 7179758643
Mailing Name: Not reported
Mailing Address: 30 HUNTER LN
Mailing City,St,Zip: CAMP HILL, PA 17011
Gen County: San Diego
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Tons: 0.005
CA Waste Code: 311-Pharmaceutical waste
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: San Diego

Name: RITE AID #5635
Address: 3813 PLAZA DR
City,State,Zip: OCEANSIDE, CA 920560000
Year: 2017
GEPAID: CAR000212324
Contact: DAVID CROZIER
Telephone: 7179758643
Mailing Name: Not reported
Mailing Address: 30 HUNTER LN
Mailing City,St,Zip: CAMP HILL, PA 17011
Gen County: San Diego
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Tons: 0.0165
CA Waste Code: 214-Unspecified solvent mixture
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: San Diego

Name: RITE AID #5635
Address: 3813 PLAZA DR
City,State,Zip: OCEANSIDE, CA 920560000
Year: 2016
GEPAID: CAR000212324
Contact: DAVID CROZIER
Telephone: 7179758643
Mailing Name: Not reported
Mailing Address: 30 HUNTER LN
Mailing City,St,Zip: CAMP HILL, PA 17011
Gen County: San Diego
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Tons: 0.057
CA Waste Code: 343-Unspecified organic liquid mixture
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery

RITE AID #5635 (Continued) **1014387661**

(H010-H129) Or (H131-H135)
Facility County: San Diego

Name: RITE AID #5635
Address: 3813 PLAZA DR
City,State,Zip: OCEANSIDE, CA 920560000
Year: 2016
GEPAID: CAR000212324
Contact: DAVID CROZIER
Telephone: 7179758643
Mailing Name: Not reported
Mailing Address: 30 HUNTER LN
Mailing City,St,Zip: CAMP HILL, PA 17011
Gen County: San Diego
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Tons: 0.0125
CA Waste Code: 214-Unspecified solvent mixture
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: San Diego

Click this hyperlink while viewing on your computer to access
20 additional CA_HAZNET: record(s) in the EDR Site Report.

F28 **RITE AID #5635** **RCRA-LQG** **1016954742**
WSW **3813 PLAZA DR** **CAL000379871**
1/8-1/4 **OCEANSIDE, CA 92056**
0.135 mi.
713 ft. **Site 2 of 3 in cluster F**

Relative: **Higher**

Actual: **194 ft.**

RCRA-LQG:
Date form received by agency: 03/01/2014
Facility name: RITE AID #5635
Facility address: 3813 PLAZA DR
OCEANSIDE, CA 92056
EPA ID: CAL000379871
Mailing address: HUNTER LN
CAMP HILL, PA 17011
Contact: STEPHANIE A CAIATI
Contact address: HUNTER LN
CAMP HILL, PA 17011
Contact country: Not reported
Contact telephone: 717-730-8255
Contact email: SSCAIATI@RITEAID.COM
EPA Region: 09
Classification: Large Quantity Generator
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than

RITE AID #5635 (Continued) **1016954742**

100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	THRIFTY PAYLESS
Owner/operator address:	HUNTER LN
	CAMP HILL, PA 17011
Owner/operator country:	Not reported
Owner/operator telephone:	717-761-2633
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	02/24/1997
Owner/Op end date:	Not reported
Owner/operator name:	RITE AID CORP
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	02/24/1997
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

. Waste code:	122
. Waste name:	Alkaline solution without metals (pH > 12.5)
. Waste code:	131
. Waste name:	Aqueous solution (2 < pH < 12.5) containing reactive anions (azide, bromate, chlorate, cyanide, fluoride, hypochlorite, nitrite, perchlorate, and sulfide anions)

RITE AID #5635 (Continued) **1016954742**

. Waste code: 141
. Waste name: Off-specification, aged, or surplus inorganics

. Waste code: 214
. Waste name: Unspecified solvent mixture

. Waste code: 232
. Waste name: Pesticides and other waste associated with pesticide production

. Waste code: 311
. Waste name: Pharmaceutical waste

. Waste code: 791
. Waste name: Liquids with pH < 2

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

. Waste code: D011
. Waste name: SILVER

. Waste code: D024
. Waste name: M-CRESOL

. Waste code: D026
. Waste name: CRESOL

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P075
. Waste name: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

Violation Status: No violations found

F29 **RITE AID #5635** **CA CERS HAZ WASTE** **S117310851**
WSW **3813 PLAZA DR** **CA HAZNET** **N/A**
1/8-1/4 **OCEANSIDE, CA 92054** **CA CERS**
0.135 mi.
713 ft. **Site 3 of 3 in cluster F**

Relative:
Higher

Actual:
194 ft.

CERS HAZ WASTE:

Site ID:	148054
CERS ID:	10372231
CERS Description:	Hazardous Waste Generator

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-08-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Santos Steven Inspection ID:4089301
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-07-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Yousif Teaba Inspection ID:5695195
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	Jordan Anderson
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	Thrifty Payless, Inc
Entity Title:	Not reported
Affiliation Address:	30 Hunter Lane
Affiliation City:	Camp Hill
Affiliation State:	PA
Affiliation Country:	United States
Affiliation Zip:	17011
Affiliation Phone:	(717) 761-2633

Affiliation Type Desc:	Property Owner
Entity Name:	Benderson Development Company
Entity Title:	Not reported
Affiliation Address:	7879 Cooper Creek Blvd., Suite 100
Affiliation City:	University Park
Affiliation State:	FL
Affiliation Country:	United States
Affiliation Zip:	34201

RITE AID #5635 (Continued) **S117310851**

Affiliation Phone:	(716) 886-0211
Affiliation Type Desc:	Environmental Contact
Entity Name:	David Crozier
Entity Title:	Not reported
Affiliation Address:	30 HUNTER LN
Affiliation City:	CAMP HILL
Affiliation State:	PA
Affiliation Country:	Not reported
Affiliation Zip:	17011
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	David Crozier
Entity Title:	Manager, EHS
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Rite Aid #5635
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 941-0712
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	30 HUNTER LN, Attn EHS
Affiliation City:	CAMP HILL
Affiliation State:	PA
Affiliation Country:	Not reported
Affiliation Zip:	17105
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	RITE AID CORPORATION
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported

RITE AID #5635 (Continued) **S117310851**

Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

HAZNET:

Name:	RITE AID #5635
Address:	3813 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 920560000
Year:	2014
GEPAID:	CAL000379871
Contact:	STEPHANIE A. CAIATI
Telephone:	7177308225
Mailing Name:	Not reported
Mailing Address:	30 HUNTER LN
Mailing City,St,Zip:	CAMP HILL, PA 170112400
Gen County:	San Diego
TSD EPA ID:	INR000110197
TSD County:	Not reported
Tons:	0.074
CA Waste Code:	331-Off-specification, aged or surplus organics
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	San Diego

Name:	RITE AID #5635
Address:	3813 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 920560000
Year:	2014
GEPAID:	CAL000379871
Contact:	STEPHANIE A. CAIATI
Telephone:	7177308225
Mailing Name:	Not reported
Mailing Address:	30 HUNTER LN
Mailing City,St,Zip:	CAMP HILL, PA 170112400
Gen County:	San Diego
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Tons:	0.0075
CA Waste Code:	214-Unspecified solvent mixture
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	San Diego

Name:	RITE AID #5635
Address:	3813 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 920560000
Year:	2014
GEPAID:	CAL000379871
Contact:	STEPHANIE A. CAIATI
Telephone:	7177308225
Mailing Name:	Not reported
Mailing Address:	30 HUNTER LN
Mailing City,St,Zip:	CAMP HILL, PA 170112400
Gen County:	San Diego
TSD EPA ID:	CAD008364432

RITE AID #5635 (Continued) **S117310851**

TSD County: Los Angeles
Tons: 0.0015
CA Waste Code: 311-Pharmaceutical waste
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: San Diego

Name: RITE AID #5635
Address: 3813 PLAZA DR
City,State,Zip: OCEANSIDE, CA 920560000
Year: 2014
GEPAID: CAL000379871
Contact: STEPHANIE A. CAIATI
Telephone: 7177308225
Mailing Name: Not reported
Mailing Address: 30 HUNTER LN
Mailing City,St,Zip: CAMP HILL, PA 170112400
Gen County: San Diego
TSD EPA ID: INR000110197
TSD County: Not reported
Tons: 0.0115
CA Waste Code: 131-Aqueous solution (2 < pH < 12.5) containing reactive anions ...
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: San Diego

Name: RITE AID #5635
Address: 3813 PLAZA DR
City,State,Zip: OCEANSIDE, CA 920560000
Year: 2014
GEPAID: CAL000379871
Contact: STEPHANIE A. CAIATI
Telephone: 7177308225
Mailing Name: Not reported
Mailing Address: 30 HUNTER LN
Mailing City,St,Zip: CAMP HILL, PA 170112400
Gen County: San Diego
TSD EPA ID: INR000110197
TSD County: Not reported
Tons: 0.032
CA Waste Code: 214-Unspecified solvent mixture
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: San Diego

Click this hyperlink while viewing on your computer to access
6 additional CA_HAZNET: record(s) in the EDR Site Report.

CERS:
Name: RITE AID #5635
Address: 3813 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92054
Site ID: 148054
CERS ID: 10372231
CERS Description: Chemical Storage Facilities

Evaluation:

RITE AID #5635 (Continued) **S117310851**

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-08-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:4089301
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-07-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5695195
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Document Preparer
Entity Name: Jordan Anderson
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Thrifty Payless, Inc
Entity Title: Not reported
Affiliation Address: 30 Hunter Lane
Affiliation City: Camp Hill
Affiliation State: PA
Affiliation Country: United States
Affiliation Zip: 17011
Affiliation Phone: (717) 761-2633

Affiliation Type Desc: Property Owner
Entity Name: Benderson Development Company
Entity Title: Not reported
Affiliation Address: 7879 Cooper Creek Blvd., Suite 100
Affiliation City: University Park
Affiliation State: FL
Affiliation Country: United States
Affiliation Zip: 34201
Affiliation Phone: (716) 886-0211

Affiliation Type Desc: Environmental Contact
Entity Name: David Crozier
Entity Title: Not reported
Affiliation Address: 30 HUNTER LN
Affiliation City: CAMP HILL
Affiliation State: PA
Affiliation Country: Not reported
Affiliation Zip: 17011

RITE AID #5635 (Continued) **S117310851**

Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	David Crozier
Entity Title:	Manager, EHS
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Rite Aid #5635
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 941-0712
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	30 HUNTER LN, Attn EHS
Affiliation City:	CAMP HILL
Affiliation State:	PA
Affiliation Country:	Not reported
Affiliation Zip:	17105
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	RITE AID CORPORATION
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

30
South
1/8-1/4
0.136 mi.
716 ft.

BEVERLY TATE
4032 MIRA COSTA STREET
OCEANSIDE, CA 92056

RCRA NonGen / NLR

1024777010
CAC002996947

Relative:
Higher

Actual:
222 ft.

RCRA NonGen / NLR:

Date form received by agency:	01/17/2019
Facility name:	BEVERLY TATE
Facility address:	4032 MIRA COSTA STREET OCEANSIDE, CA 92056
EPA ID:	CAC002996947
Contact:	BEVERLY TATE
Contact address:	4032 MIRA COSTA STREET OCEANSIDE, CA 92056
Contact country:	Not reported
Contact telephone:	619-850-9190
Contact email:	SOCALREMEDIATION@GMAIL.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	BEVERLY TATE
Owner/operator address:	4032 MIRA COSTA STREET OCEANSIDE, CA 92056
Owner/operator country:	Not reported
Owner/operator telephone:	619-850-9190
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	BEVERLY TATE
Owner/operator address:	4032 MIRA COSTA STREET OCEANSIDE, CA 92056
Owner/operator country:	Not reported
Owner/operator telephone:	619-850-9190
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

BEVERLY TATE (Continued) **1024777010**

Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

G31 **PLAZA DRIVE ARCO** **CA LUST U003938202**
West **3804 PLAZA DR** **CA UST N/A**
1/8-1/4 **OCEANSIDE, CA 92056**
0.144 mi.
762 ft. **Site 1 of 4 in cluster G**

Relative:
Higher

Actual:
220 ft.

LUST:

Name:	ARCO PRODUCTS CO #5350
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 920564623
Lead Agency:	SAN DIEGO COUNTY LOP
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607391302
Global Id:	T0607391302
Latitude:	33.181879
Longitude:	-117.294422
Status:	Completed - Case Closed
Status Date:	10/13/2005
Case Worker:	Not reported
RB Case Number:	Not reported
Local Agency:	Not reported
File Location:	Local Agency
Local Case Number:	H20645-001
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Diesel
Site History:	Not reported

LUST:

Global Id:	T0607391302
Action Type:	ENFORCEMENT
Date:	03/14/2001
Action:	Notice of Responsibility
Global Id:	T0607391302
Action Type:	Other
Date:	12/05/2000
Action:	Leak Discovery
Global Id:	T0607391302
Action Type:	Other
Date:	12/05/2000
Action:	Leak Stopped
Global Id:	T0607391302
Action Type:	Other
Date:	01/15/2001
Action:	Leak Reported
Global Id:	T0607391302

PLAZA DRIVE ARCO (Continued) **U003938202**

Action Type: Other
Date: 12/05/2000
Action: Leak Began

LUST:
Global Id: T0607391302
Status: Completed - Case Closed
Status Date: 10/13/2005

Global Id: T0607391302
Status: Open - Case Begin Date
Status Date: 12/05/2000

UST:
Name: PLAZA DRIVE ARCO
Address: 3804 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056-4623
Facility ID: 37-000-209418
Permitting Agency: San Diego County Department of Environmental Health
Latitude: 33.18269
Longitude: -117.29313

Name: ARCO PRODUCTS CO #5350
Address: 3804 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Facility ID: H20645
Permitting Agency: SAN DIEGO COUNTY
Latitude: 33.1841763
Longitude: -117.2917376

G32 **ARCO PRODUCTS CO #5350** **CA SAN DIEGO CO. SAM** **S109118213**
West **3804 PLAZA DR** **CA SAN DIEGO CO LOP** **N/A**
1/8-1/4 **OCEANSIDE, CA 92056** **CA CERS**
0.144 mi.
762 ft. **Site 2 of 4 in cluster G**

Relative:
Higher

Actual:
220 ft.

SAN DIEGO CO. SAM:
Name: ARCO PRODUCTS CO #5350
Address: 3804 PLAZA DR
City,State,Zip: OCEANSIDE, CA 920564623
Case Number: H20645-001
Agency: DEH Site Assessment & Mitigation
Funding: **LOP - Federal Fund**
Facility Type: Drinking Water Aquifer Impacted
Facility Status: Closed Case
Date: 10/13/2005
Date Began: 12/5/2000

SAN DIEGO CO LOP:
Name: ARCO PRODUCTS CO #5350
Address: 3804 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Record ID: DEH2001-LSAM-H20645-001
Record Status: Completed
Opened Date: 01/15/2001

ARCO PRODUCTS CO #5350 (Continued) **S109118213**

Parcel Number:	168-012-17-00
Case Type:	LOP - Local Oversight Program
Historical Name:	ARCO 5350
SWRCB Global ID:	T0607391302
Funding:	F - LOP Federal Fund
Lead Agency:	DEH/SAM
Lead Agency Date:	12/05/2000
Census Tract:	198.05
Community:	Oceanside
Jurisdiction:	OCEANSIDE
Watershed Basin Number:	904.21
Water Purveyor:	OCEANSIDE
Fire Agency:	OCEANSIDE
Latitude:	33.1826935
Longitude:	-117.2931303
X MapCoord:	6242520.999
Y MapCoord:	2011701.042

CERS:

Name:	ARCO PRODUCTS CO #5350
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 920564623
Site ID:	196951
CERS ID:	T0607391302
CERS Description:	Leaking Underground Storage Tank Cleanup Site

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G33 **ARCO #05350** **CA San Diego Co. HMMD** **S106174725**
West **3804 PLAZA DR** **CA CERS HAZ WASTE** **N/A**
1/8-1/4 **OCEANSIDE, CA 92056** **CA SWEEPS UST**
0.144 mi. **CA CERS TANKS**
762 ft. **Site 3 of 4 in cluster G** **CA EMI**
CA CERS

Relative:
Higher

Actual:
220 ft.

HMMD SAN DIEGO:

Name:	PLAZA DRIVE ARCO
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	Not reported
Business Type:	Not reported
EPA Id Number:	CAL000418960
APN:	Not reported
Last HMMD Inspection:	Not reported
Facility Telephone:	619-592-3931
Permit Status:	Permit Renewed
Permit Expiration:	Not reported
Date Last Updated:	06/23/2018
Facility Owner:	Not reported
Facility Mailing Address:	3804 PLAZA DR, OCEANSIDE, CA 92056
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	Y
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	N

ARCO #05350 (Continued) **S106174725**

Generate Medical Waste: Not reported

Inspection Violation:

Record ID:	DEH2008-HUPFP-209418
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-209418
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	4687386
Return To Compliance Date:	2013-07-31T00:00:00.000
Nov:	Not reported
Violation Classification:	Not reported
Underground Storage Tank Id:	25750
Container/Tank Id:	Not reported
Last Update:	2019-01-28T13:15:03.000
Inspection Date:	2013-07-08T12:40:00.000
Violation Code:	HMD3101 Current UPF Permit not obtained/not available. 25284; 68.905, 68.1003, 68.1005

Record ID:	DEH2008-HUPFP-209418
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-209418
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	4687386
Return To Compliance Date:	2013-08-21T00:00:00.000
Nov:	No
Violation Classification:	Not reported
Underground Storage Tank Id:	87
Container/Tank Id:	Not reported
Last Update:	2019-01-28T13:15:03.000
Inspection Date:	2013-07-08T12:40:00.000
Violation Code:	2030047 Failure to maintain secondary containment, as evidenced by failure of secondary containment testing.23 CCR 16 2662; HSC 6.7 25290.1(c)(2), 25290.2(c)(2), 25291(a), 25292(e)

Record ID:	DEH2008-HUPFP-209418
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-209418
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	5488446
Return To Compliance Date:	2016-07-12T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	25750
Container/Tank Id:	Not reported
Last Update:	2019-01-28T13:15:03.000
Inspection Date:	2016-07-12T11:33:59.000
Violation Code:	2030036 (RP) Failure of the overfill prevention system to meet one of the following requirements: 1. Alert the transfer operator when the tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95% of capacity; and

ARCO #05350 (Continued) **S106174725**

activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. 23 CCR 2635(b)(2), 2665

Record ID:	DEH2008-HUPFP-209418
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-209418
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	5677936
Return To Compliance Date:	2017-07-12T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	25751
Container/Tank Id:	Not reported
Last Update:	2019-01-28T13:15:03.000
Inspection Date:	2017-07-12T07:59:00.000
Violation Code:	2030018 (RD) Failure of the double-walled pressurized piping to be continuously monitored with a system that activates an audible and visual alarm or stops flow at dispenser when a leak is detected. 23 CCR 2636(f)(1)

Record ID:	DEH2008-HUPFP-209418
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-209418
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5925275
Return To Compliance Date:	2018-10-11T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-01-28T13:15:03.000
Inspection Date:	2018-07-10T10:27:00.000
Violation Code:	3010002 Failed to obtain &/or maintain an active EPA ID Number. 22 CCR 66262.12(a)

Record ID:	DEH2008-HUPFP-209418
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-209418
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	5677936
Return To Compliance Date:	2017-07-31T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-01-28T13:15:03.000
Inspection Date:	2017-07-12T07:59:00.000

ARCO #05350 (Continued) **S106174725**

Violation Code: 1010008 HMBP not certified annually as complete and accurate in CERS. HSC 25508(a)(1)(A), 25508.2, 19 CCR 2654(b)

UST DTL:

Record ID:	DEH2008-HUPFP-209418
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-209418
Facility Type (Ust Facility):	Motor Vehicle Fueling
Tank Owner Name:	Tony Attisha
Tankid:	25750
Tank Status:	Active
Date Ust Permanently Closed:	Not reported
Tank Use:	Motor Vehicle Fueling
Piping System Type:	Pressure
Last Updated:	2019-01-28T13:15:03.000
Tank Capacityin Gallons:	12000
Tank Contents:	Premium Unleaded
Type Of Tank:	Double Wall

Record ID:	DEH2008-HUPFP-209418
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-209418
Facility Type (Ust Facility):	Motor Vehicle Fueling
Tank Owner Name:	Tony Attisha
Tankid:	25751
Tank Status:	Active
Date Ust Permanently Closed:	Not reported
Tank Use:	Motor Vehicle Fueling
Piping System Type:	Pressure
Last Updated:	2019-01-28T13:15:03.000
Tank Capacityin Gallons:	12000
Tank Contents:	Regular Unleaded
Type Of Tank:	Double Wall

Record ID:	DEH2008-HUPFP-209418
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-209418
Facility Type (Ust Facility):	Motor Vehicle Fueling
Tank Owner Name:	Tony Attisha
Tankid:	25752
Tank Status:	Active
Date Ust Permanently Closed:	Not reported
Tank Use:	Motor Vehicle Fueling
Piping System Type:	Pressure
Last Updated:	2019-01-28T13:15:03.000
Tank Capacityin Gallons:	12000
Tank Contents:	Regular Unleaded
Type Of Tank:	Double Wall

Waste and Materials:

Record ID:	DEH2008-HUPFP-209418
Permit Status:	Permit Renewed
Active Permit:	Y

ARCO #05350 (Continued) **S106174725**

Child Record Id: DEH2016-HCHEM-0101295
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2017-02-23T02:35:01.000
Chemical Name: PREMIUM UNLEADED
Common Name: UNDERGROUND TANK 120645 T003
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-209418
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HCHEM-0101296
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2017-02-23T02:35:01.000
Chemical Name: REGULAR UNLEADED
Common Name: UNDERGROUND TANK 120645 T002
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-209418
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HCHEM-0101297
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2017-02-23T02:35:01.000
Chemical Name: REGULAR UNLEADED
Common Name: UNDERGROUND TANK 120645 T001
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-209418
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0083262
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-02-23T02:35:01.000
Chemical Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Common Name: FUEL CONTAMINATED FILTERS
Case Number: Not reported

Record ID: DEH2008-HUPFP-209418
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0083263
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-02-23T02:35:01.000
Chemical Name: waste liquid - water/fuel mixture
Common Name: waste liquid - water/fuel mixture
Case Number: Not reported

Record ID: DEH2008-HUPFP-209418
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0129422
Trade Secret: N

ARCO #05350 (Continued) **S106174725**

Hazardous Material Type: Not reported
Last Updated: 2017-10-23T21:36:38.000
Chemical Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Common Name: FUEL CONTAMINATED FILTERS
Case Number: Not reported

Record ID: DEH2008-HUPFP-209418
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0129423
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-10-23T21:36:38.000
Chemical Name: waste liquid - water/fuel mixture
Common Name: waste liquid - water/fuel mixture
Case Number: Not reported

Record ID: DEH2008-HUPFP-209418
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0184994
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2019-01-28T13:15:03.000
Chemical Name: PREMIUM UNLEADED
Common Name: UNDERGROUND TANK 120645 T003
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-209418
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0184995
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2019-01-28T13:15:03.000
Chemical Name: REGULAR UNLEADED
Common Name: UNDERGROUND TANK 120645 T002
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-209418
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0184996
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2019-01-28T13:15:03.000
Chemical Name: REGULAR UNLEADED
Common Name: UNDERGROUND TANK 120645 T001
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-209418
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0184997
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2019-01-28T13:15:03.000

ARCO #05350 (Continued) **S106174725**

Chemical Name: Carbon Dioxide
Common Name: Carbon Dioxide
Case Number: 124-38-9

Record ID: DEH2008-HUPFP-209418
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0159521
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-01-28T13:15:03.000
Chemical Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Common Name: FUEL CONTAMINATED FILTERS
Case Number: Not reported

Record ID: DEH2008-HUPFP-209418
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0159522
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-01-28T13:15:03.000
Chemical Name: waste liquid - water/fuel mixture
Common Name: waste liquid - water/fuel mixture
Case Number: Not reported

Record ID: DEH2008-HUPFP-209418
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HCHEM-0150932
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2017-10-23T21:36:38.000
Chemical Name: PREMIUM UNLEADED
Common Name: UNDERGROUND TANK 120645 T003
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-209418
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HCHEM-0150933
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2017-10-23T21:36:38.000
Chemical Name: REGULAR UNLEADED
Common Name: UNDERGROUND TANK 120645 T002
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-209418
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HCHEM-0150934
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2017-10-23T21:36:38.000
Chemical Name: REGULAR UNLEADED
Common Name: UNDERGROUND TANK 120645 T001

ARCO #05350 (Continued) **S106174725**

Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-209418
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HCHEM-0150935
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2017-10-23T21:36:38.000
Chemical Name: Carbon Dioxide
Common Name: Carbon Dioxide
Case Number: 124-38-9

Name: ARCO FACILITY NO. 5350
Address: 3804 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Permit Number: 120645
Business Type: 6HK28
EPA Id Number: CAL000275424
APN: 168-012-55-00
Last HMMD Inspection: 06/29/2007
Facility Telephone: 760-724-6165
Permit Status: CHNG
Permit Expiration: 01/31/2008
Date Last Updated: 11/02/2012
Facility Owner: BP WEST COAST PRODUCTS LLC
Facility Mailing Address: PO BOX 6038
Facility Mailing City: ARTESIA
Facility Mailing State: CA
Facility Mailing Zip: 90702-6038
UST Owner: BP WEST COAST PRODUCTS LLC
Handle Regulated Hazmat: Y
Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: Not reported
Generate Medical Waste: Not reported

UST:
UST Name: UNDERGROUND TANK 120645 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 120645
Tank Type: DOUBLE WALL
Additional Id: RT1545 REGULAR UNLEADED MASTER, RT2703, WEST TANK
Capacity Gallons: 12000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1986-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31A
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name: UNDERGROUND TANK 120645 T002

ARCO #05350 (Continued) **S106174725**

Last Update:	2012-11-02 14:17:38
Permit Number:	120645
Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 120645 T003
Last Update:	2012-11-02 14:17:38
Permit Number:	120645
Tank Type:	DOUBLE WALL
Additional Id:	RT1545
Capacity Gallons:	12000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	Not reported
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

Name:	ARCO AM/PM
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	209418
Business Type:	6HK28
EPA Id Number:	CAL000225476
APN:	168-012-55-00
Last HMMD Inspection:	08/01/2012
Facility Telephone:	760-724-6165
Permit Status:	OPEN
Permit Expiration:	03/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	BRIAN SHEENA
Facility Mailing Address:	3804 PLAZA DR
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	BRIAN SHEENA
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported

ARCO #05350 (Continued) **S106174725**

Generate Medical Waste: Not reported

Inventory Active Permits (not SQG Medical):

Permit Number: 209418
Update Date: 11/02/2012
Case Number: Not reported
Name: PREMIUM UNLEADED
Other Information: UNDERGROUND TANK 120645 T003
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 209418
Update Date: 11/02/2012
Case Number: 8006-61-9
Name: REGULAR UNLEADED
Other Information: UNDERGROUND TANK 120645 T001
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 209418
Update Date: 11/02/2012
Case Number: 8006-61-9
Name: REGULAR UNLEADED
Other Information: UNDERGROUND TANK 120645 T002
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 209418
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information: FUEL CONTAMINATED FILTERS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 08/01/2012
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 08/01/2012
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

ARCO #05350 (Continued) **S106174725**

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	06/22/2010
Violation Code:	6HV3115
Violation:	NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation:	Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	06/22/2010
Violation Code:	6HV3192
Violation:	NO D.O INSPECTION/INCOMPL;NO REPORTS
Violation Citation:	Designated Operator monthly inspection not conducted or incomplete; or DO inspection reports not onsite 2715 (c)(d)(e)
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	07/07/2011
Violation Code:	6HV3104
Violation:	FORMS A & B NOT AVAIL./SUBMITTED
Violation Citation:	CUPA UST form(s) A and/or B not available/complete/submitted to HMD. 25286(a); 2711
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	07/07/2011
Violation Code:	6HV0138
Violation:	NO TSDF SIGNED MANIFEST ONSITE
Violation Citation:	Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	07/07/2011
Violation Code:	6HV0225
Violation:	ACCUMULATED HW>180 OR >270 DAYS
Violation Citation:	Accumulated waste too long (>180 or 270 days). 66262.34(d), CFR 262.34(e)&(f), &/or 25201(a) [>90 days for AHW waste]
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	06/17/2008
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

ARCO #05350 (Continued) **S106174725**

UST:

UST Name:	UNDERGROUND TANK 120645 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	209418
Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED MASTER, RT2703, WEST TANK
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 120645 T002
Last Update:	2012-11-02 14:17:38
Permit Number:	209418
Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 120645 T003
Last Update:	2012-11-02 14:17:38
Permit Number:	209418
Tank Type:	DOUBLE WALL
Additional Id:	RT1545
Capacity Gallons:	12000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	Not reported
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

Name:	ARCO AM/PM
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	209418

ARCO #05350 (Continued) **S106174725**

Business Type:	6HK28
EPA Id Number:	CAL000225476
APN:	168-012-55-00
Last HMMD Inspection:	08/01/2012
Facility Telephone:	760-724-6165
Permit Status:	OPEN
Permit Expiration:	03/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	BRIAN SHEENA
Facility Mailing Address:	3804 PLAZA DR
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	BRIAN SHEENA
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	Not reported
Name:	PREMIUM UNLEADED
Other Information:	UNDERGROUND TANK 120645 T003
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 120645 T001
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 120645 T002
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information:	FUEL CONTAMINATED FILTERS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

ARCO #05350 (Continued) **S106174725**

Violations Active Permits:

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	08/01/2012
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	08/01/2012
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	06/22/2010
Violation Code:	6HV3115
Violation:	NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation:	Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	06/22/2010
Violation Code:	6HV3192
Violation:	NO D.O INSPECTION/INCOMPL;NO REPORTS
Violation Citation:	Designated Operator monthly inspection not conducted or incomplete; or DO inspection reports not onsite 2715 (c)(d)(e)
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	07/07/2011
Violation Code:	6HV3104
Violation:	FORMS A & B NOT AVAIL./SUBMITTED
Violation Citation:	CUPA UST form(s) A and/or B not available/complete/submitted to HMD. 25286(a); 2711
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	07/07/2011
Violation Code:	6HV0138
Violation:	NO TSDF SIGNED MANIFEST ONSITE
Violation Citation:	Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity:	ACTIVE

ARCO #05350 (Continued) **S106174725**

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 07/07/2011
Violation Code: 6HV0225
Violation: ACCUMULATED HW>180 OR >270 DAYS
Violation Citation: Accumulated waste too long (>180 or 270 days). 66262.34(d), CFR 262.34(e)&(f), &/or 25201(a) [>90 days for AHW waste]
Activity: ACTIVE

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 06/17/2008
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

UST:
UST Name: UNDERGROUND TANK 120645 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 209418
Tank Type: DOUBLE WALL
Additional Id: RT1545 REGULAR UNLEADED MASTER, RT2703, WEST TANK
Capacity Gallons: 12000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1986-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31A
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name: UNDERGROUND TANK 120645 T002
Last Update: 2012-11-02 14:17:38
Permit Number: 209418
Tank Type: DOUBLE WALL
Additional Id: RT1545 REGULAR UNLEADED
Capacity Gallons: 12000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1986-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31A
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name: UNDERGROUND TANK 120645 T003
Last Update: 2012-11-02 14:17:38
Permit Number: 209418
Tank Type: DOUBLE WALL

ARCO #05350 (Continued) **S106174725**

Additional Id:	RT1545
Capacity Gallons:	12000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	Not reported
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

Name:	ARCO AM/PM
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	209418
Business Type:	6HK28
EPA Id Number:	CAL000225476
APN:	168-012-55-00
Last HMMD Inspection:	08/01/2012
Facility Telephone:	760-724-6165
Permit Status:	OPEN
Permit Expiration:	03/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	BRIAN SHEENA
Facility Mailing Address:	3804 PLAZA DR
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	BRIAN SHEENA
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Y
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	Not reported
Name:	PREMIUM UNLEADED
Other Information:	UNDERGROUND TANK 120645 T003
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 120645 T001
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

ARCO #05350 (Continued) **S106174725**

Permit Number: 209418
Update Date: 11/02/2012
Case Number: 8006-61-9
Name: REGULAR UNLEADED
Other Information: UNDERGROUND TANK 120645 T002
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 209418
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information: FUEL CONTAMINATED FILTERS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:
Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 08/01/2012
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 08/01/2012
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 06/22/2010
Violation Code: 6HV3115
Violation: NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation: Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity: ACTIVE

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 06/22/2010
Violation Code: 6HV3192
Violation: NO D.O INSPECTION/INCOMPL;NO REPORTS
Violation Citation: Designated Operator monthly inspection not conducted or incomplete; or DO inspection reports not onsite 2715 (c)(d)(e)
Activity: ACTIVE

Permit Number: 209418

ARCO #05350 (Continued) **S106174725**

Update Date: 11/02/2012
Inspection Date: 07/07/2011
Violation Code: 6HV3104
Violation: FORMS A & B NOT AVAIL./SUBMITTED
Violation Citation: CUPA UST form(s) A and/or B not available/complete/submitted to HMD. 25286(a); 2711
Activity: ACTIVE

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 07/07/2011
Violation Code: 6HV0138
Violation: NO TSDF SIGNED MANIFEST ONSITE
Violation Citation: Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity: ACTIVE

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 07/07/2011
Violation Code: 6HV0225
Violation: ACCUMULATED HW>180 OR >270 DAYS
Violation Citation: Accumulated waste too long (>180 or 270 days). 66262.34(d), CFR 262.34(e)&(f), &/or 25201(a) [>90 days for AHW waste]
Activity: ACTIVE

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 06/17/2008
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

UST:
UST Name: UNDERGROUND TANK 120645 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 209418
Tank Type: DOUBLE WALL
Additional Id: RT1545 REGULAR UNLEADED MASTER, RT2703, WEST TANK
Capacity Gallons: 12000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1986-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31A
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name: UNDERGROUND TANK 120645 T002
Last Update: 2012-11-02 14:17:38
Permit Number: 209418

ARCO #05350 (Continued) **S106174725**

Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 120645 T003
Last Update:	2012-11-02 14:17:38
Permit Number:	209418
Tank Type:	DOUBLE WALL
Additional Id:	RT1545
Capacity Gallons:	12000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	Not reported
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

Name:	ARCO AM/PM
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	209418
Business Type:	6HK28
EPA Id Number:	CAL000225476
APN:	168-012-55-00
Last HMMD Inspection:	08/01/2012
Facility Telephone:	760-724-6165
Permit Status:	OPEN
Permit Expiration:	03/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	BRIAN SHEENA
Facility Mailing Address:	3804 PLAZA DR
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	BRIAN SHEENA
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

ARCO #05350 (Continued) **S106174725**

Inventory Active Permits (not SQG Medical):

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	Not reported
Name:	PREMIUM UNLEADED
Other Information:	UNDERGROUND TANK 120645 T003
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 120645 T001
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 120645 T002
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information:	FUEL CONTAMINATED FILTERS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Violations Active Permits:

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	08/01/2012
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	08/01/2012
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

ARCO #05350 (Continued) **S106174725**

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	06/22/2010
Violation Code:	6HV3115
Violation:	NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation:	Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	06/22/2010
Violation Code:	6HV3192
Violation:	NO D.O INSPECTION/INCOMPL;NO REPORTS
Violation Citation:	Designated Operator monthly inspection not conducted or incomplete; or DO inspection reports not onsite 2715 (c)(d)(e)
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	07/07/2011
Violation Code:	6HV3104
Violation:	FORMS A & B NOT AVAIL./SUBMITTED
Violation Citation:	CUPA UST form(s) A and/or B not available/complete/submitted to HMD. 25286(a); 2711
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	07/07/2011
Violation Code:	6HV0138
Violation:	NO TSDF SIGNED MANIFEST ONSITE
Violation Citation:	Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	07/07/2011
Violation Code:	6HV0225
Violation:	ACCUMULATED HW>180 OR >270 DAYS
Violation Citation:	Accumulated waste too long (>180 or 270 days). 66262.34(d), CFR 262.34(e)&(f), &/or 25201(a) [>90 days for AHW waste]
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	06/17/2008
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

ARCO #05350 (Continued) **S106174725**

UST:

UST Name:	UNDERGROUND TANK 120645 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	209418
Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED MASTER, RT2703, WEST TANK
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 120645 T002
Last Update:	2012-11-02 14:17:38
Permit Number:	209418
Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 120645 T003
Last Update:	2012-11-02 14:17:38
Permit Number:	209418
Tank Type:	DOUBLE WALL
Additional Id:	RT1545
Capacity Gallons:	12000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	Not reported
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

Name:	ARCO AM/PM
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	209418

ARCO #05350 (Continued) **S106174725**

Business Type:	6HK28
EPA Id Number:	CAL000225476
APN:	168-012-55-00
Last HMMD Inspection:	08/01/2012
Facility Telephone:	760-724-6165
Permit Status:	OPEN
Permit Expiration:	03/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	BRIAN SHEENA
Facility Mailing Address:	3804 PLAZA DR
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	BRIAN SHEENA
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	Not reported
Name:	PREMIUM UNLEADED
Other Information:	UNDERGROUND TANK 120645 T003
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 120645 T001
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 120645 T002
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information:	FUEL CONTAMINATED FILTERS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

ARCO #05350 (Continued) **S106174725**

Violations Active Permits:

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	08/01/2012
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	08/01/2012
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	06/22/2010
Violation Code:	6HV3115
Violation:	NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation:	Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	06/22/2010
Violation Code:	6HV3192
Violation:	NO D.O INSPECTION/INCOMPL;NO REPORTS
Violation Citation:	Designated Operator monthly inspection not conducted or incomplete; or DO inspection reports not onsite 2715 (c)(d)(e)
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	07/07/2011
Violation Code:	6HV3104
Violation:	FORMS A & B NOT AVAIL./SUBMITTED
Violation Citation:	CUPA UST form(s) A and/or B not available/complete/submitted to HMD. 25286(a); 2711
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	07/07/2011
Violation Code:	6HV0138
Violation:	NO TSDF SIGNED MANIFEST ONSITE
Violation Citation:	Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity:	ACTIVE

ARCO #05350 (Continued) **S106174725**

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 07/07/2011
Violation Code: 6HV0225
Violation: ACCUMULATED HW>180 OR >270 DAYS
Violation Citation: Accumulated waste too long (>180 or 270 days). 66262.34(d), CFR 262.34(e)&(f), &/or 25201(a) [>90 days for AHW waste]
Activity: ACTIVE

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 06/17/2008
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

UST:
UST Name: UNDERGROUND TANK 120645 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 209418
Tank Type: DOUBLE WALL
Additional Id: RT1545 REGULAR UNLEADED MASTER, RT2703, WEST TANK
Capacity Gallons: 12000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1986-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31A
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name: UNDERGROUND TANK 120645 T002
Last Update: 2012-11-02 14:17:38
Permit Number: 209418
Tank Type: DOUBLE WALL
Additional Id: RT1545 REGULAR UNLEADED
Capacity Gallons: 12000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1986-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31A
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name: UNDERGROUND TANK 120645 T003
Last Update: 2012-11-02 14:17:38
Permit Number: 209418
Tank Type: DOUBLE WALL

ARCO #05350 (Continued) **S106174725**

Additional Id:	RT1545
Capacity Gallons:	12000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	Not reported
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

Name:	ARCO AM/PM
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	209418
Business Type:	6HK28
EPA Id Number:	CAL000225476
APN:	168-012-55-00
Last HMMD Inspection:	08/01/2012
Facility Telephone:	760-724-6165
Permit Status:	OPEN
Permit Expiration:	03/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	BRIAN SHEENA
Facility Mailing Address:	3804 PLAZA DR
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	BRIAN SHEENA
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	Not reported
Name:	PREMIUM UNLEADED
Other Information:	UNDERGROUND TANK 120645 T003
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 120645 T001
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

ARCO #05350 (Continued) **S106174725**

Permit Number: 209418
Update Date: 11/02/2012
Case Number: 8006-61-9
Name: REGULAR UNLEADED
Other Information: UNDERGROUND TANK 120645 T002
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 209418
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information: FUEL CONTAMINATED FILTERS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 08/01/2012
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 08/01/2012
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 06/22/2010
Violation Code: 6HV3115
Violation: NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation: Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity: ACTIVE

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 06/22/2010
Violation Code: 6HV3192
Violation: NO D.O INSPECTION/INCOMPL;NO REPORTS
Violation Citation: Designated Operator monthly inspection not conducted or incomplete; or DO inspection reports not onsite 2715 (c)(d)(e)
Activity: ACTIVE

Permit Number: 209418

ARCO #05350 (Continued) **S106174725**

Update Date: 11/02/2012
Inspection Date: 07/07/2011
Violation Code: 6HV3104
Violation: FORMS A & B NOT AVAIL./SUBMITTED
Violation Citation: CUPA UST form(s) A and/or B not available/complete/submitted to HMD. 25286(a); 2711
Activity: ACTIVE

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 07/07/2011
Violation Code: 6HV0138
Violation: NO TSDF SIGNED MANIFEST ONSITE
Violation Citation: Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity: ACTIVE

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 07/07/2011
Violation Code: 6HV0225
Violation: ACCUMULATED HW>180 OR >270 DAYS
Violation Citation: Accumulated waste too long (>180 or 270 days). 66262.34(d), CFR 262.34(e)&(f), &/or 25201(a) [>90 days for AHW waste]
Activity: ACTIVE

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 06/17/2008
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

UST:
UST Name: UNDERGROUND TANK 120645 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 209418
Tank Type: DOUBLE WALL
Additional Id: RT1545 REGULAR UNLEADED MASTER, RT2703, WEST TANK
Capacity Gallons: 12000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1986-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31A
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name: UNDERGROUND TANK 120645 T002
Last Update: 2012-11-02 14:17:38
Permit Number: 209418

ARCO #05350 (Continued) **S106174725**

Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 120645 T003
Last Update:	2012-11-02 14:17:38
Permit Number:	209418
Tank Type:	DOUBLE WALL
Additional Id:	RT1545
Capacity Gallons:	12000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	Not reported
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

Name:	ARCO AM/PM
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	209418
Business Type:	6HK28
EPA Id Number:	CAL000225476
APN:	168-012-55-00
Last HMMD Inspection:	08/01/2012
Facility Telephone:	760-724-6165
Permit Status:	OPEN
Permit Expiration:	03/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	BRIAN SHEENA
Facility Mailing Address:	3804 PLAZA DR
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	BRIAN SHEENA
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

ARCO #05350 (Continued) **S106174725**

Inventory Active Permits (not SQG Medical):

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	Not reported
Name:	PREMIUM UNLEADED
Other Information:	UNDERGROUND TANK 120645 T003
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 120645 T001
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 120645 T002
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information:	FUEL CONTAMINATED FILTERS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Violations Active Permits:

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	08/01/2012
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	08/01/2012
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

ARCO #05350 (Continued) **S106174725**

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	06/22/2010
Violation Code:	6HV3115
Violation:	NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation:	Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	06/22/2010
Violation Code:	6HV3192
Violation:	NO D.O INSPECTION/INCOMPL;NO REPORTS
Violation Citation:	Designated Operator monthly inspection not conducted or incomplete; or DO inspection reports not onsite 2715 (c)(d)(e)
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	07/07/2011
Violation Code:	6HV3104
Violation:	FORMS A & B NOT AVAIL./SUBMITTED
Violation Citation:	CUPA UST form(s) A and/or B not available/complete/submitted to HMD. 25286(a); 2711
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	07/07/2011
Violation Code:	6HV0138
Violation:	NO TSDF SIGNED MANIFEST ONSITE
Violation Citation:	Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	07/07/2011
Violation Code:	6HV0225
Violation:	ACCUMULATED HW>180 OR >270 DAYS
Violation Citation:	Accumulated waste too long (>180 or 270 days). 66262.34(d), CFR 262.34(e)&(f), &/or 25201(a) [>90 days for AHW waste]
Activity:	ACTIVE

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	06/17/2008
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE

ARCO #05350 (Continued) **S106174725**

UST:

UST Name:	UNDERGROUND TANK 120645 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	209418
Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED MASTER, RT2703, WEST TANK
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 120645 T002
Last Update:	2012-11-02 14:17:38
Permit Number:	209418
Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 120645 T003
Last Update:	2012-11-02 14:17:38
Permit Number:	209418
Tank Type:	DOUBLE WALL
Additional Id:	RT1545
Capacity Gallons:	12000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	Not reported
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

Name:	ARCO AM/PM
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	209418

ARCO #05350 (Continued) **S106174725**

Business Type:	6HK28
EPA Id Number:	CAL000225476
APN:	168-012-55-00
Last HMMD Inspection:	08/01/2012
Facility Telephone:	760-724-6165
Permit Status:	OPEN
Permit Expiration:	03/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	BRIAN SHEENA
Facility Mailing Address:	3804 PLAZA DR
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	BRIAN SHEENA
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Y
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	Not reported
Name:	PREMIUM UNLEADED
Other Information:	UNDERGROUND TANK 120645 T003
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 120645 T001
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	8006-61-9
Name:	REGULAR UNLEADED
Other Information:	UNDERGROUND TANK 120645 T002
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	209418
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information:	FUEL CONTAMINATED FILTERS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

ARCO #05350 (Continued) **S106174725**

Violations Active Permits:

Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	08/01/2012
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE
Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	08/01/2012
Violation Code:	6HV3263
Violation:	MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation:	Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity:	ACTIVE
Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	06/22/2010
Violation Code:	6HV3115
Violation:	NO 2NDARY CONTAINMT. TEST/REPAIRS
Violation Citation:	Secondary containment testing not completed (passed) for all components &/or repairs to secondary containment components not completed. 25284.1, 25291(a)(2); 2637
Activity:	ACTIVE
Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	06/22/2010
Violation Code:	6HV3192
Violation:	NO D.O INSPECTION/INCOMPL;NO REPORTS
Violation Citation:	Designated Operator monthly inspection not conducted or incomplete; or DO inspection reports not onsite 2715 (c)(d)(e)
Activity:	ACTIVE
Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	07/07/2011
Violation Code:	6HV3104
Violation:	FORMS A & B NOT AVAIL./SUBMITTED
Violation Citation:	CUPA UST form(s) A and/or B not available/complete/submitted to HMD. 25286(a); 2711
Activity:	ACTIVE
Permit Number:	209418
Update Date:	11/02/2012
Inspection Date:	07/07/2011
Violation Code:	6HV0138
Violation:	NO TSDF SIGNED MANIFEST ONSITE
Violation Citation:	Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity:	ACTIVE

ARCO #05350 (Continued) **S106174725**

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 07/07/2011
Violation Code: 6HV0225
Violation: ACCUMULATED HW>180 OR >270 DAYS
Violation Citation: Accumulated waste too long (>180 or 270 days). 66262.34(d), CFR 262.34(e)&(f), &/or 25201(a) [>90 days for AHW waste]
Activity: ACTIVE

Permit Number: 209418
Update Date: 11/02/2012
Inspection Date: 06/17/2008
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

UST:
UST Name: UNDERGROUND TANK 120645 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 209418
Tank Type: DOUBLE WALL
Additional Id: RT1545 REGULAR UNLEADED MASTER, RT2703, WEST TANK
Capacity Gallons: 12000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1986-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31A
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name: UNDERGROUND TANK 120645 T002
Last Update: 2012-11-02 14:17:38
Permit Number: 209418
Tank Type: DOUBLE WALL
Additional Id: RT1545 REGULAR UNLEADED
Capacity Gallons: 12000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1986-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31A
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name: UNDERGROUND TANK 120645 T003
Last Update: 2012-11-02 14:17:38
Permit Number: 209418
Tank Type: DOUBLE WALL

ARCO #05350 (Continued) **S106174725**

Additional Id:	RT1545
Capacity Gallons:	12000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	Not reported
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

Name:	ARCO FACILITY NO. 5350
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	120645
Business Type:	6HK28
EPA Id Number:	CAL000275424
APN:	168-012-55-00
Last HMMD Inspection:	06/29/2007
Facility Telephone:	760-724-6165
Permit Status:	CHNG
Permit Expiration:	01/31/2008
Date Last Updated:	11/02/2012
Facility Owner:	BP WEST COAST PRODUCTS LLC
Facility Mailing Address:	PO BOX 6038
Facility Mailing City:	ARTESIA
Facility Mailing State:	CA
Facility Mailing Zip:	90702-6038
UST Owner:	BP WEST COAST PRODUCTS LLC
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

UST:

UST Name:	UNDERGROUND TANK 120645 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	120645
Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED MASTER, RT2703, WEST TANK
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 120645 T002

ARCO #05350 (Continued) **S106174725**

Last Update:	2012-11-02 14:17:38
Permit Number:	120645
Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 120645 T003
Last Update:	2012-11-02 14:17:38
Permit Number:	120645
Tank Type:	DOUBLE WALL
Additional Id:	RT1545
Capacity Gallons:	12000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	Not reported
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

Name:	ARCO AM/PM
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	208534
Business Type:	6HK28
EPA Id Number:	CAL000225476
APN:	168-012-55-00
Last HMMD Inspection:	10/04/2007
Facility Telephone:	760-724-6165
Permit Status:	CHNG
Permit Expiration:	08/31/2008
Date Last Updated:	11/02/2012
Facility Owner:	PAUL LE COMTE
Facility Mailing Address:	3804 PLAZA DR
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	PAUL LE COMTE
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported

ARCO #05350 (Continued) **S106174725**

Generate Medical Waste: Not reported

UST:

UST Name: UNDERGROUND TANK 120645 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 208534
Tank Type: DOUBLE WALL
Additional Id: RT1545 REGULAR UNLEADED MASTER, RT2703, WEST TANK
Capacity Gallons: 12000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1986-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31A
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name: UNDERGROUND TANK 120645 T002
Last Update: 2012-11-02 14:17:38
Permit Number: 208534
Tank Type: DOUBLE WALL
Additional Id: RT1545 REGULAR UNLEADED
Capacity Gallons: 12000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: 1986-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31A
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name: UNDERGROUND TANK 120645 T003
Last Update: 2012-11-02 14:17:38
Permit Number: 208534
Tank Type: DOUBLE WALL
Additional Id: RT1545
Capacity Gallons: 12000
UST Contents: PREMIUM UNLEADED
Other Content Info: PREMIUM UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: Not reported
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31A
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

Name: ARCO FACILITY NO. 5350
Address: 3804 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056

ARCO #05350 (Continued) **S106174725**

Permit Number:	120645
Business Type:	6HK28
EPA Id Number:	CAL000275424
APN:	168-012-55-00
Last HMMD Inspection:	06/29/2007
Facility Telephone:	760-724-6165
Permit Status:	CHNG
Permit Expiration:	01/31/2008
Date Last Updated:	11/02/2012
Facility Owner:	BP WEST COAST PRODUCTS LLC
Facility Mailing Address:	PO BOX 6038
Facility Mailing City:	ARTESIA
Facility Mailing State:	CA
Facility Mailing Zip:	90702-6038
UST Owner:	BP WEST COAST PRODUCTS LLC
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

UST:

UST Name:	UNDERGROUND TANK 120645 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	120645
Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED MASTER, RT2703, WEST TANK
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 120645 T002
Last Update:	2012-11-02 14:17:38
Permit Number:	120645
Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 120645 T003

ARCO #05350 (Continued) **S106174725**

Last Update:	2012-11-02 14:17:38
Permit Number:	120645
Tank Type:	DOUBLE WALL
Additional Id:	RT1545
Capacity Gallons:	12000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	Not reported
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

Name:	ARCO AM/PM
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	208534
Business Type:	6HK28
EPA Id Number:	CAL000225476
APN:	168-012-55-00
Last HMMD Inspection:	10/04/2007
Facility Telephone:	760-724-6165
Permit Status:	CHNG
Permit Expiration:	08/31/2008
Date Last Updated:	11/02/2012
Facility Owner:	PAUL LE COMTE
Facility Mailing Address:	3804 PLAZA DR
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	PAUL LE COMTE
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

UST:

UST Name:	UNDERGROUND TANK 120645 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	208534
Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED MASTER, RT2703, WEST TANK
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF &

ARCO #05350 (Continued) **S106174725**

FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 120645 T002
Last Update:	2012-11-02 14:17:38
Permit Number:	208534
Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 120645 T003
Last Update:	2012-11-02 14:17:38
Permit Number:	208534
Tank Type:	DOUBLE WALL
Additional Id:	RT1545
Capacity Gallons:	12000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	Not reported
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

Name:	ARCO AM/PM
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	208534
Business Type:	6HK28
EPA Id Number:	CAL000225476
APN:	168-012-55-00
Last HMMD Inspection:	10/04/2007
Facility Telephone:	760-724-6165
Permit Status:	CHNG
Permit Expiration:	08/31/2008
Date Last Updated:	11/02/2012
Facility Owner:	PAUL LE COMTE
Facility Mailing Address:	3804 PLAZA DR
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	PAUL LE COMTE
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported

ARCO #05350 (Continued) **S106174725**

Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

UST:

UST Name:	UNDERGROUND TANK 120645 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	208534
Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED MASTER, RT2703, WEST TANK
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 120645 T002
Last Update:	2012-11-02 14:17:38
Permit Number:	208534
Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 120645 T003
Last Update:	2012-11-02 14:17:38
Permit Number:	208534
Tank Type:	DOUBLE WALL
Additional Id:	RT1545
Capacity Gallons:	12000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	Not reported
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

ARCO #05350 (Continued) **S106174725**

Name:	ARCO AM/PM
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	208534
Business Type:	6HK28
EPA Id Number:	CAL000225476
APN:	168-012-55-00
Last HMMD Inspection:	10/04/2007
Facility Telephone:	760-724-6165
Permit Status:	CHNG
Permit Expiration:	08/31/2008
Date Last Updated:	11/02/2012
Facility Owner:	PAUL LE COMTE
Facility Mailing Address:	3804 PLAZA DR
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	PAUL LE COMTE
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

UST:

UST Name:	UNDERGROUND TANK 120645 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	208534
Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED MASTER, RT2703, WEST TANK
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 120645 T002
Last Update:	2012-11-02 14:17:38
Permit Number:	208534
Tank Type:	DOUBLE WALL
Additional Id:	RT1545 REGULAR UNLEADED
Capacity Gallons:	12000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1986-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF &

ARCO #05350 (Continued) **S106174725**

FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name: UNDERGROUND TANK 120645 T003
Last Update: 2012-11-02 14:17:38
Permit Number: 208534
Tank Type: DOUBLE WALL
Additional Id: RT1545
Capacity Gallons: 12000
UST Contents: PREMIUM UNLEADED
Other Content Info: PREMIUM UNLEADED
Reg Status: ACTIVE
Remove Close Date: Not reported
Year Installed: Not reported
Pipe Type: DOUBLE WALL
Delivery System: PRESSURE
Monitor Code: 31A
UST Monitor Method: DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

CERS HAZ WASTE:
Site ID: 170429
CERS ID: 10395598
CERS Description: Hazardous Waste Generator

Violations:
Site ID: 170429
Site Name: Plaza Drive Arco
Violation Date: 07-08-2013
Citation: HSC 6.7 25292(e) - California Health and Safety Code, Chapter 6.7, Section(s) 25292(e)
Violation Description: Failure to maintain secondary containment, as evidenced by failure of secondary containment testing.
Violation Notes: Returned to compliance on 08/21/2013. Inspection Sequence ID:4687386;Tank ID:87;Violation Description:Failure to maintain secondary containment, as evidenced by failure of secondary containment testing.23 CCR 16 2662; HSC 6.7 25290.1(c)(2), 25290.2(c)(2), 25291(a), 25292(e)
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 170429
Site Name: Plaza Drive Arco
Violation Date: 07-12-2017
Citation: 23 CCR 16 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(1)
Violation Description: Failure of the double-walled pressurized piping to be continuously monitored with a system that activates an audible and visual alarm or stops flow at the dispenser when a leak is detected.
Violation Notes: Returned to compliance on 07/12/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 170429
Site Name: Plaza Drive Arco

ARCO #05350 (Continued) **S106174725**

Violation Date:	07-08-2013
Citation:	HSC 6.7 Multiple Sections - California Health and Safety Code, Chapter 6.7, Section(s) Multiple Sections
Violation Description:	UST Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 07/31/2013. Inspection Sequence ID:4687386;Tank ID:25750,25751,25752;Violation:HMD3101 Current UPF Permit not obtained/not available. 25284; 68.905, 68.1003, 68.1005
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	170429
Site Name:	Plaza Drive Arco
Violation Date:	07-12-2016
Citation:	23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665
Violation Description:	Failure of the overfill prevention system to meet one of the following requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling.
Violation Notes:	Returned to compliance on 07/12/2016. Inspection Sequence ID:5488446;Tank ID:25750,25751,25752;Violation Description:(RP) Failure of the overfill prevention system to meet one of the following requirements: 1. Alert the transfer operator when the tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95% of capacity; and activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. 23 CCR 2635(b)(2), 2665
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	170429
Site Name:	Plaza Drive Arco
Violation Date:	07-12-2017
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 07/31/2017.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

ARCO #05350 (Continued) **S106174725**

Site ID: 170429
Site Name: Plaza Drive Arco
Violation Date: 07-10-2018
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description: Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes: Returned to compliance on 10/11/2018. Inspection Sequence ID:5925275
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-10-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Beacon Ellen Inspection ID:5925275
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5160855
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5160855
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-08-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:4687386
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-08-2013
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:4687386
Eval Division: San Diego County Department of Env Health
Eval Program: UST

ARCO #05350 (Continued) **S106174725**

Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-12-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5488446
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-12-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:5677936
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-12-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5488446
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-12-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:5677936
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5160855
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-08-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:4687386
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection

ARCO #05350 (Continued) **S106174725**

Eval Date: 07-10-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Beacon Ellen Inspection ID:5925275
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-10-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Beacon Ellen Inspection ID:5925275
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-12-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5488446
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-12-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:5677936
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 3804 PLAZA DR
Affiliation City: OCEANSIDE
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92056
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner

ARCO #05350 (Continued) **S106174725**

Entity Name:	Plaza Drive Arco
Entity Title:	Not reported
Affiliation Address:	3804 PLAZA DR
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(619) 592-3931
Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Tony Attisha
Entity Title:	Owner
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(619) 592-3931
Affiliation Type Desc:	Environmental Contact
Entity Name:	Tony Attisha
Entity Title:	Not reported
Affiliation Address:	3804 PLAZA DR
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Plaza Drive Arco
Entity Title:	Not reported
Affiliation Address:	3804 PLAZA DR
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(619) 592-3931
Affiliation Type Desc:	UST Tank Owner
Entity Name:	Plaza Drive Arco
Entity Title:	Not reported
Affiliation Address:	675 East Lincoln Ave. Suite L
Affiliation City:	ESCONDIDO
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92026
Affiliation Phone:	(619) 592-3931
Affiliation Type Desc:	Identification Signer
Entity Name:	Tony Attisha
Entity Title:	General Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported

ARCO #05350 (Continued) **S106174725**

Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	Plaza Drive Arco
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Tony Attisha
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(619) 592-3931
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	Plaza Drive Arco
Entity Title:	Not reported
Affiliation Address:	675 East Lincoln Ave. Suite L
Affiliation City:	Escondido
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92026
Affiliation Phone:	(619) 592-3931
Affiliation Type Desc:	UST Tank Operator
Entity Name:	Plaza Drive Arco
Entity Title:	Not reported
Affiliation Address:	675 East Lincoln Ave.
Affiliation City:	Escondido
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92026
Affiliation Phone:	(619) 592-3931

SWEEPS UST:

Name:	ARCO PRODUCTS C A KEPHART
Address:	3804 PLAZA DR
City:	OCEANSIDE
Status:	Active
Comp Number:	20645
Number:	9
Board Of Equalization:	44-000506
Referral Date:	Not reported
Action Date:	06-26-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-020645-000001
Tank Status:	A

ARCO #05350 (Continued) **S106174725**

Capacity:	12000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	3

Name:	ARCO PRODUCTS C A KEPHART
Address:	3804 PLAZA DR
City:	OCEANSIDE
Status:	Active
Comp Number:	20645
Number:	9
Board Of Equalization:	44-000506
Referral Date:	Not reported
Action Date:	06-26-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-020645-000002
Tank Status:	A
Capacity:	12000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Name:	ARCO PRODUCTS C A KEPHART
Address:	3804 PLAZA DR
City:	OCEANSIDE
Status:	Active
Comp Number:	20645
Number:	9
Board Of Equalization:	44-000506
Referral Date:	Not reported
Action Date:	06-26-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-020645-000003
Tank Status:	A
Capacity:	Not reported
Active Date:	Not reported
Tank Use:	UNKNOWN
STG:	P
Content:	Not reported
Number Of Tanks:	Not reported

CERS TANKS:

Name:	PLAZA DRIVE ARCO
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056-4623
Site ID:	170429
CERS ID:	10395598
CERS Description:	Underground Storage Tank

Violations:

Site ID:	170429

ARCO #05350 (Continued) **S106174725**

Site Name:	Plaza Drive Arco
Violation Date:	07-08-2013
Citation:	HSC 6.7 25292(e) - California Health and Safety Code, Chapter 6.7, Section(s) 25292(e)
Violation Description:	Failure to maintain secondary containment, as evidenced by failure of secondary containment testing.
Violation Notes:	Returned to compliance on 08/21/2013. Inspection Sequence ID:4687386;Tank ID:87;Violation Description:Failure to maintain secondary containment, as evidenced by failure of secondary containment testing.23 CCR 16 2662; HSC 6.7 25290.1(c)(2), 25290.2(c)(2), 25291(a), 25292(e)
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	170429
Site Name:	Plaza Drive Arco
Violation Date:	07-12-2017
Citation:	23 CCR 16 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(1)
Violation Description:	Failure of the double-walled pressurized piping to be continuously monitored with a system that activates an audible and visual alarm or stops flow at the dispenser when a leak is detected.
Violation Notes:	Returned to compliance on 07/12/2017.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	170429
Site Name:	Plaza Drive Arco
Violation Date:	07-08-2013
Citation:	HSC 6.7 Multiple Sections - California Health and Safety Code, Chapter 6.7, Section(s) Multiple Sections
Violation Description:	UST Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 07/31/2013. Inspection Sequence ID:4687386;Tank ID:25750,25751,25752;Violation:HMD3101 Current UPF Permit not obtained/not available. 25284; 68.905, 68.1003, 68.1005
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	170429
Site Name:	Plaza Drive Arco
Violation Date:	07-12-2016
Citation:	23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665
Violation Description:	Failure of the overfill prevention system to meet one of the following requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to

ARCO #05350 (Continued) **S106174725**

	overfilling.
Violation Notes:	Returned to compliance on 07/12/2016. Inspection Sequence ID:5488446;Tank ID:25750,25751,25752;Violation Description:(RP) Failure of the overfill prevention system to meet one of the following requirements: 1. Alert the transfer operator when the tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95% of capacity; and activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. 23 CCR 2635(b)(2), 2665
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	170429
Site Name:	Plaza Drive Arco
Violation Date:	07-12-2017
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 07/31/2017.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	170429
Site Name:	Plaza Drive Arco
Violation Date:	07-10-2018
Citation:	22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description:	Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes:	Returned to compliance on 10/11/2018. Inspection Sequence ID:5925275
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-10-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Beacon Ellen Inspection ID:5925275
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-16-2015
Violations Found:	No

ARCO #05350 (Continued) **S106174725**

Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:5160855
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-16-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:5160855
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-08-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:4687386
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-08-2013
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:4687386
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-12-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:5488446
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-12-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: LaPel Daniel Inspection ID:5677936
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-12-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:5488446
Eval Division:	San Diego County Department of Env Health

ARCO #05350 (Continued) **S106174725**

Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-12-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:5677936
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5160855
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-08-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:4687386
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-10-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Beacon Ellen Inspection ID:5925275
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-10-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Beacon Ellen Inspection ID:5925275
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-12-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5488446
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

ARCO #05350 (Continued) **S106174725**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-12-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: LaPel Daniel Inspection ID:5677936
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Affiliation:

Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	3804 PLAZA DR
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported

Affiliation Type Desc:	Property Owner
Entity Name:	Plaza Drive Arco
Entity Title:	Not reported
Affiliation Address:	3804 PLAZA DR
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(619) 592-3931

Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Tony Attisha
Entity Title:	Owner
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(619) 592-3931

Affiliation Type Desc:	Environmental Contact
Entity Name:	Tony Attisha
Entity Title:	Not reported
Affiliation Address:	3804 PLAZA DR
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported

ARCO #05350 (Continued) **S106174725**

Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Plaza Drive Arco
Entity Title:	Not reported
Affiliation Address:	3804 PLAZA DR
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(619) 592-3931
Affiliation Type Desc:	UST Tank Owner
Entity Name:	Plaza Drive Arco
Entity Title:	Not reported
Affiliation Address:	675 East Lincoln Ave. Suite L
Affiliation City:	ESCONDIDO
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92026
Affiliation Phone:	(619) 592-3931
Affiliation Type Desc:	Identification Signer
Entity Name:	Tony Attisha
Entity Title:	General Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	Plaza Drive Arco
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Tony Attisha
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(619) 592-3931
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	Plaza Drive Arco
Entity Title:	Not reported
Affiliation Address:	675 East Lincoln Ave. Suite L

ARCO #05350 (Continued) **S106174725**

Affiliation City:	Escondido
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92026
Affiliation Phone:	(619) 592-3931
Affiliation Type Desc:	UST Tank Operator
Entity Name:	Plaza Drive Arco
Entity Title:	Not reported
Affiliation Address:	675 East Lincoln Ave.
Affiliation City:	Escondido
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92026
Affiliation Phone:	(619) 592-3931

EMI:

Name:	ARCO #5350
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2000
County Code:	37
Air Basin:	SD
Facility ID:	86075
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	3
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	ARCO #5350
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2001
County Code:	37
Air Basin:	SD
Facility ID:	86075
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	3
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

ARCO #05350 (Continued) **S106174725**

Name:	ARCO #5350
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2002
County Code:	37
Air Basin:	SD
Facility ID:	86075
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	3
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	ARCO #5350
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2003
County Code:	37
Air Basin:	SD
Facility ID:	86075
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	3
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	ARCO #5350
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2004
County Code:	37
Air Basin:	SD
Facility ID:	86075
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.7291824
Reactive Organic Gases Tons/Yr:	2.7291824
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0

ARCO #05350 (Continued) **S106174725**

Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: ARCO #5350
Address: 3804 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Year: 2005
County Code: 37
Air Basin: SD
Facility ID: 86075
Air District Name: SD
SIC Code: 5541
Air District Name: SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 2.7291824
Reactive Organic Gases Tons/Yr: 2.7291824
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: ARCO #05350
Address: 3804 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Year: 2006
County Code: 37
Air Basin: SD
Facility ID: 86075
Air District Name: SD
SIC Code: 5541
Air District Name: SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 3.53
Reactive Organic Gases Tons/Yr: 3.53
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: ARCO #05350
Address: 3804 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Year: 2007
County Code: 37
Air Basin: SD
Facility ID: 86075
Air District Name: SD
SIC Code: 5541
Air District Name: SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 3.53
Reactive Organic Gases Tons/Yr: 3.53

ARCO #05350 (Continued) **S106174725**

Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	ARCO #05350
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2008
County Code:	37
Air Basin:	SD
Facility ID:	86075
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.53
Reactive Organic Gases Tons/Yr:	3.53
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	ARCO #05350
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2009
County Code:	37
Air Basin:	SD
Facility ID:	86075
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.5299999999999998
Reactive Organic Gases Tons/Yr:	3.5299999999999998
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	ARCO #05350
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2010
County Code:	37
Air Basin:	SD
Facility ID:	86075
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported

ARCO #05350 (Continued) **S106174725**

Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.5299999999999998
Reactive Organic Gases Tons/Yr:	3.5299999999999998
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	ARCO #05350
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2011
County Code:	37
Air Basin:	SD
Facility ID:	86075
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.53
Reactive Organic Gases Tons/Yr:	3.53
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	ARCO #05350
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2012
County Code:	37
Air Basin:	SD
Facility ID:	86075
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.53
Reactive Organic Gases Tons/Yr:	3.53
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	ARCO #05350
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2013
County Code:	37
Air Basin:	SD
Facility ID:	86075
Air District Name:	SD

ARCO #05350 (Continued) **S106174725**

SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.53
Reactive Organic Gases Tons/Yr:	3.53
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	ARCO #05350
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2014
County Code:	37
Air Basin:	SD
Facility ID:	86075
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.53
Reactive Organic Gases Tons/Yr:	3.53
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	ARCO #05350
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2015
County Code:	37
Air Basin:	SD
Facility ID:	86075
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.53
Reactive Organic Gases Tons/Yr:	3.53
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	ARCO #05350
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2016
County Code:	37

ARCO #05350 (Continued) **S106174725**

Air Basin:	SD
Facility ID:	86075
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.53
Reactive Organic Gases Tons/Yr:	3.53
Carbon Monoxide Emissions Tons/Yr:	Not reported
NOX - Oxides of Nitrogen Tons/Yr:	Not reported
SOX - Oxides of Sulphur Tons/Yr:	Not reported
Particulate Matter Tons/Yr:	Not reported
Part. Matter 10 Micrometers and Smllr Tons/Yr:	Not reported

CERS:

Name:	ARCO #05350
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Site ID:	451940
CERS ID:	110021274128
CERS Description:	US EPA Air Emission Inventory System (EIS)

Name:	PLAZA DRIVE ARCO
Address:	3804 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056-4623
Site ID:	170429
CERS ID:	10395598
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	170429
Site Name:	Plaza Drive Arco
Violation Date:	07-08-2013
Citation:	HSC 6.7 25292(e) - California Health and Safety Code, Chapter 6.7, Section(s) 25292(e)
Violation Description:	Failure to maintain secondary containment, as evidenced by failure of secondary containment testing.
Violation Notes:	Returned to compliance on 08/21/2013. Inspection Sequence ID:4687386;Tank ID:87;Violation Description:Failure to maintain secondary containment, as evidenced by failure of secondary containment testing.23 CCR 16 2662; HSC 6.7 25290.1(c)(2), 25290.2(c)(2), 25291(a), 25292(e)
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	170429
Site Name:	Plaza Drive Arco
Violation Date:	07-12-2017
Citation:	23 CCR 16 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(1)
Violation Description:	Failure of the double-walled pressurized piping to be continuously monitored with a system that activates an audible and visual alarm or stops flow at the dispenser when a leak is detected.
Violation Notes:	Returned to compliance on 07/12/2017.
Violation Division:	San Diego County Department of Env Health

ARCO #05350 (Continued) **S106174725**

Violation Program:	UST
Violation Source:	CERS
Site ID:	170429
Site Name:	Plaza Drive Arco
Violation Date:	07-08-2013
Citation:	HSC 6.7 Multiple Sections - California Health and Safety Code, Chapter 6.7, Section(s) Multiple Sections
Violation Description:	UST Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 07/31/2013. Inspection Sequence ID:4687386;Tank ID:25750,25751,25752;Violation:HMD3101 Current UPF Permit not obtained/not available. 25284; 68.905, 68.1003, 68.1005
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	170429
Site Name:	Plaza Drive Arco
Violation Date:	07-12-2016
Citation:	23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665
Violation Description:	Failure of the overfill prevention system to meet one of the following requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling.
Violation Notes:	Returned to compliance on 07/12/2016. Inspection Sequence ID:5488446;Tank ID:25750,25751,25752;Violation Description:(RP) Failure of the overfill prevention system to meet one of the following requirements: 1. Alert the transfer operator when the tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95% of capacity; and activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. 23 CCR 2635(b)(2), 2665
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	170429
Site Name:	Plaza Drive Arco
Violation Date:	07-12-2017
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due

ARCO #05350 (Continued) **S106174725**

date.
Violation Notes: Returned to compliance on 07/31/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 170429
Site Name: Plaza Drive Arco
Violation Date: 07-10-2018
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description: Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes: Returned to compliance on 10/11/2018. Inspection Sequence ID:5925275
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-10-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Beacon Ellen Inspection ID:5925275
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5160855
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5160855
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-08-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:4687386
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection

ARCO #05350 (Continued) **S106174725**

Eval Date: 07-08-2013
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:4687386
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-12-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5488446
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-12-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:5677936
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-12-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5488446
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-12-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:5677936
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-16-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5160855
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-08-2013
Violations Found: No
Eval Type: Routine done by local agency

ARCO #05350 (Continued) **S106174725**

Eval Notes: Inspector: Oglesby Margaret Inspection ID:4687386
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-10-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Beacon Ellen Inspection ID:5925275
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-10-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Beacon Ellen Inspection ID:5925275
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-12-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5488446
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-12-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: LaPel Daniel Inspection ID:5677936
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 3804 PLAZA DR
Affiliation City: OCEANSIDE

ARCO #05350 (Continued) **S106174725**

Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	Plaza Drive Arco
Entity Title:	Not reported
Affiliation Address:	3804 PLAZA DR
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(619) 592-3931
Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Tony Attisha
Entity Title:	Owner
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(619) 592-3931
Affiliation Type Desc:	Environmental Contact
Entity Name:	Tony Attisha
Entity Title:	Not reported
Affiliation Address:	3804 PLAZA DR
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Plaza Drive Arco
Entity Title:	Not reported
Affiliation Address:	3804 PLAZA DR
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92056
Affiliation Phone:	(619) 592-3931
Affiliation Type Desc:	UST Tank Owner
Entity Name:	Plaza Drive Arco
Entity Title:	Not reported
Affiliation Address:	675 East Lincoln Ave. Suite L
Affiliation City:	ESCONDIDO
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92026
Affiliation Phone:	(619) 592-3931
Affiliation Type Desc:	Identification Signer
Entity Name:	Tony Attisha

ARCO #05350 (Continued) **S106174725**

Entity Title:	General Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	Plaza Drive Arco
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Tony Attisha
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(619) 592-3931
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	Plaza Drive Arco
Entity Title:	Not reported
Affiliation Address:	675 East Lincoln Ave. Suite L
Affiliation City:	Escondido
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92026
Affiliation Phone:	(619) 592-3931
Affiliation Type Desc:	UST Tank Operator
Entity Name:	Plaza Drive Arco
Entity Title:	Not reported
Affiliation Address:	675 East Lincoln Ave.
Affiliation City:	Escondido
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92026
Affiliation Phone:	(619) 592-3931

G34 **PLAZA DRIVE ARCO** **RCRA NonGen / NLR** **1024855829**
West **3804 PLAZA DR** **CAL000418960**
1/8-1/4 **OCEANSIDE, CA 92056**
0.144 mi.
762 ft. **Site 4 of 4 in cluster G**

Relative:
Higher

Actual:
220 ft.

RCRA NonGen / NLR:

Date form received by agency:	07/18/2016
Facility name:	PLAZA DRIVE ARCO
Facility address:	3804 PLAZA DR OCEANSIDE, CA 92056
EPA ID:	CAL000418960
Contact:	TONY ATTISHA
Contact address:	3804 PLAZA DR OCEANSIDE, CA 92056
Contact country:	Not reported
Contact telephone:	619-288-5213
Contact email:	PLAZADRARCO@GMAIL.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	TONY ATTISHA
Owner/operator address:	3804 PLAZA DR OCEANSIDE, CA 92056
Owner/operator country:	Not reported
Owner/operator telephone:	619-288-5213
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	TONY ATTISHA
Owner/operator address:	3804 PLAZA DR OCEANSIDE, CA 92056
Owner/operator country:	Not reported
Owner/operator telephone:	619-288-5213
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	Yes
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

PLAZA DRIVE ARCO (Continued) **1024855829**

Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

35
SE
1/8-1/4
0.157 mi.
827 ft.

LORNA RODGERS **RCRA NonGen / NLR** **1024755104**
4102 LAKE BLVD **CAC002974924**
OCEANSIDE, CA 92056

Relative:
Higher

Actual:
247 ft.

RCRA NonGen / NLR:

Date form received by agency:	08/09/2018
Facility name:	LORNA RODGERS
Facility address:	4102 LAKE BLVD OCEANSIDE, CA 92056
EPA ID:	CAC002974924
Contact:	LORNA RODGERS
Contact address:	4102 LAKE BLVD OCEANSIDE, CA 92056
Contact country:	Not reported
Contact telephone:	805-927-7378
Contact email:	INFO@JJANDSCONSTRUCTION.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	LORNA RODGERS
Owner/operator address:	4102 LAKE BLVD OCEANSIDE, CA 92056
Owner/operator country:	Not reported
Owner/operator telephone:	805-927-7378
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	LORNA RODGERS
Owner/operator address:	4102 LAKE BLVD OCEANSIDE, CA 92056
Owner/operator country:	Not reported
Owner/operator telephone:	805-927-7378
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

LORNA RODGERS (Continued) **1024755104**

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	Yes
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

E36 **SCMC OB/GYN VISTA WAY** **CA San Diego Co. HMMD** **S113168858**
NW **3998 VISTA WAY STE C-202** **CA CERS HAZ WASTE** **N/A**
1/8-1/4 **OCEANSIDE, CA 92056** **CA CERS**
0.166 mi.
879 ft. **Site 4 of 6 in cluster E**

Relative:
Higher

Actual:
242 ft.

HMMD SAN DIEGO:

Name:	ANNA E. LEE, M.D. MEDICAL CORPORATION
Address:	3998 VISTA WAY D
City,State,Zip:	OCEANSIDE, CA 92056-4500
Permit Number:	Not reported
Business Type:	Not reported
EPA Id Number:	Not reported
APN:	Not reported
Last HMMD Inspection:	Not reported
Facility Telephone:	760-295-1995
Permit Status:	Permit Renewed
Permit Expiration:	Not reported
Date Last Updated:	10/06/2017
Facility Owner:	Not reported
Facility Mailing Address:	3998 Vista Way Ste D, Oceanside, CA 92056
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	N
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	N
Treat Haz Waste:	N
Generate Medical Waste:	Not reported

Waste and Materials:

Record ID:	DEH2014-HUPFP-000389
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2017-HWAST-0129482
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-10-20T02:31:27.000

SCMC OB/GYN VISTA WAY (Continued) **S113168858**

Chemical Name: Waste 902 Infectious Waste, SHARPS
Common Name: SHARPS
Case Number: Not reported

Name: RADIANCE OBGYN
Address: 3998 VISTA WAY C
City,State,Zip: OCEANSIDE, CA 92056-4500
Permit Number: Not reported
Business Type: Not reported
EPA Id Number: Not reported
APN: Not reported
Last HMMD Inspection: Not reported
Facility Telephone: 760-385-8008
Permit Status: Permit Renewed
Permit Expiration: Not reported
Date Last Updated: 10/26/2017
Facility Owner: Not reported
Facility Mailing Address: 3998 Vista Way, Suite C, Oceanside, CA 92056
Facility Mailing City: Not reported
Facility Mailing State: Not reported
Facility Mailing Zip: Not reported
UST Owner: N
Handle Regulated Hazmat: Not reported
Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: N
Treat Haz Waste: N
Generate Medical Waste: Not reported

Waste and Materials:
Record ID: DEH2017-HUPFP-003654
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0129479
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-08-21T02:31:36.000
Chemical Name: Waste Sharps
Common Name: Waste Sharps
Case Number: Not reported

Record ID: DEH2017-HUPFP-003654
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0129480
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-08-21T02:31:36.000
Chemical Name: Infectous Waste Red Bag Waste
Common Name: Infectous Waste Red Bag Waste
Case Number: Not reported

Name: NORTH COAST PLASTIC SURGERY
Address: 3998 VISTA WAY
City,State,Zip: OCEANSIDE, CA 92056-4500
Permit Number: Not reported

SCMC OB/GYN VISTA WAY (Continued) **S113168858**

Business Type:	Not reported
EPA Id Number:	Not reported
APN:	Not reported
Last HMMD Inspection:	Not reported
Facility Telephone:	760-655-1414
Permit Status:	Permit Renewed
Permit Expiration:	Not reported
Date Last Updated:	05/22/2018
Facility Owner:	Not reported
Facility Mailing Address:	3998 Vista Way, Suite A, Oceanside, CA 92056
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	N
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	N
Treat Haz Waste:	N
Generate Medical Waste:	Not reported

Inspection Violation:

Record ID:	DEH2016-HUPFP-002541
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-002541
Program Element:	Medical Waste
Inspection Type:	Routine
Inspection Number:	5481811
Return To Compliance Date:	2016-06-05T00:00:00.000
Nov:	No
Violation Classification:	Class I
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2018-05-22T00:00:00.000
Inspection Date:	2016-04-20T12:13:00.000
Violation Code:	HMD4201 UPF Permit not obtained. HSC 117705; SDCC 68.905, 68.1202

Waste and Materials:

Record ID:	DEH2016-HUPFP-002541
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0081158
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-05-22T02:31:52.000
Chemical Name:	Not reported
Common Name:	Waste Sharps
Case Number:	Not reported

CERS HAZ WASTE:

Site ID:	151731
CERS ID:	10373341
CERS Description:	Hazardous Waste Generator

Evaluation:

SCMC OB/GYN VISTA WAY (Continued) **S113168858**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Santos Steven Inspection ID:4101103
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Affiliation:

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	3998 Vista Way Ste. C-202
Affiliation City:	Oceanside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported

Affiliation Type Desc:	Property Owner
Entity Name:	Covey Commercial
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	United States
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 931-1134

Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880

Affiliation Type Desc:	Document Preparer
Entity Name:	MICHAEL T. MORRIS
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Environmental Contact
Entity Name:	Michael Morris
Entity Title:	Not reported
Affiliation Address:	10140 Campus Point Drive (CPA255)
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported

SCMC OB/GYN VISTA WAY (Continued) **S113168858**

Affiliation Zip: 92121
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Michael T. Morris
Entity Title: Safety Officer
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: SCMC OB/GYN
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 901-5200

Affiliation Type Desc: Parent Corporation
Entity Name: SCRIPPS HEALTH
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: SCRIPPS HEALTH
Entity Title: Not reported
Affiliation Address: 10140 Campus Point Drive
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92121
Affiliation Phone: (858) 678-7767

CERS:
Name: PACIFIC PAIN MEDICINE CONSULTANTS
Address: 3998 VISTA WAY
City,State,Zip: OCEANSIDE, CA 92056
Site ID: 140990
CERS ID: 10373416
CERS Description: Chemical Storage Facilities

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261

SCMC OB/GYN VISTA WAY (Continued) **S113168858**

Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Operator
Entity Name:	ROBERT E WAILES, MD
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 753-1104
Affiliation Type Desc:	Parent Corporation
Entity Name:	PACIFIC PAIN MEDICINE CONSULTANTS
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	3998 VISTA WAY # 108
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Candace Irons
Entity Title:	Not reported
Affiliation Address:	477 N EL CAMINO REAL B301
Affiliation City:	ENCINITAS
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92024
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Robert E Wailes, M.D.
Entity Title:	Not reported
Affiliation Address:	477 N El Camino Real, Suite B301
Affiliation City:	Encinitas
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92024
Affiliation Phone:	(760) 753-1104

SCMC OB/GYN VISTA WAY (Continued) **S113168858**

Name: ANNA E. LEE, M.D. MEDICAL CORPORATION
Address: 3998 VISTA WAY STE D
City,State,Zip: OCEANSIDE, CA 92056
Site ID: 422152
CERS ID: 10407901
CERS Description: Chemical Storage Facilities

Affiliation:
Affiliation Type Desc: Operator
Entity Name: Anna E. Lee, M.D.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 295-1995

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 3998 Vista Way Ste D
Affiliation City: Oceanside
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92056
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: Anna Lee
Entity Title: Not reported
Affiliation Address: 3998 Vista Way Ste D
Affiliation City: Oceanside
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92056
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: Anna E. Lee, MD. Medical Corporation
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

SCMC OB/GYN VISTA WAY (Continued) **S113168858**

Affiliation Type Desc: Document Preparer
Entity Name: AISHA DANIEL, EHT
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Anna Lee
Entity Title: Not reported
Affiliation Address: 3998 Vista Way Ste D
Affiliation City: Oceanside
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92056
Affiliation Phone: (949) 394-2439

Name: PACIFIC SURGERY CENTER
Address: 3998 VISTA WAY
City,State,Zip: OCEANSIDE, CA 92056
Site ID: 54904
CERS ID: 10373200
CERS Description: Chemical Storage Facilities

Affiliation:
Affiliation Type Desc: Property Owner
Entity Name: Robert E Wailes, M.D.
Entity Title: Not reported
Affiliation Address: 477 N El Camino Real, Suite B301
Affiliation City: Encinitas
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92024
Affiliation Phone: (760) 753-1104

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Environmental Contact
Entity Name: Candace Irons
Entity Title: Not reported
Affiliation Address: 477 N EL CAMINO REAL B301
Affiliation City: ENCINITAS
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92024
Affiliation Phone: Not reported

SCMC OB/GYN VISTA WAY (Continued) **S113168858**

Affiliation Type Desc:	Operator
Entity Name:	ROBERT E WAILES MD
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 753-1104

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	3998 VISTA WY C106
Affiliation City:	OCEANSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056-4507
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	PACIFIC SURGERY CENTER
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	Robert E Wailes, M.D.
Entity Title:	Not reported
Affiliation Address:	477 N El Camino Real, Suite B301
Affiliation City:	Encinitas
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92024
Affiliation Phone:	(760) 753-1104

Name:	NORTH COUNTY CARDIOTHORACIC SURGERY AMC
Address:	3998 VISTA WAY STE A
City,State,Zip:	OCEANSIDE, CA 92056
Site ID:	368766
CERS ID:	10669321
CERS Description:	Chemical Storage Facilities

Affiliation:

Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880

SCMC OB/GYN VISTA WAY (Continued) **S113168858**

Affiliation Type Desc: Parent Corporation
Entity Name: NORTH COUNTY CARDIOTHORACIC SURGERY AMC
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: SCMC OB/GYN VISTA WAY
Address: 3998 VISTA WAY STE C-202
City,State,Zip: OCEANSIDE, CA 92056
Site ID: 151731
CERS ID: 10373341
CERS Description: Chemical Storage Facilities

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-20-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:4101103
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 3998 Vista Way Ste. C-202
Affiliation City: Oceanside
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92056
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: Covey Commercial
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: United States
Affiliation Zip: Not reported
Affiliation Phone: (760) 931-1134

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261

SCMC OB/GYN VISTA WAY (Continued) **S113168858**

Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Document Preparer
Entity Name:	MICHAEL T. MORRIS
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Michael Morris
Entity Title:	Not reported
Affiliation Address:	10140 Campus Point Drive (CPA255)
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92121
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Michael T. Morris
Entity Title:	Safety Officer
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	SCMC OB/GYN
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 901-5200
Affiliation Type Desc:	Parent Corporation
Entity Name:	SCRIPPS HEALTH
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	SCRIPPS HEALTH
Entity Title:	Not reported
Affiliation Address:	10140 Campus Point Drive
Affiliation City:	San Diego

SCMC OB/GYN VISTA WAY (Continued) **S113168858**

Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92121
Affiliation Phone: (858) 678-7767

Name: NORTH COAST PLASTIC SURGERY
Address: 3998 VISTA WAY STE A-1
City,State,Zip: OCEANSIDE, CA 92056
Site ID: 368765
CERS ID: 10669252
CERS Description: Chemical Storage Facilities

Affiliation:
Affiliation Type Desc: Identification Signer
Entity Name: Gregory Park
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Gregory Park
Entity Title: Not reported
Affiliation Address: 3998 Vista Way Ste A
Affiliation City: Oceanside
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92056
Affiliation Phone: (760) 655-1414

Affiliation Type Desc: Document Preparer
Entity Name: Gregory Park
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: North Coast Plastic Surgery
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261

SCMC OB/GYN VISTA WAY (Continued) **S113168858**

Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Environmental Contact
Entity Name:	Elizabeth Park
Entity Title:	Not reported
Affiliation Address:	3998 Vista Way, Suite A
Affiliation City:	Oceanside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	3998 Vista Way, Suite A
Affiliation City:	Oceanside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	North Coast Plastic Surgery
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 655-1414

E37 **UPAC NEW LEAF RECOVERY CENTER NORTH** **RCRA NonGen / NLR** **1024867667**
NW **3998 VISTA WAY STE E** **CAL000436263**
1/8-1/4 **OCEANSIDE, CA 92056**
0.166 mi.
879 ft. **Site 5 of 6 in cluster E**

Relative:
Higher

Actual:
242 ft.

RCRA NonGen / NLR:

Date form received by agency:	05/17/2018
Facility name:	UPAC NEW LEAF RECOVERY CENTER NORTH
Facility address:	3998 VISTA WAY STE E OCEANSIDE, CA 92056
EPA ID:	CAL000436263
Contact:	ANGELA CHEN
Contact address:	1031 25TH ST SAN DIEGO, CA 92102
Contact country:	Not reported
Contact telephone:	619-232-6454
Contact email:	ACHEN@UPACSD.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

UPAC NEW LEAF RECOVERY CENTER NORTH (Continued) **1024867667**

Owner/Operator Summary:
- Owner/operator name: UNION OF PAN ASIAN COMMUNITIES
- Owner/operator address: 1031 25TH ST
  SAN DIEGO, CA 92102
- Owner/operator country: Not reported
- Owner/operator telephone: 619-232-6454
- Owner/operator email: Not reported
- Owner/operator fax: Not reported
- Owner/operator extension: Not reported
- Legal status: Other
- Owner/Operator Type: Owner
- Owner/Op start date: Not reported
- Owner/Op end date: Not reported

- Owner/operator name: ANGELA CHEN
- Owner/operator address: 1031 25TH ST
  SAN DIEGO, CA 92102
- Owner/operator country: Not reported
- Owner/operator telephone: 619-232-6454
- Owner/operator email: Not reported
- Owner/operator fax: Not reported
- Owner/operator extension: Not reported
- Legal status: Other
- Owner/Operator Type: Operator
- Owner/Op start date: Not reported
- Owner/Op end date: Not reported

Handler Activities Summary:
- U.S. importer of hazardous waste: No
- Mixed waste (haz. and radioactive): No
- Recycler of hazardous waste: No
- Transporter of hazardous waste: Yes
- Treater, storer or disposer of HW: No
- Underground injection activity: No
- On-site burner exemption: No
- Furnace exemption: No
- Used oil fuel burner: No
- Used oil processor: No
- User oil refiner: No
- Used oil fuel marketer to burner: No
- Used oil Specification marketer: No
- Used oil transfer facility: No
- Used oil transporter: No

Violation Status: No violations found

E38 **SCRIPPS COASTAL MED CTR - OB/GYN VISTA WAY** **RCRA NonGen / NLR** **1024837708**
NW **3998 VISTA WAY STE C-202** **CAL000383634**
1/8-1/4 **OCEANSIDE, CA 92056**
0.166 mi.
879 ft. **Site 6 of 6 in cluster E**

Relative: **Higher**
Actual: **242 ft.**

RCRA NonGen / NLR:
- Date form received by agency: 03/18/2013
- Facility name: SCRIPPS COASTAL MED CTR - OB/GYN VISTA WAY
- Facility address: 3998 VISTA WAY STE C-202
  OCEANSIDE, CA 92056-4500
- EPA ID: CAL000383634

SCRIPPS COASTAL MED CTR - OB/GYN VISTA WAY (Continued) **1024837708**

Mailing address:	10140 CAMPUS POINT DR SAN DIEGO, CA 92121-1520
Contact:	MICHAEL MORRIS
Contact address:	10140 CAMPUS POINT DRIVE MAIL DROP: CP-A 255 SAN DIEGO, CA 92121-0000
Contact country:	Not reported
Contact telephone:	858-361-7958
Contact email:	MORRIS.MICHAEL@SCRIPPSHEALTH.ORG
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	MICHAEL MORRIS
Owner/operator address:	10140 CAMPUS POINT DRIVE MAIL DROP: CP-A 255 SAN DIEGO, CA 92121
Owner/operator country:	Not reported
Owner/operator telephone:	858-361-7958
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	SCRIPPS HEALTH REAL ESTATE DEPT.
Owner/operator address:	10140 CAMPUS POINT DR SAN DIEGO, CA 92121
Owner/operator country:	Not reported
Owner/operator telephone:	858-678-7767
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	Yes
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

SCRIPPS COASTAL MED CTR - OB/GYN VISTA WAY (Continued) **1024837708**

Violation Status: No violations found

H39 **FIRESTONE COMPLETE AUTO CARE #793865** **RCRA NonGen / NLR** **1024871886**
NE **2030 HACIENDA DR** **CAL000440532**
1/8-1/4 **VISTA, CA 92081**
0.185 mi.
976 ft. **Site 1 of 3 in cluster H**

Relative:
Higher

Actual:
219 ft.

RCRA NonGen / NLR:

Date form received by agency:	11/01/2018
Facility name:	FIRESTONE COMPLETE AUTO CARE #793865
Facility address:	2030 HACIENDA DR VISTA, CA 92081
EPA ID:	CAL000440532
Mailing address:	200 4TH AVE S NASHVILLE, TN 37201
Contact:	BRIAN SMITH
Contact address:	200 4TH AVE S NASHVILLE, TN 37201
Contact country:	Not reported
Contact telephone:	615-937-9520
Contact email:	ENVGEN@BFRC.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	BRIAN SMITH
Owner/operator address:	200 4TH AVE S NASHVILLE, TN 37201
Owner/operator country:	Not reported
Owner/operator telephone:	615-937-9520
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	BRIDGESTONE RETAIL OPERATIONS LLC
Owner/operator address:	200 4TH AVE S NASHVILLE, TN 37201
Owner/operator country:	Not reported
Owner/operator telephone:	615-937-9520
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	Yes

FIRESTONE COMPLETE AUTO CARE #793865 (Continued) **1024871886**

Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

H40 **L&M TIRE COMPANY INC DBA EXPRESS TIRE** **RCRA NonGen / NLR** **1024789562**
NE **2030 HACIENDA DR** **CAL000067237**
1/8-1/4 **VISTA, CA 92084**
0.185 mi.
976 ft. **Site 2 of 3 in cluster H**

Relative:
Higher

Actual:
219 ft.

RCRA NonGen / NLR:

Date form received by agency:	03/11/1992
Facility name:	L&M TIRE COMPANY INC DBA EXPRESS TIRE
Facility address:	2030 HACIENDA DR VISTA, CA 92084
EPA ID:	CAL000067237
Mailing address:	1148 INDUSTRIAL AVE ESCONDIDO, CA 92029
Contact:	GRETA WAGGONER
Contact address:	1148 INDUSTRIAL AVENUE ESCONDIDO, CA 92029
Contact country:	Not reported
Contact telephone:	760-741-4044
Contact email:	GRETAW@EXPRESSTIRE.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	L&M TIRE COMPANY INC
Owner/operator address:	1148 INDUSTRIAL AVE ESCONDIDO, CA 92029
Owner/operator country:	Not reported
Owner/operator telephone:	760-741-4044
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	GRETA WAGGONER
Owner/operator address:	1148 INDUSTRIAL AVENUE ESCONDIDO, CA 92029
Owner/operator country:	Not reported
Owner/operator telephone:	760-741-4044
Owner/operator email:	Not reported

L&M TIRE COMPANY INC DBA EXPRESS TIRE (Continued) **1024789562**

Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

H41 **L & M TIRE DBA EXPRESS TIRE** **CA CERS HAZ WASTE** **S113047532**
NE **2030 HACIENDA DR** **CA HAZNET** **N/A**
1/8-1/4 **VISTA, CA 92081** **CA CERS**
0.185 mi.
976 ft. **Site 3 of 3 in cluster H**

Relative:
Higher

Actual:
219 ft.

CERS HAZ WASTE:
Site ID: 29185
CERS ID: 10377826
CERS Description: Hazardous Waste Generator

Violations:
Site ID: 29185
Site Name: Firestone Complete Auto Care #793865
Violation Date: 05-08-2017
Citation: HSC 6.5 25201(a) - California Health and Safety Code, Chapter 6.5, Section(s) 25201(a)
Violation Description: Failure to obtain a permit or grant of interim status to accumulate hazardous waste longer than 90 days.
Violation Notes: Returned to compliance on 05/15/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 29185
Site Name: Firestone Complete Auto Care #793865
Violation Date: 02-25-2015
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete, accurate, and up-to-date.
Violation Notes: Returned to compliance on 03/20/2015.
Violation Division: San Diego County Department of Env Health

L & M TIRE DBA EXPRESS TIRE (Continued) **S113047532**

Violation Program: HMRRP
Violation Source: CERS

Site ID: 29185
Site Name: Firestone Complete Auto Care #793865
Violation Date: 05-08-2017
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description: Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes: Returned to compliance on 05/08/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-25-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Jaramillo Marcie Inspection ID:4108207
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-08-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Villalvazo Olivia Inspection ID:5613474
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-25-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Jaramillo Marcie Inspection ID:4108207
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-08-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Villalvazo Olivia Inspection ID:5613474
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Facility Mailing Address

L & M TIRE DBA EXPRESS TIRE (Continued) **S113047532**

Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	200 4th Avenue South Attn: Environmental-BSRO
Affiliation City:	Nashville
Affiliation State:	TN
Affiliation Country:	Not reported
Affiliation Zip:	37201
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Adrian M. Gonzales
Entity Title:	Retail Environmental Specialist
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Parent Corporation
Entity Name:	Bridgestone Retail Operations, LLC. (BSRO)
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	Adrian M. Gonzales
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Brian Smith-BSRO
Entity Title:	Not reported
Affiliation Address:	200 4th Avenue South Attn: Environmental-BSRO
Affiliation City:	Nashville
Affiliation State:	TN
Affiliation Country:	Not reported
Affiliation Zip:	37201

L & M TIRE DBA EXPRESS TIRE (Continued) **S113047532**

Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Bridgestone Retail Operations, LLC
Entity Title:	Not reported
Affiliation Address:	200 4th Avenue South Attn: Environmental-BSRO
Affiliation City:	Nashville
Affiliation State:	TN
Affiliation Country:	United States
Affiliation Zip:	37201
Affiliation Phone:	(615) 937-9520
Affiliation Type Desc:	Operator
Entity Name:	Firestone Complete Auto Care # 793865
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 666-3991

HAZNET:

Name:	L&M TIRE COMPANY INC DBA EXPRESS TIRE
Address:	2030 HACIENDA DR
City,State,Zip:	VISTA, CA 92084
Year:	2017
GEPAID:	CAL000067237
Contact:	GRETA WAGGONER
Telephone:	7607414044
Mailing Name:	Not reported
Mailing Address:	1148 INDUSTRIAL AVE
Mailing City,St,Zip:	ESCONDIDO, CA 92029
Gen County:	San Diego
TSD EPA ID:	CAD097030993
TSD County:	Los Angeles
Tons:	0.1875
CA Waste Code:	352-Other organic solids
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	San Diego
Name:	L&M TIRE COMPANY INC DBA EXPRESS TIRE
Address:	2030 HACIENDA DR
City,State,Zip:	VISTA, CA 92084
Year:	2016
GEPAID:	CAL000067237
Contact:	DAVID NAJIM
Telephone:	7608011975
Mailing Name:	Not reported
Mailing Address:	1148 INDUSTRIAL AVE
Mailing City,St,Zip:	ESCONDIDO, CA 92029
Gen County:	San Diego
TSD EPA ID:	CAD097030993
TSD County:	Los Angeles
Tons:	0.1

L & M TIRE DBA EXPRESS TIRE (Continued) **S113047532**

CA Waste Code: 352-Other organic solids
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: San Diego

Name: L & M TIRE DBA EXPRESS TIRE
Address: 2030 HACIENDA DR
City,State,Zip: VISTA, CA 920816042
Year: 2013
GEPAID: CAL000067237
Contact: GRETA WAGGONER
Telephone: 7607414044
Mailing Name: Not reported
Mailing Address: 1148 INDUSTRIAL AVE
Mailing City,St,Zip: ESCONDIDO, CA 920291422
Gen County: San Diego
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Tons: 4.17
CA Waste Code: 222-Oil/water separation sludge
Method: H039-Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County: San Diego

Name: L & M TIRE DBA EXPRESS TIRE
Address: 2030 HACIENDA DR
City,State,Zip: VISTA, CA 920816042
Year: 2012
GEPAID: CAL000067237
Contact: GRETA WAGGONER
Telephone: 7607414044
Mailing Name: Not reported
Mailing Address: 1148 INDUSTRIAL AVE
Mailing City,St,Zip: ESCONDIDO, CA 920291422
Gen County: San Diego
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Tons: 3.1275
CA Waste Code: 222-Oil/water separation sludge
Method: H039-Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County: San Diego

Name: L & M TIRE DBA EXPRESS TIRE
Address: 2030 HACIENDA DR
City,State,Zip: VISTA, CA 920816042
Year: 2011
GEPAID: CAL000067237
Contact: GRETA WAGGONER
Telephone: 7607414044
Mailing Name: Not reported
Mailing Address: 1148 INDUSTRIAL AVE
Mailing City,St,Zip: ESCONDIDO, CA 920291422
Gen County: San Diego
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Tons: 3.336

L & M TIRE DBA EXPRESS TIRE (Continued) **S113047532**

CA Waste Code: 222-Oil/water separation sludge
Method: H039-Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County: San Diego

Click this hyperlink while viewing on your computer to access
25 additional CA_HAZNET: record(s) in the EDR Site Report.

CERS:
Name: FIRESTONE COMPLETE AUTO CARE #793865
Address: 2030 HACIENDA DR
City,State,Zip: VISTA, CA 92084
Site ID: 29185
CERS ID: 10377826
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 29185
Site Name: Firestone Complete Auto Care #793865
Violation Date: 05-08-2017
Citation: HSC 6.5 25201(a) - California Health and Safety Code, Chapter 6.5, Section(s) 25201(a)
Violation Description: Failure to obtain a permit or grant of interim status to accumulate hazardous waste longer than 90 days.
Violation Notes: Returned to compliance on 05/15/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 29185
Site Name: Firestone Complete Auto Care #793865
Violation Date: 02-25-2015
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete, accurate, and up-to-date.
Violation Notes: Returned to compliance on 03/20/2015.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 29185
Site Name: Firestone Complete Auto Care #793865
Violation Date: 05-08-2017
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description: Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes: Returned to compliance on 05/08/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection

L & M TIRE DBA EXPRESS TIRE (Continued) **S113047532**

Eval Date: 02-25-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Jaramillo Marcie Inspection ID:4108207
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-08-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Villalvazo Olivia Inspection ID:5613474
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-25-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Jaramillo Marcie Inspection ID:4108207
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-08-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Villalvazo Olivia Inspection ID:5613474
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 200 4th Avenue South Attn: Environmental-BSRO
Affiliation City: Nashville
Affiliation State: TN
Affiliation Country: Not reported
Affiliation Zip: 37201
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Adrian M. Gonzales
Entity Title: Retail Environmental Specialist
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District

L & M TIRE DBA EXPRESS TIRE (Continued) **S113047532**

Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Parent Corporation
Entity Name:	Bridgestone Retail Operations, LLC. (BSRO)
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	Adrian M. Gonzales
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Brian Smith-BSRO
Entity Title:	Not reported
Affiliation Address:	200 4th Avenue South Attn: Environmental-BSRO
Affiliation City:	Nashville
Affiliation State:	TN
Affiliation Country:	Not reported
Affiliation Zip:	37201
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Bridgestone Retail Operations, LLC
Entity Title:	Not reported
Affiliation Address:	200 4th Avenue South Attn: Environmental-BSRO
Affiliation City:	Nashville
Affiliation State:	TN
Affiliation Country:	United States
Affiliation Zip:	37201
Affiliation Phone:	(615) 937-9520
Affiliation Type Desc:	Operator
Entity Name:	Firestone Complete Auto Care # 793865
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported

L & M TIRE DBA EXPRESS TIRE (Continued) **S113047532**

Affiliation Phone: (760) 666-3991

I42 **RICHARD D. MOHRLOCK, DDS, PC** **CA San Diego Co. HMMD** **S120714496**
NE **2067 W VISTA WAY STE 190** **CA CERS HAZ WASTE** **N/A**
1/8-1/4 **VISTA, CA 92083** **CA CERS**
0.196 mi.
1035 ft. **Site 1 of 5 in cluster I**

Relative:
Higher

Actual:
223 ft.

HMMD SAN DIEGO:

Name:	THE DOCTOR'S OFFICE
Address:	2067 W VISTA WAY 130
City,State,Zip:	VISTA, CA 92083-6031
Permit Number:	Not reported
Business Type:	Not reported
EPA Id Number:	Not reported
APN:	Not reported
Last HMMD Inspection:	Not reported
Facility Telephone:	760-631-4000
Permit Status:	Permit Renewed
Permit Expiration:	Not reported
Date Last Updated:	04/28/2018
Facility Owner:	Not reported
Facility Mailing Address:	2067 W Vista Way Ste 130, Vista, CA 92083
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	N
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	N
Treat Haz Waste:	N
Generate Medical Waste:	Not reported

Waste and Materials:

Record ID:	DEH2016-HUPFP-003062
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0100819
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-04-28T02:35:15.000
Chemical Name:	WASTE 902 INFECTIOUS WASTE, SHARPS
Common Name:	SHARPS
Case Number:	Not reported

Record ID:	DEH2016-HUPFP-003062
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0100820
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-04-28T02:35:15.000
Chemical Name:	WASTE 901 INFECTIOUS WASTE, RED BAG
Common Name:	RED BAG
Case Number:	Not reported

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

Name:	FOUNDATION FOOT & ANKLE
Address:	2067 W VISTA WAY 265
City,State,Zip:	VISTA, CA 92083-6031
Permit Number:	Not reported
Business Type:	Not reported
EPA Id Number:	Not reported
APN:	Not reported
Last HMMD Inspection:	Not reported
Facility Telephone:	7604639155
Permit Status:	Permit Renewed
Permit Expiration:	Not reported
Date Last Updated:	07/17/2018
Facility Owner:	Not reported
Facility Mailing Address:	2067 W. VIsta Way, STE 265, Vista, CA 92083
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	N
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	N
Treat Haz Waste:	N
Generate Medical Waste:	Not reported

Waste and Materials:

Record ID:	DEH2018-HUPFP-004374
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0159734
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-07-17T02:30:54.000
Chemical Name:	Not reported
Common Name:	Red Bag Waste
Case Number:	Not reported

Record ID:	DEH2018-HUPFP-004374
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0159733
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-07-17T02:30:54.000
Chemical Name:	Not reported
Common Name:	sharps waste
Case Number:	Not reported

Name:	CENTERS FOR FAMILY MEDICINE
Address:	2067 W VISTA WAY 280
City,State,Zip:	VISTA, CA 92083-6031
Permit Number:	Not reported
Business Type:	Not reported
EPA Id Number:	Not reported
APN:	Not reported
Last HMMD Inspection:	Not reported
Facility Telephone:	855-449-6334

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

Permit Status:	Permit Renewed
Permit Expiration:	Not reported
Date Last Updated:	12/23/2017
Facility Owner:	Not reported
Facility Mailing Address:	9 Technology Way, Irvine, CA 92618
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	N
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	N
Treat Haz Waste:	N
Generate Medical Waste:	Not reported

Waste and Materials:

Record ID:	DEH2016-HUPFP-002346
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0093800
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-09-25T02:34:06.000
Chemical Name:	Infectious waste, sharps
Common Name:	Sharps
Case Number:	Not reported

Record ID:	DEH2016-HUPFP-002346
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0093801
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-09-25T02:34:06.000
Chemical Name:	Infectious waste, Red bag
Common Name:	Red bag
Case Number:	Not reported

CERS HAZ WASTE:

Site ID:	34357
CERS ID:	10591849
CERS Description:	Hazardous Waste Generator

Affiliation:

Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

Entity Title:	Not reported
Affiliation Address:	2067 W Vista Way Ste 195
Affiliation City:	Vista
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92083
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	Greenfield Compounding Pharmacy
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	Soheil Ahghari
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Soheil Ahghari
Entity Title:	Not reported
Affiliation Address:	2067 W Vista Way Ste 195
Affiliation City:	Vista
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92083
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Soheil Ahghari
Entity Title:	Owner
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Soheil Ahghari
Entity Title:	Not reported
Affiliation Address:	2067 W Vista Way Ste 195
Affiliation City:	Vista
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92083
Affiliation Phone:	(760) 842-1700

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

Affiliation Type Desc:	Operator
Entity Name:	Soheil Ahghari
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 842-1700

CERS:

Name:	LABCORP OCEANSIDE
Address:	2067 W VISTA WAY STE 275
City,State,Zip:	VISTA, CA 92083
Site ID:	273180
CERS ID:	10626973
CERS Description:	Chemical Storage Facilities

Affiliation:

Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880

Affiliation Type Desc:	Operator
Entity Name:	LABORATORY CORPORATION OF AMERICA
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 724-9615

Affiliation Type Desc:	Identification Signer
Entity Name:	CHRIS WESTOVER
Entity Title:	EHS MANAGER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	LABORATORY CORPORATION OF AMERICA
Entity Title:	Not reported
Affiliation Address:	358 SOUTH MAIN ST.
Affiliation City:	BURLINGTON
Affiliation State:	NC
Affiliation Country:	United States

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

Affiliation Zip: 27215
Affiliation Phone: (336) 222-7566

Affiliation Type Desc: Document Preparer
Entity Name: CHRIS WESTOVER
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: CHRIS WESTOVER
Entity Title: Not reported
Affiliation Address: 13112 EVENING CREEK DRIVE SOUTH
Affiliation City: SAN DIEGO
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92128
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 13112 EVENING CREEK DRIVE SOUTH
Affiliation City: SAN DIEGO
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92128
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: LAB CORP INC
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: NORTH COUNTY INTERNAL MEDICINE
Address: 2067 W VISTA WAY
City,State,Zip: VISTA, CA 92083
Site ID: 138698
CERS ID: 10378390
CERS Description: Chemical Storage Facilities

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: Jennifer Leger
Entity Title: Not reported
Affiliation Address: 2067 W Vista Way, Ste 200
Affiliation City: Vista
Affiliation State: CA

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

Affiliation Country:	Not reported
Affiliation Zip:	92083
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	North County Internal Medicine
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Legal Owner
Entity Name:	North County Internal Medicine
Entity Title:	Not reported
Affiliation Address:	2067 W Vista Way, Suite 200
Affiliation City:	Vista
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92083
Affiliation Phone:	(760) 726-2180
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	2067 W VISTA WY 200
Affiliation City:	VISTA
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92083-6031
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	PRACTICE ADMINISTRATOR
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 726-2180
Name:	RICHARD D. MOHRLOCK, DDS, PC
Address:	2067 W VISTA WAY STE 190

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

City,State,Zip: VISTA, CA 92083
Site ID: 412153
CERS ID: 10479145
CERS Description: Chemical Storage Facilities

Affiliation:
Affiliation Type Desc: Identification Signer
Entity Name: Richard Mohrlock
Entity Title: president
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 2067 W Vista Way Ste 190
Affiliation City: Vista
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92083
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Mohrlock, Richard
Entity Title: Not reported
Affiliation Address: 2067 W Vista Way Ste 190
Affiliation City: Vista
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92083
Affiliation Phone: (760) 967-9777

Affiliation Type Desc: Parent Corporation
Entity Name: Richard D. Mohrlock, DDS, PC
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Document Preparer
Entity Name: Richard Mohrlock

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: Richard Mohrlock
Entity Title: Not reported
Affiliation Address: 2067 W Vista Way Ste 190
Affiliation City: Vista
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92083
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: Richard Mohrlock
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 420-7322

Name: THE DOCTOR'S OFFICE
Address: 2067 W VISTA WAY STE 130
City,State,Zip: VISTA, CA 92083
Site ID: 412454
CERS ID: 10711090
CERS Description: Chemical Storage Facilities

Affiliation:
Affiliation Type Desc: Document Preparer
Entity Name: Lindsay DiPaolo
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Environmental Contact

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

Entity Name:	Linda S. Falconio MD
Entity Title:	Not reported
Affiliation Address:	2067 W Vista Way Ste 130
Affiliation City:	Vista
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92083
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	Linda S. Falconio MD Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	2067 W Vista Way Ste 130
Affiliation City:	Vista
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92083
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	Linda S. Falconio MD
Entity Title:	Not reported
Affiliation Address:	2067 W Vista Way Ste 130
Affiliation City:	Vista
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92083
Affiliation Phone:	(760) 631-4000

Affiliation Type Desc:	Operator
Entity Name:	Linda S. Falconio MD
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 631-4000

Name:	CHILDREN'S PRIMARY CARE MEDICAL GROUP, INC.
Address:	2067 W VISTA WAY STE 180
City,State,Zip:	VISTA, CA 92083
Site ID:	363306
CERS ID:	10378525
CERS Description:	Chemical Storage Facilities

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Tabares Marta Inspection ID:5397935
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Affiliation:

Affiliation Type Desc:	Environmental Contact
Entity Name:	Kathy Poulin
Entity Title:	Not reported
Affiliation Address:	3880 Murphy Canyon Rd, STE 200
Affiliation City:	SAN DIEGO
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92123
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	2067 West Vista Way Ste 180
Affiliation City:	Vista
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92083
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	RADY'S CHILDREN'S PHYSICIAN'S MGMT SVCS
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880

Affiliation Type Desc:	Document Preparer
Entity Name:	KATHY POULIN
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: Children's Primary Care Medical Group, Inc.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (858) 636-4300

Affiliation Type Desc: Identification Signer
Entity Name: Kathy Poulin
Entity Title: Contracts Administrator
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Childrens Primary Care Medical Group, Inc.
Entity Title: Not reported
Affiliation Address: 3880 Murphy Canyon Rd, Suite 200
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92123
Affiliation Phone: (858) 502-1100

Name: FOUNDATION FOOT & ANKLE
Address: 2067 W VISTA WAY STE 265
City,State,Zip: VISTA, CA 92083
Site ID: 437233
CERS ID: 10758208
CERS Description: Chemical Storage Facilities

Affiliation:
Affiliation Type Desc: Legal Owner
Entity Name: Steven Berthelsen
Entity Title: Not reported
Affiliation Address: 2067 W. Vista Way, STE 265
Affiliation City: Vista
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92083
Affiliation Phone: (760) 463-9155

Affiliation Type Desc: Document Preparer
Entity Name: Steven Berthelsen
Entity Title: Not reported
Affiliation Address: Not reported

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Environmental Contact
Entity Name:	Troy Theriault
Entity Title:	Not reported
Affiliation Address:	7630 Miramar Road Suite 2200
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92126
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	2067 W. Vista Way, STE 265
Affiliation City:	Vista
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92083
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Steven Berthelsen
Entity Title:	President
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Steven Berthelsen
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 463-9155
Affiliation Type Desc:	Parent Corporation

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

Entity Name:	Foundation Foot & Ankle
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Name:	CENTERS FOR FAMILY MEDICINE
Address:	2067 W VISTA WAY STE 280
City,State,Zip:	VISTA, CA 92083
Site ID:	364087
CERS ID:	10657036
CERS Description:	Chemical Storage Facilities

Affiliation:

Affiliation Type Desc:	Operator
Entity Name:	Medi Waste
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(951) 305-4763

Affiliation Type Desc:	Environmental Contact
Entity Name:	Theresa Gomez
Entity Title:	Not reported
Affiliation Address:	2067 W Vista Way Ste 280
Affiliation City:	Vista
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92083
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	P O Box 6579
Affiliation City:	Corona
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92878
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	Centers for Family Medicine, G.P
Entity Title:	Not reported
Affiliation Address:	11 Technology Way
Affiliation City:	Irvine
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92618
Affiliation Phone:	(760) 941-1047

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880

Affiliation Type Desc:	Parent Corporation
Entity Name:	Centers for Family Medicine
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Property Owner
Entity Name:	Greg Petree
Entity Title:	Not reported
Affiliation Address:	140 Lomas Santa Fe Drive, #103
Affiliation City:	Solana Beach
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92075
Affiliation Phone:	(858) 792-0696

Affiliation Type Desc:	Document Preparer
Entity Name:	AISHA DANIEL, EHT
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Name:	ALLERGY & IMMUNOLOGY MEDICAL GROUP
Address:	2067 W VISTA WAY STE 140
City,State,Zip:	VISTA, CA 92083
Site ID:	378235
CERS ID:	10378486
CERS Description:	Chemical Storage Facilities

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-19-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Denslow Vikki Inspection ID:5402169
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	Ryan White
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	2067 W VISTA WY 140
Affiliation City:	VISTA
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92083-6031
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	ALLERGY & IMMUNOLOGY MED GRP
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Environmental Contact
Entity Name:	ROBERT W ZIERING MD
Entity Title:	Not reported
Affiliation Address:	2067 W Vista Way Ste 140
Affiliation City:	Vista
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92083
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	ROBERT W ZIERING MD
Entity Title:	Not reported
Affiliation Address:	2067 W Vista Way Ste 140
Affiliation City:	Vista
Affiliation State:	CA

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

Affiliation Country: United States
Affiliation Zip: 92083
Affiliation Phone: (760) 941-4444

Affiliation Type Desc: Operator
Entity Name: ALLERGY & IMMUNOLOGY MEDICAL GROUP
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 941-4444

Name: VENUS WOMEN'S HEALTHCARE
Address: 2067 W VISTA WAY STE 160
City,State,Zip: VISTA, CA 92083
Site ID: 412605
CERS ID: 10711963
CERS Description: Chemical Storage Facilities

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: Tannaz Ebrahimi Adib, MD
Entity Title: Not reported
Affiliation Address: 2067 W Vista Way Ste 160
Affiliation City: Vista
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92083
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Legal Owner
Entity Name: Tannaz Ebrahimi Adib, MD
Entity Title: Not reported
Affiliation Address: 2067 W Vista Way Ste 160
Affiliation City: Vista
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92083
Affiliation Phone: (760) 295-9999

Affiliation Type Desc: Operator
Entity Name: Tannaz Ebrahimi Adib, MD
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 295-9999
Affiliation Type Desc:	Parent Corporation
Entity Name:	Venus Women's Healthcare
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	Ryan White
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	2067 W Vista Way Ste 160
Affiliation City:	Vista
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92083
Affiliation Phone:	Not reported

Name:	GREENFIELD COMPOUNDING PHARMACY
Address:	2067 W VISTA WAY STE 195
City,State,Zip:	VISTA, CA 92083
Site ID:	34357
CERS ID:	10591849
CERS Description:	Chemical Storage Facilities

Affiliation:

Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	2067 W Vista Way Ste 195

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

Affiliation City:	Vista
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92083
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	Greenfield Compounding Pharmacy
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	Soheil Ahghari
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Soheil Ahghari
Entity Title:	Not reported
Affiliation Address:	2067 W Vista Way Ste 195
Affiliation City:	Vista
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92083
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Soheil Ahghari
Entity Title:	Owner
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Soheil Ahghari
Entity Title:	Not reported
Affiliation Address:	2067 W Vista Way Ste 195
Affiliation City:	Vista
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92083
Affiliation Phone:	(760) 842-1700
Affiliation Type Desc:	Operator

RICHARD D. MOHRLOCK, DDS, PC (Continued) **S120714496**

Entity Name:	Soheil Ahghari
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 842-1700

I43 **RICHARD D MOHRLOCK DDS INC** **RCRA NonGen / NLR** **1024838957**
NE **2067 W VISTA WAY STE 190** **CAL000386454**
1/8-1/4 **VISTA, CA 92083**
0.196 mi.
1035 ft. **Site 2 of 5 in cluster I**

Relative:
Higher

Actual:
223 ft.

RCRA NonGen / NLR:

Date form received by agency:	06/20/2013
Facility name:	RICHARD D MOHRLOCK DDS INC
Facility address:	2067 W VISTA WAY STE 190 VISTA, CA 92083
EPA ID:	CAL000386454
Contact:	RICHARD MOHRLOCK
Contact address:	2067 W VISTA WAY STE 190 VISTA, CA 92083
Contact country:	Not reported
Contact telephone:	760-967-9777
Contact email:	DRMOHRLOCK@COX.NET
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	RICHARD MOHRLOCK
Owner/operator address:	2067 W VISTA WAY STE 190 VISTA, CA 92083
Owner/operator country:	Not reported
Owner/operator telephone:	760-967-9777
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	RICHARD D MOHRLOCK DDS INC
Owner/operator address:	2067 W VISTA WAY STE 190 VISTA, CA 92083
Owner/operator country:	Not reported
Owner/operator telephone:	760-967-9777
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported

RICHARD D MOHRLOCK DDS INC (Continued) **1024838957**

Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

I44 **VISTA MEDICAL PLAZA** **RCRA NonGen / NLR** **1024772769**
NE **2067 W. VISTA WAY** **CAC002992685**
1/8-1/4 **VISTA, CA 92083**
0.196 mi.
1035 ft. **Site 3 of 5 in cluster I**

Relative:
Higher

Actual:
223 ft.

RCRA NonGen / NLR:
Date form received by agency: 12/11/2018
Facility name: VISTA MEDICAL PLAZA
Facility address: 2067 W. VISTA WAY
ATTN: AL HOOEY
VISTA, CA 92083
EPA ID: CAC002992685
Mailing address: 140 LOMAS SANTA FE DRIVE, SUITE 103
ATTN: LESLIE HOWARD
SOLANA BEACH, CA 92075
Contact: AL HOOEY
Contact address: 2067 W. VISTA WAY ATTN: AL HOOEY
VISTA, CA 92083
Contact country: Not reported
Contact telephone: 760-525-9994
Contact email: AL.NCHC@GMAIL.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: VISTA MEDICAL PLAZA
Owner/operator address: 140 LOMAS SANTA FE DRIVE, SUITE 103 ATTN: LESLIE HOWARD
SOLANA BEACH, CA 92075
Owner/operator country: Not reported
Owner/operator telephone: 858-792-0696
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner

VISTA MEDICAL PLAZA (Continued) **1024772769**

Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: AL HOOEY
Owner/operator address: 2067 W. VISTA WAY ATTN: AL HOOEY
VISTA, CA 92083
Owner/operator country: Not reported
Owner/operator telephone: 760-525-9994
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

I45 **NORTH COUNTY INTERNAL MEDICINE** **RCRA NonGen / NLR** **1024865095**
NE **2067 W VISTA WAY STE 200** **CAL000433664**
1/8-1/4 **VISTA, CA 92083**
0.196 mi.
1035 ft. **Site 4 of 5 in cluster I**

Relative:
Higher

Actual:
223 ft.

RCRA NonGen / NLR:
Date form received by agency: 02/15/2018
Facility name: NORTH COUNTY INTERNAL MEDICINE
Facility address: 2067 W VISTA WAY STE 200
VISTA, CA 92083
EPA ID: CAL000433664
Contact: DENE GOSEJOHAN
Contact address: 2067 W VISTA WAY STE 200
VISTA, CA 92083
Contact country: Not reported
Contact telephone: 760-726-2180
Contact email: DGOSEJOHAN.NCIM@GMAIL.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

NORTH COUNTY INTERNAL MEDICINE (Continued) **1024865095**

Owner/Operator Summary:

Owner/operator name:	DENE GOSEJOHAN
Owner/operator address:	2067 W VISTA WAY STE 200 VISTA, CA 92083
Owner/operator country:	Not reported
Owner/operator telephone:	760-726-2180
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	DENE GOSEJOHAN
Owner/operator address:	2067 W VISTA WAY STE 200 VISTA, CA 92083
Owner/operator country:	Not reported
Owner/operator telephone:	760-726-2180
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	Yes
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

I46 **ALLEGRY AND IMMUNOLOGY MEDICAL GROUP** **RCRA NonGen / NLR** **1024845277**
NE **2067 W VISTA WAY STE 140** **CAL000398278**
1/8-1/4 **VISTA, CA 92083**
0.196 mi.
1035 ft. **Site 5 of 5 in cluster I**

Relative:
Higher

Actual:
223 ft.

RCRA NonGen / NLR:

Date form received by agency:	06/27/2014
Facility name:	ALLERGY AND IMMUNOLOGY MEDICAL GROUP
Facility address:	2067 W VISTA WAY STE 140 VISTA, CA 92083
EPA ID:	CAL000398278

ALLERGY AND IMMUNOLOGY MEDICAL GROUP (Continued) **1024845277**

Contact: CAROL SCHREIBER
Contact address: 2067 W. VISTA WAY, STE. 140
VISTA, CA 92083
Contact country: Not reported
Contact telephone: 760-941-4444
Contact email: INFO@SDALLERGY.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: CAROL SCHREIBER
Owner/operator address: 2067 W. VISTA WAY, STE. 140
VISTA, CA 92083
Owner/operator country: Not reported
Owner/operator telephone: 760-941-4444
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: ROBERT ZIERING
Owner/operator address: 2067 W VISTA WAY STE 140
VISTA, CA 92083
Owner/operator country: Not reported
Owner/operator telephone: 760-941-4444
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

J47 **US HEALTH WORKS MEDICAL GROUP** **RCRA NonGen / NLR** **1024833926**
WNW **3910 VISTA WAY STE 106** **CAL000373700**
1/8-1/4 **OCEANSIDE, CA 92056**
0.206 mi.
1087 ft. **Site 1 of 2 in cluster J**

Relative:
Higher

Actual:
237 ft.

RCRA NonGen / NLR:

Date form received by agency:	04/16/2012
Facility name:	US HEALTH WORKS MEDICAL GROUP
Facility address:	3910 VISTA WAY STE 106 OCEANSIDE, CA 92056-4513
EPA ID:	CAL000373700
Contact:	CATHI WASSON
Contact address:	3910 VISTA WAY STE 106 OCEANSIDE, CA 92056
Contact country:	Not reported
Contact telephone:	760-941-2000
Contact email:	CATHI.WASSON@USHWORKS.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	US HEALTHWORKS MEDICAL GROUP
Owner/operator address:	3910 VISTA WAY STE 106 OCEANSIDE, CA 92056
Owner/operator country:	Not reported
Owner/operator telephone:	760-941-2000
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	CATHI WASSON
Owner/operator address:	3910 VISTA WAY STE 106 OCEANSIDE, CA 92056
Owner/operator country:	Not reported
Owner/operator telephone:	760-941-2000
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	Yes
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

US HEALTH WORKS MEDICAL GROUP (Continued) **1024833926**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

J48 **NORTH COAST DENTAL GROUP** **CA San Diego Co. HMMD** **S106067386**
WNW **3910 VISTA WY** **CA CERS HAZ WASTE** **N/A**
1/8-1/4 **OCEANSIDE, CA 92056** **CA HAZNET**
0.206 mi. **CA CERS**
1087 ft. **Site 2 of 2 in cluster J**

Relative:
Higher

Actual:
237 ft.

HMMD SAN DIEGO:
Name: NORTH COAST DENTAL EXCELLENCE
Address: 3910 VISTA WAY
City,State,Zip: OCEANSIDE, CA 92056
Permit Number: Not reported
Business Type: Not reported
EPA Id Number: Not reported
APN: Not reported
Last HMMD Inspection: Not reported
Facility Telephone: 760-941-1414
Permit Status: Permit Renewed
Permit Expiration: Not reported
Date Last Updated: 02/24/2018
Facility Owner: Not reported
Facility Mailing Address: 3910 VISTA WAY #111, OCEANSIDE, CA 92056
Facility Mailing City: Not reported
Facility Mailing State: Not reported
Facility Mailing Zip: Not reported
UST Owner: N
Handle Regulated Hazmat: Not reported
Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: N
Treat Haz Waste: N
Generate Medical Waste: Not reported

Waste and Materials:
Record ID: DEH2007-HUPFP-208597
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0069868
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-02-24T02:34:21.000
Chemical Name: WASTE 902 INFECTIOUS WASTE, SHARPS
Common Name: WASTE 902 INFECTIOUS WASTE, SHARPS
Case Number: Not reported

Name: SMITHKLINE BEECHAM CLINICAL
Address: 3910 VISTA WY
City,State,Zip: OCEANSIDE, CA 92056
Permit Number: 151934

NORTH COAST DENTAL GROUP (Continued) **S106067386**

Business Type:	6HK10
EPA Id Number:	Not reported
APN:	DEH-151934
Last HMMD Inspection:	Not reported
Facility Telephone:	619-291-6980
Permit Status:	INAC
Permit Expiration:	02/28/2002
Date Last Updated:	11/02/2012
Facility Owner:	SMITHKLINE BEECHAM CLINICAL
Facility Mailing Address:	9530 PADGETT ST #101
Facility Mailing City:	SAN DIEGO
Facility Mailing State:	CA
Facility Mailing Zip:	92126-
UST Owner:	Not reported
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Not reported
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Name:	NORTH COAST DENTAL GROUP
Address:	3910 VISTA WY
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	208597
Business Type:	6HK10
EPA Id Number:	Not reported
APN:	DEH-151934
Last HMMD Inspection:	07/24/2012
Facility Telephone:	760-941-1414
Permit Status:	OPEN
Permit Expiration:	01/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	K. SOLEIMANI, DDS, INC.
Facility Mailing Address:	3910 VISTA WY #111
Facility Mailing City:	Oceanside
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	Not reported
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Not reported
Treat Haz Waste:	Not reported
Generate Medical Waste:	Y

Inventory Active Permits (SQG Medical):

Permit Number:	208597
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 902 INFECTIOUS WASTE, SHARPS
Other Information:	ISOLYSER
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Violations Active Permits:

NORTH COAST DENTAL GROUP (Continued) **S106067386**

Permit Number:	208597
Update Date:	11/02/2012
Inspection Date:	09/24/2007
Violation Code:	6HV4205
Violation:	MED SOLID WASTE NOT SECURED TO DENY ACCE
Violation Citation:	Medical Solid Waste not secured to deny access to unauthorized persons. 68.1211
Activity:	ACTIVE

Name:	NORTH COAST DENTAL GROUP
Address:	3910 VISTA WY
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	208597
Business Type:	6HK10
EPA Id Number:	Not reported
APN:	DEH-151934
Last HMMD Inspection:	07/24/2012
Facility Telephone:	760-941-1414
Permit Status:	OPEN
Permit Expiration:	01/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	K. SOLEIMANI, DDS, INC.
Facility Mailing Address:	3910 VISTA WY #111
Facility Mailing City:	Oceanside
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	Not reported
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Not reported
Treat Haz Waste:	Not reported
Generate Medical Waste:	Y

Inventory Active Permits (SQG Medical):

Permit Number:	208597
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 902 INFECTIOUS WASTE, SHARPS
Other Information:	ISOLYSER
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Violations Active Permits:

Permit Number:	208597
Update Date:	11/02/2012
Inspection Date:	09/24/2007
Violation Code:	6HV4205
Violation:	MED SOLID WASTE NOT SECURED TO DENY ACCE
Violation Citation:	Medical Solid Waste not secured to deny access to unauthorized persons. 68.1211
Activity:	ACTIVE

Name:	NORTH COAST DENTAL GROUP

NORTH COAST DENTAL GROUP (Continued) **S106067386**

Address:	3910 VISTA WY
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	208597
Business Type:	6HK10
EPA Id Number:	Not reported
APN:	DEH-151934
Last HMMD Inspection:	07/24/2012
Facility Telephone:	760-941-1414
Permit Status:	OPEN
Permit Expiration:	01/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	K. SOLEIMANI, DDS, INC.
Facility Mailing Address:	3910 VISTA WY #111
Facility Mailing City:	Oceanside
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	Not reported
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Not reported
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (SQG Medical):

Permit Number:	208597
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 902 INFECTIOUS WASTE, SHARPS
Other Information:	ISOLYSER
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Violations Active Permits:

Permit Number:	208597
Update Date:	11/02/2012
Inspection Date:	09/24/2007
Violation Code:	6HV4205
Violation:	MED SOLID WASTE NOT SECURED TO DENY ACCE
Violation Citation:	Medical Solid Waste not secured to deny access to unauthorized persons. 68.1211
Activity:	ACTIVE

Name:	NORTH COAST DENTAL GROUP
Address:	3910 VISTA WY
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	208597
Business Type:	6HK10
EPA Id Number:	Not reported
APN:	DEH-151934
Last HMMD Inspection:	07/24/2012
Facility Telephone:	760-941-1414
Permit Status:	OPEN
Permit Expiration:	01/31/2013
Date Last Updated:	11/02/2012

NORTH COAST DENTAL GROUP (Continued) **S106067386**

Facility Owner:	K. SOLEIMANI, DDS, INC.
Facility Mailing Address:	3910 VISTA WY #111
Facility Mailing City:	Oceanside
Facility Mailing State:	CA
Facility Mailing Zip:	92056
UST Owner:	Not reported
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Not reported
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (SQG Medical):

Permit Number:	208597
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 902 INFECTIOUS WASTE, SHARPS
Other Information:	ISOLYSER
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Violations Active Permits:

Permit Number:	208597
Update Date:	11/02/2012
Inspection Date:	09/24/2007
Violation Code:	6HV4205
Violation:	MED SOLID WASTE NOT SECURED TO DENY ACCE
Violation Citation:	Medical Solid Waste not secured to deny access to unauthorized persons. 68.1211
Activity:	ACTIVE

CERS HAZ WASTE:

Site ID:	165082
CERS ID:	10373617
CERS Description:	Hazardous Waste Generator

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-11-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Tabares Marta Inspection ID:4084999
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Affiliation:

Affiliation Type Desc:	Environmental Contact
Entity Name:	Cathi Wasson
Entity Title:	Not reported
Affiliation Address:	3910 Vista Way, Suite 106
Affiliation City:	Oceanside
Affiliation State:	CA
Affiliation Country:	Not reported

NORTH COAST DENTAL GROUP (Continued) **S106067386**

Affiliation Zip: 92056
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Operator
Entity Name: Concentra - Oceanside
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 941-2000

Affiliation Type Desc: Parent Corporation
Entity Name: Occupational Health Centers of California, A Medical Corporation
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 3910 Vista Way, Suite 106
Affiliation City: Oceanside
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92056
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Occupational Health Centers of California, A Medical Corporation
Entity Title: Not reported
Affiliation Address: 4714 Gettysburg Rd Attn: Legal Dept. Concentra License
Affiliation City: Mechanicsburg
Affiliation State: PA
Affiliation Country: United States
Affiliation Zip: 17055
Affiliation Phone: (717) 730-3625

HAZNET:
Name: US HEALTH WORKS MEDICAL GROUP
Address: 3910 VISTA WAY STE 106

NORTH COAST DENTAL GROUP (Continued) **S106067386**

City,State,Zip: OCEANSIDE, CA 920564513
Year: 2017
GEPAID: CAL000373700
Contact: CATHI WASSON
Telephone: 7609412000
Mailing Name: Not reported
Mailing Address: 3910 VISTA WAY STE 106
Mailing City,St,Zip: OCEANSIDE, CA 920564513
Gen County: San Diego
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Tons: 0.003
CA Waste Code: 311-Pharmaceutical waste
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: San Diego

Name: US HEALTH WORKS MEDICAL GROUP
Address: 3910 VISTA WAY STE 106
City,State,Zip: OCEANSIDE, CA 920564513
Year: 2016
GEPAID: CAL000373700
Contact: CATHI WASSON
Telephone: 7609412000
Mailing Name: Not reported
Mailing Address: 3910 VISTA WAY STE 106
Mailing City,St,Zip: OCEANSIDE, CA 920564513
Gen County: San Diego
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Tons: 0.003
CA Waste Code: 311-Pharmaceutical waste
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: San Diego

CERS:
Name: CONCENTRA - OCEANSIDE
Address: 3910 VISTA WAY STE 106
City,State,Zip: OCEANSIDE, CA 92056
Site ID: 165082
CERS ID: 10373617
CERS Description: Chemical Storage Facilities

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-11-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Tabares Marta Inspection ID:4084999
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: Cathi Wasson

NORTH COAST DENTAL GROUP (Continued) **S106067386**

Entity Title:	Not reported
Affiliation Address:	3910 Vista Way, Suite 106
Affiliation City:	Oceanside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Operator
Entity Name:	Concentra - Oceanside
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 941-2000
Affiliation Type Desc:	Parent Corporation
Entity Name:	Occupational Health Centers of California, A Medical Corporation
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	3910 Vista Way, Suite 106
Affiliation City:	Oceanside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Occupational Health Centers of California, A Medical Corporation
Entity Title:	Not reported
Affiliation Address:	4714 Gettysburg Rd Attn: Legal Dept. Concentra License
Affiliation City:	Mechanicsburg
Affiliation State:	PA
Affiliation Country:	United States
Affiliation Zip:	17055
Affiliation Phone:	(717) 730-3625

49
SW
1/8-1/4
0.216 mi.
1142 ft.

MG TENANT LLC DBA MERRILL GARDENS AT OCEANSIDE
3500 LAKE BLVD
OCEANSIDE, CA 92056

RCRA NonGen / NLR

1024867700
CAL000436296

Relative:
Lower

Actual:
191 ft.

RCRA NonGen / NLR:

Date form received by agency:	05/21/2018
Facility name:	MG TENANT LLC DBA MERRILL GARDENS AT OCEANSIDE
Facility address:	3500 LAKE BLVD OCEANSIDE, CA 92056
EPA ID:	CAL000436296
Mailing address:	1938 E FAIRVIEW AVE STE 300 SEATTLE, WA 98102
Contact:	ROSA CAMPBELL
Contact address:	3500 LAKE BLVD OCEANSIDE, CA 92056
Contact country:	Not reported
Contact telephone:	760-414-9411
Contact email:	GM.OCEANSIDE@MERRILLGARDENS.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	MG TENANT LLC
Owner/operator address:	1938 E FAIRVIEW AVE STE 300 SEATTLE, WA 98102
Owner/operator country:	Not reported
Owner/operator telephone:	206-676-5300
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	ROSA CAMPBELL
Owner/operator address:	3500 LAKE BLVD OCEANSIDE, CA 92056
Owner/operator country:	Not reported
Owner/operator telephone:	760-414-9411
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	Yes
Treater, storer or disposer of HW:	No
Underground injection activity:	No

MG TENANT LLC DBA MERRILL GARDENS AT OCEANSIDE (Continued) **1024867700**

On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

K50 **CA CANCER ASSOCIATES FOR RSRCH & EXLNCE** **CA San Diego Co. HMMD** **S110498576**
NNE **161 THUNDER DR** **CA CERS HAZ WASTE** **N/A**
1/8-1/4 **VISTA, CA 92083** **CA CERS**
0.222 mi.
1170 ft. **Site 1 of 2 in cluster K**

Relative:
Higher

Actual:
245 ft.

HMMD SAN DIEGO:

Name:	TRI-CITY MEDICAL CENTER -WOUND CARE
Address:	161 THUNDER
City,State,Zip:	VISTA, CA 92083
Permit Number:	210674
Business Type:	6HK58
EPA Id Number:	Not reported
APN:	166-051-32-00
Last HMMD Inspection:	04/21/2009
Facility Telephone:	760-940-5600
Permit Status:	INAC
Permit Expiration:	08/31/2011
Date Last Updated:	11/02/2012
Facility Owner:	TRI-CITY MEDICAL CENTER
Facility Mailing Address:	161 THUNDER DR
Facility Mailing City:	Vista
Facility Mailing State:	CA
Facility Mailing Zip:	92083
UST Owner:	Not reported
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Not reported
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Violations Inactive Permits:

Permit Number:	210674
Update Date:	11/02/2012
Inspection Date:	04/21/2009
Violation Code:	6HV1001
Violation:	NO UPF PERMIT FOR HAZMATS
Violation Citation:	A Unified Program Facility permit has not been obtained for hazardous materials. 68.905
Activity:	Inactive Permit

Permit Number:	210674
Update Date:	11/02/2012
Inspection Date:	04/21/2009
Violation Code:	6HV1002
Violation:	HMBP NOT ESTABISHED/IMPLEMENTED.

CA CANCER ASSOCIATES FOR RSRCH & EXLNCE (Continued) **S110498576**

Violation Citation: Hazardous materials handler has not established/implemented a business plan. HSC 25503.5(a)
Activity: Inactive Permit

Name: CA CANCER ASSOCIATES FOR RSRCH & EXLNCE
Address: 161 THUNDER DR
City,State,Zip: VISTA, CA 92083
Permit Number: 211613
Business Type: 6HK10
EPA Id Number: Not reported
APN: 166-051-32-00
Last HMMD Inspection: 03/30/2010
Facility Telephone: 760-208-6730
Permit Status: OPEN
Permit Expiration: 12/31/2012
Date Last Updated: 11/02/2012
Facility Owner: CA CANCER ASSOCIATES FOR RSRCH & EXCLNC
Facility Mailing Address: 7645 DAGGET ST #370
Facility Mailing City: San Diego
Facility Mailing State: CA
Facility Mailing Zip: 92111
UST Owner: Not reported
Handle Regulated Hazmat: Not reported
Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: Not reported
Treat Haz Waste: Not reported
Generate Medical Waste: Y

Inventory Active Permits (SQG Medical):
Permit Number: 211613
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 902 INFECTIOUS WASTE, SHARPS
Other Information: SHARPS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 211613
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 901 INFECTIOUS WASTE, GENERAL
Other Information: RED BAGS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 211613
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 904 INFECTIOUS WST,CHEMOTHERAPY
Other Information: TRACE CHEMO
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

CA CANCER ASSOCIATES FOR RSRCH & EXLNCE (Continued) **S110498576**

Name:	CA CANCER ASSOCIATES FOR RSRCH & EXLNCE
Address:	161 THUNDER DR
City,State,Zip:	VISTA, CA 92083
Permit Number:	211613
Business Type:	6HK10
EPA Id Number:	Not reported
APN:	166-051-32-00
Last HMMD Inspection:	03/30/2010
Facility Telephone:	760-208-6730
Permit Status:	OPEN
Permit Expiration:	12/31/2012
Date Last Updated:	11/02/2012
Facility Owner:	CA CANCER ASSOCIATES FOR RSRCH & EXCLNC
Facility Mailing Address:	7645 DAGGET ST #370
Facility Mailing City:	San Diego
Facility Mailing State:	CA
Facility Mailing Zip:	92111
UST Owner:	Not reported
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Not reported
Treat Haz Waste:	Not reported
Generate Medical Waste:	Y

Inventory Active Permits (SQG Medical):

Permit Number:	211613
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 902 INFECTIOUS WASTE, SHARPS
Other Information:	SHARPS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	211613
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 901 INFECTIOUS WASTE, GENERAL
Other Information:	RED BAGS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	211613
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 904 INFECTIOUS WST,CHEMOTHERAPY
Other Information:	TRACE CHEMO
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

CERS HAZ WASTE:

Site ID:	372607
CERS ID:	10378600

CA CANCER ASSOCIATES FOR RSRCH & EXLNCE (Continued) **S110498576**

CERS Description: Hazardous Waste Generator

Affiliation:

Affiliation Type Desc: Environmental Contact
Entity Name: VALERIE DIAZ
Entity Title: Not reported
Affiliation Address: 150 VALPREDA ROAD
Affiliation City: SAN MARCOS
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92069
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: NORTH COUNTY HEALTH SERVICES
Entity Title: Not reported
Affiliation Address: 150 VALPREDA ROAD
Affiliation City: SAN MARCOS
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92069
Affiliation Phone: (760) 736-6700

Affiliation Type Desc: Parent Corporation
Entity Name: NORTH COUNTY HEALTH SERVICES
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: North County Health Project, Inc.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 736-6700

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 150 VALPREDA ROAD
Affiliation City: SAN MARCOS

CA CANCER ASSOCIATES FOR RSRCH & EXLNCE (Continued) **S110498576**

Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92069
Affiliation Phone: Not reported

CERS:
Name: DAVID B JENKINS DDS
Address: 161 THUNDER DR STE 208
City,State,Zip: VISTA, CA 92083
Site ID: 110351
CERS ID: 10395730
CERS Description: Chemical Storage Facilities

Affiliation:
Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 161 Thunder Dr. STE 208
Affiliation City: Vista
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92083
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: Matt McDonald DDS APC
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 758-8506

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Document Preparer
Entity Name: Matt McDonald
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: Heidi Mestaz

CA CANCER ASSOCIATES FOR RSRCH & EXLNCE (Continued) **S110498576**

Entity Title: Not reported
Affiliation Address: 161 Thunder Dr Ste 208
Affiliation City: Vista
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92083
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Matt McDonald
Entity Title: President
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Matt McDonald
Entity Title: Not reported
Affiliation Address: 161 Thunder Dr Ste 208
Affiliation City: Vista
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92083
Affiliation Phone: (425) 417-4509

Affiliation Type Desc: Parent Corporation
Entity Name: MATT MCDONALD, DDS
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: NCHS-WOMEN'S HEALTH SERVICES
Address: 161 THUNDER DR STE 210
City,State,Zip: VISTA, CA 92083
Site ID: 372607
CERS ID: 10378600
CERS Description: Chemical Storage Facilities

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: VALERIE DIAZ
Entity Title: Not reported
Affiliation Address: 150 VALPREDA ROAD
Affiliation City: SAN MARCOS
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92069
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner

CA CANCER ASSOCIATES FOR RSRCH & EXLNCE (Continued) **S110498576**

Entity Name: NORTH COUNTY HEALTH SERVICES
Entity Title: Not reported
Affiliation Address: 150 VALPREDA ROAD
Affiliation City: SAN MARCOS
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92069
Affiliation Phone: (760) 736-6700

Affiliation Type Desc: Parent Corporation
Entity Name: NORTH COUNTY HEALTH SERVICES
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: North County Health Project, Inc.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (760) 736-6700

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 150 VALPREDA ROAD
Affiliation City: SAN MARCOS
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92069
Affiliation Phone: Not reported

Name: DYNAMIC DENTAL GROUP
Address: 161 THUNDER DR STE 211
City,State,Zip: VISTA, CA 92083
Site ID: 409606
CERS ID: 10378768
CERS Description: Chemical Storage Facilities

CA CANCER ASSOCIATES FOR RSRCH & EXLNCE (Continued) **S110498576**

Affiliation:

Affiliation Type Desc:	Environmental Contact
Entity Name:	DR TENETTE SERRANO TREVINO
Entity Title:	Not reported
Affiliation Address:	161 Thunder Dr Ste 211
Affiliation City:	Vista
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92083
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	DR TENETTE SERRANO TREVINO, INC
Entity Title:	Not reported
Affiliation Address:	161 Thunder Dr Ste 211
Affiliation City:	Vista
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92083
Affiliation Phone:	(760) 631-0454

Affiliation Type Desc:	Operator
Entity Name:	DR TENETTE SERRANO TREVINO
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 631-0454

Affiliation Type Desc:	Parent Corporation
Entity Name:	DYNAMIC DENTAL GROUP
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	161 Thunder Dr Ste 211
Affiliation City:	Vista
Affiliation State:	CA

CA CANCER ASSOCIATES FOR RSRCH & EXLNCE (Continued) **S110498576**

Affiliation Country: Not reported
Affiliation Zip: 92083
Affiliation Phone: Not reported

Name: MELISSA HURD MEDICAL CORP
Address: 161 THUNDER DR STE 103
City,State,Zip: VISTA, CA 92083
Site ID: 411784
CERS ID: 10711813
CERS Description: Chemical Storage Facilities

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: Melissa Hurd
Entity Title: Not reported
Affiliation Address: 161 Thunder Dr Ste 103
Affiliation City: Vista
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92083
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 161 Thunder Dr Ste 103
Affiliation City: Vista
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92083
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: Melissa Hurd Medical Corp
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Document Preparer
Entity Name: Ryan White
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported

CA CANCER ASSOCIATES FOR RSRCH & EXLNCE (Continued) **S110498576**

Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Melissa Hurd
Entity Title:	Not reported
Affiliation Address:	161 Thunder Dr Ste 103
Affiliation City:	Vista
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92083
Affiliation Phone:	(760) 758-1988
Affiliation Type Desc:	Operator
Entity Name:	Melissa Hurd Medical Corp
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 758-1988

K51 **NCHS WOMEN'S HEALTH SERVICES** **RCRA NonGen / NLR** **1024855582**
NNE **161 THUNDER DR STE 210** **CAL000418365**
1/8-1/4 **VISTA, CA 92083**
0.222 mi.
1170 ft. **Site 2 of 2 in cluster K**

Relative:
Higher

Actual:
245 ft.

RCRA NonGen / NLR:

Date form received by agency:	06/23/2016
Facility name:	NCHS WOMEN'S HEALTH SERVICES
Facility address:	161 THUNDER DR STE 210 VISTA, CA 92083-6052
EPA ID:	CAL000418365
Mailing address:	150 VALPREDA RD SAN MARCOS, CA 92069
Contact:	MAVI ABRIL
Contact address:	150 VALPREDA ROAD OPERATIONS DEPARTMENT SAN MARCOS, CA 92069
Contact country:	Not reported
Contact telephone:	760-736-6700
Contact email:	MAVI.ABRIL@NCHS-HEALTH.ORG
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	MAVI ABRIL
Owner/operator address:	150 VALPREDA ROAD OPERATIONS DEPARTMENT SAN MARCOS, CA 92069
Owner/operator country:	Not reported
Owner/operator telephone:	760-736-6700
Owner/operator email:	Not reported

NCHS WOMEN'S HEALTH SERVICES (Continued) **1024855582**

Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NORTH COUNTY HEALTH PROJECT INC
Owner/operator address: 150 VALPREDA RD
SAN MARCOS, CA 92069
Owner/operator country: Not reported
Owner/operator telephone: 760-736-6700
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

L52 **PEP BOYS TRI-CITY #742** **CA SAN DIEGO CO. SAM** **S109118212**
West **3752 PLAZA DR** **N/A**
1/8-1/4 **OCEANSIDE, CA 92056**
0.225 mi.
1186 ft. **Site 1 of 3 in cluster L**

Relative:
Higher

Actual:
206 ft.

SAN DIEGO CO. SAM:
Name: PEP BOYS TRI-CITY #742
Address: 3752 PLAZA DR
City,State,Zip: OCEANSIDE, CA 920564621
Case Number: H24763-001
Agency: DEH Site Assessment & Mitigation
Funding: **LOP - Federal Fund**
Facility Type: Drinking Water Aquifer Impacted
Facility Status: Closed Case
Date: 7/9/2004
Date Began: 8/18/1998

L53 **PEP BOYS #742** **RCRA-SQG** **1000105158**
West **3752 PLAZA DRIVE** **CA LUST** **CAD982476079**
1/8-1/4 **OCEANSIDE, CA 92056**
0.225 mi.
1186 ft. **Site 2 of 3 in cluster L**

Relative:
Higher

Actual:
206 ft.

RCRA-SQG:

Date form received by agency:	09/01/1996
Facility name:	PEP BOYS #742
Facility address:	3752 PLAZA DRIVE OCEANSIDE, CA 92056
EPA ID:	CAD982476079
Mailing address:	P O BOX 15806 LOS ANGELES, CA 90015
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	PEP BOYS OF CALIFORNIA
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	415-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	415-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No

PEP BOYS #742 (Continued) **1000105158**

Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 07/01/1988
Site name: PEP BOYS #742
Classification: Large Quantity Generator

Facility Has Received Notices of Violations:
Regulation violated: FR - 262.10-12.A
Area of violation: Generators - General
Date violation determined: 02/23/1993
Date achieved compliance: 02/23/1998
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.10-12.A
Area of violation: Generators - General
Date violation determined: 02/23/1992
Date achieved compliance: 02/23/1997
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.10-12.A
Area of violation: Generators - General
Date violation determined: 02/04/1992
Date achieved compliance: 02/23/1993
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported

PEP BOYS #742 (Continued) **1000105158**

Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 02/23/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 02/23/1998
Evaluation lead agency: State Contractor/Grantee

Evaluation date: 02/23/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 02/23/1997
Evaluation lead agency: State Contractor/Grantee

Evaluation date: 02/04/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 02/23/1993
Evaluation lead agency: State Contractor/Grantee

LUST REG 9:
Region: 9
Status: Preliminary site assessment underway
Case Number: 9UT3695
Local Case: H24763-001
Substance: Waste Oil
Qty Leaked: Not reported
Abate Method: Not reported
Local Agency: San Diego
How Found: Tank Closure
How Stopped: Close Tank
Source: Unknown
Cause: Unknown
Lead Agency: Local Agency
Case Type: Other ground water affected
Date Found: 08/18/1998
Date Stopped: 08/18/1998
Confirm Date: / /
Submit Workplan: Not reported
Prelim Assess: 08/18/1998
Desc Pollution: Not reported
Remed Plan: / /
Remed Action: Not reported
Began Monitor: Not reported
Release Date: 08/27/1998
Enforce Date: Not reported
Closed Date: Not reported
Enforce Type: Not reported
Pilot Program: LOP
Basin Number: 904.31
GW Depth: 9’

PEP BOYS #742 (Continued) **1000105158**

Beneficial Use: MUNBU
NPDES Number: Not reported
Priority: 1B
File Dispn: Administratively opened on database, however no file physically exists
Interim Remedial Actions: Not reported
Cleanup and Abatement order Number: Not reported
Waste Discharge Requirement Number: Not reported

L54 **PEP BOYS TRI-CITY #742** **CA LUST** **S103656105**
West **3752 PLAZA DR** **CA San Diego Co. HMMD** **N/A**
1/8-1/4 **OCEANSIDE, CA 92056** **CA CERS HAZ WASTE**
0.225 mi. **CA SWEEPS UST**
1186 ft. **Site 3 of 3 in cluster L** **CA HIST CORTESE**
CA SAN DIEGO CO LOP
Relative: **CA CERS**
Higher

Actual: **206 ft.**

LUST:
Name: PEP BOYS TRI-CITY #742
Address: 3752 PLAZA DR
City,State,Zip: OCEANSIDE, CA 920564621
Lead Agency: SAN DIEGO COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607302463
Global Id: T0607302463
Latitude: 33.18251
Longitude: -117.294511
Status: Completed - Case Closed
Status Date: 07/09/2004
Case Worker: Not reported
RB Case Number: 9UT3695
Local Agency: Not reported
File Location: Local Agency
Local Case Number: H24763-001
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Waste Oil / Motor / Hydraulic / Lubricating
Site History: Not reported

LUST:
Global Id: T0607302463
Action Type: Other
Date: 08/18/1998
Action: Leak Discovery

Global Id: T0607302463
Action Type: Other
Date: 08/18/1998
Action: Leak Reported

Global Id: T0607302463
Action Type: Other
Date: 08/18/1998
Action: Leak Began

LUST:
Global Id: T0607302463
Status: Completed - Case Closed
Status Date: 07/09/2004

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Global Id: T0607302463
Status: Open - Case Begin Date
Status Date: 08/18/1998

HMMD SAN DIEGO:
Name: PEP BOYS TRI-CITY #742
Address: 3752 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Permit Number: 124763
Business Type: 6HK26
EPA Id Number: CAD982476079
APN: 168-012-57-00
Last HMMD Inspection: 12/06/2011
Facility Telephone: 760-724-2726
Permit Status: OPEN
Permit Expiration: 02/28/2013
Date Last Updated: 11/02/2012
Facility Owner: PEP BOYS
Facility Mailing Address: 3111 W ALLEGHANY AVE
Facility Mailing City: PHILADELPHIA
Facility Mailing State: PA
Facility Mailing Zip: 19132-
UST Owner: PEP BOYS
Handle Regulated Hazmat: Y
Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: Not reported
Generate Medical Waste: Not reported

Inventory Active Permits (not SQG Medical):
Permit Number: 124763
Update Date: 11/02/2012
Case Number: 8002-05-9
Name: OILS, LUBRICATING
Other Information: Not reported
Material Waste: Material
Hazardous Categories 1: ACUTE
Hazardous Categories 2: Not reported

Permit Number: 124763
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 135 UNSPECIFIED AQUEOUS SOL'N
Other Information: PARTS WASHER -FILTERS WASTE
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 124763
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 172 METAL DUST & MACHINING WASTE
Other Information: BREAK LATHE GRINDINGS
Material Waste: Waste
Hazardous Categories 1: Not reported

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Hazardous Categories 2: Not reported

Permit Number: 124763
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 181 INORGANIC SOLID WASTE (OTHER)
Other Information: GASOLINE FILTERS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 124763
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 221 WASTE OIL & MIXED OIL
Other Information: WASTE OIL TANK
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 124763
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 222 OIL/WATER SEPARATION SLUDGE
Other Information: SUMP SEPARATOR-CLARIFIER
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 124763
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 223 UNSPEC OIL CONTAINING WASTE
Other Information: BRAKE FLUID
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 124763
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 223 UNSPEC OIL CONTAINING WASTE
Other Information: OILY ABSORBENT
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 124763
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 342 ORGANIC LIQUIDS W/METALS
Other Information: ANTIFREEZE
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 124763

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 444 USED BATTERIES
Other Information:	PEP BOYS BATTERIES
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported
Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 888 USED OIL FILTERS
Other Information:	DRAINED OIL FILTERS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Violations Active Permits:

Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0135
Violation:	MANIFESTS/RECEIPTS FOR 3 YEARS NOT ONSIT
Violation Citation:	Hazardous waste manifests/receipts for 3 years are not maintained onsite to document proper disposal of hazardous waste. CCR 66262.40(a) & 25160.2(b)(3)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0138
Violation:	NO TSDF SIGNED MANIFEST ONSITE
Violation Citation:	Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0201
Violation:	WASTE CONTAINER NOT CLOSED
Violation Citation:	Hazardous waste containers are not kept closed while in storage. CCR 66265.173(a)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0202
Violation:	WASTE CONTAINER W/O LABELS
Violation Citation:	Hazardous waste containers &/or tanks are missing labels, accumulation date and/or are improperly labeled. CCR 66262.34(a)(2); 66262.34(a)(3) & 66262.34(f)
Activity:	ACTIVE

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0208
Violation:	STORAGE AREA: NO WEEKLY INSPECTION
Violation Citation:	Hazardous waste storage area is not being inspected weekly for deteriorated or leaking containers CCR 66265.174
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0211
Violation:	INCOMPATIBLES IN SAME CONTAINER
Violation Citation:	Incompatible wastes/materials are placed in the same container or an unwashed container that held an incompatible material. CCR 66265.177
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0214
Violation:	WASTE OIL CONTAMINATED
Violation Citation:	Generator of waste oil has improperly contaminated the waste oil with other hazardous wastes. HSC 25250.7
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0401
Violation:	TRAINING RECORDS UNAVAILABLE
Violation Citation:	Personnel training records are not maintained to document compliance with requirements for current and former employees. CCR 66265.16(d)&(e)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0406
Violation:	CONT PLAN NOT PREPARED/ONSITE
Violation Citation:	Owner/Operator has not prepared an Emergency Contingency Plan, or maintained a copy on site, or submitted a copy to the HMMD. CCR 66265.51(a), 66265.53(a)&(b)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV1605
Violation:	NO DAILY TANK INSPECTION/LOG
Violation Citation:	Failed to inspect and/or document daily HW tank system inspections. 66265.195 (c)
Activity:	ACTIVE
Permit Number:	124763

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV1005
Violation:	HMBP: NO ER CONTACTS LISTED OR CURRENT
Violation Citation:	Business Plan does not list the name and 24 hour phone numbers of Emergency Contact persons or contact is not current. HSC 25509(a)(7)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0301
Violation:	HAZWASTE:UNAUTHORIZED DISPOSAL
Violation Citation:	Disposal or causing the disposal of hazardous waste to an unauthorized point (ground, storm drain, sewer system, trash, or air). HSC 25189.5(a) or 25189(d)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0210
Violation:	DID NOT CLEAN SPILL TO FLOOR
Violation Citation:	Failure to clean up hazardous waste off of floor surface. 66262.10b
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/07/2007
Violation Code:	6HV0212
Violation:	INCOMPATIBLE WASTE NOT SEPARATED
Violation Citation:	Hazardous waste storage container is not adequately separated from nearby incompatible wastes or materials. CCR 66265.177
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/07/2007
Violation Code:	6HV0135
Violation:	MANIFESTS/RECEIPTS FOR 3 YEARS NOT ONSIT
Violation Citation:	Hazardous waste manifests/receipts for 3 years are not maintained onsite to document proper disposal of hazardous waste. CCR 66262.40(a) & 25160.2(b)(3)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/07/2007
Violation Code:	6HV0138
Violation:	NO TSDF SIGNED MANIFEST ONSITE
Violation Citation:	Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Inspection Date:	02/07/2007
Violation Code:	6HV0301
Violation:	HAZWASTE:UNAUTHORIZED DISPOSAL
Violation Citation:	Disposal or causing the disposal of hazardous waste to an unauthorized point (ground, storm drain, sewer system, trash, or air). HSC 25189.5(a) or 25189(d)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/07/2007
Violation Code:	6HV0304
Violation:	WASTE DETERMINATION NOT MADE
Violation Citation:	Generator of a waste has not determined if that waste is a hazardous waste as defined by law. CCR 66262.11 & 66260.200(c)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	07/10/2003
Violation Code:	6HV0201
Violation:	WASTE CONTAINER NOT CLOSED
Violation Citation:	Hazardous waste containers are not kept closed while in storage. CCR 66265.173(a)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	07/10/2003
Violation Code:	6HV0204
Violation:	WASTE CONTAINER:IMPROPER MGMT
Violation Citation:	Hazardous waste storage container is not handled or stored in a manner which will prevent leaks or rupture. CCR 66265.173
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	07/10/2003
Violation Code:	6HV0209
Violation:	WASTE ONSITE >90/180/270 DAYS
Violation Citation:	Hazardous waste is stored in excess of allowable time period (90 days) without a State permit or written variance. CCR 25201(a) & 66262.34(a)&(c)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	07/10/2003
Violation Code:	6HV0301
Violation:	HAZWASTE:UNAUTHORIZED DISPOSAL
Violation Citation:	Disposal or causing the disposal of hazardous waste to an unauthorized point (ground, storm drain, sewer system, trash, or air). HSC 25189.5(a) or 25189(d)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Inspection Date:	07/10/2003
Violation Code:	6HV0406
Violation:	CONT PLAN NOT PREPARED/ONSITE
Violation Citation:	Owner/Operator has not prepared an Emergency Contingency Plan, or maintained a copy on site, or submitted a copy to the HMMD. CCR 66265.51(a), 66265.53(a)&(b)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	12/06/2011
Violation Code:	6HV0202
Violation:	WASTE CONTAINER W/O LABELS
Violation Citation:	Hazardous waste containers &/or tanks are missing labels, accumulation date and/or are improperly labeled. CCR 66262.34(a)(2); 66262.34(a)(3) & 66262.34(f)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	12/06/2011
Violation Code:	6HV1605
Violation:	NO DAILY TANK INSPECTION/LOG
Violation Citation:	Failed to inspect and/or document daily HW tank system inspections. 66265.195 (c)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/09/2004
Violation Code:	6HV0210
Violation:	DID NOT CLEAN SPILL TO FLOOR
Violation Citation:	Failure to clean up hazardous waste off of floor surface. 66262.10b
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/09/2004
Violation Code:	6HV0211
Violation:	INCOMPATIBLES IN SAME CONTAINER
Violation Citation:	Incompatible wastes/materials are placed in the same container or an unwashed container that held an incompatible material. CCR 66265.177
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/09/2004
Violation Code:	6HV0215
Violation:	OIL FILTERS IMPROPERLY MANAGED
Violation Citation:	Used oil filters not properly drained, stored, or labeled prior to transport for the purpose of metal reclamation. CCR 66266.130
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/09/2004
Violation Code:	6HV0301

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Violation: HAZWASTE:UNAUTHORIZED DISPOSAL
Violation Citation: Disposal or causing the disposal of hazardous waste to an unauthorized point (ground, storm drain, sewer system, trash, or air). HSC 25189.5(a) or 25189(d)
Activity: ACTIVE

Permit Number: 124763
Update Date: 11/02/2012
Inspection Date: 02/09/2004
Violation Code: 6HV0401
Violation: TRAINING RECORDS UNAVAILABLE
Violation Citation: Personnel training records are not maintained to document compliance with requirements for current and former employees. CCR 66265.16(d)&(e)
Activity: ACTIVE

Permit Number: 124763
Update Date: 11/02/2012
Inspection Date: 02/09/2004
Violation Code: 6HV1605
Violation: NO DAILY TANK INSPECTION/LOG
Violation Citation: Failed to inspect and/or document daily HW tank system inspections. 66265.195 (c)
Activity: ACTIVE

UST:
UST Name: UNDERGROUND TANK 124763 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 124763
Tank Type: DOUBLE WALL
Additional Id: 1
Capacity Gallons: 550
UST Contents: Not reported
Other Content Info: WASTE OIL
Reg Status: REMOVED
Remove Close Date: 1998-08-18 00:00:00
Year Installed: 1988-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: GRAVITY
Monitor Code: 21
UST Monitor Method: DW TANK DW SUCTION AND/ OR GRAVITY PIPING WITH INTERSTITIAL MONITORS: INTERSTITIAL.

Name: PEP BOYS TRI-CITY #742
Address: 3752 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Permit Number: 124763
Business Type: 6HK26
EPA Id Number: CAD982476079
APN: 168-012-57-00
Last HMMD Inspection: 12/06/2011
Facility Telephone: 760-724-2726
Permit Status: OPEN
Permit Expiration: 02/28/2013
Date Last Updated: 11/02/2012
Facility Owner: PEP BOYS

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Facility Mailing Address:	3111 W ALLEGHANY AVE
Facility Mailing City:	PHILADELPHIA
Facility Mailing State:	PA
Facility Mailing Zip:	19132-
UST Owner:	PEP BOYS
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	124763
Update Date:	11/02/2012
Case Number:	8002-05-9
Name:	OILS, LUBRICATING
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	ACUTE
Hazardous Categories 2:	Not reported

Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 135 UNSPECIFIED AQUEOUS SOL'N
Other Information:	PARTS WASHER -FILTERS WASTE
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 172 METAL DUST & MACHINING WASTE
Other Information:	BREAK LATHE GRINDINGS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 181 INORGANIC SOLID WASTE (OTHER)
Other Information:	GASOLINE FILTERS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 221 WASTE OIL & MIXED OIL
Other Information:	WASTE OIL TANK
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 222 OIL/WATER SEPARATION SLUDGE
Other Information:	SUMP SEPARATOR-CLARIFIER
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 223 UNSPEC OIL CONTAINING WASTE
Other Information:	BRAKE FLUID
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 223 UNSPEC OIL CONTAINING WASTE
Other Information:	OILY ABSORBENT
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 342 ORGANIC LIQUIDS W/METALS
Other Information:	ANTIFREEZE
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 444 USED BATTERIES
Other Information:	PEP BOYS BATTERIES
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 888 USED OIL FILTERS
Other Information:	DRAINED OIL FILTERS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Violations Active Permits:

Permit Number:	124763
Update Date:	11/02/2012

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Inspection Date:	08/24/2005
Violation Code:	6HV0135
Violation:	MANIFESTS/RECEIPTS FOR 3 YEARS NOT ONSIT
Violation Citation:	Hazardous waste manifests/receipts for 3 years are not maintained onsite to document proper disposal of hazardous waste. CCR 66262.40(a) & 25160.2(b)(3)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0138
Violation:	NO TSDF SIGNED MANIFEST ONSITE
Violation Citation:	Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0201
Violation:	WASTE CONTAINER NOT CLOSED
Violation Citation:	Hazardous waste containers are not kept closed while in storage. CCR 66265.173(a)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0202
Violation:	WASTE CONTAINER W/O LABELS
Violation Citation:	Hazardous waste containers &/or tanks are missing labels, accumulation date and/or are improperly labeled. CCR 66262.34(a)(2); 66262.34(a)(3) & 66262.34(f)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0208
Violation:	STORAGE AREA: NO WEEKLY INSPECTION
Violation Citation:	Hazardous waste storage area is not being inspected weekly for deteriorated or leaking containers CCR 66265.174
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0211
Violation:	INCOMPATIBLES IN SAME CONTAINER
Violation Citation:	Incompatible wastes/materials are placed in the same container or an unwashed container that held an incompatible material. CCR 66265.177
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Inspection Date:	08/24/2005
Violation Code:	6HV0214
Violation:	WASTE OIL CONTAMINATED
Violation Citation:	Generator of waste oil has improperly contaminated the waste oil with other hazardous wastes. HSC 25250.7
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0401
Violation:	TRAINING RECORDS UNAVAILABLE
Violation Citation:	Personnel training records are not maintained to document compliance with requirements for current and former employees. CCR 66265.16(d)&(e)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0406
Violation:	CONT PLAN NOT PREPARED/ONSITE
Violation Citation:	Owner/Operator has not prepared an Emergency Contingency Plan, or maintained a copy on site, or submitted a copy to the HMMD. CCR 66265.51(a), 66265.53(a)&(b)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV1605
Violation:	NO DAILY TANK INSPECTION/LOG
Violation Citation:	Failed to inspect and/or document daily HW tank system inspections. 66265.195 (c)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV1005
Violation:	HMBP: NO ER CONTACTS LISTED OR CURRENT
Violation Citation:	Business Plan does not list the name and 24 hour phone numbers of Emergency Contact persons or contact is not current. HSC 25509(a)(7)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0301
Violation:	HAZWASTE:UNAUTHORIZED DISPOSAL
Violation Citation:	Disposal or causing the disposal of hazardous waste to an unauthorized point (ground, storm drain, sewer system, trash, or air). HSC 25189.5(a) or 25189(d)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Inspection Date:	08/24/2005
Violation Code:	6HV0210
Violation:	DID NOT CLEAN SPILL TO FLOOR
Violation Citation:	Failure to clean up hazardous waste off of floor surface. 66262.10b
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/07/2007
Violation Code:	6HV0212
Violation:	INCOMPATIBLE WASTE NOT SEPARATED
Violation Citation:	Hazardous waste storage container is not adequately separated from nearby incompatible wastes or materials. CCR 66265.177
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/07/2007
Violation Code:	6HV0135
Violation:	MANIFESTS/RECEIPTS FOR 3 YEARS NOT ONSIT
Violation Citation:	Hazardous waste manifests/receipts for 3 years are not maintained onsite to document proper disposal of hazardous waste. CCR 66262.40(a) & 25160.2(b)(3)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/07/2007
Violation Code:	6HV0138
Violation:	NO TSDF SIGNED MANIFEST ONSITE
Violation Citation:	Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/07/2007
Violation Code:	6HV0301
Violation:	HAZWASTE:UNAUTHORIZED DISPOSAL
Violation Citation:	Disposal or causing the disposal of hazardous waste to an unauthorized point (ground, storm drain, sewer system, trash, or air). HSC 25189.5(a) or 25189(d)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/07/2007
Violation Code:	6HV0304
Violation:	WASTE DETERMINATION NOT MADE
Violation Citation:	Generator of a waste has not determined if that waste is a hazardous waste as defined by law. CCR 66262.11 & 66260.200(c)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	07/10/2003

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Violation Code:	6HV0201
Violation:	WASTE CONTAINER NOT CLOSED
Violation Citation:	Hazardous waste containers are not kept closed while in storage. CCR 66265.173(a)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	07/10/2003
Violation Code:	6HV0204
Violation:	WASTE CONTAINER:IMPROPER MGMT
Violation Citation:	Hazardous waste storage container is not handled or stored in a manner which will prevent leaks or rupture. CCR 66265.173
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	07/10/2003
Violation Code:	6HV0209
Violation:	WASTE ONSITE >90/180/270 DAYS
Violation Citation:	Hazardous waste is stored in excess of allowable time period (90 days) without a State permit or written variance. CCR 25201(a) & 66262.34(a)&(c)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	07/10/2003
Violation Code:	6HV0301
Violation:	HAZWASTE:UNAUTHORIZED DISPOSAL
Violation Citation:	Disposal or causing the disposal of hazardous waste to an unauthorized point (ground, storm drain, sewer system, trash, or air). HSC 25189.5(a) or 25189(d)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	07/10/2003
Violation Code:	6HV0406
Violation:	CONT PLAN NOT PREPARED/ONSITE
Violation Citation:	Owner/Operator has not prepared an Emergency Contingency Plan, or maintained a copy on site, or submitted a copy to the HMMD. CCR 66265.51(a), 66265.53(a)&(b)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	12/06/2011
Violation Code:	6HV0202
Violation:	WASTE CONTAINER W/O LABELS
Violation Citation:	Hazardous waste containers &/or tanks are missing labels, accumulation date and/or are improperly labeled. CCR 66262.34(a)(2); 66262.34(a)(3) & 66262.34(f)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Inspection Date:	12/06/2011
Violation Code:	6HV1605
Violation:	NO DAILY TANK INSPECTION/LOG
Violation Citation:	Failed to inspect and/or document daily HW tank system inspections. 66265.195 (c)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/09/2004
Violation Code:	6HV0210
Violation:	DID NOT CLEAN SPILL TO FLOOR
Violation Citation:	Failure to clean up hazardous waste off of floor surface. 66262.10b
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/09/2004
Violation Code:	6HV0211
Violation:	INCOMPATIBLES IN SAME CONTAINER
Violation Citation:	Incompatible wastes/materials are placed in the same container or an unwashed container that held an incompatible material. CCR 66265.177
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/09/2004
Violation Code:	6HV0215
Violation:	OIL FILTERS IMPROPERLY MANAGED
Violation Citation:	Used oil filters not properly drained, stored, or labeled prior to transport for the purpose of metal reclamation. CCR 66266.130
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/09/2004
Violation Code:	6HV0301
Violation:	HAZWASTE:UNAUTHORIZED DISPOSAL
Violation Citation:	Disposal or causing the disposal of hazardous waste to an unauthorized point (ground, storm drain, sewer system, trash, or air). HSC 25189.5(a) or 25189(d)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/09/2004
Violation Code:	6HV0401
Violation:	TRAINING RECORDS UNAVAILABLE
Violation Citation:	Personnel training records are not maintained to document compliance with requirements for current and former employees. CCR 66265.16(d)&(e)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/09/2004
Violation Code:	6HV1605

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Violation:	NO DAILY TANK INSPECTION/LOG
Violation Citation:	Failed to inspect and/or document daily HW tank system inspections. 66265.195 (c)
Activity:	ACTIVE

UST:

UST Name:	UNDERGROUND TANK 124763 T001
Last Update:	2012-11-02 14:17:38
Permit Number:	124763
Tank Type:	DOUBLE WALL
Additional Id:	1
Capacity Gallons:	550
UST Contents:	Not reported
Other Content Info:	WASTE OIL
Reg Status:	REMOVED
Remove Close Date:	1998-08-18 00:00:00
Year Installed:	1988-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	GRAVITY
Monitor Code:	21
UST Monitor Method:	DW TANK DW SUCTION AND/ OR GRAVITY PIPING WITH INTERSTITIAL MONITORS: INTERSTITIAL.

Name:	PEP BOYS TRI-CITY #742
Address:	3752 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	Not reported
Business Type:	Not reported
EPA Id Number:	CAD982476079
APN:	Not reported
Last HMMD Inspection:	Not reported
Facility Telephone:	(760) 724-2726
Permit Status:	Permit Renewed
Permit Expiration:	Not reported
Date Last Updated:	06/21/2018
Facility Owner:	Not reported
Facility Mailing Address:	3111 W Allegheny Ave, Attn: Environmental Department, Philadelphia, PA 19132
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	N
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	N
Generate Medical Waste:	Not reported

Inspection Violation:

Record ID:	DEH2002-HUPFP-124763
Permit Status:	Expired
Active Permit:	N
Facility Id Number:	37-000-124763
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	4099928

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Return To Compliance Date:	2016-08-10T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-03-01T05:02:44.000
Inspection Date:	2015-03-18T00:00:00.000
Violation Code:	3030017 Failure to properly close hazardous waste containers when not in active use.; 22 CCR 12 66262.34(d)(2); 40 CFR 1 265.173.
Record ID:	DEH2002-HUPFP-124763
Permit Status:	Expired
Active Permit:	N
Facility Id Number:	37-000-124763
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5645880
Return To Compliance Date:	2017-06-30T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-03-01T05:02:44.000
Inspection Date:	2017-04-25T11:27:00.000
Violation Code:	3130008 Failed to inspect hazardous waste storage area(s) at least weekly. 22 CCR 66265.174
Record ID:	DEH2002-HUPFP-124763
Permit Status:	Expired
Active Permit:	N
Facility Id Number:	37-000-124763
Program Element:	Hazardous Waste Generator
Inspection Type:	Routine
Inspection Number:	5645880
Return To Compliance Date:	2017-06-30T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-03-01T05:02:44.000
Inspection Date:	2017-04-25T11:27:00.000
Violation Code:	3030030 Failed to maintain and/or operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents. (40 CFR 262.34(d)(4), 265.31.) 22 CCR 66262.34(d)(2)
Record ID:	DEH2002-HUPFP-124763
Permit Status:	Expired
Active Permit:	N
Facility Id Number:	37-000-124763
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	4099928
Return To Compliance Date:	2016-02-29T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Container/Tank Id:	Not reported
Last Update:	2019-03-01T05:02:44.000
Inspection Date:	2015-03-18T00:00:00.000
Violation Code:	1010006 Failure to update hazardous material inventory within 30 days when one of the following occurs: A 100 percent or more increase in the quantity of a previously disclosed material; Any handling of a previously undisclosed hazardous materials; A change of business address, business ownership, or business name; HSC 6.95 25508.1(a)/(b)/(c)/(d)/(e).
Record ID:	DEH2002-HUPFP-124763
Permit Status:	Expired
Active Permit:	N
Facility Id Number:	37-000-124763
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	5645880
Return To Compliance Date:	2017-06-30T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-03-01T05:02:44.000
Inspection Date:	2017-04-25T11:27:00.000
Violation Code:	1010008 HMBP not certified annually as complete and accurate in CERS. HSC 25508.2
Record ID:	DEH2002-HUPFP-124763
Permit Status:	Expired
Active Permit:	N
Facility Id Number:	37-000-124763
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	5645880
Return To Compliance Date:	2017-06-30T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-03-01T05:02:44.000
Inspection Date:	2017-04-25T11:27:00.000
Violation Code:	1010005 Site map not submitted in CERS or not sufficient. HSC 25505(a)(2) and 25508(a)(1)(A)
Record ID:	DEH2002-HUPFP-124763
Permit Status:	Expired
Active Permit:	N
Facility Id Number:	37-000-124763
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	5645880
Return To Compliance Date:	2017-06-30T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2019-03-01T05:02:44.000

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Inspection Date: 2017-04-25T11:27:00.000
Violation Code: 1010006 HMBP not updated to reflect inventory changes or facility information. HSC 25508.1(a-e)

UST DTL:
Record ID: DEH2002-HUPFP-124763
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-124763
Facility Type (Ust Facility): Not reported
Tank Owner Name: Pep Boys - Manny, Moe & Jack
Tankid: 27704
Tank Status: Removed
Date Ust Permanently Closed: 08/18/1998
Tank Use: 04
Piping System Type: 03
Last Updated: 2018-06-21T19:55:43.000
Tank Capacityin Gallons: 550
Tank Contents: Not reported
Type Of Tank: 02

Waste and Materials:
Record ID: DEH2002-HUPFP-124763
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0186591
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2018-06-21T19:55:42.000
Chemical Name: Petroleum Hydrocarbon
Common Name: Motor Oil (Bulk Oil for oil change at Service Bays -Ecobox and Bulk Oil Tank)
Case Number: Mixture

Record ID: DEH2002-HUPFP-124763
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0161534
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-06-21T19:55:42.000
Chemical Name: Used Petroleum Hydrocarbon
Common Name: Used Motor Oil
Case Number: Not reported

Record ID: DEH2002-HUPFP-124763
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0161535
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-06-21T19:55:42.000
Chemical Name: Waste Brake Fluid
Common Name: Waste Brake Fluid
Case Number: Not reported

Record ID: DEH2002-HUPFP-124763

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0161536
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-06-21T19:55:42.000
Chemical Name:	Waste Inhibited Ethylene Glycol
Common Name:	Waste Antifreeze/Coolant
Case Number:	Not reported

Record ID:	DEH2002-HUPFP-124763
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0161537
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-06-21T19:55:42.000
Chemical Name:	Chemfree Spent Absorbent Filter
Common Name:	Chemfree Spent Absorbent Filter
Case Number:	Not reported

Record ID:	DEH2002-HUPFP-124763
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0161538
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-06-21T19:55:42.000
Chemical Name:	Defective Retail Shelf Products - Aerosols, Flammable and Combustible container
Common Name:	Defective Retail Shelf Products - Aerosols, Flammable and Combustible container
Case Number:	Not reported

Record ID:	DEH2002-HUPFP-124763
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0161539
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-06-21T19:55:42.000
Chemical Name:	Defective Retail Shelf Products - Corrosive Bases
Common Name:	Defective Retail Shelf Products - Corrosive Bases
Case Number:	Not reported

Record ID:	DEH2002-HUPFP-124763
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0161540
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-06-21T19:55:42.000
Chemical Name:	Defective Retail Shelf Products - Corrosive Acids
Common Name:	Defective Retail Shelf Products - Corrosive Acids
Case Number:	Not reported

Record ID:	DEH2002-HUPFP-124763
Permit Status:	Permit Renewed
Active Permit:	Y

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Child Record Id: DEH2018-HWAST-0161541
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-06-21T19:55:42.000
Chemical Name: Defective Retail Shelf Products - State regulated toxics
Common Name: Defective Retail Shelf Products - State regulated toxics
Case Number: Not reported

Record ID: DEH2002-HUPFP-124763
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HCHEM-0092304
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2017-02-09T02:30:44.000
Chemical Name: Petroleum Hydrocarbon
Common Name: Motor Oil (Bulk Oil for oil change at Service Bays -Ecobox and Bulk Oil Tank)
Case Number: Mixture

Record ID: DEH2002-HUPFP-124763
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0074494
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-02-09T02:30:44.000
Chemical Name: Used Petroleum Hydrocarbon
Common Name: Used Motor Oil
Case Number: Not reported

Record ID: DEH2002-HUPFP-124763
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0074495
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-02-09T02:30:44.000
Chemical Name: Waste Brake Fluid
Common Name: Waste Brake Fluid
Case Number: Not reported

Record ID: DEH2002-HUPFP-124763
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0074496
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-02-09T02:30:44.000
Chemical Name: Waste Inhibited Ethylene Glycol
Common Name: Waste Antifreeze/Coolant
Case Number: Not reported

Record ID: DEH2002-HUPFP-124763
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0074497
Trade Secret: N

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Hazardous Material Type: Not reported
Last Updated: 2017-02-09T02:30:44.000
Chemical Name: Chemfree Spent Absorbent Filter
Common Name: Chemfree Spent Absorbent Filter
Case Number: Not reported

Record ID: DEH2002-HUPFP-124763
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HCHEM-0145949
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2018-05-11T01:05:40.000
Chemical Name: Petroleum Hydrocarbon
Common Name: Motor Oil (Bulk Oil for oil change at Service Bays -Ecobox and Bulk Oil Tank)
Case Number: Mixture

Record ID: DEH2002-HUPFP-124763
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0124697
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-05-11T01:05:40.000
Chemical Name: Used Petroleum Hydrocarbon
Common Name: Used Motor Oil
Case Number: Not reported

Record ID: DEH2002-HUPFP-124763
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0124698
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-05-11T01:05:40.000
Chemical Name: Waste Brake Fluid
Common Name: Waste Brake Fluid
Case Number: Not reported

Record ID: DEH2002-HUPFP-124763
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0124699
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-05-11T01:05:40.000
Chemical Name: Waste Inhibited Ethylene Glycol
Common Name: Waste Antifreeze/Coolant
Case Number: Not reported

Record ID: DEH2002-HUPFP-124763
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0124700
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-05-11T01:05:40.000

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Chemical Name: Chemfree Spent Absorbent Filter
Common Name: Chemfree Spent Absorbent Filter
Case Number: Not reported

Name: PEP BOYS TRI-CITY #742
Address: 3752 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Permit Number: 124763
Business Type: 6HK26
EPA Id Number: CAD982476079
APN: 168-012-57-00
Last HMMD Inspection: 12/06/2011
Facility Telephone: 760-724-2726
Permit Status: OPEN
Permit Expiration: 02/28/2013
Date Last Updated: 11/02/2012
Facility Owner: PEP BOYS
Facility Mailing Address: 3111 W ALLEGHANY AVE
Facility Mailing City: PHILADELPHIA
Facility Mailing State: PA
Facility Mailing Zip: 19132-
UST Owner: PEP BOYS
Handle Regulated Hazmat: Y
Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: Not reported
Generate Medical Waste: Not reported

Inventory Active Permits (not SQG Medical):
Permit Number: 124763
Update Date: 11/02/2012
Case Number: 8002-05-9
Name: OILS, LUBRICATING
Other Information: Not reported
Material Waste: Material
Hazardous Categories 1: ACUTE
Hazardous Categories 2: Not reported

Permit Number: 124763
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 135 UNSPECIFIED AQUEOUS SOL'N
Other Information: PARTS WASHER -FILTERS WASTE
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 124763
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 172 METAL DUST & MACHINING WASTE
Other Information: BREAK LATHE GRINDINGS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 181 INORGANIC SOLID WASTE (OTHER)
Other Information:	GASOLINE FILTERS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 221 WASTE OIL & MIXED OIL
Other Information:	WASTE OIL TANK
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 222 OIL/WATER SEPARATION SLUDGE
Other Information:	SUMP SEPARATOR-CLARIFIER
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 223 UNSPEC OIL CONTAINING WASTE
Other Information:	BRAKE FLUID
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 223 UNSPEC OIL CONTAINING WASTE
Other Information:	OILY ABSORBENT
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 342 ORGANIC LIQUIDS W/METALS
Other Information:	ANTIFREEZE
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Name:	WASTE 444 USED BATTERIES
Other Information:	PEP BOYS BATTERIES
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported
Permit Number:	124763
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 888 USED OIL FILTERS
Other Information:	DRAINED OIL FILTERS
Material Waste:	Waste
Hazardous Categories 1:	Not reported
Hazardous Categories 2:	Not reported

Violations Active Permits:

Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0135
Violation:	MANIFESTS/RECEIPTS FOR 3 YEARS NOT ONSIT
Violation Citation:	Hazardous waste manifests/receipts for 3 years are not maintained onsite to document proper disposal of hazardous waste. CCR 66262.40(a) & 25160.2(b)(3)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0138
Violation:	NO TSDF SIGNED MANIFEST ONSITE
Violation Citation:	Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0201
Violation:	WASTE CONTAINER NOT CLOSED
Violation Citation:	Hazardous waste containers are not kept closed while in storage. CCR 66265.173(a)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0202
Violation:	WASTE CONTAINER W/O LABELS
Violation Citation:	Hazardous waste containers &/or tanks are missing labels, accumulation date and/or are improperly labeled. CCR 66262.34(a)(2); 66262.34(a)(3) & 66262.34(f)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Inspection Date:	08/24/2005
Violation Code:	6HV0208
Violation:	STORAGE AREA: NO WEEKLY INSPECTION
Violation Citation:	Hazardous waste storage area is not being inspected weekly for deteriorated or leaking containers CCR 66265.174
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0211
Violation:	INCOMPATIBLES IN SAME CONTAINER
Violation Citation:	Incompatible wastes/materials are placed in the same container or an unwashed container that held an incompatible material. CCR 66265.177
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0214
Violation:	WASTE OIL CONTAMINATED
Violation Citation:	Generator of waste oil has improperly contaminated the waste oil with other hazardous wastes. HSC 25250.7
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0401
Violation:	TRAINING RECORDS UNAVAILABLE
Violation Citation:	Personnel training records are not maintained to document compliance with requirements for current and former employees. CCR 66265.16(d)&(e)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0406
Violation:	CONT PLAN NOT PREPARED/ONSITE
Violation Citation:	Owner/Operator has not prepared an Emergency Contingency Plan, or maintained a copy on site, or submitted a copy to the HMMD. CCR 66265.51(a), 66265.53(a)&(b)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV1605
Violation:	NO DAILY TANK INSPECTION/LOG
Violation Citation:	Failed to inspect and/or document daily HW tank system inspections. 66265.195 (c)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Violation Code:	6HV1005
Violation:	HMBP: NO ER CONTACTS LISTED OR CURRENT
Violation Citation:	Business Plan does not list the name and 24 hour phone numbers of Emergency Contact persons or contact is not current. HSC 25509(a)(7)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0301
Violation:	HAZWASTE:UNAUTHORIZED DISPOSAL
Violation Citation:	Disposal or causing the disposal of hazardous waste to an unauthorized point (ground, storm drain, sewer system, trash, or air). HSC 25189.5(a) or 25189(d)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	08/24/2005
Violation Code:	6HV0210
Violation:	DID NOT CLEAN SPILL TO FLOOR
Violation Citation:	Failure to clean up hazardous waste off of floor surface. 66262.10b
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/07/2007
Violation Code:	6HV0212
Violation:	INCOMPATIBLE WASTE NOT SEPARATED
Violation Citation:	Hazardous waste storage container is not adequately separated from nearby incompatible wastes or materials. CCR 66265.177
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/07/2007
Violation Code:	6HV0135
Violation:	MANIFESTS/RECEIPTS FOR 3 YEARS NOT ONSIT
Violation Citation:	Hazardous waste manifests/receipts for 3 years are not maintained onsite to document proper disposal of hazardous waste. CCR 66262.40(a) & 25160.2(b)(3)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/07/2007
Violation Code:	6HV0138
Violation:	NO TSDF SIGNED MANIFEST ONSITE
Violation Citation:	Generator has not maintained the required signed copy of the hazardous waste manifest from the TSD facility on site for review. CCR 66262.40(a)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/07/2007
Violation Code:	6HV0301

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Violation:	HAZWASTE:UNAUTHORIZED DISPOSAL
Violation Citation:	Disposal or causing the disposal of hazardous waste to an unauthorized point (ground, storm drain, sewer system, trash, or air). HSC 25189.5(a) or 25189(d)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/07/2007
Violation Code:	6HV0304
Violation:	WASTE DETERMINATION NOT MADE
Violation Citation:	Generator of a waste has not determined if that waste is a hazardous waste as defined by law. CCR 66262.11 & 66260.200(c)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	07/10/2003
Violation Code:	6HV0201
Violation:	WASTE CONTAINER NOT CLOSED
Violation Citation:	Hazardous waste containers are not kept closed while in storage. CCR 66265.173(a)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	07/10/2003
Violation Code:	6HV0204
Violation:	WASTE CONTAINER:IMPROPER MGMT
Violation Citation:	Hazardous waste storage container is not handled or stored in a manner which will prevent leaks or rupture. CCR 66265.173
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	07/10/2003
Violation Code:	6HV0209
Violation:	WASTE ONSITE >90/180/270 DAYS
Violation Citation:	Hazardous waste is stored in excess of allowable time period (90 days) without a State permit or written variance. CCR 25201(a) & 66262.34(a)&(c)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	07/10/2003
Violation Code:	6HV0301
Violation:	HAZWASTE:UNAUTHORIZED DISPOSAL
Violation Citation:	Disposal or causing the disposal of hazardous waste to an unauthorized point (ground, storm drain, sewer system, trash, or air). HSC 25189.5(a) or 25189(d)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	07/10/2003
Violation Code:	6HV0406

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Violation:	CONT PLAN NOT PREPARED/ONSITE
Violation Citation:	Owner/Operator has not prepared an Emergency Contingency Plan, or maintained a copy on site, or submitted a copy to the HMMD. CCR 66265.51(a), 66265.53(a)&(b)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	12/06/2011
Violation Code:	6HV0202
Violation:	WASTE CONTAINER W/O LABELS
Violation Citation:	Hazardous waste containers &/or tanks are missing labels, accumulation date and/or are improperly labeled. CCR 66262.34(a)(2); 66262.34(a)(3) & 66262.34(f)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	12/06/2011
Violation Code:	6HV1605
Violation:	NO DAILY TANK INSPECTION/LOG
Violation Citation:	Failed to inspect and/or document daily HW tank system inspections. 66265.195 (c)
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/09/2004
Violation Code:	6HV0210
Violation:	DID NOT CLEAN SPILL TO FLOOR
Violation Citation:	Failure to clean up hazardous waste off of floor surface. 66262.10b
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/09/2004
Violation Code:	6HV0211
Violation:	INCOMPATIBLES IN SAME CONTAINER
Violation Citation:	Incompatible wastes/materials are placed in the same container or an unwashed container that held an incompatible material. CCR 66265.177
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/09/2004
Violation Code:	6HV0215
Violation:	OIL FILTERS IMPROPERLY MANAGED
Violation Citation:	Used oil filters not properly drained, stored, or labeled prior to transport for the purpose of metal reclamation. CCR 66266.130
Activity:	ACTIVE
Permit Number:	124763
Update Date:	11/02/2012
Inspection Date:	02/09/2004
Violation Code:	6HV0301
Violation:	HAZWASTE:UNAUTHORIZED DISPOSAL
Violation Citation:	Disposal or causing the disposal of hazardous waste to an unauthorized

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

point (ground, storm drain, sewer system, trash, or air). HSC 25189.5(a) or 25189(d)
Activity: ACTIVE

Permit Number: 124763
Update Date: 11/02/2012
Inspection Date: 02/09/2004
Violation Code: 6HV0401
Violation: TRAINING RECORDS UNAVAILABLE
Violation Citation: Personnel training records are not maintained to document compliance with requirements for current and former employees. CCR 66265.16(d)&(e)
Activity: ACTIVE

Permit Number: 124763
Update Date: 11/02/2012
Inspection Date: 02/09/2004
Violation Code: 6HV1605
Violation: NO DAILY TANK INSPECTION/LOG
Violation Citation: Failed to inspect and/or document daily HW tank system inspections. 66265.195 (c)
Activity: ACTIVE

UST:
UST Name: UNDERGROUND TANK 124763 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 124763
Tank Type: DOUBLE WALL
Additional Id: 1
Capacity Gallons: 550
UST Contents: Not reported
Other Content Info: WASTE OIL
Reg Status: REMOVED
Remove Close Date: 1998-08-18 00:00:00
Year Installed: 1988-01-01 00:00:00
Pipe Type: DOUBLE WALL
Delivery System: GRAVITY
Monitor Code: 21
UST Monitor Method: DW TANK DW SUCTION AND/ OR GRAVITY PIPING WITH INTERSTITIAL MONITORS: INTERSTITIAL.

CERS HAZ WASTE:
Site ID: 56185
CERS ID: 10373356
CERS Description: Hazardous Waste Generator

Violations:
Site ID: 56185
Site Name: PEP BOYS TRI-CITY #742
Violation Date: 04-25-2017
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 06/30/2017.

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 56185
Site Name: PEP BOYS TRI-CITY #742
Violation Date: 04-25-2017
Citation: HSC 6.95 25508.1(a)-(f) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(f)
Violation Description: Failure to electronically update business plan within 30 days of any one of the following events: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials at or above reportable quantities. A change of business address, business ownership, or business name. A substantial change in the handler's operations that requires modification to any portion of the business plan.
Violation Notes: Returned to compliance on 06/30/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 56185
Site Name: PEP BOYS TRI-CITY #742
Violation Date: 03-18-2015
Citation: 40 CFR 1 265.173 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.173
Violation Description: Failure to properly close hazardous waste containers when not in active use.
Violation Notes: Returned to compliance on 08/10/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 56185
Site Name: PEP BOYS TRI-CITY #742
Violation Date: 03-18-2015
Citation: HSC 6.95 25508.1(a)-(e) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(e)
Violation Description: Failure to electronically update business plan within 30 days of any one of the following events: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials at or above reportable quantities. A change of business address, business ownership, or business name.
Violation Notes: Returned to compliance on 02/29/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 56185
Site Name: PEP BOYS TRI-CITY #742
Violation Date: 04-25-2017
Citation: 40 CFR 1 265.31 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.31
Violation Description: Failure to maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

to air, soil, or surface water which could threaten human health or the environment.
Violation Notes: Returned to compliance on 06/30/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 56185
Site Name: PEP BOYS TRI-CITY #742
Violation Date: 04-25-2017
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit a site map with all required content.
Violation Notes: Returned to compliance on 06/30/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 56185
Site Name: PEP BOYS TRI-CITY #742
Violation Date: 04-25-2017
Citation: 22 CCR 15 66265.174 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.174
Violation Description: Failure to inspect weekly areas where hazardous waste containers are stored. The owner or operator must look for leaking containers and for deterioration of containers caused by corrosion or other factors.
Violation Notes: Returned to compliance on 06/30/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-25-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffin Donelle Inspection ID:5645880
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-07-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector: Calcagno Leonardo Inspection ID:5901914
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-25-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffin Donelle Inspection ID:5645880
Eval Division: San Diego County Department of Env Health

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-07-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector: Calcagno Leonardo Inspection ID:5901914
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-18-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Burke Mike Inspection ID:4099928
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-18-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Burke Mike Inspection ID:4099928
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Coordinates:
Site ID: 56185
Facility Name: PEP BOYS TRI-CITY #742
Env Int Type Code: HWG
Program ID: 10373356
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.182500
Longitude: -117.294510

Affiliation:
Affiliation Type Desc: Parent Corporation
Entity Name: Pep Boys- Manny, Moe & Jack
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Document Preparer
Entity Name: Alana Persad
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	3111 W Allegheny Ave, Attn: Environmental Department
Affiliation City:	Philadelphia
Affiliation State:	PA
Affiliation Country:	Not reported
Affiliation Zip:	19132
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Alana Persad
Entity Title:	Environmental Coordinator
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Pep Boys - Manny, Moe & Jack
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(215) 430-9226
Affiliation Type Desc:	Property Owner
Entity Name:	Castle Realty, LLC
Entity Title:	Not reported
Affiliation Address:	40-16 149th Pl.
Affiliation City:	Flushing
Affiliation State:	NY
Affiliation Country:	United States
Affiliation Zip:	11354
Affiliation Phone:	(718) 353-3900
Affiliation Type Desc:	Environmental Contact
Entity Name:	Alana Persad

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Entity Title: Not reported
Affiliation Address: 3111 W Allegheny Ave, Attn: Environmental Department
Affiliation City: Philadelphia
Affiliation State: PA
Affiliation Country: Not reported
Affiliation Zip: 19132
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Pep Boys - Manny, Moe & Jack
Entity Title: Not reported
Affiliation Address: 3111 W Allegheny Ave, Attn: Environmental Department
Affiliation City: Philadelphia
Affiliation State: PA
Affiliation Country: United States
Affiliation Zip: 19132
Affiliation Phone: (215) 430-9095

SWEEPS UST:
Name: PEP BOYS TRI-CITY #742
Address: 3752 PLAZA DR
City: OCEANSIDE
Status: Active
Comp Number: 24763
Number: 9
Board Of Equalization: 44-023648
Referral Date: Not reported
Action Date: 06-26-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 37-000-024763-000001
Tank Status: A
Capacity: 550
Active Date: Not reported
Tank Use: PETROLEUM
STG: W
Content: Not reported
Number Of Tanks: 1

HIST CORTESE:
edr_fname: PEP BOYS #742
edr_fadd1: 3752 PLAZA
City,State,Zip: OCEANSIDE, CA 92056
Region: CORTESE
Facility County Code: 37
Reg By: LTNKA
Reg Id: 9UT3695

SAN DIEGO CO LOP:
Name: PEP BOYS TRI-CITY #742
Address: 3752 PLAZA DR
City,State,Zip: OCEANSIDE, CA 92056
Record ID: DEH1998-LSAM-H24763-001
Record Status: Completed
Opened Date: 08/18/1998

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Parcel Number:	168-012-57-00
Case Type:	LOP - Local Oversight Program
Historical Name:	PEP BOYS
SWRCB Global ID:	T0607302463
Funding:	F - LOP Federal Fund
Lead Agency:	DEH/SAM
Lead Agency Date:	08/18/1998
Census Tract:	198.05
Community:	Oceanside
Jurisdiction:	OCEANSIDE
Watershed Basin Number:	904.21
Water Purveyor:	OCEANSIDE
Fire Agency:	OCEANSIDE
Latitude:	33.1824936
Longitude:	-117.2945065
X MapCoord:	6242094.811
Y MapCoord:	2011595.888

CERS:

Name:	PEP BOYS TRI-CITY #742
Address:	3752 PLAZA DR
City,State,Zip:	OCEANSIDE, CA 920564621
Site ID:	56185
CERS ID:	10373356
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	56185
Site Name:	PEP BOYS TRI-CITY #742
Violation Date:	04-25-2017
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 06/30/2017.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	56185
Site Name:	PEP BOYS TRI-CITY #742
Violation Date:	04-25-2017
Citation:	HSC 6.95 25508.1(a)-(f) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(f)
Violation Description:	Failure to electronically update business plan within 30 days of any one of the following events: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials at or above reportable quantities. A change of business address, business ownership, or business name. A substantial change in the handler's operations that requires modification to any portion of the business plan.
Violation Notes:	Returned to compliance on 06/30/2017.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Site ID:	56185
Site Name:	PEP BOYS TRI-CITY #742
Violation Date:	03-18-2015
Citation:	40 CFR 1 265.173 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.173
Violation Description:	Failure to properly close hazardous waste containers when not in active use.
Violation Notes:	Returned to compliance on 08/10/2016.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	56185
Site Name:	PEP BOYS TRI-CITY #742
Violation Date:	03-18-2015
Citation:	HSC 6.95 25508.1(a)-(e) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(e)
Violation Description:	Failure to electronically update business plan within 30 days of any one of the following events: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials at or above reportable quantities. A change of business address, business ownership, or business name.
Violation Notes:	Returned to compliance on 02/29/2016.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	56185
Site Name:	PEP BOYS TRI-CITY #742
Violation Date:	04-25-2017
Citation:	40 CFR 1 265.31 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.31
Violation Description:	Failure to maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.
Violation Notes:	Returned to compliance on 06/30/2017.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	56185
Site Name:	PEP BOYS TRI-CITY #742
Violation Date:	04-25-2017
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a site map with all required content.
Violation Notes:	Returned to compliance on 06/30/2017.
Violation Division:	San Diego County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	56185
Site Name:	PEP BOYS TRI-CITY #742

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Violation Date: 04-25-2017
Citation: 22 CCR 15 66265.174 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.174
Violation Description: Failure to inspect weekly areas where hazardous waste containers are stored. The owner or operator must look for leaking containers and for deterioration of containers caused by corrosion or other factors.
Violation Notes: Returned to compliance on 06/30/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-25-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffin Donelle Inspection ID:5645880
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-07-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector: Calcagno Leonardo Inspection ID:5901914
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-25-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffin Donelle Inspection ID:5645880
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-07-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector: Calcagno Leonardo Inspection ID:5901914
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-18-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Burke Mike Inspection ID:4099928
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-18-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Burke Mike Inspection ID:4099928
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Coordinates:

Site ID:	56185
Facility Name:	PEP BOYS TRI-CITY #742
Env Int Type Code:	HWG
Program ID:	10373356
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.182500
Longitude:	-117.294510

Affiliation:

Affiliation Type Desc:	Parent Corporation
Entity Name:	Pep Boys- Manny, Moe & Jack
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Document Preparer
Entity Name:	Alana Persad
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	3111 W Allegheny Ave, Attn: Environmental Department
Affiliation City:	Philadelphia
Affiliation State:	PA

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Affiliation Country:	Not reported
Affiliation Zip:	19132
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Alana Persad
Entity Title:	Environmental Coordinator
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Pep Boys - Manny, Moe & Jack
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(215) 430-9226
Affiliation Type Desc:	Property Owner
Entity Name:	Castle Realty, LLC
Entity Title:	Not reported
Affiliation Address:	40-16 149th Pl.
Affiliation City:	Flushing
Affiliation State:	NY
Affiliation Country:	United States
Affiliation Zip:	11354
Affiliation Phone:	(718) 353-3900
Affiliation Type Desc:	Environmental Contact
Entity Name:	Alana Persad
Entity Title:	Not reported
Affiliation Address:	3111 W Allegheny Ave, Attn: Environmental Department
Affiliation City:	Philadelphia
Affiliation State:	PA
Affiliation Country:	Not reported
Affiliation Zip:	19132
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Pep Boys - Manny, Moe & Jack
Entity Title:	Not reported
Affiliation Address:	3111 W Allegheny Ave, Attn: Environmental Department
Affiliation City:	Philadelphia
Affiliation State:	PA
Affiliation Country:	United States
Affiliation Zip:	19132
Affiliation Phone:	(215) 430-9095
Name:	PEP BOYS TRI-CITY #742
Address:	3752 PLAZA DR

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

City,State,Zip: OCEANSIDE, CA 920564621
Site ID: 56185
CERS ID: T0607302463
CERS Description: Leaking Underground Storage Tank Cleanup Site

Violations:
Site ID: 56185
Site Name: PEP BOYS TRI-CITY #742
Violation Date: 04-25-2017
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 06/30/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 56185
Site Name: PEP BOYS TRI-CITY #742
Violation Date: 04-25-2017
Citation: HSC 6.95 25508.1(a)-(f) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(f)
Violation Description: Failure to electronically update business plan within 30 days of any one of the following events: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials at or above reportable quantities. A change of business address, business ownership, or business name. A substantial change in the handler's operations that requires modification to any portion of the business plan.
Violation Notes: Returned to compliance on 06/30/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 56185
Site Name: PEP BOYS TRI-CITY #742
Violation Date: 03-18-2015
Citation: 40 CFR 1 265.173 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.173
Violation Description: Failure to properly close hazardous waste containers when not in active use.
Violation Notes: Returned to compliance on 08/10/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 56185
Site Name: PEP BOYS TRI-CITY #742
Violation Date: 03-18-2015
Citation: HSC 6.95 25508.1(a)-(e) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(e)
Violation Description: Failure to electronically update business plan within 30 days of any one of the following events: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials at or above reportable quantities. A change of business address, business ownership, or

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

business name.
Violation Notes: Returned to compliance on 02/29/2016.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 56185
Site Name: PEP BOYS TRI-CITY #742
Violation Date: 04-25-2017
Citation: 40 CFR 1 265.31 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.31
Violation Description: Failure to maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.
Violation Notes: Returned to compliance on 06/30/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 56185
Site Name: PEP BOYS TRI-CITY #742
Violation Date: 04-25-2017
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit a site map with all required content.
Violation Notes: Returned to compliance on 06/30/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 56185
Site Name: PEP BOYS TRI-CITY #742
Violation Date: 04-25-2017
Citation: 22 CCR 15 66265.174 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.174
Violation Description: Failure to inspect weekly areas where hazardous waste containers are stored. The owner or operator must look for leaking containers and for deterioration of containers caused by corrosion or other factors.
Violation Notes: Returned to compliance on 06/30/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-25-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffin Donelle Inspection ID:5645880
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Eval Date: 02-07-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector: Calcagno Leonardo Inspection ID:5901914
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-25-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Griffin Donelle Inspection ID:5645880
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-07-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector: Calcagno Leonardo Inspection ID:5901914
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-18-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Burke Mike Inspection ID:4099928
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-18-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Burke Mike Inspection ID:4099928
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Coordinates:
Site ID: 56185
Facility Name: PEP BOYS TRI-CITY #742
Env Int Type Code: HWG
Program ID: 10373356
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.182500
Longitude: -117.294510

Affiliation:
Affiliation Type Desc: Parent Corporation

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Entity Name:	Pep Boys- Manny, Moe & Jack
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	Alana Persad
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	3111 W Allegheny Ave, Attn: Environmental Department
Affiliation City:	Philadelphia
Affiliation State:	PA
Affiliation Country:	Not reported
Affiliation Zip:	19132
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Alana Persad
Entity Title:	Environmental Coordinator
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Pep Boys - Manny, Moe & Jack
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported

PEP BOYS TRI-CITY #742 (Continued) **S103656105**

Affiliation Phone:	(215) 430-9226
Affiliation Type Desc:	Property Owner
Entity Name:	Castle Realty, LLC
Entity Title:	Not reported
Affiliation Address:	40-16 149th Pl.
Affiliation City:	Flushing
Affiliation State:	NY
Affiliation Country:	United States
Affiliation Zip:	11354
Affiliation Phone:	(718) 353-3900
Affiliation Type Desc:	Environmental Contact
Entity Name:	Alana Persad
Entity Title:	Not reported
Affiliation Address:	3111 W Allegheny Ave, Attn: Environmental Department
Affiliation City:	Philadelphia
Affiliation State:	PA
Affiliation Country:	Not reported
Affiliation Zip:	19132
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Pep Boys - Manny, Moe & Jack
Entity Title:	Not reported
Affiliation Address:	3111 W Allegheny Ave, Attn: Environmental Department
Affiliation City:	Philadelphia
Affiliation State:	PA
Affiliation Country:	United States
Affiliation Zip:	19132
Affiliation Phone:	(215) 430-9095

M55 **DICKS SPORTING GOODS #931** **RCRA NonGen / NLR** **1024844117**
WSW **3514 COLLEGE BLVD** **CAL000396184**
1/8-1/4 **OCEANSIDE, CA 92056**
0.230 mi.
1214 ft. **Site 1 of 2 in cluster M**

Relative: **Lower**

Actual: **177 ft.**

RCRA NonGen / NLR:

Date form received by agency:	04/23/2014
Facility name:	DICKS SPORTING GOODS #931
Facility address:	3514 COLLEGE BLVD OCEANSIDE, CA 92056
EPA ID:	CAL000396184
Mailing address:	5151 SAN FELIPE ST, SUITE 1000 HOUSTON, TX 77056-0000
Contact:	ASHLEY CAMPBELL
Contact address:	5151 SAN FELIPE ST, SUITE 1000 HOUSTON, TX 77056-0000
Contact country:	Not reported
Contact telephone:	713-985-5472
Contact email:	ASHLEY.CAMPBELL@STERICYCLE.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

DICKS SPORTING GOODS #931 (Continued) **1024844117**

Owner/Operator Summary:

Owner/operator name:	ASHLEY CAMPBELL
Owner/operator address:	5151 SAN FELIPE ST, SUITE 1000 HOUSTON, TX 77056
Owner/operator country:	Not reported
Owner/operator telephone:	713-985-5472
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	DICKS SPORTING GOODS INC
Owner/operator address:	345 COURT ST CORAOPOLIS, PA 15108
Owner/operator country:	Not reported
Owner/operator telephone:	724-273-3400
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	Yes
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

M56 **HOBBY LOBBY** **CA San Diego Co. HMMD** **S110497359**
WSW **3514 COLLEGE BLVD** **CA CERS HAZ WASTE** **N/A**
1/8-1/4 **OCEANSIDE, CA 92056** **CA HAZNET**
0.230 mi. **CA CERS**
1214 ft. **Site 2 of 2 in cluster M**

Relative: **Lower**
Actual: **177 ft.**

HMMD SAN DIEGO:

Name:	CLINICAL INVESTIGATOR NETWORK
Address:	3514 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	153249
Business Type:	6HK10

HOBBY LOBBY (Continued) **S110497359**

EPA Id Number:	Not reported
APN:	168-012-32-00
Last HMMD Inspection:	11/29/2001
Facility Telephone:	941-5244
Permit Status:	INAC
Permit Expiration:	12/31/2002
Date Last Updated:	11/02/2012
Facility Owner:	CLINICAL INVESTIGATOR NETWORK
Facility Mailing Address:	3520 COLLEGE BL #203
Facility Mailing City:	OCEANSIDE
Facility Mailing State:	CA
Facility Mailing Zip:	92056-
UST Owner:	Not reported
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Not reported
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

CERS HAZ WASTE:

Site ID:	446998
CERS ID:	10779457
CERS Description:	Hazardous Waste Generator

Coordinates:

Site ID:	446998
Facility Name:	Hobby Lobby
Env Int Type Code:	HMBP
Program ID:	10779457
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.180980
Longitude:	-117.294280

Affiliation:

Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880

Affiliation Type Desc:	Identification Signer
Entity Name:	Samantha AOWR
Entity Title:	Account Number
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner

HOBBY LOBBY (Continued) **S110497359**

Entity Name:	Hobby Lobby Inc
Entity Title:	Not reported
Affiliation Address:	jack.johnston@hobbylobby.com
Affiliation City:	Oklahoma City
Affiliation State:	OK
Affiliation Country:	United States
Affiliation Zip:	73179
Affiliation Phone:	(405) 745-1351
Affiliation Type Desc:	Property Owner
Entity Name:	Hobby Lobby Inc
Entity Title:	Not reported
Affiliation Address:	7707 SW 44 st
Affiliation City:	Oklahoma City
Affiliation State:	OK
Affiliation Country:	United States
Affiliation Zip:	73179
Affiliation Phone:	(405) 745-1351
Affiliation Type Desc:	Environmental Contact
Entity Name:	COLTON CROASDALE
Entity Title:	Not reported
Affiliation Address:	7707 SW 44th St
Affiliation City:	Oklahoma City
Affiliation State:	OK
Affiliation Country:	Not reported
Affiliation Zip:	73179
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	3514 College Blvd
Affiliation City:	Oceanside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	HOBBY LOBBY
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(405) 745-1351
Affiliation Type Desc:	Parent Corporation
Entity Name:	HOBBY LOBBY
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported

HOBBY LOBBY (Continued) **S110497359**

Affiliation Phone: Not reported

Affiliation Type Desc: Document Preparer
Entity Name: Samantha AOWR
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

HAZNET:
Name: DICKS SPORTING GOODS #931
Address: 3514 COLLEGE BLVD
City,State,Zip: OCEANSIDE, CA 92056
Year: 2016
GEPAID: CAL000396184
Contact: ASHLEY CAMPBELL
Telephone: 7139855472
Mailing Name: Not reported
Mailing Address: 5151
Mailing City,St,Zip: HOUSTON, TX 770560000
Gen County: San Diego
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Tons: 0.002
CA Waste Code: 331-Off-specification, aged or surplus organics
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: San Diego

Name: DICKS SPORTING GOODS #931
Address: 3514 COLLEGE BLVD
City,State,Zip: OCEANSIDE, CA 92056
Year: 2016
GEPAID: CAL000396184
Contact: ASHLEY CAMPBELL
Telephone: 7139855472
Mailing Name: Not reported
Mailing Address: 5151
Mailing City,St,Zip: HOUSTON, TX 770560000
Gen County: San Diego
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Tons: 0.07
CA Waste Code: 331-Off-specification, aged or surplus organics
Method: H061-Fuel Blending Prior To Energy Recovery At Another Site
Facility County: San Diego

CERS:
Name: HOBBY LOBBY
Address: 3514 COLLEGE BLVD
City,State,Zip: OCEANSIDE, CA 92056
Site ID: 446998

HOBBY LOBBY (Continued) **S110497359**

CERS ID: 10779457
CERS Description: Chemical Storage Facilities

Coordinates:
Site ID: 446998
Facility Name: Hobby Lobby
Env Int Type Code: HMBP
Program ID: 10779457
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.180980
Longitude: -117.294280

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: Identification Signer
Entity Name: Samantha AOWR
Entity Title: Account Number
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Hobby Lobby Inc
Entity Title: Not reported
Affiliation Address: jack.johnston@hobbylobby.com
Affiliation City: Oklahoma City
Affiliation State: OK
Affiliation Country: United States
Affiliation Zip: 73179
Affiliation Phone: (405) 745-1351

Affiliation Type Desc: Property Owner
Entity Name: Hobby Lobby Inc
Entity Title: Not reported
Affiliation Address: 7707 SW 44 st
Affiliation City: Oklahoma City
Affiliation State: OK
Affiliation Country: United States
Affiliation Zip: 73179
Affiliation Phone: (405) 745-1351

Affiliation Type Desc: Environmental Contact
Entity Name: COLTON CROASDALE
Entity Title: Not reported

HOBBY LOBBY (Continued) **S110497359**

Affiliation Address:	7707 SW 44th St
Affiliation City:	Oklahoma City
Affiliation State:	OK
Affiliation Country:	Not reported
Affiliation Zip:	73179
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	3514 College Blvd
Affiliation City:	Oceanside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92056
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	HOBBY LOBBY
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(405) 745-1351
Affiliation Type Desc:	Parent Corporation
Entity Name:	HOBBY LOBBY
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	Samantha AOWR
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

57
WSW
1/4-1/2
0.285 mi.
1504 ft.

REFLECT SHINE CAR WASH
3528 COLLEGE BL
OCEANSIDE, CA 92056

CA LUST
CA SAN DIEGO CO. SAM
CA CERS

S108407204
N/A

Relative:
Lower

Actual:
164 ft.

LUST:

Name:	REFLECT SHINE CAR WASH
Address:	3528 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92056
Lead Agency:	SAN DIEGO COUNTY LOP
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T06019774905
Global Id:	T06019774905
Latitude:	33.18012
Longitude:	-117.294823
Status:	Completed - Case Closed
Status Date:	03/29/2007
Case Worker:	Not reported
RB Case Number:	Not reported
Local Agency:	Not reported
File Location:	Local Agency
Local Case Number:	126589-001
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Diesel
Site History:	Not reported

LUST:

Global Id:	T06019774905
Action Type:	Other
Date:	01/29/2002
Action:	Leak Discovery

Global Id:	T06019774905
Action Type:	ENFORCEMENT
Date:	02/13/2006
Action:	Notice of Responsibility

Global Id:	T06019774905
Action Type:	Other
Date:	02/01/2006
Action:	Leak Reported

Global Id:	T06019774905
Action Type:	Other
Date:	01/29/2002
Action:	Leak Began

LUST:

Global Id:	T06019774905
Status:	Completed - Case Closed
Status Date:	03/29/2007

Global Id:	T06019774905
Status:	Open - Case Begin Date
Status Date:	01/29/2002

Name: REFLECT SHINE CAR WASH

REFLECT SHINE CAR WASH (Continued) **S108407204**

Address: 3528 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 92056
Lead Agency: SAN DIEGO COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0619761135
Global Id: T0619761135
Latitude: 33.18012
Longitude: -117.294823
Status: Completed - Case Closed
Status Date: 03/29/2007
Case Worker: Not reported
RB Case Number: Not reported
Local Agency: Not reported
File Location: Local Agency
Local Case Number: 126589-002
Potential Media Affect: Soil
Potential Contaminants of Concern: Diesel
Site History: Not reported

LUST:
Global Id: T0619761135
Action Type: Other
Date: 03/28/2006
Action: Leak Discovery

Global Id: T0619761135
Action Type: ENFORCEMENT
Date: 06/08/2006
Action: Notice of Responsibility

Global Id: T0619761135
Action Type: Other
Date: 03/30/2006
Action: Leak Reported

Global Id: T0619761135
Action Type: Other
Date: 03/28/2006
Action: Leak Began

LUST:
Global Id: T0619761135
Status: Completed - Case Closed
Status Date: 03/29/2007

Global Id: T0619761135
Status: Open - Case Begin Date
Status Date: 03/28/2006

SAN DIEGO CO. SAM:
Name: REFLECT SHINE CAR WASH
Address: 3528 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 92056
Case Number: 126589-001
Agency: DEH Site Assessment & Mitigation
Funding: **LOP - Federal Fund**

REFLECT SHINE CAR WASH (Continued) **S108407204**

Facility Type: Soils Only
Facility Status: Closed Case
Date: 3/29/2007
Date Began: 1/29/2002

Name: REFLECT SHINE CAR WASH
Address: 3528 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 92056
Case Number: 126589-002
Agency: DEH Site Assessment & Mitigation
Funding: LOP - Federal Fund
Facility Type: Soils Only
Facility Status: Closed Case
Date: 3/29/2007
Date Began: 3/28/2006

CERS:
Name: REFLECT SHINE CAR WASH
Address: 3528 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 92056
Site ID: 225899
CERS ID: T0619761135
CERS Description: Leaking Underground Storage Tank Cleanup Site

Name: REFLECT SHINE CAR WASH
Address: 3528 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 92056
Site ID: 225899
CERS ID: T06019774905
CERS Description: Leaking Underground Storage Tank Cleanup Site

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N58 **SHELL/SOUTHERN CA RETAIL DSTRC** **CA LUST** **S101301823**
West **3502 COLLEGE BL** **CA SAN DIEGO CO. SAM** **N/A**
1/4-1/2 **OCEANSIDE, CA 92056**
0.316 mi.
1668 ft. **Site 1 of 6 in cluster N**

Relative:
Lower

Actual:
176 ft.

LUST REG 9:
Region: 9
Status: Preliminary site assessment underway
Case Number: 9UT1385
Local Case: H04104-001
Substance: Gasoline
Qty Leaked: Not reported
Abate Method: Not reported
Local Agency: San Diego
How Found: Other Means
How Stopped: Close Tank
Source: Unknown
Cause: Unknown
Lead Agency: Local Agency
Case Type: Aquifer affected
Date Found: 03/31/1989
Date Stopped: 03/31/1989
Confirm Date: 03/31/1989
Submit Workplan: Not reported
Prelim Assess: 06/05/1989

SHELL/SOUTHERN CA RETAIL DSTRC (Continued) **S101301823**

Desc Pollution: Not reported
Remed Plan: / /
Remed Action: Not reported
Began Monitor: Not reported
Release Date: 06/05/1989
Enforce Date: Not reported
Closed Date: Not reported
Enforce Type: Not reported
Pilot Program: LOP
Basin Number: 904.21
GW Depth: 7'
Beneficial Use: Municipal groundwater use
NPDES Number: Not reported
Priority: 2A
File Dispn: Not reported
Interim Remedial Actions: Yes
Cleanup and Abatement order Number: Not reported
Waste Discharge Requirement Number: Not reported

SAN DIEGO CO. SAM:

Name: SHELL/SOUTHERN CA RETAIL DSTRC
Address: 3502 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 920564622
Case Number: H04104-001
Agency: DEH Site Assessment & Mitigation
Funding: **LOP - Federal Fund**
Facility Type: Drinking Water Aquifer Impacted
Facility Status: Closed Case
Date: 4/16/2001
Date Began: 3/31/1989

Name: SHELL/SOUTHERN CA RETAIL DSTRC
Address: 3502 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 920564622
Case Number: H04104-002
Agency: DEH Site Assessment & Mitigation
Funding: **Non Billable**
Facility Type: Failed Integrity Test
Facility Status: Closed Case
Date: 10/9/1992
Date Began: 4/22/1992

N59 **SHELL/SOUTHERN CA RETAIL DSTRC** **CA LUST** **S104745864**
West **3502 COLLEGE BL** **CA CPS-SLIC** **N/A**
1/4-1/2 **OCEANSIDE, CA 92056** **CA HIST CORTESE**
0.316 mi. **CA CERS**
1668 ft. **Site 2 of 6 in cluster N**

Relative: LUST:
Lower
Actual: Name: SHELL/SOUTHERN CA RETAIL DSTRC
176 ft. Address: 3502 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 920564622
Lead Agency: SAN DIEGO COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607300225
Global Id: T0607300225
Latitude: 33.181327

SHELL/SOUTHERN CA RETAIL DSTRC (Continued) **S104745864**

Longitude: -117.295905
Status: Completed - Case Closed
Status Date: 04/16/2001
Case Worker: Not reported
RB Case Number: 9UT1385
Local Agency: Not reported
File Location: Local Agency
Local Case Number: H04104-001
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0607300225
Action Type: Other
Date: 03/31/1989
Action: Leak Discovery

Global Id: T0607300225
Action Type: ENFORCEMENT
Date: 04/03/1989
Action: Notice of Responsibility

Global Id: T0607300225
Action Type: Other
Date: 03/31/1989
Action: Leak Stopped

Global Id: T0607300225
Action Type: Other
Date: 03/31/1989
Action: Leak Reported

Global Id: T0607300225
Action Type: Other
Date: 03/31/1989
Action: Leak Began

LUST:
Global Id: T0607300225
Status: Completed - Case Closed
Status Date: 04/16/2001

Global Id: T0607300225
Status: Open - Case Begin Date
Status Date: 03/31/1989

CPS-SLIC:
Name: SHELL/SOUTHERN CA RETAIL DSTRC
Address: 3502 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 920564622
Region: STATE
Facility Status: **Completed - Case Closed**
Status Date: 10/09/1992
Global Id: T0608164335
Lead Agency: SAN DIEGO COUNTY LOP

SHELL/SOUTHERN CA RETAIL DSTRC (Continued) **S104745864**

Lead Agency Case Number:	H04104-002
Latitude:	33.18134
Longitude:	-117.295908
Case Type:	Cleanup Program Site
Case Worker:	Not reported
Local Agency:	Not reported
RB Case Number:	Not reported
File Location:	Local Agency
Potential Media Affected:	Under Investigation
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

HIST CORTESE:

edr_fname:	SHELL SERVICE STATION #
edr_fadd1:	3502 COLLEGE
City,State,Zip:	OCEANSIDE, CA 92056
Region:	CORTESE
Facility County Code:	37
Reg By:	LTNKA
Reg Id:	9UT1385

CERS:

Name:	SHELL/SOUTHERN CA RETAIL DSTRC
Address:	3502 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 920564622
Site ID:	204602
CERS ID:	T0608164335
CERS Description:	Cleanup Program Site

Name:	SHELL/SOUTHERN CA RETAIL DSTRC
Address:	3502 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 920564622
Site ID:	204602
CERS ID:	T0607300225
CERS Description:	Leaking Underground Storage Tank Cleanup Site

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N60 **COLLEGE BLVD EXXON** **CA SAN DIEGO CO. SAM** **S104747356**
West **3401 COLLEGE BL** **CA EMI** **N/A**
1/4-1/2 **OCEANSIDE, CA 92056** **CA HAZNET**
0.360 mi. **CA CERS**
1903 ft. **Site 3 of 6 in cluster N**

Relative:
Lower

Actual:
175 ft.

SAN DIEGO CO. SAM:

Name:	COLLEGE BLVD EXXON
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 920564614
Case Number:	H12485-001
Agency:	DEH Site Assessment & Mitigation
Funding:	**LOP - Federal Fund**
Facility Type:	Soils Only
Facility Status:	Closed Case
Date:	12/21/1988
Date Began:	8/14/1986

Name: COLLEGE BLVD EXXON

COLLEGE BLVD EXXON (Continued) **S104747356**

Address: 3401 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 920564614
Case Number: H12485-002
Agency: DEH Site Assessment & Mitigation
Funding: **Non Billable**
Facility Type: Failed Integrity Test
Facility Status: Closed Case
Date: 5/17/1991
Date Began: 1/31/1991

Name: COLLEGE BLVD EXXON
Address: 3401 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 920564614
Case Number: H12485-003
Agency: DEH Site Assessment & Mitigation
Funding: **Non Billable**
Facility Type: Failed Integrity Test
Facility Status: Closed Case
Date: 10/3/1994
Date Began: 12/17/1992

Name: COLLEGE BLVD EXXON
Address: 3401 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 920564614
Case Number: H12485-004
Agency: DEH Site Assessment & Mitigation
Funding: **Non Billable**
Facility Type: Failed Integrity Test
Facility Status: Closed Case
Date: 7/25/1994
Date Began: 5/26/1994

Name: COLLEGE BLVD EXXON
Address: 3401 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 920564614
Case Number: H12485-005
Agency: DEH Site Assessment & Mitigation
Funding: **Non Billable**
Facility Type: Failed Integrity Test
Facility Status: Closed Case
Date: 7/25/1994
Date Began: 5/26/1994

Name: COLLEGE BLVD EXXON
Address: 3401 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 920564614
Case Number: H12485-006
Agency: DEH Site Assessment & Mitigation
Funding: **Non Billable**
Facility Type: Failed Integrity Test
Facility Status: Closed Case
Date: 7/25/1994
Date Began: 5/26/1994

Name: COLLEGE BLVD EXXON
Address: 3401 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 920564614

COLLEGE BLVD EXXON (Continued) **S104747356**

Case Number:	H12485-007
Agency:	DEH Site Assessment & Mitigation
Funding:	**LOP - Federal Fund**
Facility Type:	Drinking Water Aquifer Impacted
Facility Status:	Closed Case
Date:	3/25/1996
Date Began:	10/12/1994

Name:	COLLEGE BLVD EXXON
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92056-4614
Case Number:	H12485-008
Agency:	DEH Site Assessment & Mitigation
Funding:	**LOP - State Fund**
Facility Type:	AX
Facility Status:	Preliminary Assessment
Date:	6/16/2006
Date Began:	5/11/2006

EMI:

Name:	EXXON #1024
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92054
Year:	2000
County Code:	37
Air Basin:	SD
Facility ID:	3976
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	EXXON #1024
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92054
Year:	2001
County Code:	37
Air Basin:	SD
Facility ID:	3976
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0

COLLEGE BLVD EXXON (Continued) **S104747356**

Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	EXXON #1024
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92054
Year:	2002
County Code:	37
Air Basin:	SD
Facility ID:	3976
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	EXXON #1024
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92054
Year:	2003
County Code:	37
Air Basin:	SD
Facility ID:	3976
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	EXXON #1024
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92054
Year:	2004
County Code:	37
Air Basin:	SD
Facility ID:	3976
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.283778
Reactive Organic Gases Tons/Yr:	2.283778

COLLEGE BLVD EXXON (Continued) **S104747356**

Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	EXXON #1024
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92054
Year:	2005
County Code:	37
Air Basin:	SD
Facility ID:	3976
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.283778
Reactive Organic Gases Tons/Yr:	2.283778
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	EXXON #1024
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92054
Year:	2006
County Code:	37
Air Basin:	SD
Facility ID:	3976
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.4
Reactive Organic Gases Tons/Yr:	2.4
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	EXXON #1024
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92054
Year:	2007
County Code:	37
Air Basin:	SD
Facility ID:	3976
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported

COLLEGE BLVD EXXON (Continued) **S104747356**

Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.4
Reactive Organic Gases Tons/Yr:	2.4
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	EXXON #1024
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92054
Year:	2008
County Code:	37
Air Basin:	SD
Facility ID:	3976
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.4
Reactive Organic Gases Tons/Yr:	2.4
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	EXXON #1024
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92054
Year:	2009
County Code:	37
Air Basin:	SD
Facility ID:	3976
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.3999999999999999
Reactive Organic Gases Tons/Yr:	2.3999999999999999
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	EXXON #1024
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92054
Year:	2010
County Code:	37
Air Basin:	SD
Facility ID:	3976
Air District Name:	SD

COLLEGE BLVD EXXON (Continued) **S104747356**

SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.3999999999999999
Reactive Organic Gases Tons/Yr:	2.3999999999999999
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	EXXON #1024
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92054
Year:	2011
County Code:	37
Air Basin:	SD
Facility ID:	3976
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.4
Reactive Organic Gases Tons/Yr:	2.4
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	EXXON #1024
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92054
Year:	2012
County Code:	37
Air Basin:	SD
Facility ID:	3976
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.4
Reactive Organic Gases Tons/Yr:	2.4
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	EXXON #1024
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92054
Year:	2013
County Code:	37

COLLEGE BLVD EXXON (Continued) **S104747356**

Air Basin:	SD
Facility ID:	3976
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.4
Reactive Organic Gases Tons/Yr:	2.4
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	EXXON #1024
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92054
Year:	2014
County Code:	37
Air Basin:	SD
Facility ID:	3976
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.4
Reactive Organic Gases Tons/Yr:	2.4
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	EXXON #1024
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92054
Year:	2015
County Code:	37
Air Basin:	SD
Facility ID:	3976
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.4
Reactive Organic Gases Tons/Yr:	2.4
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	EXXON #1024
Address:	3401 COLLEGE BL

COLLEGE BLVD EXXON (Continued) **S104747356**

City,State,Zip:	OCEANSIDE, CA 92054
Year:	2016
County Code:	37
Air Basin:	SD
Facility ID:	3976
Air District Name:	SD
SIC Code:	5541
Air District Name:	SAN DIEGO COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.4
Reactive Organic Gases Tons/Yr:	2.4
Carbon Monoxide Emissions Tons/Yr:	Not reported
NOX - Oxides of Nitrogen Tons/Yr:	Not reported
SOX - Oxides of Sulphur Tons/Yr:	Not reported
Particulate Matter Tons/Yr:	Not reported
Part. Matter 10 Micrometers and Smllr Tons/Yr:	Not reported

HAZNET:

Name:	APRO LLC DBA UNITED OIL 44
Address:	3401 COLLEGE BLVD
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2017
GEPAID:	CAL000398654
Contact:	TOM ROBINS
Telephone:	3103233992
Mailing Name:	Not reported
Mailing Address:	4130 COVER STREET
Mailing City,St,Zip:	LONG BEACH, CA 908080000
Gen County:	San Diego
TSD EPA ID:	CAD028409019
TSD County:	Los Angeles
Tons:	0.417
CA Waste Code:	241-Tank bottom waste
Method:	H135-Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
Facility County:	San Diego

Name:	APRO LLC DBA UNITED OIL 44
Address:	3401 COLLEGE BLVD
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2017
GEPAID:	CAL000398654
Contact:	TOM ROBINS
Telephone:	3103233992
Mailing Name:	Not reported
Mailing Address:	4130 COVER STREET
Mailing City,St,Zip:	LONG BEACH, CA 908080000
Gen County:	San Diego
TSD EPA ID:	CAD028409019
TSD County:	Los Angeles
Tons:	0.0875
CA Waste Code:	352-Other organic solids
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	San Diego

COLLEGE BLVD EXXON (Continued) **S104747356**

Name:	APRO LLC DBA UNITED OIL 44
Address:	3401 COLLEGE BLVD
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2016
GEPAID:	CAL000398654
Contact:	TOM ROBINS
Telephone:	3103233992
Mailing Name:	Not reported
Mailing Address:	17311 S MAIN ST
Mailing City,St,Zip:	GARDENA, CA 90248
Gen County:	San Diego
TSD EPA ID:	CAD028409019
TSD County:	Los Angeles
Tons:	0.075
CA Waste Code:	352-Other organic solids
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	San Diego

Name:	UNITED 44
Address:	3401 COLLEGE BLVD
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2015
GEPAID:	CAL000398654
Contact:	ALLEN FAASS
Telephone:	9492895286
Mailing Name:	Not reported
Mailing Address:	17311 S MAIN ST
Mailing City,St,Zip:	GARDENA, CA 90248
Gen County:	San Diego
TSD EPA ID:	Not reported
TSD County:	Not reported
Tons:	0.075
CA Waste Code:	352-Other organic solids
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	San Diego

Name:	UNITED 44
Address:	3401 COLLEGE BLVD
City,State,Zip:	OCEANSIDE, CA 92056
Year:	2015
GEPAID:	CAL000398654
Contact:	ALLEN FAASS
Telephone:	9492895286
Mailing Name:	Not reported
Mailing Address:	17311 S MAIN ST
Mailing City,St,Zip:	GARDENA, CA 90248
Gen County:	San Diego
TSD EPA ID:	CAD028409019
TSD County:	Los Angeles
Tons:	0.10425
CA Waste Code:	241-Tank bottom waste
Method:	H135-Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
Facility County:	San Diego

COLLEGE BLVD EXXON (Continued) **S104747356**

Click this hyperlink while viewing on your computer to access additional CA_HAZNET: detail in the EDR Site Report.

CERS:
Name: COLLEGE BLVD EXXON
Address: 3401 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 92056-461
Site ID: 222525
CERS ID: T0607300508
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: COLLEEN HINES - SAN DIEGO COUNTY LOP
Entity Title: Not reported
Affiliation Address: P.O. Box 129261
Affiliation City: SAN DIEGO
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 8585056874

Name: COLLEGE BLVD EXXON
Address: 3401 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 92056-461
Site ID: 222525
CERS ID: T0607301989
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: COLLEEN HINES - SAN DIEGO COUNTY LOP
Entity Title: Not reported
Affiliation Address: P.O. Box 129261
Affiliation City: SAN DIEGO
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 8585056874

Name: COLLEGE BLVD EXXON
Address: 3401 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 92056-461
Site ID: 222525
CERS ID: T0608133767
CERS Description: Cleanup Program Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: COLLEEN HINES - SAN DIEGO COUNTY LOP
Entity Title: Not reported
Affiliation Address: P.O. Box 129261
Affiliation City: SAN DIEGO
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported

COLLEGE BLVD EXXON (Continued) **S104747356**

Affiliation Phone: 8585056874

Name: COLLEGE BLVD EXXON
Address: 3401 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 92056-461
Site ID: 222525
CERS ID: T0608126493
CERS Description: Cleanup Program Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: COLLEEN HINES - SAN DIEGO COUNTY LOP
Entity Title: Not reported
Affiliation Address: P.O. Box 129261
Affiliation City: SAN DIEGO
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 8585056874

Name: COLLEGE BLVD EXXON
Address: 3401 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 92056-461
Site ID: 222525
CERS ID: T0608142935
CERS Description: Cleanup Program Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: COLLEEN HINES - SAN DIEGO COUNTY LOP
Entity Title: Not reported
Affiliation Address: P.O. Box 129261
Affiliation City: SAN DIEGO
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 8585056874

Name: COLLEGE BLVD EXXON
Address: 3401 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 92056-461
Site ID: 222525
CERS ID: T06019720262
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: COLLEEN HINES - SAN DIEGO COUNTY LOP
Entity Title: Not reported
Affiliation Address: P.O. Box 129261
Affiliation City: SAN DIEGO
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 8585056874

COLLEGE BLVD EXXON (Continued) **S104747356**

Name: COLLEGE BLVD EXXON
Address: 3401 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 92056-461
Site ID: 222525
CERS ID: T0608108958
CERS Description: Cleanup Program Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: COLLEEN HINES - SAN DIEGO COUNTY LOP
Entity Title: Not reported
Affiliation Address: P.O. Box 129261
Affiliation City: SAN DIEGO
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 8585056874

Name: COLLEGE BLVD EXXON
Address: 3401 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 92056-461
Site ID: 222525
CERS ID: T0608192490
CERS Description: Cleanup Program Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: COLLEEN HINES - SAN DIEGO COUNTY LOP
Entity Title: Not reported
Affiliation Address: P.O. Box 129261
Affiliation City: SAN DIEGO
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 8585056874

Name: EXXON #1024
Address: 3401 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 92056-4614
Site ID: 467148
CERS ID: 110021283065
CERS Description: US EPA Air Emission Inventory System (EIS)

N61 **TEXAC0/COLLEGE BLVD 3401** **CA LUST** **S104164100**
West **3401 COLLEGE BLVD** **N/A**
1/4-1/2 **OCEANSIDE, CA 92056**
0.360 mi.
1903 ft. **Site 4 of 6 in cluster N**

Relative:
Lower

Actual:
175 ft.

LUST REG 9:
Region: 9
Status: Case Closed
Case Number: 9UT3236
Local Case: H12485-007
Substance: Unleaded Gasoline
Qty Leaked: 0
Abate Method: EDGT

TEXAC0/COLLEGE BLVD 3401 (Continued) **S104164100**

Local Agency:	San Diego
How Found:	Not reported
How Stopped:	Not reported
Source:	Not reported
Cause:	Not reported
Lead Agency:	Local Agency
Case Type:	Other ground water affected
Date Found:	10/12/1994
Date Stopped:	11/29/1994
Confirm Date:	/ /
Submit Workplan:	Not reported
Prelim Assess:	11/04/1994
Desc Pollution:	Not reported
Remed Plan:	/ /
Remed Action:	11/29/94
Began Monitor:	Not reported
Release Date:	10/12/1994
Enforce Date:	11/14/94
Closed Date:	3/25/96
Enforce Type:	SEL
Pilot Program:	LOP
Basin Number:	904.21
GW Depth:	7.7
Beneficial Use:	Not reported
NPDES Number:	Not reported
Priority:	2A
File Dispn:	Administratively opened on database, however no file physically exists
Interim Remedial Actions:	Not reported
Cleanup and Abatement order Number:	Not reported
Waste Discharge Requirement Number:	Not reported

N62
West
1/4-1/2
0.360 mi.
1903 ft.

Relative:
Lower

Actual:
175 ft.

UNITED #044
3401 COLLEGE BLVD
OCEANSIDE, CA 92056

Site 5 of 6 in cluster N

CA LUST **S105034159**
CA San Diego Co. HMMD **N/A**
CA CERS HAZ WASTE
CA SWEEPS UST
CA CERS TANKS
CA CHMIRS
CA CERS

HMMD SAN DIEGO:

Name:	APRO #44
Address:	3401 COLLEGE BLVD
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	210161
Business Type:	6HK28
EPA Id Number:	CAL000335783
APN:	168-011-03-00
Last HMMD Inspection:	06/26/2012
Facility Telephone:	760-434-8004
Permit Status:	OPEN
Permit Expiration:	10/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	APRO LLC
Facility Mailing Address:	17311 S MAIN ST
Facility Mailing City:	GARDENA
Facility Mailing State:	CA
Facility Mailing Zip:	90248
UST Owner:	APRO LLC

UNITED #044 (Continued) **S105034159**

Handle Regulated Hazmat: Y
Own Or Operate UST: Y
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: Not reported
Generate Medical Waste: Not reported

Inventory Active Permits (not SQG Medical):
Permit Number: 210161
Update Date: 11/02/2012
Case Number: 68476-34-6
Name: DIESEL
Other Information: UNDERGROUND TANK 112485 T008
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 210161
Update Date: 11/02/2012
Case Number: 8006-61-9
Name: REGULAR UNLEADED
Other Information: UNDERGROUND TANK 112485 T005
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 210161
Update Date: 11/02/2012
Case Number: 8006-61-9
Name: REGULAR UNLEADED
Other Information: UNDERGROUND TANK 112485 T006 GASOLINE REGULAR UNLEADED
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 210161
Update Date: 11/02/2012
Case Number: 8006-61-9
Name: SUPER UNLEADED
Other Information: UNDERGROUND TANK 112485 T007
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 210161
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information: GASOLINE FILTERS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:
Permit Number: 210161
Update Date: 11/02/2012
Inspection Date: 06/22/2010

UNITED #044 (Continued) **S105034159**

Violation Code: 6HV3252
Violation: AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation: All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity: ACTIVE

Permit Number: 210161
Update Date: 11/02/2012
Inspection Date: 06/22/2010
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 210161
Update Date: 11/02/2012
Inspection Date: 06/22/2010
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 210161
Update Date: 11/02/2012
Inspection Date: 06/22/2010
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 210161
Update Date: 11/02/2012
Inspection Date: 06/22/2010
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 210161
Update Date: 11/02/2012
Inspection Date: 06/23/2009
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

Permit Number: 210161
Update Date: 11/02/2012
Inspection Date: 06/23/2009
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL

UNITED #044 (Continued) **S105034159**

Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

UST:
UST Name: UNDERGROUND TANK 112485 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 210161
Tank Type: SINGLE WALL
Additional Id: 1
Capacity Gallons: 6000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: REMOVED
Remove Close Date: 1994-08-11 00:00:00
Year Installed: 1970-01-01 00:00:00
Pipe Type: Not reported
Delivery System: Not reported
Monitor Code: 05
UST Monitor Method: SW TANK DW PIPE W/ POS SHUTOFF-ALARM ON LLD W/ SIRS:SIR ANALY MONTHLY, TANK TEST BIENNIALLY, PIPE TEST ANN 0.1 G/HR OR MO 0.2 G/HR

UST Name: UNDERGROUND TANK 112485 T002
Last Update: 2012-11-02 14:17:38
Permit Number: 210161
Tank Type: SINGLE WALL
Additional Id: 2
Capacity Gallons: 8000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: REMOVED
Remove Close Date: 1994-08-11 00:00:00
Year Installed: 1970-01-01 00:00:00
Pipe Type: Not reported
Delivery System: Not reported
Monitor Code: 05
UST Monitor Method: SW TANK DW PIPE W/ POS SHUTOFF-ALARM ON LLD W/ SIRS:SIR ANALY MONTHLY, TANK TEST BIENNIALLY, PIPE TEST ANN 0.1 G/HR OR MO 0.2 G/HR

UST Name: UNDERGROUND TANK 112485 T003
Last Update: 2012-11-02 14:17:38
Permit Number: 210161
Tank Type: SINGLE WALL
Additional Id: 3
Capacity Gallons: 10000
UST Contents: REGULAR UNLEADED
Other Content Info: REGULAR UNLEADED
Reg Status: REMOVED
Remove Close Date: 1994-08-11 00:00:00
Year Installed: 1970-01-01 00:00:00
Pipe Type: Not reported
Delivery System: Not reported
Monitor Code: 05
UST Monitor Method: SW TANK DW PIPE W/ POS SHUTOFF-ALARM ON LLD W/ SIRS:SIR ANALY MONTHLY, TANK TEST BIENNIALLY, PIPE TEST ANN 0.1 G/HR OR MO 0.2 G/HR

UNITED #044 (Continued) **S105034159**

UST Name:	UNDERGROUND TANK 112485 T004
Last Update:	2012-11-02 14:17:38
Permit Number:	210161
Tank Type:	SINGLE WALL
Additional Id:	4
Capacity Gallons:	1000
UST Contents:	Not reported
Other Content Info:	WASTE OIL
Reg Status:	REMOVED
Remove Close Date:	1993-02-17 00:00:00
Year Installed:	1970-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	07
UST Monitor Method:	SW TANK SW PRESSURE PIPE W/RESTRICTIVE LLD W/DAILY RECONCILIATION OR WEEKLY GAUGING: TANK AND PIPE TEST ANNUALLY

UST Name:	UNDERGROUND TANK 112485 T005
Last Update:	2012-11-02 14:17:38
Permit Number:	210161
Tank Type:	DOUBLE WALL
Additional Id:	NT1800, RT3598/RT4548
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1994-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 112485 T006
Last Update:	2012-11-02 14:17:38
Permit Number:	210161
Tank Type:	DOUBLE WALL
Additional Id:	NT1800 GASOLINE REGULAR UNLEADED, RT3598/RT4548
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1994-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 112485 T007
Last Update:	2012-11-02 14:17:38
Permit Number:	210161
Tank Type:	DOUBLE WALL
Additional Id:	NT1800, RT3598/RT4548
Capacity Gallons:	10000

UNITED #044 (Continued) **S105034159**

UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1994-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UST Name:	UNDERGROUND TANK 112485 T008
Last Update:	2012-11-02 14:17:38
Permit Number:	210161
Tank Type:	DOUBLE WALL
Additional Id:	NT1800, RT3598/RT4548
Capacity Gallons:	10000
UST Contents:	DIESEL
Other Content Info:	DIESEL
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1994-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

Name:	APRO #44
Address:	3401 COLLEGE BLVD
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	210161
Business Type:	6HK28
EPA Id Number:	CAL000335783
APN:	168-011-03-00
Last HMMD Inspection:	06/26/2012
Facility Telephone:	760-434-8004
Permit Status:	OPEN
Permit Expiration:	10/31/2013
Date Last Updated:	11/02/2012
Facility Owner:	APRO LLC
Facility Mailing Address:	17311 S MAIN ST
Facility Mailing City:	GARDENA
Facility Mailing State:	CA
Facility Mailing Zip:	90248
UST Owner:	APRO LLC
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Y
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

Inventory Active Permits (not SQG Medical):

Permit Number:	210161
Update Date:	11/02/2012
Case Number:	68476-34-6

UNITED #044 (Continued) **S105034159**

Name: DIESEL
Other Information: UNDERGROUND TANK 112485 T008
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 210161
Update Date: 11/02/2012
Case Number: 8006-61-9
Name: REGULAR UNLEADED
Other Information: UNDERGROUND TANK 112485 T005
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 210161
Update Date: 11/02/2012
Case Number: 8006-61-9
Name: REGULAR UNLEADED
Other Information: UNDERGROUND TANK 112485 T006 GASOLINE REGULAR UNLEADED
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 210161
Update Date: 11/02/2012
Case Number: 8006-61-9
Name: SUPER UNLEADED
Other Information: UNDERGROUND TANK 112485 T007
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: Not reported

Permit Number: 210161
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Other Information: GASOLINE FILTERS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:
Permit Number: 210161
Update Date: 11/02/2012
Inspection Date: 06/22/2010
Violation Code: 6HV3252
Violation: AUDIO&VISUAL ALARMS NOT WORKING OK
Violation Citation: All audible and/or visual alarms not functioning properly. 2632(c)(2)(B), 2636(f)(1)
Activity: ACTIVE

Permit Number: 210161
Update Date: 11/02/2012
Inspection Date: 06/22/2010
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL

UNITED #044 (Continued) **S105034159**

Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 210161
Update Date: 11/02/2012
Inspection Date: 06/22/2010
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 210161
Update Date: 11/02/2012
Inspection Date: 06/22/2010
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 210161
Update Date: 11/02/2012
Inspection Date: 06/22/2010
Violation Code: 6HV3263
Violation: MONITOR SYSTEM NOT ALL FUNCTIONAL
Violation Citation: Monitoring system components &/or devices are not all functional. 2630, 2641(j), 2632
Activity: ACTIVE

Permit Number: 210161
Update Date: 11/02/2012
Inspection Date: 06/23/2009
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

Permit Number: 210161
Update Date: 11/02/2012
Inspection Date: 06/23/2009
Violation Code: 6HV3411
Violation: LLD NOT INSTALLED/NOT FUNCTIONAL
Violation Citation: DOUBLE WALLED PRESSURIZED PIPING-Including Under Dispenser Containment (UDC):Line leak detector is not installed, not functional, or not tested. 2636(f)(2), 25284.1(a)(4)(C), 2641(j)
Activity: ACTIVE

UST:
UST Name: UNDERGROUND TANK 112485 T001
Last Update: 2012-11-02 14:17:38
Permit Number: 210161
Tank Type: SINGLE WALL
Additional Id: 1

UNITED #044 (Continued) **S105034159**

Capacity Gallons:	6000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1994-08-11 00:00:00
Year Installed:	1970-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	05
UST Monitor Method:	SW TANK DW PIPE W/ POS SHUTOFF-ALARM ON LLD W/ SIRS:SIR ANALY MONTHLY, TANK TEST BIENNIALLY, PIPE TEST ANN 0.1 G/HR OR MO 0.2 G/HR
UST Name:	UNDERGROUND TANK 112485 T002
Last Update:	2012-11-02 14:17:38
Permit Number:	210161
Tank Type:	SINGLE WALL
Additional Id:	2
Capacity Gallons:	8000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1994-08-11 00:00:00
Year Installed:	1970-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	05
UST Monitor Method:	SW TANK DW PIPE W/ POS SHUTOFF-ALARM ON LLD W/ SIRS:SIR ANALY MONTHLY, TANK TEST BIENNIALLY, PIPE TEST ANN 0.1 G/HR OR MO 0.2 G/HR
UST Name:	UNDERGROUND TANK 112485 T003
Last Update:	2012-11-02 14:17:38
Permit Number:	210161
Tank Type:	SINGLE WALL
Additional Id:	3
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	REMOVED
Remove Close Date:	1994-08-11 00:00:00
Year Installed:	1970-01-01 00:00:00
Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	05
UST Monitor Method:	SW TANK DW PIPE W/ POS SHUTOFF-ALARM ON LLD W/ SIRS:SIR ANALY MONTHLY, TANK TEST BIENNIALLY, PIPE TEST ANN 0.1 G/HR OR MO 0.2 G/HR
UST Name:	UNDERGROUND TANK 112485 T004
Last Update:	2012-11-02 14:17:38
Permit Number:	210161
Tank Type:	SINGLE WALL
Additional Id:	4
Capacity Gallons:	1000
UST Contents:	Not reported
Other Content Info:	WASTE OIL
Reg Status:	REMOVED
Remove Close Date:	1993-02-17 00:00:00
Year Installed:	1970-01-01 00:00:00

UNITED #044 (Continued) **S105034159**

Pipe Type:	Not reported
Delivery System:	Not reported
Monitor Code:	07
UST Monitor Method:	SW TANK SW PRESSURE PIPE W/RESTRICTIVE LLD W/DAILY RECONCILIATION OR WEEKLY GAUGING: TANK AND PIPE TEST ANNUALLY
UST Name:	UNDERGROUND TANK 112485 T005
Last Update:	2012-11-02 14:17:38
Permit Number:	210161
Tank Type:	DOUBLE WALL
Additional Id:	NT1800, RT3598/RT4548
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1994-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF
UST Name:	UNDERGROUND TANK 112485 T006
Last Update:	2012-11-02 14:17:38
Permit Number:	210161
Tank Type:	DOUBLE WALL
Additional Id:	NT1800 GASOLINE REGULAR UNLEADED, RT3598/RT4548
Capacity Gallons:	10000
UST Contents:	REGULAR UNLEADED
Other Content Info:	REGULAR UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1994-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF
UST Name:	UNDERGROUND TANK 112485 T007
Last Update:	2012-11-02 14:17:38
Permit Number:	210161
Tank Type:	DOUBLE WALL
Additional Id:	NT1800, RT3598/RT4548
Capacity Gallons:	10000
UST Contents:	PREMIUM UNLEADED
Other Content Info:	PREMIUM UNLEADED
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1994-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

UNITED #044 (Continued) **S105034159**

UST Name:	UNDERGROUND TANK 112485 T008
Last Update:	2012-11-02 14:17:38
Permit Number:	210161
Tank Type:	DOUBLE WALL
Additional Id:	NT1800, RT3598/RT4548
Capacity Gallons:	10000
UST Contents:	DIESEL
Other Content Info:	DIESEL
Reg Status:	ACTIVE
Remove Close Date:	Not reported
Year Installed:	1994-01-01 00:00:00
Pipe Type:	DOUBLE WALL
Delivery System:	PRESSURE
Monitor Code:	31A
UST Monitor Method:	DW TANK, DW PRESSURIZED PIPE W/ DRY TANK ANNULAR; POSITIVE SHUT-OFF & FAILSAFE, 3.0LLD; UDC W/ POSITIVE SHUT-OFF

Name:	UNITED #044
Address:	3401 COLLEGE BLVD
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	Not reported
Business Type:	Not reported
EPA Id Number:	CAL000398654
APN:	Not reported
Last HMMD Inspection:	Not reported
Facility Telephone:	310-323-3992
Permit Status:	Permit Renewed
Permit Expiration:	Not reported
Date Last Updated:	06/19/2018
Facility Owner:	Not reported
Facility Mailing Address:	4130 Cover Street, Long Beach, CA 90808
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	Y
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	N
Generate Medical Waste:	Not reported

Inspection Violation:

Record ID:	DEH2008-HUPFP-210161
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-210161
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	4100939
Return To Compliance Date:	2013-05-16T00:00:00.000
Nov:	No
Violation Classification:	Not reported
Underground Storage Tank Id:	87
Container/Tank Id:	Not reported
Last Update:	2019-01-10T01:14:19.000
Inspection Date:	2013-05-16T15:41:00.000

UNITED #044 (Continued) **S105034159**

Violation Code:	2030025 Failure of the pressurized piping to meet one or more of the following requirements: monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour, and will restrict the flow of product through the piping or trigger an alarm when a release occurs. 23 CCR 16 2636(f)(2)
Record ID:	DEH2008-HUPFP-210161
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-210161
Program Element:	Underground Storage Tank
Inspection Type:	Return To Compliance (RTC)
Inspection Number:	5023122
Return To Compliance Date:	2013-05-16T00:00:00.000
Nov:	No
Violation Classification:	Not reported
Underground Storage Tank Id:	87
Container/Tank Id:	Not reported
Last Update:	2019-01-10T01:14:19.000
Inspection Date:	2013-05-16T15:51:00.000
Violation Code:	2030025 Failure of the pressurized piping to meet one or more of the following requirements: monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour, and will restrict the flow of product through the piping or trigger an alarm when a release occurs. 23 CCR 16 2636(f)(2).
Record ID:	DEH2008-HUPFP-210161
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-210161
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	4977949
Return To Compliance Date:	2014-06-18T00:00:00.000
Nov:	No
Violation Classification:	Not reported
Underground Storage Tank Id:	87
Container/Tank Id:	Not reported
Last Update:	2019-01-10T01:14:19.000
Inspection Date:	2014-06-03T15:25:00.000
Violation Code:	2030026 Failure of line leak detector to detect a leak and/or failure of audible and visual alarm. 23 CCR 16 2636(f)(2), 2666.
Record ID:	DEH2008-HUPFP-210161
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-210161
Program Element:	Underground Storage Tank
Inspection Type:	Routine
Inspection Number:	4977949
Return To Compliance Date:	2014-06-18T00:00:00.000
Nov:	No
Violation Classification:	Not reported
Underground Storage Tank Id:	00
Container/Tank Id:	Not reported
Last Update:	2019-01-10T01:14:19.000
Inspection Date:	2014-06-03T15:25:00.000

UNITED #044 (Continued) **S105034159**

Violation Code: 2030016 Failure to continuously monitor the interstitial space of the tank, piping and/or sumps sump such that the leak detection activates an audible/visual alarm when a leak is detected. 23 CCR 16 2631(g), 2632(c)(2)(A)&(B), 2633(c), 2636(f).

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-210161
Program Element: Underground Storage Tank
Inspection Type: Routine
Inspection Number: 5434866
Return To Compliance Date: 2016-06-01T00:00:00.000
Nov: No
Violation Classification: Minor
Underground Storage Tank Id: 21541
Container/Tank Id: Not reported
Last Update: 2019-01-10T01:14:19.000
Inspection Date: 2016-06-01T13:15:56.000
Violation Code: 2030036 (RP) Failure of the overfill prevention system to meet one of the following requirements: 1. Alert the transfer operator when the tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95% of capacity; and activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. 23 CCR 2635(b)(2), 2665

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-210161
Program Element: Underground Storage Tank
Inspection Type: Routine
Inspection Number: 5652109
Return To Compliance Date: 2017-05-25T00:00:00.000
Nov: No
Violation Classification: Class II
Underground Storage Tank Id: 21539
Container/Tank Id: Not reported
Last Update: 2019-01-10T01:14:19.000
Inspection Date: 2017-05-25T14:54:44.000
Violation Code: 2030025 (RD) Failure of the pressurized piping to meet one or more of the following requirements: monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour, and will restrict the flow or product through the piping or trigger an alarm when a release occurs. 23 CCR 2636(f)(2)

UST DTL:
Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Facility Id Number: 37-000-210161

UNITED #044 (Continued) **S105034159**

Facility Type (Ust Facility):	Motor Vehicle Fueling
Tank Owner Name:	APRO LLC
Tankid:	21538
Tank Status:	Active
Date Ust Permanently Closed:	Not reported
Tank Use:	Motor Vehicle Fueling
Piping System Type:	Pressure
Last Updated:	2019-01-10T01:14:36.000
Tank Capacityin Gallons:	10000
Tank Contents:	Regular Unleaded
Type Of Tank:	Double Wall

Record ID:	DEH2008-HUPFP-210161
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-210161
Facility Type (Ust Facility):	Motor Vehicle Fueling
Tank Owner Name:	APRO LLC
Tankid:	21539
Tank Status:	Active
Date Ust Permanently Closed:	Not reported
Tank Use:	Motor Vehicle Fueling
Piping System Type:	Pressure
Last Updated:	2019-01-10T01:14:36.000
Tank Capacityin Gallons:	10000
Tank Contents:	Midgrade Unleaded
Type Of Tank:	Double Wall

Record ID:	DEH2008-HUPFP-210161
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-210161
Facility Type (Ust Facility):	Motor Vehicle Fueling
Tank Owner Name:	APRO LLC
Tankid:	21540
Tank Status:	Active
Date Ust Permanently Closed:	Not reported
Tank Use:	Motor Vehicle Fueling
Piping System Type:	Pressure
Last Updated:	2019-01-10T01:14:36.000
Tank Capacityin Gallons:	10000
Tank Contents:	Premium Unleaded
Type Of Tank:	Double Wall

Record ID:	DEH2008-HUPFP-210161
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-210161
Facility Type (Ust Facility):	Motor Vehicle Fueling
Tank Owner Name:	APRO LLC
Tankid:	21541
Tank Status:	Active
Date Ust Permanently Closed:	Not reported
Tank Use:	Motor Vehicle Fueling
Piping System Type:	Pressure
Last Updated:	2019-01-10T01:14:36.000
Tank Capacityin Gallons:	10000

UNITED #044 (Continued) **S105034159**

Tank Contents: Diesel
Type Of Tank: Double Wall

Waste and Materials:
Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0194110
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2018-10-25T06:11:40.000
Chemical Name: SUPER UNLEADED
Common Name: GASOLINE
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0194111
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2018-10-25T06:11:40.000
Chemical Name: REGULAR UNLEADED
Common Name: GASOLINE
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0194112
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2018-10-25T06:11:40.000
Chemical Name: REGULAR UNLEADED
Common Name: GASOLINE
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0194113
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2018-10-25T06:11:40.000
Chemical Name: DIESEL
Common Name: DIESEL FUEL No. 2
Case Number: 68476-34-6

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0167658
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-10-25T06:11:40.000
Chemical Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Common Name: SOLID WASTE AFFECTED by GASOLINE

UNITED #044 (Continued) **S105034159**

Case Number: Not reported

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0167659
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-10-25T06:11:40.000
Chemical Name: WATER/FUEL MIX
Common Name: WATER/FUEL MIX
Case Number: Not reported

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HCHEM-0204140
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2019-01-10T01:14:35.000
Chemical Name: SUPER UNLEADED
Common Name: GASOLINE
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HCHEM-0204141
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2019-01-10T01:14:35.000
Chemical Name: REGULAR UNLEADED
Common Name: GASOLINE
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HCHEM-0204142
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2019-01-10T01:14:35.000
Chemical Name: REGULAR UNLEADED
Common Name: GASOLINE
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HCHEM-0204143
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2019-01-10T01:14:35.000
Chemical Name: DIESEL
Common Name: DIESEL FUEL No. 2
Case Number: 68476-34-6

UNITED #044 (Continued) **S105034159**

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HWAST-0176108
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-01-10T01:14:36.000
Chemical Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Common Name: SOLID WASTE AFFECTED by GASOLINE
Case Number: Not reported

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HWAST-0176109
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2019-01-10T01:14:36.000
Chemical Name: WATER/FUEL MIX
Common Name: WATER/FUEL MIX
Case Number: Not reported

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HCHEM-0130362
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2017-10-26T02:31:36.000
Chemical Name: SUPER UNLEADED
Common Name: GASOLINE
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HCHEM-0130363
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2017-10-26T02:31:36.000
Chemical Name: REGULAR UNLEADED
Common Name: GASOLINE
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HCHEM-0130364
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2017-10-26T02:31:36.000
Chemical Name: REGULAR UNLEADED
Common Name: GASOLINE
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed

UNITED #044 (Continued) **S105034159**

Active Permit: Y
Child Record Id: DEH2017-HCHEM-0130365
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2017-10-26T02:31:36.000
Chemical Name: DIESEL
Common Name: DIESEL
Case Number: 68476-34-6

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0108853
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-10-26T02:31:36.000
Chemical Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Common Name: GASOLINE FILTERS
Case Number: Not reported

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0108854
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2017-10-26T02:31:36.000
Chemical Name: WATER/FUEL MIX
Common Name: WATER/FUEL MIX
Case Number: Not reported

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0167285
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2018-06-19T01:11:40.000
Chemical Name: SUPER UNLEADED
Common Name: GASOLINE
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0167286
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2018-06-19T01:11:40.000
Chemical Name: REGULAR UNLEADED
Common Name: GASOLINE
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0167287

UNITED #044 (Continued) **S105034159**

Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2018-06-19T01:11:40.000
Chemical Name: REGULAR UNLEADED
Common Name: GASOLINE
Case Number: 8006-61-9

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0167288
Trade Secret: N
Hazardous Material Type: Mixture
Last Updated: 2018-06-19T01:11:40.000
Chemical Name: DIESEL
Common Name: DIESEL
Case Number: 68476-34-6

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0141892
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-06-19T01:11:41.000
Chemical Name: WASTE 352 ORGANIC SOLIDS (OTHER)
Common Name: GASOLINE FILTERS
Case Number: Not reported

Record ID: DEH2008-HUPFP-210161
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0141893
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-06-19T01:11:41.000
Chemical Name: WATER/FUEL MIX
Common Name: WATER/FUEL MIX
Case Number: Not reported

CERS HAZ WASTE:
Site ID: 78954
CERS ID: 10373539
CERS Description: Hazardous Waste Generator

Violations:
Site ID: 78954
Site Name: UNITED #044
Violation Date: 06-01-2016
Citation: 23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665
Violation Description: Failure of the overfill prevention system to meet one of the following requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs

UNITED #044 (Continued) **S105034159**

	when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling.
Violation Notes:	Returned to compliance on 06/01/2016. Inspection Sequence ID:5434866;Tank ID:21541,21540,21539,21538;Violation Description:(RP) Failure of the overfill prevention system to meet one of the following requirements: 1. Alert the transfer operator when the tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95% of capacity; and activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. 23 CCR 2635(b)(2), 2665
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	78954
Site Name:	UNITED #044
Violation Date:	05-25-2017
Citation:	23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description:	Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements:Monitor at least hourly.Be capable of detecting a release of 3.0 gallons per hour at 10 p.s.i.g. Restrict or shut off the flow of product through the piping when a leak is detected.
Violation Notes:	Returned to compliance on 05/25/2017.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	78954
Site Name:	UNITED #044
Violation Date:	06-03-2014
Citation:	23 CCR 16 2666(c) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2666(c)
Violation Description:	Failure of line leak detector to detect a leak and/or failure of audible and visual alarm.
Violation Notes:	Returned to compliance on 06/18/2014. Inspection Sequence ID:4977949;Tank ID:87,03;Violation Description:Failure of line leak detector to detect a leak and/or failure of audible and visual alarm. 23 CCR 16 2636(f)(2), 2666.
Violation Division:	San Diego County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	78954
Site Name:	UNITED #044
Violation Date:	06-03-2014

UNITED #044 (Continued) **S105034159**

Citation: 23 CCR 16 2636(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)
Violation Description: Failure to continuously monitor the interstitial space of the tank, piping and/or sumps sump such that the leak detection activates an audible/visual alarm when a leak is detected.
Violation Notes: Returned to compliance on 06/18/2014. Inspection Sequence ID:4977949;Tank ID:00;Violation Description:Failure to continuously monitor the interstitial space of the tank, piping and/or sumps sump such that the leak detection activates an audible/visual alarm when a leak is detected. 23 CCR 16 2631(g), 2632(c)(2)(A)&(B), 2633(c), 2636(f).
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-23-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Beacon Ellen Inspection ID:5892639
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-25-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5652109
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-25-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5652109
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-03-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:4977949
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-11-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5160987

UNITED #044 (Continued) **S105034159**

Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-01-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5434866
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-01-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5434866
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-03-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:4977949
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-11-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5160987
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-23-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Beacon Ellen Inspection ID:5892639
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-23-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Beacon Ellen Inspection ID:5892639
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

UNITED #044 (Continued) **S105034159**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-01-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:5434866
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-03-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:4977949
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-25-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:5652109
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS

Coordinates:

Site ID:	78954
Facility Name:	UNITED #044
Env Int Type Code:	HWG
Program ID:	10373539
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.181590
Longitude:	-117.296750

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	Tom Robins
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	UST Tank Operator
Entity Name:	APRO, LLC
Entity Title:	Not reported
Affiliation Address:	4130 Cover Street
Affiliation City:	Long Beach
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90808

UNITED #044 (Continued) **S105034159**

Affiliation Phone:	(310) 323-3992
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	ARCP UO PORTFOLIO IV, LP
Entity Title:	Not reported
Affiliation Address:	2325 E. Camelback Rd, Ste 1200
Affiliation City:	Phoenix
Affiliation State:	AZ
Affiliation Country:	United States
Affiliation Zip:	85016
Affiliation Phone:	(602) 778-6223
Affiliation Type Desc:	Environmental Contact
Entity Name:	Tom Robins
Entity Title:	Not reported
Affiliation Address:	4130 Cover Street
Affiliation City:	Long Beach
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	90808
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Tom Robins
Entity Title:	Staff Geologist
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	APRO LLC
Entity Title:	Not reported
Affiliation Address:	4130 Cover Street
Affiliation City:	Long Beach
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90808
Affiliation Phone:	(310) 323-3992
Affiliation Type Desc:	Property Owner
Entity Name:	ARCP UO PORTFOLIO IV, LP
Entity Title:	Not reported
Affiliation Address:	2325 E. Camelback Rd, Ste 1200
Affiliation City:	Phoenix

UNITED #044 (Continued) **S105034159**

Affiliation State:	AZ
Affiliation Country:	United States
Affiliation Zip:	85016
Affiliation Phone:	(602) 778-6223
Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Allen Faass
Entity Title:	Compliance Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(310) 323-3992
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	4130 Cover Street
Affiliation City:	Long Beach
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	90808
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	APRO LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(310) 323-3992
Affiliation Type Desc:	Parent Corporation
Entity Name:	APRO LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Tank Owner
Entity Name:	APRO, LLC
Entity Title:	Not reported
Affiliation Address:	4130 Cover Street
Affiliation City:	Long Beach
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90808
Affiliation Phone:	(310) 323-3992

UNITED #044 (Continued) **S105034159**

SWEEPS UST:

Name:	ATTN P S VIDADOVICH
Address:	3401 COLLEGE BLVD
City:	OCEANSIDE
Status:	Active
Comp Number:	12485
Number:	9
Board Of Equalization:	44-000217
Referral Date:	Not reported
Action Date:	06-26-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-012485-000001
Tank Status:	A
Capacity:	6000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	P
Content:	LEADED
Number Of Tanks:	4

Name:	ATTN P S VIDADOVICH
Address:	3401 COLLEGE BLVD
City:	OCEANSIDE
Status:	Active
Comp Number:	12485
Number:	9
Board Of Equalization:	44-000217
Referral Date:	Not reported
Action Date:	06-26-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-012485-000002
Tank Status:	A
Capacity:	8000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	P
Content:	LEADED
Number Of Tanks:	Not reported

Name:	ATTN P S VIDADOVICH
Address:	3401 COLLEGE BLVD
City:	OCEANSIDE
Status:	Active
Comp Number:	12485
Number:	9
Board Of Equalization:	44-000217
Referral Date:	Not reported
Action Date:	06-26-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	37-000-012485-000003
Tank Status:	A
Capacity:	10000
Active Date:	Not reported
Tank Use:	M.V. FUEL

UNITED #044 (Continued) **S105034159**

STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Name: ATTN P S VIDADOVICH
Address: 3401 COLLEGE BLVD
City: OCEANSIDE
Status: Active
Comp Number: 12485
Number: 9
Board Of Equalization: 44-000217
Referral Date: Not reported
Action Date: 06-26-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 37-000-012485-000003
Tank Status: A
Capacity: 1000
Active Date: Not reported
Tank Use: PETROLEUM
STG: W
Content: Not reported
Number Of Tanks: Not reported

CERS TANKS:
Name: UNITED #044
Address: 3401 COLLEGE BLVD
City,State,Zip: OCEANSIDE, CA 92056
Site ID: 78954
CERS ID: 10373539
CERS Description: Underground Storage Tank

Violations:
Site ID: 78954
Site Name: UNITED #044
Violation Date: 06-01-2016
Citation: 23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665
Violation Description: Failure of the overfill prevention system to meet one of the following requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling.
Violation Notes: Returned to compliance on 06/01/2016. Inspection Sequence ID:5434866;Tank ID:21541,21540,21539,21538;Violation Description:(RP) Failure of the overfill prevention system to meet one of the following requirements: 1. Alert the transfer operator when the tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the

UNITED #044 (Continued) **S105034159**

tank is filled to no more than 95% of capacity; and activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. 23 CCR 2635(b)(2), 2665

Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 78954
Site Name: UNITED #044
Violation Date: 05-25-2017
Citation: 23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description: Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements:Monitor at least hourly.Be capable of detecting a release of 3.0 gallons per hour at 10 p.s.i.g. Restrict or shut off the flow of product through the piping when a leak is detected.
Violation Notes: Returned to compliance on 05/25/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 78954
Site Name: UNITED #044
Violation Date: 06-03-2014
Citation: 23 CCR 16 2666(c) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2666(c)
Violation Description: Failure of line leak detector to detect a leak and/or failure of audible and visual alarm.
Violation Notes: Returned to compliance on 06/18/2014. Inspection Sequence ID:4977949;Tank ID:87,03;Violation Description:Failure of line leak detector to detect a leak and/or failure of audible and visual alarm. 23 CCR 16 2636(f)(2), 2666.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 78954
Site Name: UNITED #044
Violation Date: 06-03-2014
Citation: 23 CCR 16 2636(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)
Violation Description: Failure to continuously monitor the interstitial space of the tank, piping and/or sumps sump such that the leak detection activates an audible/visual alarm when a leak is detected.
Violation Notes: Returned to compliance on 06/18/2014. Inspection Sequence ID:4977949;Tank ID:00;Violation Description:Failure to continuously monitor the interstitial space of the tank, piping and/or sumps sump such that the leak detection activates an audible/visual alarm when a leak is detected. 23 CCR 16 2631(g), 2632(c)(2)(A)&(B), 2633(c), 2636(f).
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

UNITED #044 (Continued) **S105034159**

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-23-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Beacon Ellen Inspection ID:5892639
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-25-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:5652109
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-25-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:5652109
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-03-2014
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:4977949
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-11-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:5160987
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-01-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:5434866
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-01-2016

UNITED #044 (Continued) **S105034159**

Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:5434866
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-03-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:4977949
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-11-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:5160987
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-23-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Beacon Ellen Inspection ID:5892639
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-23-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Beacon Ellen Inspection ID:5892639
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-01-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:5434866
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-03-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:4977949

UNITED #044 (Continued) **S105034159**

Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-25-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5652109
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Coordinates:
Site ID: 78954
Facility Name: UNITED #044
Env Int Type Code: HWG
Program ID: 10373539
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.181590
Longitude: -117.296750

Affiliation:
Affiliation Type Desc: Document Preparer
Entity Name: Tom Robins
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: UST Tank Operator
Entity Name: APRO, LLC
Entity Title: Not reported
Affiliation Address: 4130 Cover Street
Affiliation City: Long Beach
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 90808
Affiliation Phone: (310) 323-3992

Affiliation Type Desc: CUPA District
Entity Name: San Diego County Env Health
Entity Title: Not reported
Affiliation Address: PO Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92112-9261
Affiliation Phone: (858) 505-6880

Affiliation Type Desc: UST Property Owner Name
Entity Name: ARCP UO PORTFOLIO IV, LP

UNITED #044 (Continued) **S105034159**

Entity Title:	Not reported
Affiliation Address:	2325 E. Camelback Rd, Ste 1200
Affiliation City:	Phoenix
Affiliation State:	AZ
Affiliation Country:	United States
Affiliation Zip:	85016
Affiliation Phone:	(602) 778-6223
Affiliation Type Desc:	Environmental Contact
Entity Name:	Tom Robins
Entity Title:	Not reported
Affiliation Address:	4130 Cover Street
Affiliation City:	Long Beach
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	90808
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Tom Robins
Entity Title:	Staff Geologist
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	APRO LLC
Entity Title:	Not reported
Affiliation Address:	4130 Cover Street
Affiliation City:	Long Beach
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90808
Affiliation Phone:	(310) 323-3992
Affiliation Type Desc:	Property Owner
Entity Name:	ARCP UO PORTFOLIO IV, LP
Entity Title:	Not reported
Affiliation Address:	2325 E. Camelback Rd, Ste 1200
Affiliation City:	Phoenix
Affiliation State:	AZ
Affiliation Country:	United States
Affiliation Zip:	85016
Affiliation Phone:	(602) 778-6223
Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Allen Faass
Entity Title:	Compliance Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(310) 323-3992

UNITED #044 (Continued) **S105034159**

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	4130 Cover Street
Affiliation City:	Long Beach
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	90808
Affiliation Phone:	Not reported

Affiliation Type Desc:	Operator
Entity Name:	APRO LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(310) 323-3992

Affiliation Type Desc:	Parent Corporation
Entity Name:	APRO LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	UST Tank Owner
Entity Name:	APRO, LLC
Entity Title:	Not reported
Affiliation Address:	4130 Cover Street
Affiliation City:	Long Beach
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90808
Affiliation Phone:	(310) 323-3992

CHMIRS:

Name:	Not reported
Address:	3401 COLLEGE BLVD
City,State,Zip:	OCEANSIDE, CA
OES Incident Number:	2-5339
OES notification:	10/02/2002
OES Date:	Not reported
OES Time:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported

UNITED #044 (Continued) **S105034159**

Property Management:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	Responsible Party
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	2002
Agency:	Veeder Root
Incident Date:	10/2/200212:00:00 AM
Admin Agency:	San Diego County Health Services Dept.
Amount:	Not reported
Contained:	Yes
Site Type:	Service Station
E Date:	Not reported
Substance:	Diesel
Gallons:	10
Unknown:	0
Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
#1 Pipeline:	Not reported
#2 Pipeline:	Not reported
#3 Pipeline:	Not reported
#1 Vessel >= 300 Tons:	Not reported
#2 Vessel >= 300 Tons:	Not reported
#3 Vessel >= 300 Tons:	Not reported
Evacs:	Not reported
Injuries:	Not reported
Fatals:	Not reported
Comments:	Not reported
Description:	Customer was filling vehicle. Customer had hole in tank releasing substance. Substance was cleaned up by service station personnel. Fire Dept supervised cleanup.

UNITED #044 (Continued) **S105034159**

CERS:
Name: UNITED #044
Address: 3401 COLLEGE BLVD
City,State,Zip: OCEANSIDE, CA 92056
Site ID: 78954
CERS ID: 10373539
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 78954
Site Name: UNITED #044
Violation Date: 06-01-2016
Citation: 23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665
Violation Description: Failure of the overfill prevention system to meet one of the following requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling.
Violation Notes: Returned to compliance on 06/01/2016. Inspection Sequence ID:5434866;Tank ID:21541,21540,21539,21538;Violation Description:(RP) Failure of the overfill prevention system to meet one of the following requirements: 1. Alert the transfer operator when the tank is 90% full by restricting the flow into the tank or triggering an audible and visual alarm; or 2. Restrict delivery of flow to the tank at least 30m before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95% of capacity; and activate an audible alarm at least 5m before the tank overfills; or 3. Provide positive shut-off of flow to the tank when the tank is filled to no more than 95% of capacity; or 4. Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. 23 CCR 2635(b)(2), 2665
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 78954
Site Name: UNITED #044
Violation Date: 05-25-2017
Citation: 23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description: Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements:Monitor at least hourly.Be capable of detecting a release of 3.0 gallons per hour at 10 p.s.i.g. Restrict or shut off the flow of product through the piping when a leak is detected.
Violation Notes: Returned to compliance on 05/25/2017.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

UNITED #044 (Continued) **S105034159**

Site ID: 78954
Site Name: UNITED #044
Violation Date: 06-03-2014
Citation: 23 CCR 16 2666(c) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2666(c)
Violation Description: Failure of line leak detector to detect a leak and/or failure of audible and visual alarm.
Violation Notes: Returned to compliance on 06/18/2014. Inspection Sequence ID:4977949;Tank ID:87,03;Violation Description:Failure of line leak detector to detect a leak and/or failure of audible and visual alarm. 23 CCR 16 2636(f)(2), 2666.
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 78954
Site Name: UNITED #044
Violation Date: 06-03-2014
Citation: 23 CCR 16 2636(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)
Violation Description: Failure to continuously monitor the interstitial space of the tank, piping and/or sumps sump such that the leak detection activates an audible/visual alarm when a leak is detected.
Violation Notes: Returned to compliance on 06/18/2014. Inspection Sequence ID:4977949;Tank ID:00;Violation Description:Failure to continuously monitor the interstitial space of the tank, piping and/or sumps sump such that the leak detection activates an audible/visual alarm when a leak is detected. 23 CCR 16 2631(g), 2632(c)(2)(A)&(B), 2633(c), 2636(f).
Violation Division: San Diego County Department of Env Health
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-23-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Beacon Ellen Inspection ID:5892639
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-25-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5652109
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-25-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5652109

UNITED #044 (Continued) **S105034159**

Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-03-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:4977949
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-11-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5160987
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-01-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5434866
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-01-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5434866
Eval Division: San Diego County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-03-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:4977949
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-11-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Oglesby Margaret Inspection ID:5160987
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

UNITED #044 (Continued) **S105034159**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-23-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Beacon Ellen Inspection ID:5892639
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-23-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Beacon Ellen Inspection ID:5892639
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-01-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:5434866
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-03-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:4977949
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-25-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Oglesby Margaret Inspection ID:5652109
Eval Division:	San Diego County Department of Env Health
Eval Program:	UST
Eval Source:	CERS

Coordinates:

Site ID:	78954
Facility Name:	UNITED #044
Env Int Type Code:	HWG
Program ID:	10373539
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.181590
Longitude:	-117.296750

Affiliation:

UNITED #044 (Continued) **S105034159**

Affiliation Type Desc:	Document Preparer
Entity Name:	Tom Robins
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	UST Tank Operator
Entity Name:	APRO, LLC
Entity Title:	Not reported
Affiliation Address:	4130 Cover Street
Affiliation City:	Long Beach
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90808
Affiliation Phone:	(310) 323-3992

Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880

Affiliation Type Desc:	UST Property Owner Name
Entity Name:	ARCP UO PORTFOLIO IV, LP
Entity Title:	Not reported
Affiliation Address:	2325 E. Camelback Rd, Ste 1200
Affiliation City:	Phoenix
Affiliation State:	AZ
Affiliation Country:	United States
Affiliation Zip:	85016
Affiliation Phone:	(602) 778-6223

Affiliation Type Desc:	Environmental Contact
Entity Name:	Tom Robins
Entity Title:	Not reported
Affiliation Address:	4130 Cover Street
Affiliation City:	Long Beach
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	90808
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	Tom Robins
Entity Title:	Staff Geologist
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported

UNITED #044 (Continued) **S105034159**

Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: APRO LLC
Entity Title: Not reported
Affiliation Address: 4130 Cover Street
Affiliation City: Long Beach
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 90808
Affiliation Phone: (310) 323-3992

Affiliation Type Desc: Property Owner
Entity Name: ARCP UO PORTFOLIO IV, LP
Entity Title: Not reported
Affiliation Address: 2325 E. Camelback Rd, Ste 1200
Affiliation City: Phoenix
Affiliation State: AZ
Affiliation Country: United States
Affiliation Zip: 85016
Affiliation Phone: (602) 778-6223

Affiliation Type Desc: UST Permit Applicant
Entity Name: Allen Faass
Entity Title: Compliance Manager
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (310) 323-3992

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 4130 Cover Street
Affiliation City: Long Beach
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 90808
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: APRO LLC
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (310) 323-3992

Affiliation Type Desc: Parent Corporation
Entity Name: APRO LLC
Entity Title: Not reported
Affiliation Address: Not reported

UNITED #044 (Continued) **S105034159**

Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Tank Owner
Entity Name:	APRO, LLC
Entity Title:	Not reported
Affiliation Address:	4130 Cover Street
Affiliation City:	Long Beach
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90808
Affiliation Phone:	(310) 323-3992

N63 **COLLEGE BLVD EXXON** **CA LUST S104575941**
West **3401 COLLEGE BL** **CA CPS-SLIC N/A**
1/4-1/2 **OCEANSIDE, CA 92056** **CA HIST CORTESE**
0.360 mi.
1903 ft. **Site 6 of 6 in cluster N**

Relative: **Lower**
Actual: **175 ft.**

LUST:

Name:	COLLEGE BLVD EXXON
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92056-461
Lead Agency:	SAN DIEGO COUNTY LOP
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T06019720262
Global Id:	T06019720262
Latitude:	33.181594
Longitude:	-117.296745
Status:	Completed - Case Closed
Status Date:	05/19/2014
Case Worker:	CH
RB Case Number:	Not reported
Local Agency:	SAN DIEGO COUNTY LOP
File Location:	Local Agency
Local Case Number:	H12485-008
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Benzene, Diesel, MTBE / TBA / Other Fuel Oxygenates, Gasoline
Site History:	On May 11, 2006 soil sampling was completed in conjunction with installation of two new dispensers, new secondary containment under the existing four dispensers, and new piping. Petroleum impacted-soil was identified five feet beneath dispenser four, with total petroleum hydrocarbons (TPH) from gasoline and diesel detected at 1,700 and 540 milligrams per kilogram (mg/kg), respectively. Based upon these results, Unauthorized Release H12485-008 was opened. In February 2007, four soil borings were drilled to the north, west, and south of the dispenser island and completed as groundwater monitoring wells. A total of 11 soil samples were collected and analyzed, and two petroleum constituents were detected in the samples. TPH from diesel (TPHd) was detected in samples from all four borings at a maximum of 180 mg/kg, and tert-butyl alcohol (TBA) was detected in soil samples from three of the borings at a maximum of 0.026 mg/kg. Groundwater monitoring continued on a quarterly basis through 2007, and on a semi-annual basis in 2008. Petroleum constituents were not detected

COLLEGE BLVD EXXON (Continued) **S104575941**

in monitoring well MW-4A during any monitoring event. Benzene was only detected in monitoring well MW-3A and MTBE was detected in monitoring wells MW-1A, MW-2A, and MW-3A, and concentrations of these constituents did not exceed maximum contaminant levels (MCLs) during any sampling event. TBA was detected in groundwater samples from monitoring wells MW-1A and MW-3A at concentrations that exceeded the California Drinking Water Action Level (AL) during every sampling event. In July 2007, the responsible parties were directed to complete additional site assessment to determine the lateral and vertical extent of petroleum-impacted soil and the lateral extent of the groundwater plume. A workplan to install three additional groundwater monitoring wells and two soil borings was approved in November 2007. These activities were never completed. In response to enforcement action by DEH, groundwater monitoring resumed in April, 2011 and continued on a semi-annual basis until June, 2012. During the last monitoring event, petroleum constituents were detected in groundwater samples from monitoring wells MW-2A and MW-3A. Specifically, MTBE was detected in monitoring well MW-2A at a concentration below the MCL and TBA was detected in monitoring well MW-3A at a concentration below the AL. The consultant recommended preparing a request for case closure based on the low to non-detect concentrations of the constituents of concern in the groundwater samples. DEH required that the consultant submit a Corrective Action Plan for the case based upon remediation by natural attenuation. The Corrective Action Plan (CAP), dated September 13, 2011, and Revised Corrective Action Plan Addendum (CAP Addendum), dated August 22, 2013, prepared for the site recommend remediation of the site by natural attenuation. The CAP states that the contaminants of concern at the site have naturally attenuated, will continue to degrade, and do not pose a risk to sensitive receptors. The CAP Addendum states that soil and groundwater clean-up goals for the site have been met and there is no risk to the environment or human health from petroleum hydrocarbons remaining at the site. Both reports recommend that the case be closed. The public review period for the CAP and CAP Addendum was completed on January 31, 2014. The City of Oceanside Water Utilities Department was notified of the closure on March 7, 2014, and given 60 days to comment. Neither DEH nor the consultant received any comments. DEH concurs with the conclusions presented in the CAP and CAP Addendum and the recommendation to close the case.

LUST:

Global Id:	T06019720262
Contact Type:	Local Agency Caseworker
Contact Name:	COLLEEN HINES
Organization Name:	SAN DIEGO COUNTY LOP
Address:	P.O. Box 129261
City:	SAN DIEGO
Email:	colleen.hines@sdcounty.ca.gov
Phone Number:	8585056874

LUST:

Global Id:	T06019720262
Action Type:	Other
Date:	05/11/2006
Action:	Leak Discovery
Global Id:	T06019720262

COLLEGE BLVD EXXON (Continued) **S104575941**

Action Type: ENFORCEMENT
Date: 06/20/2006
Action: Notice of Responsibility

Global Id: T06019720262
Action Type: Other
Date: 05/11/2006
Action: Leak Stopped

Global Id: T06019720262
Action Type: RESPONSE
Date: 04/28/2011
Action: Monitoring Report - Semi-Annually - Regulator Responded

Global Id: T06019720262
Action Type: RESPONSE
Date: 09/14/2011
Action: Corrective Action Plan / Remedial Action Plan - Regulator Responded

Global Id: T06019720262
Action Type: RESPONSE
Date: 07/13/2012
Action: Monitoring Report - Semi-Annually - Regulator Responded

Global Id: T06019720262
Action Type: RESPONSE
Date: 06/29/2012
Action: Corrective Action Plan / Remedial Action Plan - Addendum - Regulator Responded

Global Id: T06019720262
Action Type: Other
Date: 06/15/2006
Action: Leak Reported

Global Id: T06019720262
Action Type: RESPONSE
Date: 11/01/2012
Action: Corrective Action Plan / Remedial Action Plan - Addendum - Regulator Responded

Global Id: T06019720262
Action Type: RESPONSE
Date: 08/30/2013
Action: Corrective Action Plan / Remedial Action Plan - Addendum - Regulator Responded

Global Id: T06019720262
Action Type: RESPONSE
Date: 03/20/2014
Action: Well Destruction Workplan - Regulator Responded

Global Id: T06019720262
Action Type: RESPONSE
Date: 02/04/2014
Action: Other Report / Document

Global Id: T06019720262
Action Type: ENFORCEMENT
Date: 07/09/2009

COLLEGE BLVD EXXON (Continued) **S104575941**

Action: Letter - Notice

Global Id: T06019720262
Action Type: ENFORCEMENT
Date: 01/19/2010
Action: Letter - Notice

Global Id: T06019720262
Action Type: ENFORCEMENT
Date: 02/19/2010
Action: Notice of Responsibility

Global Id: T06019720262
Action Type: ENFORCEMENT
Date: 05/26/2010
Action: Technical Correspondence / Assistance / Other

Global Id: T06019720262
Action Type: ENFORCEMENT
Date: 02/28/2011
Action: Letter - Notice

Global Id: T06019720262
Action Type: ENFORCEMENT
Date: 05/23/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T06019720262
Action Type: ENFORCEMENT
Date: 10/13/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T06019720262
Action Type: ENFORCEMENT
Date: 10/13/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T06019720262
Action Type: ENFORCEMENT
Date: 08/03/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T06019720262
Action Type: ENFORCEMENT
Date: 02/28/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T06019720262
Action Type: ENFORCEMENT
Date: 07/25/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T06019720262
Action Type: ENFORCEMENT
Date: 10/18/2013
Action: Technical Correspondence / Assistance / Other

COLLEGE BLVD EXXON (Continued) **S104575941**

Global Id: T06019720262
Action Type: RESPONSE
Date: 08/25/2014
Action: Well Destruction Report

Global Id: T06019720262
Action Type: ENFORCEMENT
Date: 12/27/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T06019720262
Action Type: ENFORCEMENT
Date: 12/02/2013
Action: Technical Correspondence / Assistance / Other

Global Id: T06019720262
Action Type: ENFORCEMENT
Date: 02/05/2014
Action: Technical Correspondence / Assistance / Other

Global Id: T06019720262
Action Type: ENFORCEMENT
Date: 03/07/2014
Action: Notification - Public Notice of Case Closure

Global Id: T06019720262
Action Type: RESPONSE
Date: 03/25/2010
Action: Other Report / Document

Global Id: T06019720262
Action Type: ENFORCEMENT
Date: 05/19/2014
Action: Closure/No Further Action Letter

Global Id: T06019720262
Action Type: Other
Date: 05/11/2006
Action: Leak Began

LUST:
Global Id: T06019720262
Status: Completed - Case Closed
Status Date: 05/19/2014

Global Id: T06019720262
Status: Open - Case Begin Date
Status Date: 05/11/2006

Global Id: T06019720262
Status: Open - Eligible for Closure
Status Date: 02/05/2014

Global Id: T06019720262
Status: Open - Site Assessment
Status Date: 09/28/2006

COLLEGE BLVD EXXON (Continued) **S104575941**

Name: COLLEGE BLVD EXXON
Address: 3401 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 920564614
Lead Agency: SAN DIEGO COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607300508
Global Id: T0607300508
Latitude: 33.1831241
Longitude: -117.2965272
Status: Completed - Case Closed
Status Date: 12/21/1988
Case Worker: Not reported
RB Case Number: 9UT171
Local Agency: Not reported
File Location: Local Agency
Local Case Number: H12485-001
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0607300508
Action Type: Other
Date: 08/14/1986
Action: Leak Stopped

Global Id: T0607300508
Action Type: Other
Date: 08/14/1986
Action: Leak Reported

Global Id: T0607300508
Action Type: Other
Date: 08/14/1986
Action: Leak Began

Global Id: T0607300508
Action Type: Other
Date: 08/14/1986
Action: Leak Discovery

LUST:
Global Id: T0607300508
Status: Completed - Case Closed
Status Date: 12/21/1988

Global Id: T0607300508
Status: Open - Case Begin Date
Status Date: 08/14/1986

Name: COLLEGE BLVD EXXON
Address: 3401 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 920564614
Lead Agency: SAN DIEGO COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607301989

COLLEGE BLVD EXXON (Continued) **S104575941**

Global Id:	T0607301989
Latitude:	33.181592
Longitude:	-117.296745
Status:	Completed - Case Closed
Status Date:	03/25/1996
Case Worker:	Not reported
RB Case Number:	9UT3236
Local Agency:	Not reported
File Location:	Local Agency
Local Case Number:	H12485-007
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST:

Global Id:	T0607301989
Action Type:	Other
Date:	10/12/1994
Action:	Leak Discovery

Global Id:	T0607301989
Action Type:	Other
Date:	11/29/1994
Action:	Leak Stopped

Global Id:	T0607301989
Action Type:	ENFORCEMENT
Date:	11/14/1994
Action:	Notice of Responsibility

Global Id:	T0607301989
Action Type:	Other
Date:	10/12/1994
Action:	Leak Reported

Global Id:	T0607301989
Action Type:	Other
Date:	10/12/1994
Action:	Leak Began

LUST:

Global Id:	T0607301989
Status:	Completed - Case Closed
Status Date:	03/25/1996

Global Id:	T0607301989
Status:	Open - Case Begin Date
Status Date:	10/12/1994

CPS-SLIC:

Name:	COLLEGE BLVD EXXON
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 920564614
Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	07/25/1994

COLLEGE BLVD EXXON (Continued) **S104575941**

Global Id:	T0608142935
Lead Agency:	SAN DIEGO COUNTY LOP
Lead Agency Case Number:	H12485-004
Latitude:	33.181594
Longitude:	-117.296745
Case Type:	Cleanup Program Site
Case Worker:	Not reported
Local Agency:	Not reported
RB Case Number:	Not reported
File Location:	Local Agency
Potential Media Affected:	Under Investigation
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Name:	COLLEGE BLVD EXXON
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 920564614
Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	07/25/1994
Global Id:	T0608126493
Lead Agency:	SAN DIEGO COUNTY LOP
Lead Agency Case Number:	H12485-006
Latitude:	33.181594
Longitude:	-117.296745
Case Type:	Cleanup Program Site
Case Worker:	Not reported
Local Agency:	Not reported
RB Case Number:	Not reported
File Location:	Local Agency
Potential Media Affected:	Under Investigation
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Name:	COLLEGE BLVD EXXON
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 920564614
Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	10/03/1994
Global Id:	T0608108958
Lead Agency:	SAN DIEGO COUNTY LOP
Lead Agency Case Number:	H12485-003
Latitude:	33.181594
Longitude:	-117.296745
Case Type:	Cleanup Program Site
Case Worker:	Not reported
Local Agency:	Not reported
RB Case Number:	Not reported
File Location:	Local Agency
Potential Media Affected:	Under Investigation
Potential Contaminants of Concern:	Waste Oil / Motor / Hydraulic / Lubricating
Site History:	Not reported

COLLEGE BLVD EXXON (Continued) **S104575941**

Click here to access the California GeoTracker records for this facility:

Name:	COLLEGE BLVD EXXON
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 920564614
Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	05/17/1991
Global Id:	T0608133767
Lead Agency:	SAN DIEGO COUNTY LOP
Lead Agency Case Number:	H12485-002
Latitude:	33.181594
Longitude:	-117.296745
Case Type:	Cleanup Program Site
Case Worker:	Not reported
Local Agency:	Not reported
RB Case Number:	Not reported
File Location:	Local Agency
Potential Media Affected:	Under Investigation
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Name:	COLLEGE BLVD EXXON
Address:	3401 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 920564614
Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	07/25/1994
Global Id:	T0608192490
Lead Agency:	SAN DIEGO COUNTY LOP
Lead Agency Case Number:	H12485-005
Latitude:	33.181594
Longitude:	-117.296745
Case Type:	Cleanup Program Site
Case Worker:	Not reported
Local Agency:	Not reported
RB Case Number:	Not reported
File Location:	Local Agency
Potential Media Affected:	Under Investigation
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

HIST CORTESE:

edr_fname:	EXXON SERVICE STATION
edr_fadd1:	3401 COLLEGE
City,State,Zip:	OCEANSIDE, CA
Region:	CORTESE
Facility County Code:	37
Reg By:	LTNKA
Reg Id:	9UT171

edr_fname:	TEXACO/COLLEGE BLVD 3401

COLLEGE BLVD EXXON (Continued) **S104575941**

edr_fadd1:	3401 COLLEGE
City,State,Zip:	OCEANSIDE, CA
Region:	CORTESE
Facility County Code:	37
Reg By:	LTNKA
Reg Id:	9UT3236

64
NW
1/4-1/2
0.389 mi.
2052 ft.

CONOCOPHILLIPS
3350 COLLEGE BL
OCEANSIDE, CA 92056

CA LUST **S109277045**
CA SAN DIEGO CO. SAM **N/A**
CA SAN DIEGO CO LOP
CA CERS

Relative:
Higher

Actual:
225 ft.

LUST:

Name:	CONOCOPHILLIPS
Address:	3350 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92056
Lead Agency:	SAN DIEGO COUNTY LOP
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000000292
Global Id:	T10000000292
Latitude:	33.185767
Longitude:	-117.296043
Status:	Completed - Case Closed
Status Date:	07/29/2015
Case Worker:	JC
RB Case Number:	Not reported
Local Agency:	SAN DIEGO COUNTY LOP
File Location:	Not reported
Local Case Number:	121464-001
Potential Media Affect:	Other Groundwater (uses other than drinking water), Soil
Potential Contaminants of Concern:	Gasoline
Site History:	The Site is located in the City of Oceanside, California on the southeast corner of College Boulevard and Waring Road. Site improvements include a Circle K mini]mart, three 10,000]gallon underground storage tanks (USTs) containing regular unleaded, mid]grade unleaded, and premium unleaded fuel, and one fuel dispensing island with two dispensers. Properties surrounding the Site are commercial and residential. In December 2007, four soil borings (B]1 through B]4) were advanced near the USTs and dispensers at the Site as part of an environmental due diligence (baseline) assessment conducted for a property transfer. The borings were advanced by hollow]stem augers to depths of approximately 30 to 35 feet below ground surface (bgs). Based on the results of the baseline assessment, Unauthorized Release Case 121464-001 was opened. On May 3, 2012, a CAP was submitted to DEH proposing to perform a soil vapor survey and collect additional site specific soil parameters to further evaluate the potential vapor inhalation risk to the occupants of the station building. On October 11 and 21, 2012, five dual]nested vapor monitoring probes (SVP]1 through SVP]5) were installed surrounding the Circle K building. In general, the probes were constructed with a shallow probe set between approximately 4.5 to 5 feet bgs and a deeper probe set from approximately 9.5 to 10 feet bgs. Vapor probe sampling was conducted on November 12, 2012 and December 3, 2012. The cancer risk for any carcinogenic Target Compound was less than one in a million; therefore the Site does not pose a human health risk to the occupants of the Circle K building. Three off]site (HP]4 through HP]6) temporary wells were installed

CONOCOPHILLIPS (Continued) **S109277045**

downgradient of the Site. Groundwater samples were collected in the temporary wells to delineate the down]gradient hydrocarbon impact to the groundwater. MTBE, TAME and TBA were detected in the groundwater sample collected at HP]5, at concentrations of 98 i%g/l, 2.5 i%g/l, and 20 i%g/l, respectively. BTEX, diisopropyl ether (DIPE), ethyl]tert]butyl ether (ETBE), and ethanol were not detected above the laboratory reporting limits in groundwater samples collected. Residual impacted soil with concentrations greater than 100 milligram per kilogram of total petroleum hydrocarbons as gasoline does not exist at the Site. Seven groundwater monitoring wells have been installed at the Site. Groundwater was monitored between March 2009 and September 2014. Free product has never been detected at the Site. Hydrocarbon-impacted groundwater at the Site appears to be consistent with a release from the former UST system. Following DPE activities, dissolved-phase hydrocarbons remain in low concentrations beneath the Site and immediately downgradient beneath College Boulevard. The case for closure was evaluated under the Statefs Low-Threat Underground Storage Tank Case Closure Policy (the Policy). It was concluded that the case qualifies for a low-risk closure designation and it was recommended that DEH grant low-risk closure for Unauthorized Release Case 121464-001. DEH concurred that the case qualifies for a low-risk closure designation. Public notification was conducted per the Policy. No comments were received.

LUST:

Global Id:	T10000000292
Contact Type:	Local Agency Caseworker
Contact Name:	JAMES CLAY
Organization Name:	SAN DIEGO COUNTY LOP
Address:	P.O. Box 129261
City:	San Diego
Email:	james.clay@sdcounty.ca.gov
Phone Number:	Not reported

LUST:

Global Id:	T10000000292
Action Type:	ENFORCEMENT
Date:	09/11/2014
Action:	Technical Correspondence / Assistance / Other
Global Id:	T10000000292
Action Type:	RESPONSE
Date:	10/25/2010
Action:	Monitoring Report - Quarterly
Global Id:	T10000000292
Action Type:	RESPONSE
Date:	08/04/2010
Action:	Monitoring Report - Quarterly
Global Id:	T10000000292
Action Type:	Other
Date:	01/07/2010
Action:	Leak Discovery
Global Id:	T10000000292
Action Type:	RESPONSE

CONOCOPHILLIPS (Continued) **S109277045**

Date: 04/26/2011
Action: Monitoring Report - Quarterly

Global Id: T10000000292
Action Type: RESPONSE
Date: 01/30/2012
Action: Monitoring Report - Quarterly

Global Id: T10000000292
Action Type: RESPONSE
Date: 02/01/2011
Action: Site Assessment Report - Regulator Responded

Global Id: T10000000292
Action Type: RESPONSE
Date: 03/24/2011
Action: Site Assessment Report - Regulator Responded

Global Id: T10000000292
Action Type: RESPONSE
Date: 12/29/2011
Action: Other Report / Document - Regulator Responded

Global Id: T10000000292
Action Type: RESPONSE
Date: 05/04/2012
Action: CAP/RAP - Other Report - Regulator Responded

Global Id: T10000000292
Action Type: RESPONSE
Date: 07/26/2012
Action: Soil Vapor Intrusion Investigation Workplan - Regulator Responded

Global Id: T10000000292
Action Type: Other
Date: 01/07/2010
Action: Leak Stopped

Global Id: T10000000292
Action Type: RESPONSE
Date: 07/31/2012
Action: Monitoring Report - Semi-Annually

Global Id: T10000000292
Action Type: RESPONSE
Date: 08/24/2012
Action: Corrective Action Plan / Remedial Action Plan - Addendum - Regulator Responded

Global Id: T10000000292
Action Type: RESPONSE
Date: 10/18/2012
Action: Corrective Action Plan / Remedial Action Plan - Addendum - Regulator Responded

Global Id: T10000000292
Action Type: RESPONSE
Date: 12/21/2012
Action: Other Report / Document - Regulator Responded

CONOCOPHILLIPS (Continued) **S109277045**

Global Id: T10000000292
Action Type: RESPONSE
Date: 07/31/2013
Action: Monitoring Report - Semi-Annually - Regulator Responded

Global Id: T10000000292
Action Type: RESPONSE
Date: 05/14/2013
Action: Risk Assessment Report - Regulator Responded

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 09/10/2008
Action: Technical Correspondence / Assistance / Other

Global Id: T10000000292
Action Type: RESPONSE
Date: 09/26/2013
Action: Other Workplan - Regulator Responded

Global Id: T10000000292
Action Type: RESPONSE
Date: 08/27/2014
Action: Site Assessment Report - Regulator Responded

Global Id: T10000000292
Action Type: RESPONSE
Date: 02/11/2015
Action: Request for Closure - Regulator Responded

Global Id: T10000000292
Action Type: RESPONSE
Date: 12/02/2014
Action: Request for Closure - Regulator Responded

Global Id: T10000000292
Action Type: Other
Date: 01/07/2010
Action: Leak Reported

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 07/09/2009
Action: Technical Correspondence / Assistance / Other

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 06/15/2009
Action: Technical Correspondence / Assistance / Other

Global Id: T10000000292
Action Type: RESPONSE
Date: 01/30/2014
Action: Monitoring Report - Semi-Annually

Global Id: T10000000292
Action Type: ENFORCEMENT

CONOCOPHILLIPS (Continued) **S109277045**

Date: 09/03/2009
Action: Technical Correspondence / Assistance / Other

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 04/13/2010
Action: Technical Correspondence / Assistance / Other

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 09/16/2010
Action: Technical Correspondence / Assistance / Other

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 02/24/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 06/07/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 01/04/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 12/09/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 07/27/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 11/28/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 06/28/2013
Action: Staff Letter

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 03/19/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 08/31/2012
Action: Technical Correspondence / Assistance / Other

CONOCOPHILLIPS (Continued) **S109277045**

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 08/06/2013
Action: Staff Letter

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 02/09/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 05/19/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 07/05/2013
Action: Staff Letter

Global Id: T10000000292
Action Type: RESPONSE
Date: 02/11/2010
Action: Monitoring Report - Quarterly

Global Id: T10000000292
Action Type: RESPONSE
Date: 01/26/2015
Action: Fact Sheets - Public Participation

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 01/29/2013
Action: Technical Correspondence / Assistance / Other

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 12/20/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T10000000292
Action Type: ENFORCEMENT
Date: 07/29/2015
Action: Closure/No Further Action Letter

Global Id: T10000000292
Action Type: RESPONSE
Date: 05/10/2010
Action: Monitoring Report - Quarterly

Global Id: T10000000292
Action Type: RESPONSE
Date: 07/28/2014
Action: Monitoring Report - Semi-Annually

Global Id: T10000000292
Action Type: RESPONSE

CONOCOPHILLIPS (Continued) **S109277045**

Date: 11/03/2014
Action: Monitoring Report - Quarterly

Global Id: T10000000292
Action Type: RESPONSE
Date: 05/05/2014
Action: Other Report / Document

Global Id: T10000000292
Action Type: Other
Date: 01/07/2010
Action: Leak Began

Global Id: T10000000292
Action Type: RESPONSE
Date: 08/09/2010
Action: Soil and Water Investigation Workplan - Addendum

LUST:
Global Id: T10000000292
Status: Completed - Case Closed
Status Date: 07/29/2015

Global Id: T10000000292
Status: Open - Case Begin Date
Status Date: 08/28/2008

Global Id: T10000000292
Status: Open - Eligible for Closure
Status Date: 05/20/2015

Global Id: T10000000292
Status: Open - Site Assessment
Status Date: 08/28/2008

Global Id: T10000000292
Status: Open - Site Assessment
Status Date: 12/02/2014

Global Id: T10000000292
Status: Open - Site Assessment
Status Date: 12/31/2014

SAN DIEGO CO. SAM:
Name: CONOCOPHILLIPS
Address: 3350 COLLEGE BL
City,State,Zip: OCEANSIDE, CA 92056
Case Number: 121464-001
Agency: DEH Site Assessment & Mitigation
Funding: **LOP - State Fund**
Facility Type: Drinking Water Aquifer Impacted
Facility Status: Preliminary Assessment
Date: 7/28/2008
Date Began: 12/12/2007

CONOCOPHILLIPS (Continued) **S109277045**

SAN DIEGO CO LOP:

Name:	CONOCOPHILLIPS
Address:	3350 COLLEGE BLVD
City,State,Zip:	OCEANSIDE, CA 92056
Record ID:	DEH2008-LSAM-121464-001
Record Status:	Completed
Opened Date:	07/18/2008
Parcel Number:	166-010-40-00
Case Type:	LOP - Local Oversight Program
Historical Name:	CONOCOPHILLIPS
SWRCB Global ID:	T10000000294
Funding:	S - LOP State Fund
Lead Agency:	DEH/SAM
Lead Agency Date:	07/28/2008
Census Tract:	185.18
Community:	Oceanside
Jurisdiction:	OCEANSIDE
Watershed Basin Number:	904.21
Water Purveyor:	OCEANSIDE
Fire Agency:	OCEANSIDE
Latitude:	33.1858116
Longitude:	-117.2960594
X MapCoord:	6241637.827
Y MapCoord:	2012823.930

CERS:

Name:	CONOCOPHILLIPS
Address:	3350 COLLEGE BL
City,State,Zip:	OCEANSIDE, CA 92056
Site ID:	245584
CERS ID:	T10000000292
CERS Description:	Leaking Underground Storage Tank Cleanup Site

Affiliation:

Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	JAMES CLAY - SAN DIEGO COUNTY LOP
Entity Title:	Not reported
Affiliation Address:	P.O. Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

65
WSW
1/4-1/2
0.400 mi.
2113 ft.

ALBERTSON'S #6733
3450 MARRON RD
OCEANSIDE, CA 92056

CA SWRCY **S108197104**
CA San Diego Co. HMMD **N/A**
CA CERS HAZ WASTE
CA CERS

Relative:
Higher

Actual:
269 ft.

SWRCY:

Name:	REPLANET LLC
Address:	3450 MARRON RD
City,State,Zip:	OCEANSIDE, CA 92056
Reg Id:	156968
Cert Id:	RC156968.001

ALBERTSON'S #6733 (Continued) **S108197104**

Mailing Address:	800 N Haven Ave Suite 120
Mailing City:	Ontario
Mailing State:	CA
Mailing Zip Code:	91764
Website:	http://www.replanet.com
Email:	Not reported
Phone Number:	(877) 737-5263
Rural:	N
Operation Begin Date:	05/01/2012
Aluminium:	Y
Glass:	Y
Plastic:	Y
Bimetal:	Y
Hours of Operation:	Mon - Sun 10:00 am - 4:30 pm, Closed 1:00 pm - 1:30 pm
Organization ID:	151891
Organization Name:	rePlanet LLC

HMMD SAN DIEGO:

Name:	ALBERTSON'S #6733
Address:	3450 MARRON RD
City,State,Zip:	OCEANSIDE, CA 92056
Permit Number:	207023
Business Type:	6HK42
EPA Id Number:	CAR000175141
APN:	168-011-20-00
Last HMMD Inspection:	08/28/2012
Facility Telephone:	760-729-3469
Permit Status:	OPEN
Permit Expiration:	11/30/2012
Date Last Updated:	11/02/2012
Facility Owner:	NEW ALBERTSONS, INC
Facility Mailing Address:	P.O BOX 20, DEPT 72405
Facility Mailing City:	BOISE
Facility Mailing State:	ID
Facility Mailing Zip:	83726
UST Owner:	Not reported
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Y
Treat Haz Waste:	Not reported
Generate Medical Waste:	Y

Inventory Active Permits (not SQG Medical):

Permit Number:	207023
Update Date:	11/02/2012
Case Number:	68476-85-7
Name:	PROPANE
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	Not reported

Permit Number:	207023
Update Date:	11/02/2012
Case Number:	Not reported
Name:	WASTE 331 OFF-SPEC,AGED,SURPLUS ORGANICS

ALBERTSON'S #6733 (Continued) **S108197104**

Other Information: LEAKING OR DAMAGED RETAIL PRODUCTS
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Name: ALBERTSONS #733
Address: 3450 MARRON RD
City,State,Zip: OCEANSIDE, CA 92056
Permit Number: Not reported
Business Type: Not reported
EPA Id Number: CAL000384632
APN: Not reported
Last HMMD Inspection: Not reported
Facility Telephone: 760-729-3468
Permit Status: Permit Renewed
Permit Expiration: Not reported
Date Last Updated: 03/29/2018
Facility Owner: Not reported
Facility Mailing Address: PO Box 29096, MS #6531, Phoenix, AZ 85038
Facility Mailing City: Not reported
Facility Mailing State: Not reported
Facility Mailing Zip: Not reported
UST Owner: N
Handle Regulated Hazmat: Not reported
Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: Y
Treat Haz Waste: N
Generate Medical Waste: Not reported

Waste and Materials:
Record ID: DEH2006-HUPFP-207023
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0114141
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-03-09T02:36:03.000
Chemical Name: Retail Hazardous Waste 311 - pharmaceuticals/Rx acute toxic solids
Common Name: Non-RCRA hazardous waste
Case Number: Not reported

Record ID: DEH2006-HUPFP-207023
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HCHEM-0097254
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2016-11-09T02:32:32.000
Chemical Name: Helium
Common Name: Helium
Case Number: 7440-59-7

Record ID: DEH2006-HUPFP-207023
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0079202

ALBERTSON'S #6733 (Continued) **S108197104**

Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2016-11-09T02:32:32.000
Chemical Name:	WASTE 902 INFECTIOUS WASTE, SHARPS
Common Name:	WASTE 902 INFECTIOUS WASTE, SHARPS
Case Number:	Not reported
Record ID:	DEH2006-HUPFP-207023
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0079203
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2016-11-09T02:32:32.000
Chemical Name:	WASTE 311 PHARMACEUTICAL WASTE
Common Name:	RCRA HAZARDOUS WASTE
Case Number:	Not reported
Record ID:	DEH2006-HUPFP-207023
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0079204
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2016-11-09T02:32:32.000
Chemical Name:	WASTE 214 UNSPEC SOLVENT MIXTURE
Common Name:	Retail Hazardous Waste 214 aerosols and flammables
Case Number:	Not reported
Record ID:	DEH2006-HUPFP-207023
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0079205
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2016-11-09T02:32:32.000
Chemical Name:	Waste 131 Aqueous Solution w/reactive anion
Common Name:	Retail Hazardous Waste 131 oxidizers
Case Number:	Not reported
Record ID:	DEH2006-HUPFP-207023
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0079206
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2016-11-09T02:32:32.000
Chemical Name:	Waste 122, unspecified alkaline solution
Common Name:	Retail Hazardous Waste 122 corrosives
Case Number:	Not reported
Record ID:	DEH2006-HUPFP-207023
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2016-HWAST-0079207
Trade Secret:	N
Hazardous Material Type:	Not reported

ALBERTSON'S #6733 (Continued) **S108197104**

Last Updated: 2016-11-09T02:32:32.000
Chemical Name: Waste 141, state regulated liquids
Common Name: Retail Hazardous Waste 141 State Regulated Liquids
Case Number: Not reported

Record ID: DEH2006-HUPFP-207023
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0079208
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-11-09T02:32:32.000
Chemical Name: Retail Hazardous Waste 311 - pharmaceuticals/Rx acute toxic solids
Common Name: Non-RCRA hazardous waste
Case Number: Not reported

Record ID: DEH2006-HUPFP-207023
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0079209
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-11-09T02:32:32.000
Chemical Name: Retail Hazardous Waste 331 State Regulated Solids
Common Name: Retail Hazardous Waste 331 State Regulated Solids
Case Number: Not reported

Record ID: DEH2006-HUPFP-207023
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0079210
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-11-09T02:32:32.000
Chemical Name: Retail Hazardous Waste 311, rx toxics
Common Name: Retail Hazardous Waste 311, rx toxics
Case Number: Not reported

Record ID: DEH2006-HUPFP-207023
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0079211
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-11-09T02:32:32.000
Chemical Name: Retail Hazardous Waste 331 flammable solids
Common Name: Retail Hazardous Waste 331 flammable solids
Case Number: Not reported

Record ID: DEH2006-HUPFP-207023
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2016-HWAST-0079212
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2016-11-09T02:32:32.000
Chemical Name: Retail Hazardous Waste 791, acidic corrosives

ALBERTSON'S #6733 (Continued) **S108197104**

Common Name: Retail Hazardous Waste 331 flammable solids
Case Number: Not reported

Record ID: DEH2006-HUPFP-207023
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0150638
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-11-07T02:32:06.000
Chemical Name: Retail Hazardous Waste 311 - pharmaceuticals/Rx acute toxic solids
Common Name: Non-RCRA hazardous waste
Case Number: Not reported

Record ID: DEH2006-HUPFP-207023
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0150639
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-11-07T02:32:06.000
Chemical Name: Retail Hazardous Waste 331 State Regulated Waste
Common Name: Retail Hazardous Waste 331 State Regulated Waste
Case Number: Not reported

Record ID: DEH2006-HUPFP-207023
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HCHEM-0175896
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2018-11-07T02:32:06.000
Chemical Name: Helium
Common Name: Helium
Case Number: 7440-59-7

Record ID: DEH2006-HUPFP-207023
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0150634
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-11-07T02:32:06.000
Chemical Name: WASTE 902 INFECTIOUS WASTE, SHARPS
Common Name: WASTE 902 INFECTIOUS WASTE, SHARPS
Case Number: Not reported

Record ID: DEH2006-HUPFP-207023
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2018-HWAST-0150635
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-11-07T02:32:06.000
Chemical Name: WASTE 311 PHARMACEUTICAL WASTE
Common Name: RCRA HAZARDOUS WASTE
Case Number: Not reported

ALBERTSON'S #6733 (Continued) **S108197104**

Record ID:	DEH2006-HUPFP-207023
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0150636
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-11-07T02:32:06.000
Chemical Name:	WASTE 214 UNSPEC SOLVENT MIXTURE
Common Name:	Retail Hazardous Waste 214 aerosols and flammables
Case Number:	Not reported

Record ID:	DEH2006-HUPFP-207023
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HWAST-0150637
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-11-07T02:32:06.000
Chemical Name:	Retail Hazardous Waste 141 corrosives
Common Name:	Retail Hazardous Waste 141 corrosives
Case Number:	Not reported

Record ID:	DEH2006-HUPFP-207023
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2017-HCHEM-0135825
Trade Secret:	N
Hazardous Material Type:	Pure
Last Updated:	2018-03-09T02:36:03.000
Chemical Name:	Helium
Common Name:	Helium
Case Number:	7440-59-7

Record ID:	DEH2006-HUPFP-207023
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2017-HWAST-0114137
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-03-09T02:36:03.000
Chemical Name:	WASTE 902 INFECTIOUS WASTE, SHARPS
Common Name:	WASTE 902 INFECTIOUS WASTE, SHARPS
Case Number:	Not reported

Record ID:	DEH2006-HUPFP-207023
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2017-HWAST-0114138
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2018-03-09T02:36:03.000
Chemical Name:	WASTE 311 PHARMACEUTICAL WASTE
Common Name:	RCRA HAZARDOUS WASTE
Case Number:	Not reported

Record ID:	DEH2006-HUPFP-207023
Permit Status:	Permit Renewed

ALBERTSON'S #6733 (Continued) **S108197104**

Active Permit: Y
Child Record Id: DEH2017-HWAST-0114139
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-03-09T02:36:03.000
Chemical Name: WASTE 214 UNSPEC SOLVENT MIXTURE
Common Name: Retail Hazardous Waste 214 aerosols and flammables
Case Number: Not reported

Record ID: DEH2006-HUPFP-207023
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0114140
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-03-09T02:36:03.000
Chemical Name: Retail Hazardous Waste 141 oxidizers
Common Name: Retail Hazardous Waste 141 oxidizers
Case Number: Not reported

Record ID: DEH2006-HUPFP-207023
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0114142
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-03-09T02:36:03.000
Chemical Name: Retail Hazardous Waste 331 State Regulated Waste
Common Name: Retail Hazardous Waste 331 State Regulated Waste
Case Number: Not reported

Record ID: DEH2006-HUPFP-207023
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0114143
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-03-09T02:36:03.000
Chemical Name: Retail Hazardous Waste 331 flammable solids
Common Name: Retail Hazardous Waste 331 flammable solids
Case Number: Not reported

Record ID: DEH2006-HUPFP-207023
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0114144
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-03-09T02:36:03.000
Chemical Name: Retail Hazardous Waste 791, acidic corrosives
Common Name: Retail Hazardous Waste 791, acidic corrosives
Case Number: Not reported

CERS HAZ WASTE:
Site ID: 4042
CERS ID: 10139189

ALBERTSON'S #6733 (Continued) **S108197104**

CERS Description: Hazardous Waste Generator

Evaluation:

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-17-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5764427
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-20-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:4350550
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-20-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:4350550
Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-17-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5764427
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-20-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:4350550
Eval Division: San Diego County Department of Env Health
Eval Program: CA
Eval Source: CERS

Coordinates:

Site ID: 4042
Facility Name: Albertsons #733
Env Int Type Code: HWG
Program ID: 10139189
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.179250
Longitude: -117.296390

ALBERTSON'S #6733 (Continued) **S108197104**

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	Jill Washburn
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	Albertsons
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	Albertsons, LLC
Entity Title:	Not reported
Affiliation Address:	PO Box 20, Dept. 81014
Affiliation City:	Boise
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	83726
Affiliation Phone:	(208) 395-3949

Affiliation Type Desc:	Environmental Contact
Entity Name:	Jill Washburn
Entity Title:	Not reported
Affiliation Address:	PO Box 20, Dept. #81014
Affiliation City:	BOISE
Affiliation State:	ID
Affiliation Country:	Not reported
Affiliation Zip:	83726
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	Jill Washburn
Entity Title:	Environmental Coordinator
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Operator
Entity Name:	Albertsons #733
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported

ALBERTSON'S #6733 (Continued) **S108197104**

Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 729-3468
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	P.O BOX 20, DEPT 81014
Affiliation City:	BOISE
Affiliation State:	ID
Affiliation Country:	Not reported
Affiliation Zip:	83726
Affiliation Phone:	Not reported

CERS:

Name:	ALBERTSONS #733
Address:	3450 MARRON RD
City,State,Zip:	OCEANSIDE, CA 92056
Site ID:	4042
CERS ID:	10139189
CERS Description:	Chemical Storage Facilities

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-17-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Yousif Teaba Inspection ID:5764427
Eval Division:	San Diego County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-20-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Santos Steven Inspection ID:4350550
Eval Division:	San Diego County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-20-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector: Santos Steven Inspection ID:4350550

ALBERTSON'S #6733 (Continued) **S108197104**

Eval Division: San Diego County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-17-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Yousif Teaba Inspection ID:5764427
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-20-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Santos Steven Inspection ID:4350550
Eval Division: San Diego County Department of Env Health
Eval Program: CA
Eval Source: CERS

Coordinates:
Site ID: 4042
Facility Name: Albertsons #733
Env Int Type Code: HWG
Program ID: 10139189
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.179250
Longitude: -117.296390

Affiliation:
Affiliation Type Desc: Document Preparer
Entity Name: Jill Washburn
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: Albertsons
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Albertsons, LLC
Entity Title: Not reported

ALBERTSON'S #6733 (Continued) **S108197104**

Affiliation Address:	PO Box 20, Dept. 81014
Affiliation City:	Boise
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	83726
Affiliation Phone:	(208) 395-3949
Affiliation Type Desc:	Environmental Contact
Entity Name:	Jill Washburn
Entity Title:	Not reported
Affiliation Address:	PO Box 20, Dept. #81014
Affiliation City:	BOISE
Affiliation State:	ID
Affiliation Country:	Not reported
Affiliation Zip:	83726
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Jill Washburn
Entity Title:	Environmental Coordinator
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Albertsons #733
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 729-3468
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	P.O BOX 20, DEPT 81014
Affiliation City:	BOISE
Affiliation State:	ID
Affiliation Country:	Not reported
Affiliation Zip:	83726
Affiliation Phone:	Not reported

66
ENE
1/4-1/2
0.498 mi.
2632 ft.

VISTA SHOPPING CENTER
NONE W BROADWAY
VISTA, CA 92083

CA CPS-SLIC **S106916378**
CA CERS **N/A**

Relative:
Higher

Actual:
228 ft.

CPS-SLIC:

Name:	VISTA SHOPPING CENTER
Address:	NONE W BROADWAY
City,State,Zip:	VISTA, CA 92083
Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	07/09/1991
Global Id:	T0608153321
Lead Agency:	SAN DIEGO COUNTY LOP
Lead Agency Case Number:	H24663-001
Latitude:	33.1861827785505
Longitude:	-117.280506444829
Case Type:	Cleanup Program Site
Case Worker:	NS
Local Agency:	SAN DIEGO COUNTY LOP
RB Case Number:	Not reported
File Location:	Local Agency
Potential Media Affected:	Not reported
Potential Contaminants of Concern:	Not reported
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

CERS:

Name:	VISTA SHOPPING CENTER
Address:	NONE W BROADWAY
City,State,Zip:	VISTA, CA 92083
Site ID:	246227
CERS ID:	T0608153321
CERS Description:	Cleanup Program Site

Affiliation:

Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	NASSER SIONIT - SAN DIEGO COUNTY LOP
Entity Title:	Not reported
Affiliation Address:	P.O. Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

67
West
1/2-1
0.720 mi.
3803 ft.

HANSON AGGREGATES PAC SO REGIO
3701 HAYMAR DR
CARLSBAD, CA 92008

CA ENVIROSTOR **1001020730**
CA LUST **N/A**
CA CPS-SLIC
CA HIST CORTESE
CA CIWQS
CA CERS

Relative:
Lower

Actual:
131 ft.

ENVIROSTOR:

Name:	SOUTH COAST ASPHALT PRODUCTS
Address:	3701 HAYMAR
City,State,Zip:	CARLSBAD, CA 92008

HANSON AGGREGATES PAC SO REGIO (Continued) **1001020730**

Facility ID: 37290005
Status: Refer: Other Agency
Status Date: 06/01/1995
Site Code: Not reported
Site Type: Historical
Site Type Detailed: * Historical
Acres: Not reported
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: * Mmonroy
Division Branch: Cleanup Cypress
Assembly: 76
Senate: 36
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Not reported
Latitude: 33.17836
Longitude: -117.3025
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: * OTHER ORGANIC SOLIDS * UNSPECIFIED SLUDGE WASTE * UNSPECIFIED ORGANIC LIQUID MIXTURE
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: CAD009548371
Alias Type: EPA Identification Number
Alias Name: 37290005
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 06/04/1987
Comments: SITE SCREENING DONE SITE ON EPA CERCLIS

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 02/15/1983
Comments: FACILITY IDENTIFIED ID VIA DOHS RECORDS SEARCH

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

Name: HANSON AGGREGATES CARLSBAD PLANT
Address: 3701 HAYMAR DRIVE
City,State,Zip: CARLSBAD, CA 92008

HANSON AGGREGATES PAC SO REGIO (Continued) **1001020730**

Facility ID: 37500038
Status: Refer: 1248 Local Agency
Status Date: 12/26/2000
Site Code: Not reported
Site Type: Evaluation
Site Type Detailed: Evaluation
Acres: Not reported
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: Referred - Not Assigned
Division Branch: Cleanup Cypress
Assembly: 76
Senate: 36
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Not Applicable
Latitude: 33.17836
Longitude: -117.3025
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: 37500038
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: SB 1248 Notification
Completed Date: 12/26/2000
Comments: SB 1248 San Diego County

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

LUST:
Name: HANSON AGGREGATES PAC SO REGIO
Address: 3701 HAYMAR DR
City,State,Zip: CARLSBAD, CA 920088325
Lead Agency: SAN DIEGO COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607302215
Global Id: T0607302215
Latitude: 33.180536764
Longitude: -117.301930556
Status: Completed - Case Closed

HANSON AGGREGATES PAC SO REGIO (Continued) **1001020730**

Status Date:	08/28/2012
Case Worker:	CF
RB Case Number:	9UT3452
Local Agency:	SAN DIEGO COUNTY LOP
File Location:	Local Agency
Local Case Number:	H02509-001
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Diesel, Gasoline, Waste Oil / Motor / Hydraulic / Lubricating
Site History:	An unauthorized release of gasoline and diesel occurred at a 155-acre property owned by Hanson Aggregates, LLC (Hanson) in Carlsbad, California. The subject property is bounded on the north by State Highway 78 and Haymar Drive, on the east by College Boulevard, and on the south by residential properties. The site is bisected by Buena Vista Creek. Approximately 103 acres of the property, as well as the land and west of the property, are undeveloped. The remaining 52 acres of the property were the site of an aggregate quarry and concrete production facility. In recent years, concrete was brought in from outside sources and crushed to produce recycled aggregate. Quarry and concrete production operations ceased in 2010 when the quarry was closed and the facility was dismantled. The former office and storage buildings, two asphalt plants, a concrete batch plant, a recycled-material area for asphalt/concrete, a rock crushing plant, a maintenance shop, bulk materials storage areas, fueling facilities, several storage trailers and fenced areas, two empty explosives magazines/containers, a scale-room building, a sales office, four above-ground storage tanks (ASTs), and 21 underground storage tanks (USTs) were removed. The USTs had been used to store gasoline, diesel, and asphalt emulsion fluid. Four diesel USTs were removed at the facility on December 17, 1986. Two of the USTs had 4,000-gallon capacities, one had a 15,000-gallon-capacity, and one had a 20,000-gallon capacity. On February 26, 1987, one 1000-gallon-capacity gasoline tank was abandoned in place with cement slurry. No unauthorized releases were observed when the tanks were decommissioned. On April 7, 1997, a 550-gallon capacity waste oil tank was removed. Analytical results for a soil sample collected during the removal inspection included detection of total petroleum hydrocarbons (TPH) at a concentration of 1,400 milligrams per kilogram (mg/kg). An unauthorized release case was opened on April 21, 1997. A limited environmental assessment of site soils was performed at the site in 1998. However, the investigation addressed the area of the UST fuel system at the facility and did not address the waste oil release. Gasoline and diesel impacts were reported that were attributed to the eight operating USTs in the area. The maximum TPH concentrations reported for impacted soil samples were 3,500 mg/kg as gasoline and 30,000 mg/kg as diesel. Eight USTs were removed in August 1998. The tanks included three 10,000-gallon-capacity USTs and one 12,000-gallon-capacity UST that had stored gasoline. Three diesel USTs, each with a 10,000-gallon-capacity, and one diesel UST with a 12,000-gallon-capacity were also removed. The distribution lines and dispensers associated with the UST system were subsequently removed in March 2000. An estimated 900 cubic yards (yd3) of TPH-impacted soil were excavated and disposed of off-site. Confirmation samples were collected from the walls of the UST excavation to determine the effectiveness of over-excavation and soil removal. Based on the confirmation sample results, soil impacted with diesel-range hydrocarbons still remained beyond the excavated area. Seventy-four borings were drilled and sampled at the site from August

HANSON AGGREGATES PAC SO REGIO (Continued) **1001020730**

1998 to November 1999. Analytical results for soil samples collected from the borings indicated that an estimated 1,900 yd3 of TPH-impacted soil remained in place in the vicinity of the eight former USTs. Temporary groundwater monitoring wells were installed in 26 of the 74 borings. Three of the borings were converted into monitoring wells KMW-l through KMW-3. In March 2001, monitoring wells MW-1 through MW-13 were installed at the site. Additional investigation in January 2003 included the drilling of 11 borings north of Buena Vista Creek. Data obtained from the borings served as a basis to install four additional wells (MW-14 through MW-17) in February 2003. Water level measurements for the wells indicated the groundwater flow direction to be to the south-southwest towards Buena Vista Creek. Liquid-phase hydrocarbons (LPH) were first detected in MW-3 and MW-7 in May 2001. Although LPH was not subsequently detected in MW-7, it was measured in MW-3 until March 2005. From 2001 through March 2004, approximately 148 gallons of groundwater and LPH were removed. Four additional monitoring wells (MW-18 to MW-21) were installed in 2006 and MW-22 was installed in 2007. Analytical results for groundwater samples collected during quarterly sampling events through 2009 indicated impacts by TPH as gasoline and diesel, the aromatic hydrocarbons benzene, toluene, ethyl-benzene, and xylenes (BTEX), and the fuel oxygenates methyl-tert-butyl ether (MTBE) and tert-butyl alcohol (TBA). An interim remedial action (IRA) was implemented in December 2003 involving the excavation of six barrier trenches to depths approximately five feet below the water table. An Oxygen Reducing Compound (ORC) slurry was injected into the barrier trenches. The intent of the IRA was to inhibit the migration of dissolved-phase contaminants into Buena Vista Creek. By January 1995, it was concluded that the method was ineffective insofar as significant decreases in contaminant concentrations were not observed. Analytical data for groundwater samples provided the basis to delineate the lateral extents of dissolved benzene and MTBE by mid-2005. A new interim remedial strategy was implemented from July 2005 through April 2006 that included further excavation of the source area and the subsequent use of ozone-sparging to reduce dissolved-phase contaminants. Of the total of 43,500 yd3 of soil excavated, approximately 15,000 yd3 was not impacted by gasoline, diesel, BTEX, or fuel oxygenates and was used to backfill the excavation. In mid-2006, approximately 17,000 yd3 of TPH-impacted soil were placed into passive, on-site, bioremediation treatment cells. The remaining excavated soil had low TPH impacts and was stockpiled onsite. Verification sampling of soil treated in the bioremediation cells and the stockpiled soil was completed in the second quarter of 2009. Analytical results indicated that TPH as gasoline and BTEX concentrations were near or at detection levels and that remaining diesel concentrations averaged 80 mg/kg. [Note: Hanson plans to reuse the soil beneath roads on the property]. Sixteen ozone-sparging wells were installed in 2006 to address residual impacts to groundwater beneath the site. A pilot study of the ozone-sparging system was performed from August 2006 through January 2007 that demonstrated a significant reduction in the mass of dissolved benzene and MTBE. The system delivered over 15,000 pounds of oxygen/ozone to the saturated zone and operated through January 2010. A Corrective Action Plan (CAP) for the site was submitted to DEH in October 2012. Trend analyses for groundwater contaminants were added to the CAP in May 2012. The CAP was approved in June 2011. The site conceptual model indicates that the dissolved contaminant plume

HANSON AGGREGATES PAC SO REGIO (Continued) **1001020730**

has stabilized approximately 475 feet down-gradient of the source area (i.e., up-gradient of Buena Vista Creek), benzene, MTBE, and TBA have not been detected in surface water samples collected from the creek, and that a private water well located 1,900 feet northwest of the source area has not been impacted by the petroleum hydrocarbon release. The CAP reports that total dissolved solids levels in groundwater beneath the site area exceed State standards for drinking water and that the Oceanside and Carlsbad municipal water districts have no plans to develop groundwater in the area. Based on these findings, the consultant (Brown and Caldwell) has recommended remediation of site soil and groundwater by natural attenuation and no further action. DEH concurs with these recommendations.

LUST:
Global Id: T0607302215
Contact Type: Local Agency Caseworker
Contact Name: CAROL FENNER
Organization Name: SAN DIEGO COUNTY LOP
Address: P.O. Box 129261
City: San Diego
Email: carol.fenner@sdcounty.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0607302215
Action Type: RESPONSE
Date: 12/31/2010
Action: CAP/RAP - Feasibility Study Report

Global Id: T0607302215
Action Type: Other
Date: 04/07/1997
Action: Leak Discovery

Global Id: T0607302215
Action Type: ENFORCEMENT
Date: 04/29/1997
Action: Notice of Responsibility

Global Id: T0607302215
Action Type: Other
Date: 04/07/1997
Action: Leak Stopped

Global Id: T0607302215
Action Type: RESPONSE
Date: 06/01/2011
Action: Verbal Communication - Regulator Responded

Global Id: T0607302215
Action Type: Other
Date: 04/07/1997
Action: Leak Reported

Global Id: T0607302215
Action Type: ENFORCEMENT
Date: 06/05/2009

HANSON AGGREGATES PAC SO REGIO (Continued) **1001020730**

Action: Technical Correspondence / Assistance / Other

Global Id: T0607302215
Action Type: ENFORCEMENT
Date: 07/09/2009
Action: Letter - Notice

Global Id: T0607302215
Action Type: ENFORCEMENT
Date: 02/08/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T0607302215
Action Type: ENFORCEMENT
Date: 06/07/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T0607302215
Action Type: ENFORCEMENT
Date: 08/28/2012
Action: Closure/No Further Action Letter

Global Id: T0607302215
Action Type: RESPONSE
Date: 08/18/2009
Action: Remedial Progress Report

Global Id: T0607302215
Action Type: REMEDIATION
Date: 12/01/2003
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0607302215
Action Type: REMEDIATION
Date: 05/01/2001
Action: Free Product Removal

Global Id: T0607302215
Action Type: REMEDIATION
Date: 07/01/2005
Action: Ex Situ Physical/Chemical Treatment (other than P&T, SVE, or Excavation)

Global Id: T0607302215
Action Type: REMEDIATION
Date: 08/17/1998
Action: Excavation

Global Id: T0607302215
Action Type: Other
Date: 04/07/1997
Action: Leak Began

LUST:
Global Id: T0607302215
Status: Completed - Case Closed
Status Date: 08/28/2012

HANSON AGGREGATES PAC SO REGIO (Continued) **1001020730**

Global Id: T0607302215
Status: Open - Case Begin Date
Status Date: 04/07/1997

Global Id: T0607302215
Status: Open - Remediation
Status Date: 06/01/2005

CPS-SLIC:
Name: HANSON AGGREGATES PAC SO REGIO
Address: 3701 HAYMAR DR
City,State,Zip: CARLSBAD, CA 920088325
Region: STATE
Facility Status: **Completed - Case Closed**
Status Date: 06/27/2012
Global Id: T0608165282
Lead Agency: SAN DIEGO COUNTY LOP
Lead Agency Case Number: H02509-002
Latitude: 33.178368
Longitude: -117.302599
Case Type: Cleanup Program Site
Case Worker: CF
Local Agency: SAN DIEGO COUNTY LOP
RB Case Number: Not reported
File Location: Local Agency
Potential Media Affected: Not reported
Potential Contaminants of Concern: Not reported
Site History: The Hanson America (formerly Hanson Aggregates Pacific Southwest, Inc.) property consists of approximately 155 acres along the Buena Vista Creek drainage in Carlsbad, California. The subject property is bounded on the north by State Highway 78 and Haymar Drive, on the east by College Boulevard, on the south by residential developments, and by undeveloped land to the west. Approximately 103 acres of the property is undeveloped. Although aggregate was formerly quarried on the property, current operations at the facility are limited to the production of concrete from existing and imported aggregate reserves. Past quarry operations and current production activities have been confined to approximately 52 acres of the property. The surface mine (quarry) has been decommissioned, as well as former office and storage buildings, two asphalt plants, a concrete batch plant, a recycled-material area for asphalt/concrete, a rock crushing plant, a maintenance shop, bulk materials storage areas, fueling facilities, several storage trailers and fenced areas, two empty explosives magazines/ containers, a scale-room building, a sales office, four above-ground storage tanks (ASTs) and numerous underground storage tanks (USTs). One AST remains in operation at the facility. Four diesel USTs were removed at the facility on December 17, 1986. Two of the USTs had 4,000-gallon capacities, one had a 15,000-gallon-capacity, and one had a 20,000-gallon capacity. On February 26, 1987, one 1000-gallon gasoline tank was abandoned in place by slurry-filling. No unauthorized releases were observed at the time these tanks were decommissioned. However, on April 17, 1997, a 550-gallon capacity waste oil tank was removed. Analytical results for a soil sample collected during the removal inspection had a total petroleum hydrocarbon (TPH) concentration of 1,400 milligrams per kilogram (mg/kg) and an unauthorized release case was opened. A

HANSON AGGREGATES PAC SO REGIO (Continued) **1001020730**

limited site assessment was performed in 1998, as documented in a report dated August 3, 1998. However, the site assessment did not address the waste oil release; it was performed in the area of the UST fuel system at the facility. Gasoline and diesel impacts related to the eight operating USTs in the area were reported. The maximum TPH concentrations reported for impacted soil samples were 3,500 mg/kg as gasoline and 30,000 mg/kg as diesel. The eight USTs were removed in August 1998. The tanks included two 10,000-gallon capacity gasoline USTs, three 10,000-gallon capacity diesel USTs, and three 12,000-gallon capacity diesel USTs. The distribution lines and dispensers associated with the UST system were also removed in March 2000. An estimated 900 cubic yards of impacted soil were removed and disposed of off-site. Confirmation samples were then collected from the walls of the UST excavation to determine the effectiveness of over-excavation and soil removal. Based on the confirmation sample results, soil impacted with diesel-range hydrocarbons still remained beyond the excavated area. Subsequent assessment data indicated that an estimated 400 cubic yards of fuel-impacted soil in the vicinity of the six former diesel tanks remained in place. An estimated 1,500 cubic yards of residual TPH-impacted soil remained in the vicinity of the former gasoline USTs. Seventy-four borings were drilled and sampled at the site from August 1998 to November 1999. Temporary groundwater monitoring wells were installed in 26 of the borings. Three of the borings were converted into permanent monitoring wells (KMW-l through KMW-3). In March 2001, an additional 13 permanent groundwater monitoring wells (MW -1 through MW -13) were installed at the site. Additional investigation in January 2003 included the drilling of 11 borings north of Buena Vista Creek. Data obtained from the borings were used to select the locations for four additional wells near the creek. These wells (MW-14 through MW-17) were installed in February 2003. Water level measurements for the wells indicated the groundwater flow direction to be to the south/southwest. Liquid-phase hydrocarbons (LPH) were first detected in two of the groundwater monitoring wells (MW-3 and MW-7) in May 2001. Although LPH was not detected in MW-7 after May 2001, it was measured in MW-3 until March 2005. Beginning in 2001, LPH was purged from MW-3 on a quarterly basis. Approximately 148 gallons of groundwater and LPH were removed from MW-3 through March 2004. Prior to implementation of site remediation in July 2005, the maximum detected concentration of TPH as gasoline was 53,000 micrograms per liter (ug/l). The maximum detected TPH as diesel concentration was 66,000 ug/l. The maximum detected concentrations of aromatic hydrocarbons were as follows: benzene -19,000 ug/l, toluene - 12,000 ug/l, ethyl-benzene - 1,600 ug/l, and total xylenes - 10,400 ug/l. The maximum detected concentrations of the fuel oxygenates methyl-tert-butyl ether (MTBE) and tert butyl alcohol (TBA) were 2,200 and 22 ug/l, respectively. (Note: several samples had elevated detection limits for TBA of up to 500 ug/l). In December 2003, six ORC barriers trenches were installed at the site to inhibit the migration of dissolved-phase gasoline, diesel, aromatic hydrocarbons, and fuel oxygenates. The trenches extended approximately five feet below the water table and were backfilled with the ORC slurry. By January 1995, it was concluded that this interim remedial action (IRA) was not effective. Analytical data for groundwater samples provided the basis to delineate the lateral extents of dissolved benzene and methyl-tert-butyl ether (MTBE) by mid-2005. The dissolved benzene plume has stabilized approximately 200 feet down-gradient

HANSON AGGREGATES PAC SO REGIO (Continued) **1001020730**

from the former fuel UST area. The dissolved MTBE plume has migrated approximately 700 feet down-gradient. Petroleum hydrocarbons (e.g., gasoline and diesel), volatile organic compounds (including benzene), and fuel oxygenates (e.g., MTBE) have not been detected in surface water samples collected from Buena Vista Creek. Removal of TPH-impacted soil from the source area (i.e., former UST area) was performed from July 2005 through March 2006 as an IRA. The excavated soil was placed into on-site passive bioremediation treatment cells in mid-2006 with the intention of re-using the remediated soil onsite. Based on 1998 site assessment data, it was estimated that approximately 7,700 cubic yards of soil required excavation (1,900 cubic yards of TPH-impacted soil and 5,800 cubic yards of clean soil). During IRA implementation, the volume of TPH-impacted was found to be significantly greater than anticipated. A total of 43,500 cubic yards of soil were excavated. This excavated soil was estimated to consist of 14,000 cubic yards of clean soil, 10,500 cubic yards of low-level, TPH- impacted soils that could be reused onsite (with restrictions), and 19,000 cubic yards of TPH-impacted soil. Following removal of the soil, the excavated areas were backfilled.
Verification sampling of soil treated in the bioremediation cells was completed in the second quarter of 2009. Currently Hanson America is developing a plan for the on-site reuse of the treated soil.
Following the excavation of TPH-impacted soils in 2006, four monitoring wells were installed to replace wells that were destroyed prior to implementation of the IRA. Sixteen ozone-sparging wells and three vapor probes were also installed in association with a pilot test to address residual impacts to groundwater beneath the site. The pilot test began on August 28, 2006, and concluded on March 15, 2007, when the operation was approved by DEH for continued use as part of the IRA. The ozone-sparging system operated through February 2010. Data generated during system operation is currently being evaluated as to its effectiveness. A Corrective Action Plan (CAP) for the site is currently in preparation.

Click here to access the California GeoTracker records for this facility:

Name:	HANSON CARLSBAD FACILITY
Address:	3701 HAYMAR ROAD
City,State,Zip:	CARLSBAD, CA 92008
Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	12/27/2012
Global Id:	T10000004417
Lead Agency:	SAN DIEGO COUNTY LOP
Lead Agency Case Number:	H02509-004
Latitude:	33.1788853825687
Longitude:	-117.30269908905
Case Type:	Cleanup Program Site
Case Worker:	CF
Local Agency:	SAN DIEGO COUNTY LOP
RB Case Number:	Not reported
File Location:	Local Agency
Potential Media Affected:	Not reported
Potential Contaminants of Concern:	Not reported
Site History:	Refer to "Site Maps/Documents" tab for closure summary/letter.

HANSON AGGREGATES PAC SO REGIO (Continued) **1001020730**

Click here to access the California GeoTracker records for this facility:

Name:	HANSON AGGREGATES PAC SO REGIO
Address:	3701 HAYMAR DRIVE
City,State,Zip:	CARLSBAD, CA 92008
Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	07/27/2012
Global Id:	T10000002854
Lead Agency:	SAN DIEGO COUNTY LOP
Lead Agency Case Number:	H02509-003
Latitude:	33.178369
Longitude:	-117.302599
Case Type:	Cleanup Program Site
Case Worker:	CF
Local Agency:	SAN DIEGO COUNTY LOP
RB Case Number:	Not reported
File Location:	Local Agency
Potential Media Affected:	Soil
Potential Contaminants of Concern:	Diesel, Gasoline
Site History:	An aggregate quarry and concrete production facility operated by Hanson Aggregates, LLC (currently Lehigh Hanson) was decommissioned in early 2011. The facility occupied approximately 52 acres of a 155-acre property located south of Highway 78 and north of Buena Vista Creek in Carlsbad, California. An unauthorized release of petroleum hydrocarbons was discovered at the facility in 1998 that originated from an underground storage tank (UST) system consisting of eight tanks and associated pipelines. The USTs were removed in 1998 and the pipelines were removed in 2000 under DEH Case #H02509-001. Impacted soil was excavated and stored onsite, of which approximately 17,000 cubic yards (yd3) were remediated in bio-treatment cells. Groundwater impacted by the petroleum hydrocarbon release was remediated by ozone sparging under #H02509-001. Three additional areas of petroleum hydrocarbon-impacted soil at the facility were identified during a Phase II environmental site assessment (ESA) in 1999 (Kleinfelder, 2000). Although the sources of the impacts may have included the former UST system, soil remediation was not addressed in these areas until after the facility was demolished. The three areas included the former maintenance shop, aggregate conveyor tunnel, and asphalt plant. Of these areas, the former maintenance shop and the former conveyor tunnel were located down-gradient of the former UST system. The asphalt plant was located in the southeastern portion of the facility, immediately north of Buena Vista Creek. In anticipation of major cutting and filling operations during reclamation grading activities, plant structures, utilities, and vegetation in the three areas were removed in early 2011. A work plan for addressing remaining petroleum hydrocarbon-impacted soil during reclamation grading activities was submitted under Voluntary Assistance Program (VAP) case #H02509-003. Cleanup goals proposed in the work plan for remedial excavation activities were 100 milligrams per kilogram (mg/kg) for Total Petroleum Hydrocarbons (TPH) as gasoline and 500 mg/kg as diesel. DEH approved the work plan on April 8, 2011, and a work plan addendum on August 17, 2011. During the 1998 Phase II ESA, borings were advanced south and west of the maintenance building to collect soil samples, ostensibly to assess impacts from the UST system that had been

HANSON AGGREGATES PAC SO REGIO (Continued) **1001020730**

removed earlier that year. The maximum diesel concentration detected in the soil samples was 15,800 milligrams per kilogram (mg/kg), while gasoline was detected at a maximum concentration of 7.3 mg/kg. Additional soil samples were collected southwest of the maintenance shop during remediation of pipe trenches in 2006. Analysis of the samples also indicated primarily diesel impacts. Because the maintenance shop was in use at the time of the Phase II ESA, the soil beneath its foundation and adjoining areas were not assessed until the 2011 work plan was implemented. Eighteen potholes were excavated to depths of 6 to 7 feet below ground surface (bgs), a depth coincident with the water table. Twenty-one total soil samples were collected and analyzed for Total Petroleum Hydrocarbons (TPH) as diesel and gasoline. The sample locations that yielded the highest maximum detected TPH concentrations were used as starting points for remedial excavation, which was further guided by visual observations, photo-ionization detector readings, and laboratory results for confirmation soil samples. Impacted soil was removed by stepping out horizontally until cleanup goals were met and vertically until the water table was reached. Approximately 2,684 tons of impacted soil was removed from the maintenance shop excavation. Petroleum hydrocarbon impacts to soil surrounding the former Aggregate Conveyor Tunnel No. 1 were confirmed during removal of the conveyor system in July 2011. The system had transported aggregate through the tunnel from the former stockpile area to the processing area when the facility was in operation. The Phase II ESA report indicated that diesel and gasoline were detected at a maximum concentration of 5,300 and 110 mg/kg, respectively, in a soil sample collected from a boring advanced adjacent to the tunnel. TPH as diesel and gasoline were also detected in a discrete-depth groundwater sample collected from the boring. During reclamation grading, stockpiled soil removed during over-excavation of the tunnel was noted as emitting odors. Analysis of soil samples collected from the stockpile indicated diesel and gasoline concentrations in excess of work plan cleanup levels. Approximately 800 tons of petroleum hydrocarbon-impacted soil was removed from the conveyor tunnel excavation. During the Phase II ESA in 1999, diesel-impacted soil had been detected in soil samples collected from borings advanced southeast of Asphalt Plant No.1. The borings were located around seven tanks that serviced the plant and had contained asphalt, diesel, and kerosene. According to the Phase II ESA report, diesel was detected at a maximum concentration of 16,000 mg/kg in a soil sample collected southeast of the tanks and adjacent to a product pipeline. The tanks and the asphalt plant were removed in approximately 2001. According to the Phase II ESA report, Product Line No. 2, located south of the former Asphalt Plant No. 1 and northeast of the former tanks, was removed under DEH permit in March 2000. A hole in the pipeline was noted by the DEH inspector and soil samples indicated that a diesel release from the pipeline had occurred. During reclamation grading in 2011, a pipe containing residual diesel was encountered that indicated a fuel release in the former asphalt plant area. The spill was reported to DEH and contained. Although the fuel and impacted soil were removed, analytical results for soil confirmation samples indicated that further excavation was needed to remove remaining soil where product concentrations exceeded the cleanup level for diesel. During potholing activity to the water table, an additional pipe release was discovered where residual fuel had collected on groundwater. A vacuum truck was used to extract approximately 1600 gallons of mixed fuel

HANSON AGGREGATES PAC SO REGIO (Continued) **1001020730**

and water. Once the potholes were dewatered, non-impacted soil was placed as backfill in the excavations. The remainder of the pipe and approximately 4,651 tons of impacted soil were removed from the final excavation of the asphalt plant tank area. A former monitoring well had been located approximately 50 feet down-gradient of the product release area. Analytical results for groundwater samples collected from the well from September 2006 to the final sampling event in April 2010 indicated no detection of petroleum hydrocarbon fuel constituents. Remedial activities performed during reclamation grading at the site resulted in the excavation and off-site disposal of a total of 8,135 tons of TPH-impacted soil. Residual product and impacted groundwater encountered in the former asphalt plant area were removed and also disposed off site. Historical groundwater sampling results suggest that the product release did not impact Buena Vista Creek. Based on these results, the consultant (Brown and Caldwell) has recommended no further action at the site and case closure. DEH concurs with these recommendations.

Click here to access the California GeoTracker records for this facility:

HIST CORTESE:

edr_fname:	SOUTH COAST MATERIALS
edr_fadd1:	3701 HAYMAR
City,State,Zip:	CARLSBAD, CA 92008
Region:	CORTESE
Facility County Code:	37
Reg By:	LTNKA
Reg Id:	9UT3452

CIWQS:

Name:	HANSON AGGREGATES PRE MIXED CO
Address:	3701 HAYMAR DR
City,State,Zip:	CARLSBAD, CA 92008
Agency:	Hanson Aggregates LLC
Agency Address:	PO Box 639069, San Diego, CA 92163
Place/Project Type:	Industrial - Ready-Mixed Concrete
SIC/NAICS:	3273
Region:	9
Program:	INDSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water industrial
Order Number:	2014-0057-DWQ
WDID:	9 37I014667
NPDES Number:	CAS000001
Adoption Date:	Not reported
Effective Date:	10/15/1998
Termination Date:	08/16/2013
Expiration/Review Date:	Not reported
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	Not reported
Longitude:	Not reported

HANSON AGGREGATES PAC SO REGIO (Continued) **1001020730**

Name:	SOUTH COAST MATERIALS QUARRY
Address:	3701 HAYMAR DRIVE
City,State,Zip:	CARLSBAD, CA 92008
Agency:	Hanson Aggregates Pacific Southwest Inc
Agency Address:	9229 Harris Plant Road POB 639069, San Diego, CA 92163
Place/Project Type:	Construction - Other: Reclamation Grading
SIC/NAICS:	Not reported
Region:	9
Program:	CONSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water construction
Order Number:	2009-0009-DWQ
WDID:	9 37C361247
NPDES Number:	CAS000002
Adoption Date:	Not reported
Effective Date:	06/17/2011
Termination Date:	04/22/2013
Expiration/Review Date:	Not reported
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	33.1791
Longitude:	-117.3013

CERS:

Name:	HANSON AGGREGATES PAC SO REGIO
Address:	3701 HAYMAR DR
City,State,Zip:	CARLSBAD, CA 920088325
Site ID:	188484
CERS ID:	T0608165282
CERS Description:	Cleanup Program Site

Affiliation:

Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	CAROL FENNER - SAN DIEGO COUNTY LOP
Entity Title:	Not reported
Affiliation Address:	P.O. Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Name:	HANSON AGGREGATES PAC SO REGIO
Address:	3701 HAYMAR DRIVE
City,State,Zip:	CARLSBAD, CA 92008
Site ID:	225043
CERS ID:	T10000002854
CERS Description:	Cleanup Program Site

Affiliation:

Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	CAROL FENNER - SAN DIEGO COUNTY LOP
Entity Title:	Not reported

HANSON AGGREGATES PAC SO REGIO (Continued) **1001020730**

Affiliation Address: P.O. Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: HANSON CARLSBAD FACILITY
Address: 3701 HAYMAR ROAD
City,State,Zip: CARLSBAD, CA 92008
Site ID: 244236
CERS ID: T10000004417
CERS Description: Cleanup Program Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: CAROL FENNER - SAN DIEGO COUNTY LOP
Entity Title: Not reported
Affiliation Address: P.O. Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: HANSON AGGREGATES PAC SO REGIO
Address: 3701 HAYMAR DR
City,State,Zip: CARLSBAD, CA 920088325
Site ID: 188484
CERS ID: T0607302215
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: CAROL FENNER - SAN DIEGO COUNTY LOP
Entity Title: Not reported
Affiliation Address: P.O. Box 129261
Affiliation City: San Diego
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Count: 1 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
VISTA	S121700897	TRI-CITY CLEANERS	1851 D W VISTA WY	92083	CA DRYCLEANERS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 07/02/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 07/02/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 07/02/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/03/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 35

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/02/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 35

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/02/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/26/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/26/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/26/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/26/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/26/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 02/22/2019
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 41

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/10/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 01/31/2019
Date Data Arrived at EDR: 02/04/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/29/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 01/31/2019
Date Data Arrived at EDR: 02/04/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/29/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/26/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 36

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/26/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 04/29/2019
Date Data Arrived at EDR: 04/30/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 58

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/30/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 04/29/2019
Date Data Arrived at EDR: 04/30/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 58

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/30/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/11/2019
Date Data Arrived at EDR: 02/12/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 21

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 05/14/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41
Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27
Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27
Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)
Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35
Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 06/11/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/10/2018
Date Data Arrived at EDR: 03/08/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 54
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 09/24/2018
Date Data Arrived at EDR: 03/12/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 50
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/17/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 11/01/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 02/19/2019
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/16/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/12/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/13/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/11/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/10/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Varies

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 03/11/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/03/2019
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 06/12/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Varies

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 06/11/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Semi-Annually

MILITARY UST SITES: Military UST Sites (GEOTRACKER)

Military ust sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/11/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 06/17/2019
Next Scheduled EDR Contact: 09/30/2019
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/03/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 09/24/2018
Date Data Arrived at EDR: 03/12/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 50

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/12/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 11/01/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 11/07/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/16/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/10/2018
Date Data Arrived at EDR: 03/08/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 54

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/17/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 06/20/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 04/29/2019
Date Data Arrived at EDR: 04/30/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 58
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/30/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/26/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 34
Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 06/25/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/17/2018
Date Data Arrived at EDR: 12/18/2018
Date Made Active in Reports: 01/11/2019
Number of Days to Update: 24
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/04/2019
Next Scheduled EDR Contact: 09/30/2019
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 04/25/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 03/11/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 48

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/12/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 03/26/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 34

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 05/09/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176
Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 04/23/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 02/24/2019
Date Data Arrived at EDR: 02/26/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 50
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database
The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21
Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program
This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 04/29/2019
Date Data Arrived at EDR: 04/30/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 58
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/30/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs
A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/12/2018
Date Made Active in Reports: 08/06/2018
Number of Days to Update: 55
Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 07/08/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites
Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27
Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 04/09/2019
Date Data Arrived at EDR: 04/11/2019
Date Made Active in Reports: 05/08/2019
Number of Days to Update: 27

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 04/11/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 02/24/2019
Date Data Arrived at EDR: 02/26/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 50

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 02/21/2019
Date Data Arrived at EDR: 02/22/2019
Date Made Active in Reports: 04/15/2019
Number of Days to Update: 52

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/28/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 12/04/2018
Date Data Arrived at EDR: 12/06/2018
Date Made Active in Reports: 12/14/2018
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing
Aboveground storage tank sites

Date of Government Version: 09/11/2018
Date Data Arrived at EDR: 09/12/2018
Date Made Active in Reports: 10/11/2018
Number of Days to Update: 29

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Varies

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CERS TANKS: California Environmental Reporting System (CERS) Tanks
List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 04/09/2019
Date Data Arrived at EDR: 04/11/2019
Date Made Active in Reports: 05/08/2019
Number of Days to Update: 27

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/11/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Quarterly

Local Land Records

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 02/28/2019
Date Data Arrived at EDR: 03/01/2019
Date Made Active in Reports: 04/02/2019
Number of Days to Update: 32

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 06/03/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 07/02/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 03/04/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 27

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 06/04/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/26/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 49

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 06/26/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 10/24/2018
Date Data Arrived at EDR: 01/24/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 40

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 06/24/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/11/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/11/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/26/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 03/07/2019
Date Data Arrived at EDR: 04/03/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 50

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/21/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/09/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/10/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/13/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/26/2019
Date Made Active in Reports: 05/07/2019
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 06/26/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 05/06/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/10/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/18/2019
Next Scheduled EDR Contact: 09/30/2019
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/24/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 35

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 07/01/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/25/2019
Date Data Arrived at EDR: 05/02/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 07/01/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/20/2019
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 34

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/12/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 07/03/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 06/07/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/07/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 04/02/2019
Date Data Arrived at EDR: 04/02/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 42
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 07/01/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 12/03/2018
Date Data Arrived at EDR: 01/29/2019
Date Made Active in Reports: 03/21/2019
Number of Days to Update: 51

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 04/30/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 30

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 07/08/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/26/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/10/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 07/01/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/27/2018
Date Data Arrived at EDR: 02/27/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 33

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/29/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/31/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/31/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/27/2019
Date Data Arrived at EDR: 03/28/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 34

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/19/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/15/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 03/15/2019
Number of Days to Update: 10

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 06/05/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 74

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/15/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 04/07/2019
Date Data Arrived at EDR: 04/09/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 07/09/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing
A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71
Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/19/2019
Date Data Arrived at EDR: 02/21/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 39
Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/21/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6
Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/26/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 36
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 06/25/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Quarterly

CUPA SAN FRANCISCO CO: CUPA Facility Listing
Cupa facilities

Date of Government Version: 04/18/2019
Date Data Arrived at EDR: 04/19/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 11
Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 04/18/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Varies

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing
list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 01/23/2019
Date Data Arrived at EDR: 02/26/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 34
Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 05/14/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 02/27/2019
Date Data Arrived at EDR: 02/28/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 32

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 06/03/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 03/19/2019
Date Data Arrived at EDR: 03/22/2019
Date Made Active in Reports: 04/09/2019
Number of Days to Update: 18

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 05/23/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 03/01/2019
Date Data Arrived at EDR: 04/25/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 35

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 06/03/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Annually

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/20/2018
Date Made Active in Reports: 08/06/2018
Number of Days to Update: 47

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 06/24/2019
Next Scheduled EDR Contact: 09/30/2019
Data Release Frequency: Varies

ENF: Enforcement Action Listing
A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 11/01/2018
Date Data Arrived at EDR: 11/02/2018
Date Made Active in Reports: 12/13/2018
Number of Days to Update: 41

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 05/14/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/15/2019
Date Data Arrived at EDR: 02/19/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 14

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 05/09/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 04/09/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 50

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 07/12/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 02/19/2019
Date Data Arrived at EDR: 02/20/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 13

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 05/21/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 02/19/2019
Date Data Arrived at EDR: 02/20/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/21/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 04/08/2019
Date Data Arrived at EDR: 04/09/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 51

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 07/09/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/12/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 34
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 06/11/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 02/20/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 04/02/2019
Number of Days to Update: 28
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 06/04/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 02/11/2019
Date Data Arrived at EDR: 02/12/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 23
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 05/14/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 03/04/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 04/05/2019
Number of Days to Update: 31
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 06/04/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 03/11/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 47
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/12/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 03/18/2019
Date Data Arrived at EDR: 03/19/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 41
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 06/17/2019
Next Scheduled EDR Contact: 09/30/2019
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 04/27/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 34
Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 06/11/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35
Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/11/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 07/11/2018
Date Made Active in Reports: 09/13/2018
Number of Days to Update: 64
Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 07/12/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9
Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13
Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 06/19/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/11/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/11/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 03/11/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 47

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 06/12/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 03/05/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 04/02/2019
Number of Days to Update: 28

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 06/04/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 04/09/2019
Date Data Arrived at EDR: 04/11/2019
Date Made Active in Reports: 05/08/2019
Number of Days to Update: 27

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/11/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/11/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/11/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/11/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/11/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/11/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 07/08/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 04/10/2019
Date Data Arrived at EDR: 04/11/2019
Date Made Active in Reports: 06/20/2019
Number of Days to Update: 70

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 07/08/2019
Next Scheduled EDR Contact: 04/24/2047
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 01/07/2019
Date Data Arrived at EDR: 01/08/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 58

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 06/17/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 07/08/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/02/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 27

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 06/24/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 02/27/2019
Date Data Arrived at EDR: 02/28/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 32

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 02/14/2019
Date Data Arrived at EDR: 02/19/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 17

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 04/29/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 02/20/2019
Date Data Arrived at EDR: 05/01/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 29

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 04/25/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 02/27/2019
Date Data Arrived at EDR: 02/28/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 32

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 04/29/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 04/10/2019
Date Data Arrived at EDR: 04/11/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 19

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 06/26/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 12/11/2018
Date Data Arrived at EDR: 12/13/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 33

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 05/20/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/24/2019
Date Data Arrived at EDR: 04/25/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 63

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

KERN COUNTY:

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 01/28/2019
Date Data Arrived at EDR: 02/07/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 29

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 05/16/2019
Date Data Arrived at EDR: 05/17/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 13

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 02/08/2019
Date Data Arrived at EDR: 02/12/2019
Date Made Active in Reports: 03/12/2019
Number of Days to Update: 28

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/15/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/17/2019
Date Data Arrived at EDR: 01/18/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 46

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 06/17/2019
Next Scheduled EDR Contact: 09/30/2019
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 12/19/2018
Date Data Arrived at EDR: 01/10/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 56

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 07/08/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/15/2019
Date Data Arrived at EDR: 04/16/2019
Date Made Active in Reports: 06/21/2019
Number of Days to Update: 66

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/16/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 51

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 07/12/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 54

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills

This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/30/2012
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 42

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 04/17/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory

A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 54

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory

A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 54

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 04/08/2019
Date Data Arrived at EDR: 04/16/2019
Date Made Active in Reports: 06/21/2019
Number of Days to Update: 66

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 04/16/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 07/12/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 04/04/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/20/2019
Date Data Arrived at EDR: 02/22/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 13

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 06/26/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 03/11/2019
Date Data Arrived at EDR: 03/19/2019
Date Made Active in Reports: 05/08/2019
Number of Days to Update: 50

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 02/21/2019
Date Data Arrived at EDR: 02/26/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 34

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 05/23/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 02/05/2019
Date Data Arrived at EDR: 02/07/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 26

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 06/28/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 02/21/2019
Date Data Arrived at EDR: 02/22/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 14

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/20/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 9

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 05/13/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/09/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 21

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/06/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/09/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 21

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/06/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 01/02/2019
Date Data Arrived at EDR: 02/05/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 31

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/07/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 02/28/2019
Date Data Arrived at EDR: 03/01/2019
Date Made Active in Reports: 04/12/2019
Number of Days to Update: 42

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 06/03/2019
Next Scheduled EDR Contact: 06/17/2019
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/12/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 18

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/17/2019
Next Scheduled EDR Contact: 09/30/2019
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/12/2019
Date Made Active in Reports: 06/20/2019
Number of Days to Update: 69

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/17/2019
Next Scheduled EDR Contact: 09/30/2019
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 02/05/2019
Date Data Arrived at EDR: 04/02/2019
Date Made Active in Reports: 06/18/2019
Number of Days to Update: 77

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 06/28/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/06/2019
Date Data Arrived at EDR: 04/02/2019
Date Made Active in Reports: 06/20/2019
Number of Days to Update: 79

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 06/28/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List

Cupa facility list

Date of Government Version: 03/11/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 48

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 02/27/2019
Date Data Arrived at EDR: 02/28/2019
Date Made Active in Reports: 04/02/2019
Number of Days to Update: 33

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 05/06/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 03/04/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 04/02/2019
Number of Days to Update: 28

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 06/04/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56
Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing
A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 04/24/2019
Date Data Arrived at EDR: 04/25/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 63
Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24
Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 06/03/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/05/2018
Date Data Arrived at EDR: 11/06/2018
Date Made Active in Reports: 12/14/2018
Number of Days to Update: 38
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 06/17/2019
Next Scheduled EDR Contact: 09/30/2019
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 02/13/2019
Date Data Arrived at EDR: 02/15/2019
Date Made Active in Reports: 03/14/2019
Number of Days to Update: 27

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 03/04/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 47

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/12/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/10/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 02/13/2019
Date Data Arrived at EDR: 02/19/2019
Date Made Active in Reports: 03/06/2019
Number of Days to Update: 15

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13
Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 01/30/2019
Date Data Arrived at EDR: 02/01/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 34
Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90
Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51
Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 03/05/2019
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 53
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/03/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/05/2019
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 04/03/2019
Number of Days to Update: 27
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/03/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 03/18/2019
Date Data Arrived at EDR: 03/26/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 36

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 06/19/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/11/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 19

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 06/19/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 12/11/2018
Date Data Arrived at EDR: 12/13/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 33

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 04/15/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 02/28/2019
Date Data Arrived at EDR: 03/01/2019
Date Made Active in Reports: 04/03/2019
Number of Days to Update: 33

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 06/03/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 12/13/2018
Date Data Arrived at EDR: 12/18/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 28

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 04/24/2019
Date Data Arrived at EDR: 04/25/2019
Date Made Active in Reports: 06/28/2019
Number of Days to Update: 64

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 12/26/2018
Date Data Arrived at EDR: 12/27/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 19

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 05/06/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 03/26/2019
Date Data Arrived at EDR: 04/25/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 63

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/23/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/26/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 05/09/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 03/26/2019
Date Data Arrived at EDR: 04/25/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 35
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 04/23/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 02/26/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/03/2019
Number of Days to Update: 21
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/12/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 06/20/2019
Number of Days to Update: 76
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 06/26/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 02/08/2019
Date Data Arrived at EDR: 02/12/2019
Date Made Active in Reports: 03/06/2019
Number of Days to Update: 22
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 04/25/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 02/11/2019
Date Data Arrived at EDR: 02/12/2019
Date Made Active in Reports: 03/04/2019
Number of Days to Update: 20
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/14/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/09/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 05/01/2019
Date Made Active in Reports: 06/21/2019
Number of Days to Update: 51

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/01/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 10/23/2018
Date Made Active in Reports: 11/27/2018
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/15/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 04/09/2018
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/17/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/15/2018
Date Made Active in Reports: 07/09/2018
Number of Days to Update: 24

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/10/2019
Next Scheduled EDR Contact: 09/23/2019
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

PROPOSED CARMAX - OCEANSIDE
CAMINO CREST DR
OCEANSIDE, CA 92056

TARGET PROPERTY COORDINATES

Latitude (North):	33.181949 - 33° 10' 55.02''
Longitude (West):	117.289225 - 117° 17' 21.21''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	473036.8
UTM Y (Meters):	3671303.5
Elevation:	194 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5641318 SAN LUIS REY, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

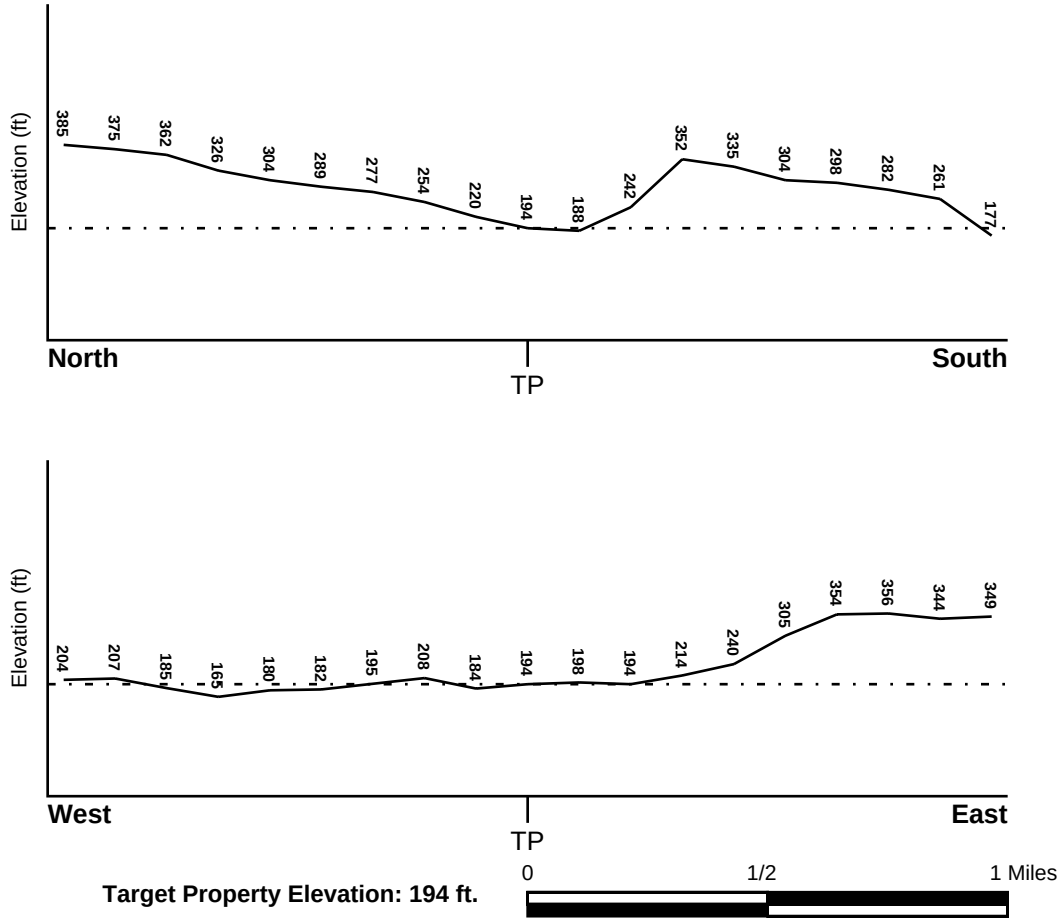
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06073C0766G	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06073C0758G	FEMA FIRM Flood data
06073C0759G	FEMA FIRM Flood data
06073C0767G	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
SAN LUIS REY	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

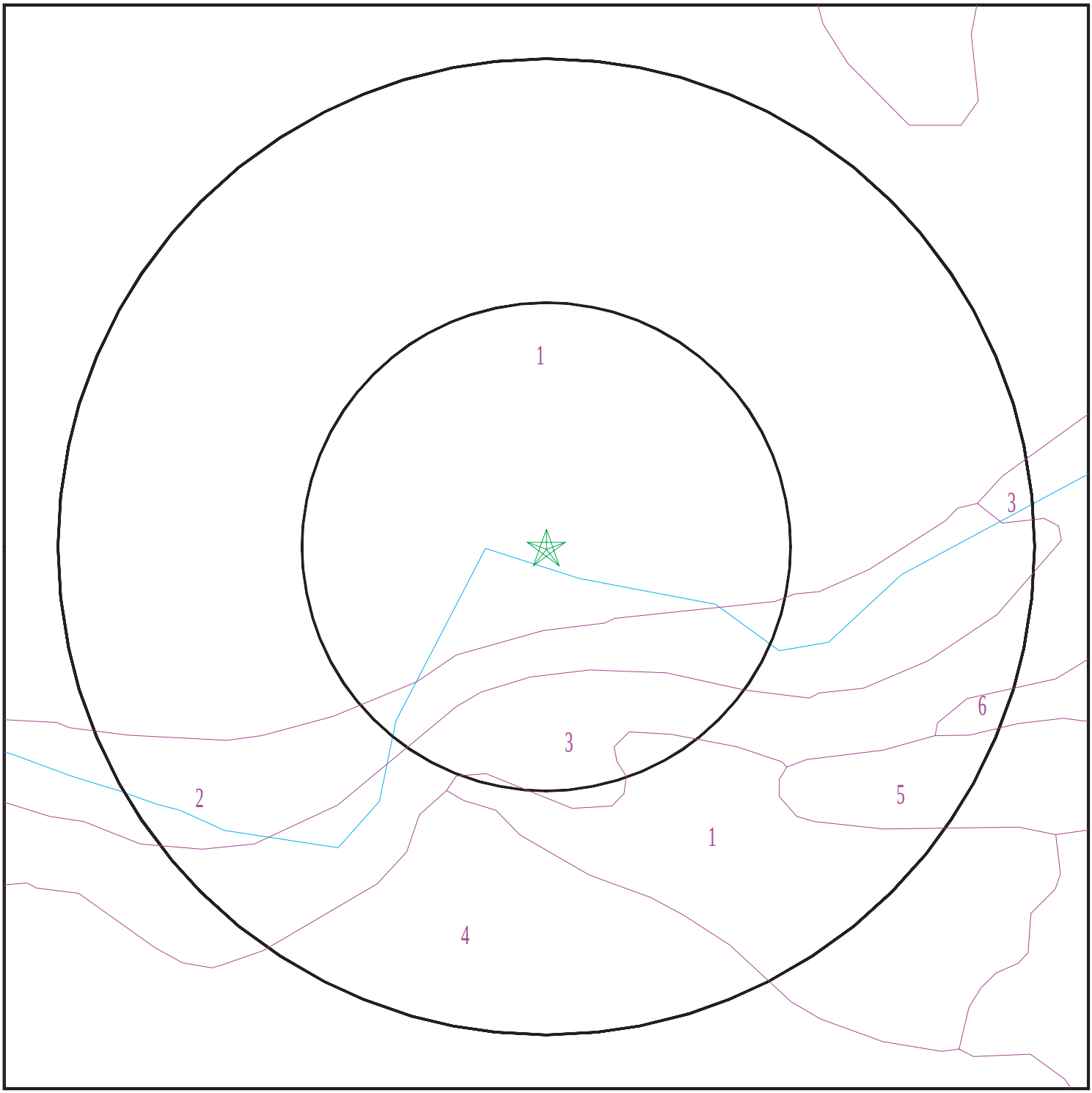
Era:	Cenozoic
System:	Tertiary
Series:	Eocene
Code:	Te *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 5717018.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Proposed CarMax - Oceanside	CLIENT:	Enviroapplications Inc.
ADDRESS:	CAMINO CREST DR OCEANSIDE CA 92056	CONTACT:	Fred Allee
LAT/LONG:	33.181949 / 117.289225	INQUIRY #:	5717018.2s
		DATE:	July 15, 2019 6:07 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: LAS FLORES

Soil Surface Texture: loamy fine sand

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
2	14 inches	22 inches	sandy clay	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
3	22 inches	38 inches	sandy clay	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
4	38 inches	48 inches	loamy coarse sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
5	48 inches	51 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:

Soil Map ID: 2

Soil Component Name: VISALIA

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 6.5 Min: 6.1

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	11 inches	40 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 6.5 Min: 6.1
3	40 inches	59 inches	very fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 6.5 Min: 6.1

Soil Map ID: 3

Soil Component Name: LAS FLORES

Soil Surface Texture: loamy fine sand

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	20 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	20 inches	29 inches	clay	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
3	29 inches	40 inches	sandy clay	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
4	40 inches	48 inches	loamy coarse sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
5	48 inches	51 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:

Soil Map ID: 4

Soil Component Name: LAS FLORES

Soil Surface Texture: loamy fine sand

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
2	14 inches	22 inches	sandy clay	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
3	22 inches	38 inches	sandy clay	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
4	38 inches	48 inches	loamy coarse sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
5	48 inches	51 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:

Soil Map ID: 5

Soil Component Name: LAS FLORES

Soil Surface Texture: loamy fine sand

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
2	14 inches	22 inches	sandy clay	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
3	22 inches	38 inches	sandy clay	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
4	38 inches	48 inches	loamy coarse sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
5	48 inches	51 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 6

Soil Component Name: LAS FLORES

Soil Surface Texture: loamy fine sand

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
2	14 inches	22 inches	sandy clay	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
3	22 inches	38 inches	sandy clay	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
4	38 inches	48 inches	loamy coarse sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
5	48 inches	51 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

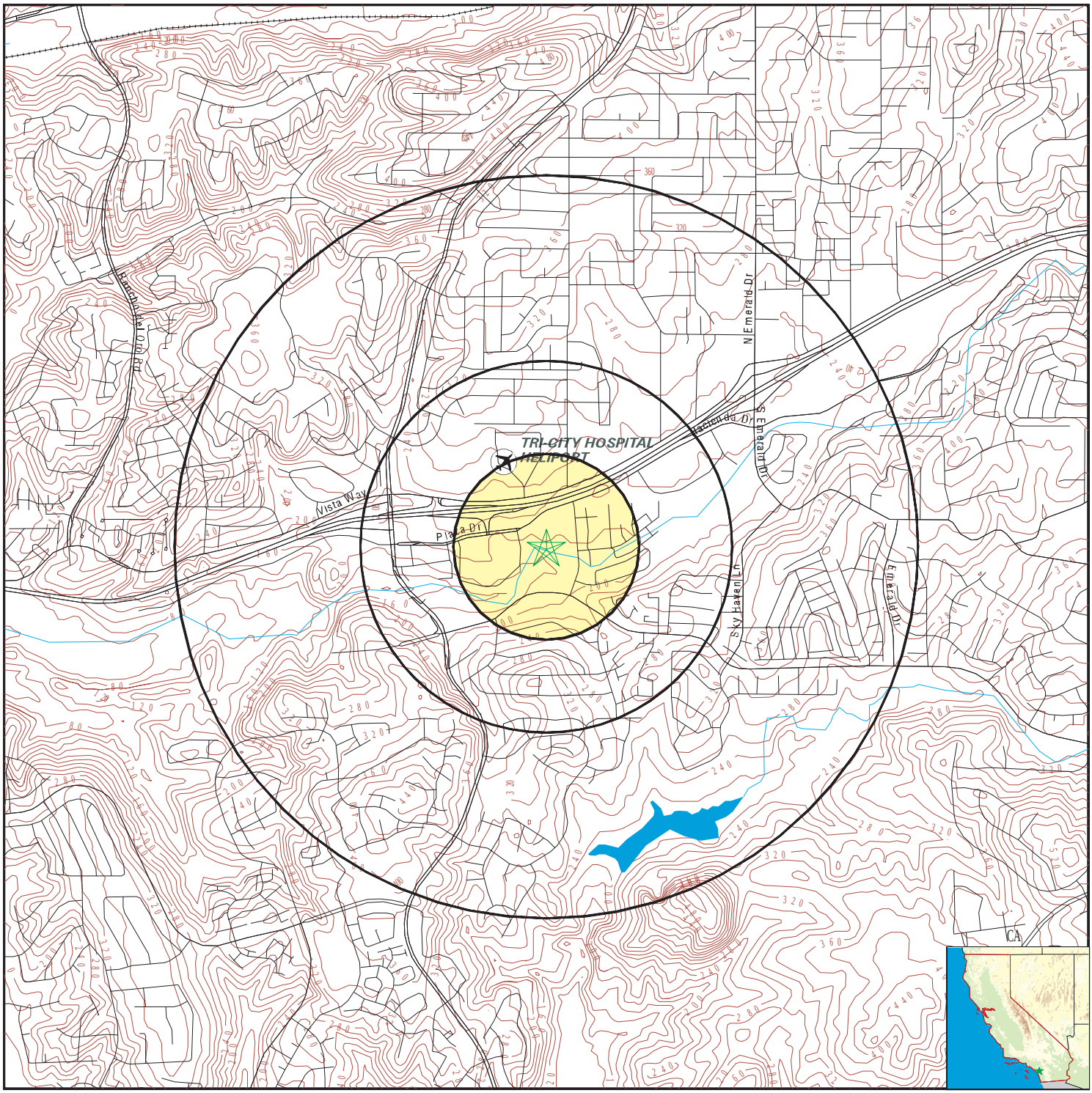
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 5717018.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	Proposed CarMax - Oceanside	CLIENT:	Enviroapplications Inc.
ADDRESS:	CAMINO CREST DR OCEANSIDE CA 92056	CONTACT:	Fred Allee
		INQUIRY #:	5717018.2s
LAT/LONG:	33.181949 / 117.289225	DATE:	July 15, 2019 6:07 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92056	38	0

Federal EPA Radon Zone for SAN DIEGO County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 92056

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.200 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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ATTACHMENT 4

DATABASE ASSESSMENT CRITIERA

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Proposed Oceanside CarMax Facility
Vacant Commercial Property
3843-4003 Plaza Drive, Oceanside
(North) San Diego County, CA 92056

September 10, 2019

EAI Project No.: 80.CARMAX1.19
APNs: 168-012-42 & -43-00

DATABASE ASSESSMENT CRITERIA

EnviroApplications, Inc. (*EAI*) used a commercial government database search service in the preparation of this report. Specifically, research into environmental regulatory agency database listings was performed by a third-party database search firm. The purpose of the review was to identify reported environmental issues for the subject property (SP) and other properties in the vicinity. The database search firm utilized the more stringent of the approximate minimum search distances specified in the Scope of Work described in Section 1.4 for each of the referenced Local, State and Federal environmental agency and other databases. The definition of the databases searched and the associated search radius distances from the SP are identified in the regulatory agency database search report.

The regulatory agency database search report commonly lists a number of sites identified as "unmappable and/or orphan." The database search firm was unable to confirm the physical locations of these sites relative to the SP or to assess whether they were located within the designated search radii. *EAI* independently reviewed the locations of these "unmappable" sites, to the extent possible, using various maps and our knowledge of the SP area. Any of the "unmappable" sites determined to be within the designated search radii were included in our evaluation of the various listed release sites that might result in a potential ASTM *recognized environmental condition* (REC) of the SP.

An ASTM REC refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at the SP: due to release into the environment; under conditions indicative of a release into the environment; or under conditions that pose a material threat of a future release into the environment.

An ASTM *controlled recognized environmental condition (CREC)* refers to a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory agency authorities, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

An ASTM *historical recognized environmental condition (HREC)* refers to a past release of any hazardous substances or petroleum products that has occurred in connection with the SP and has been addressed to the satisfaction of the applicable regulatory agency authorities, or meeting unrestricted use criteria established by a regulatory authority, without subjecting the SP or its improvements to any required engineering or other types of controls.

EAI reviewed the results of the database search report to note reported environmental release sites in the vicinity of the SP that were considered to have a potential to have adversely impacted the SP (i.e., are known to have or are expected to result in an ASTM REC). Reported release sites identified in the regulatory agency database search report were evaluated with respect to the nature and extent of a given release, the distance of the reported release site from the SP, the stratigraphy of soils, the expected soil permeability, and the topographic position of a reported release site with respect to known or expected local and/or regional groundwater movement direction. Those release sites that were considered likely to have impacted the SP are identified in the report as ASTM RECs, as defined in the latest version of ASTM Standard 1527. Sites that were listed in the database search report, but not identified as a release site (for example, a site listed as a hazardous waste generator but not as having had a release), and release sites that were listed as being "closed" by the regulatory agencies were not considered likely to have impacted the SP.

ATTACHMENT 5

AGENCY RECORD REQUESTS AND INFORMATION RESPONSES

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Proposed Oceanside CarMax Facility
Vacant Commercial Property
3843-4003 Plaza Drive, Oceanside
(North) San Diego County, CA 92056

September 10, 2019

EAI Project No.: 80.CARMAX1.19
APNs: 168-012-42 & -43-00

Telephone Conversation Record

EnviroApplications, Inc.
Engineering & Consulting

Date: 07.17.2019 (+VAR) **Time:** VARIOUS
Project Name: CARMAX - OCEANSIDE
Job No.: 0OCARMAX1.19
Phone No.: VARIOUS
Prepared by: [signature]
Call: ☑ Placed ☑ Received

Contact/Title:	HECTOR GOMEZ CITY CLERK	EDWIN ANDRUS RECORDS	JONE BARRIO RECORDS	CINDY GOULD RECORDS	LEAH LORCH RECORDS
Agency/Region:	OCEANSIDE	COUNTY DEH	DTSC CAL/EPA	COUNTY APCD	SDRWQCB CAL/EPA

Discussion:

HECTOR GOMEZ - RETURNED CALL TO INDICATE NO OBD, OFD OR ONUD RECORDS ASSOCIATED W/PARCELS.

JONE BARRIO - INDICATED NO FILE FOR SUBJECT PROPERTY, DIFFICULT TO SEARCH USING APNS.

EDWIN ANDRUS RETURNED CALL, NO NEED TO SUBMIT SEARCH FORM SINCE NO COUNTY RECORDS EXIST FOR EITHER PARCEL.

LEAH LORCH - INDICATED NO STORMWATER MGT. OR ANY FILE RECORDS FOR SUBJECT PROPERTY.

CINDY GOULD RETURNED CALL, NO APCD PERMIT OR OTHER RECORDS FOR SUBJECT PROPERTY. REFERRED TO COUNTY DEH.

Action Required:

cc: PROJECT FILE

ATTACHMENT 6

HISTORICAL INFORMATION REGARDING THE SUBJECT PROPERTY

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Proposed Oceanside CarMax Facility
Vacant Commercial Property
3843-4003 Plaza Drive, Oceanside
(North) San Diego County, CA 92056

September 10, 2019

EAI Project No.: 80.CARMAX1.19
APNs: 168-012-42 & -43-00

Proposed CarMax - Oceanside

CAMINO CREST DR

OCEANSIDE, CA 92056

Inquiry Number: 5717018.5

July 16, 2019

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

07/16/19

Site Name:

Proposed CarMax - Oceanside
CAMINO CREST DR
OCEANSIDE, CA 92056
EDR Inquiry # 5717018.5

Client Name:

Enviroapplications Inc.
2831 Camino Del Rio South
San Diego, CA 92108
Contact: Fred Allee

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
1994	1"=500'	Acquisition Date: June 01, 1994	USGS/DOQQ
1990	1"=500'	Flight Date: September 06, 1990	USDA
1989	1"=500'	Flight Date: August 15, 1989	USDA
1985	1"=500'	Flight Date: September 13, 1985	USDA
1979	1"=500'	Flight Date: January 27, 1979	EDR Proprietary Landiscor
1970	1"=500'	Flight Date: March 06, 1970	EDR Proprietary Landiscor
1967	1"=500'	Flight Date: May 07, 1967	USGS
1964	1"=500'	Flight Date: April 09, 1964	USDA
1953	1"=500'	Flight Date: April 14, 1953	USDA
1946	1"=500'	Flight Date: December 30, 1946	USGS
1939	1"=500'	Flight Date: April 16, 1939	USDA
1928	1"=500'	Flight Date: November 01, 1928	EDR Proprietary Landiscor

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SUBJECT
PROPERTY
(All Photos)
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EDR

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YEAR: 2012
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EDR

INQUIRY #: 5717018.5
YEAR: 2009
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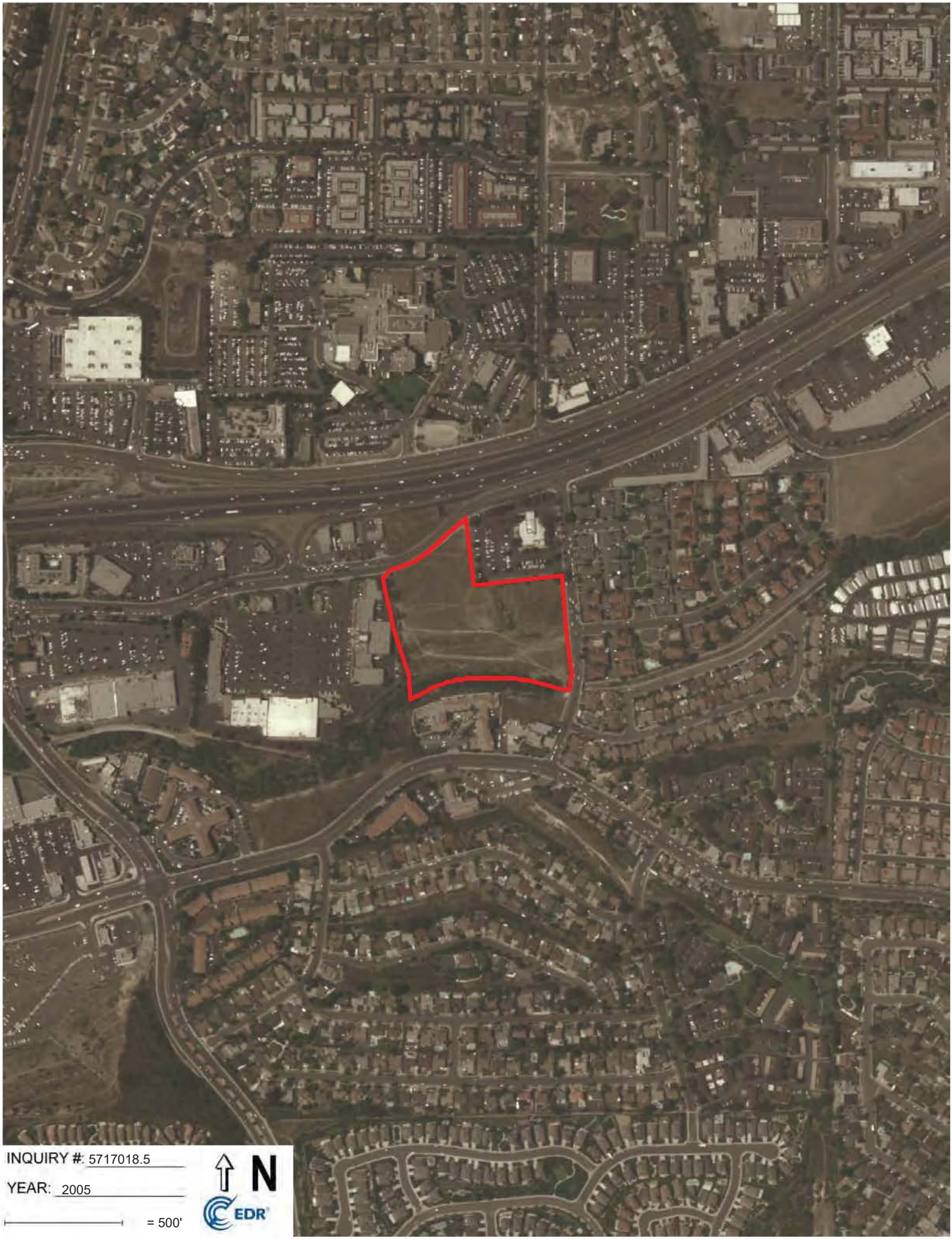
EDR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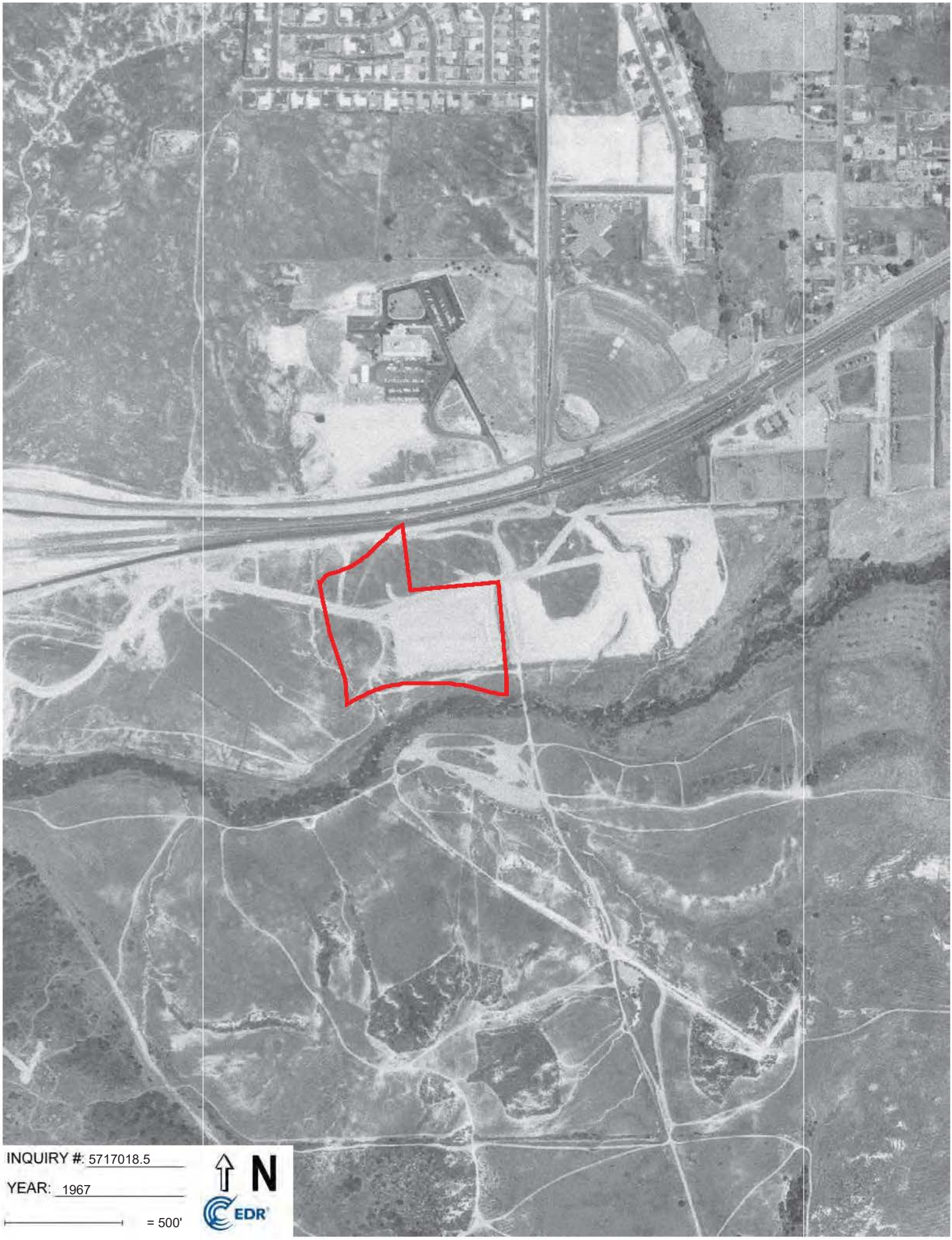
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EDR

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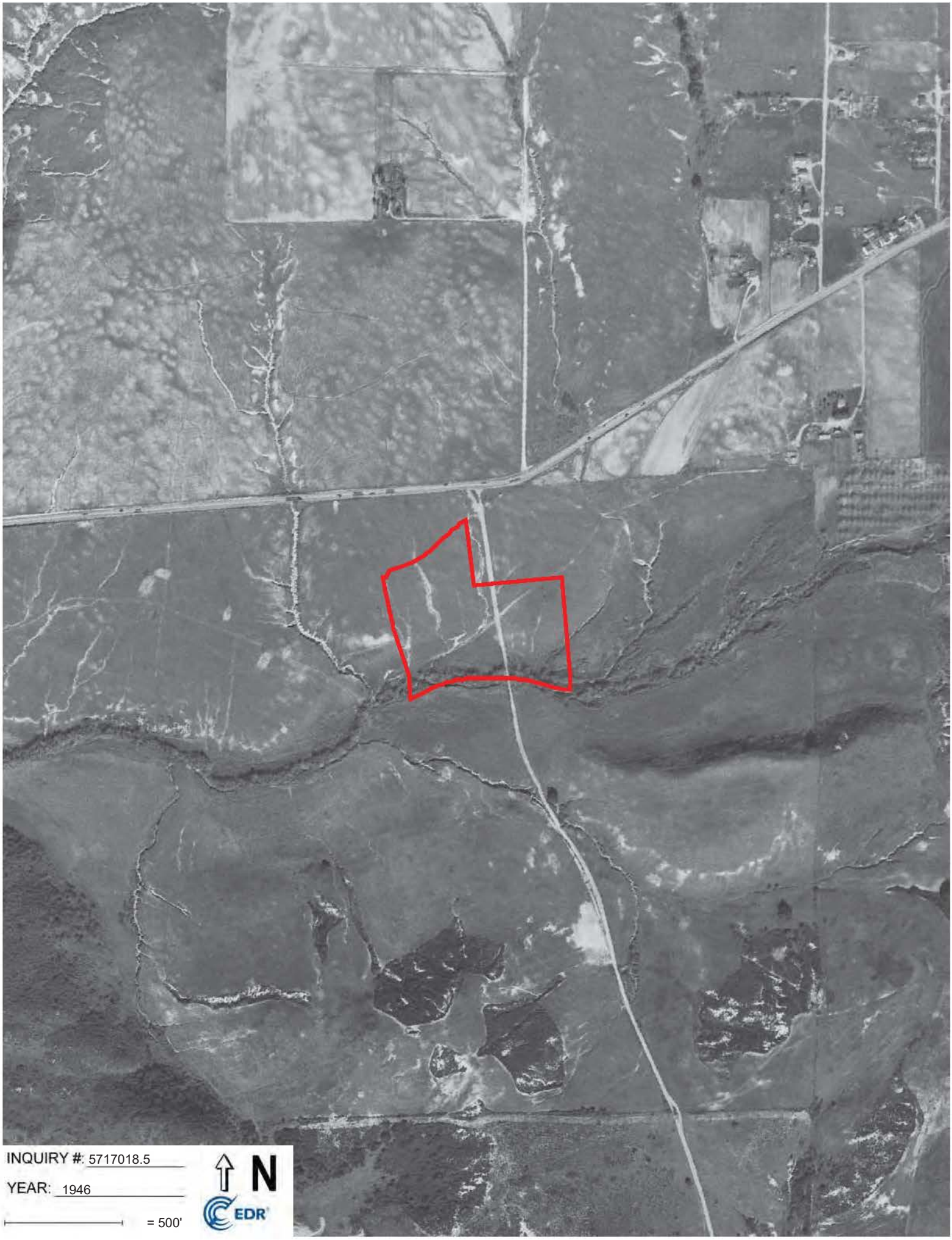
EDR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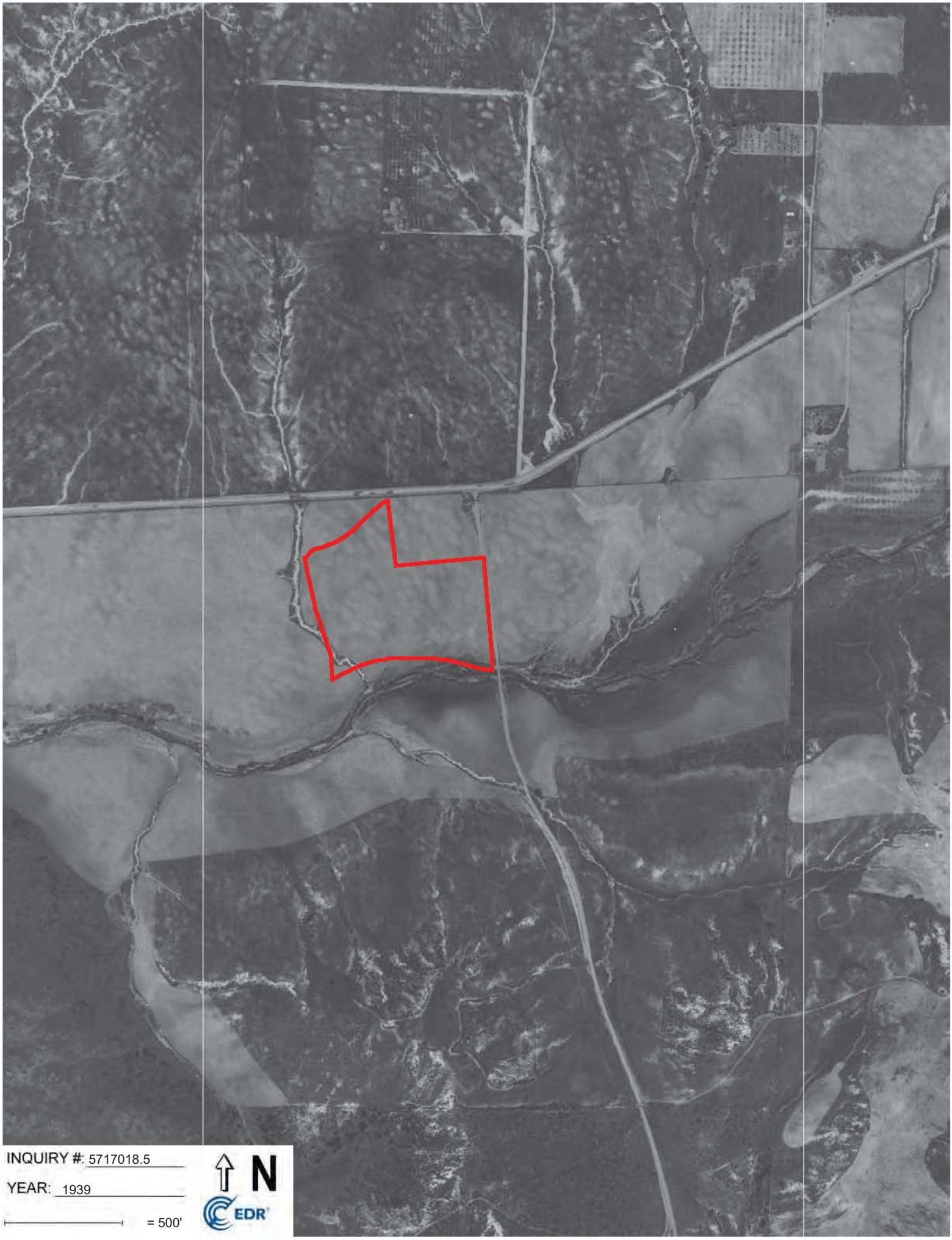
EDR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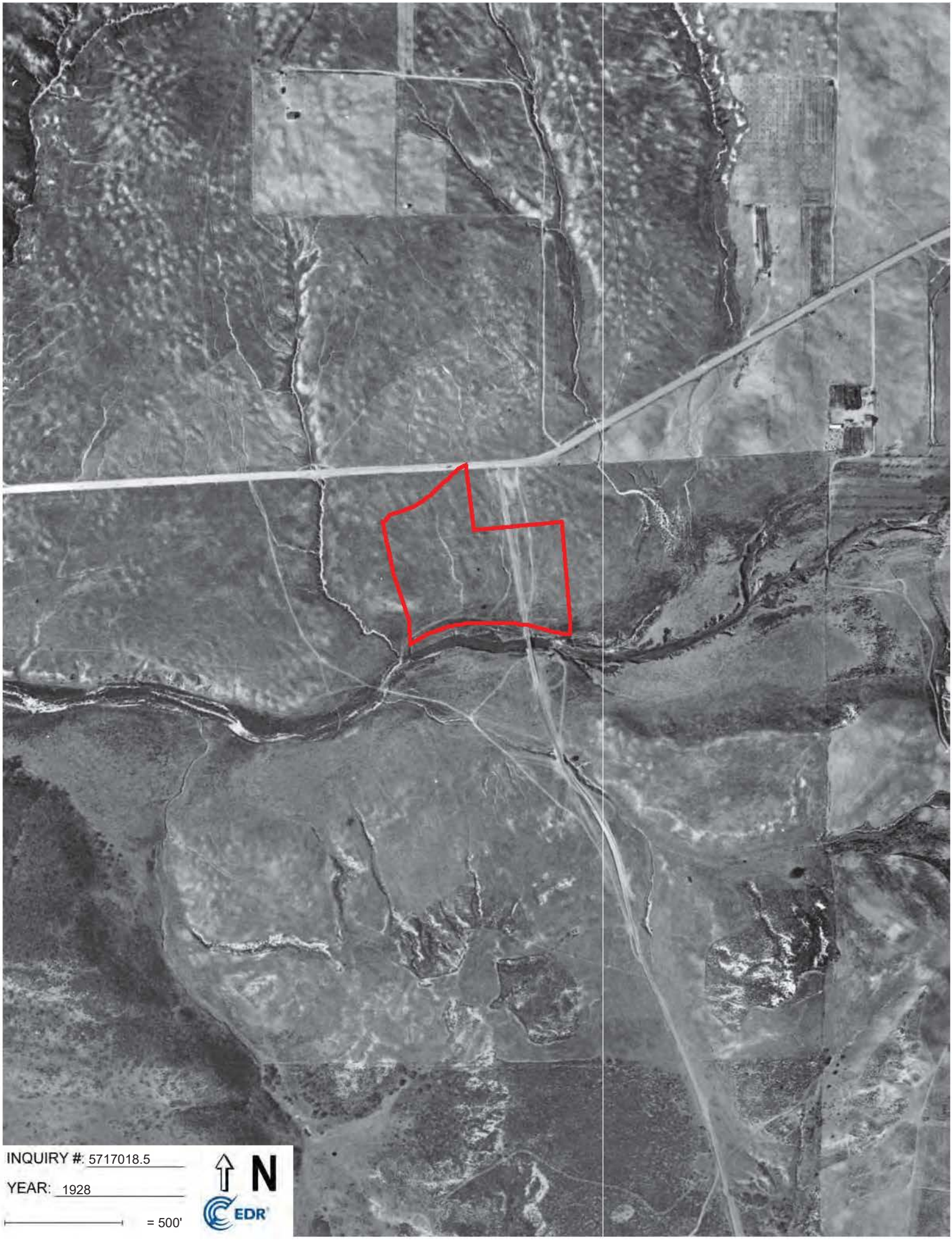
EDR



INQUIRY #: 5717018.5

YEAR: 1928

= 500'

N

EDR

Proposed CarMax - Oceanside

CAMINO CREST DR

OCEANSIDE, CA 92056

Inquiry Number: 5717018.3

July 15, 2019

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

07/15/19

Site Name:

Proposed CarMax - Oceanside
CAMINO CREST DR
OCEANSIDE, CA 92056
EDR Inquiry # 5717018.3

Client Name:

Enviroapplications Inc.
2831 Camino Del Rio South
San Diego, CA 92108
Contact: Fred Allee

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Certified Sanborn Results:

Certification # 87B5-4E3C-8B59

PO # 80.TBDCarMaxOceanside1.19.02.0

Project Proposed CarMax - Oceanside

UNMAPPED PROPERTY

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Sanborn® Library search results

Certification #: 87B5-4E3C-8B59

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- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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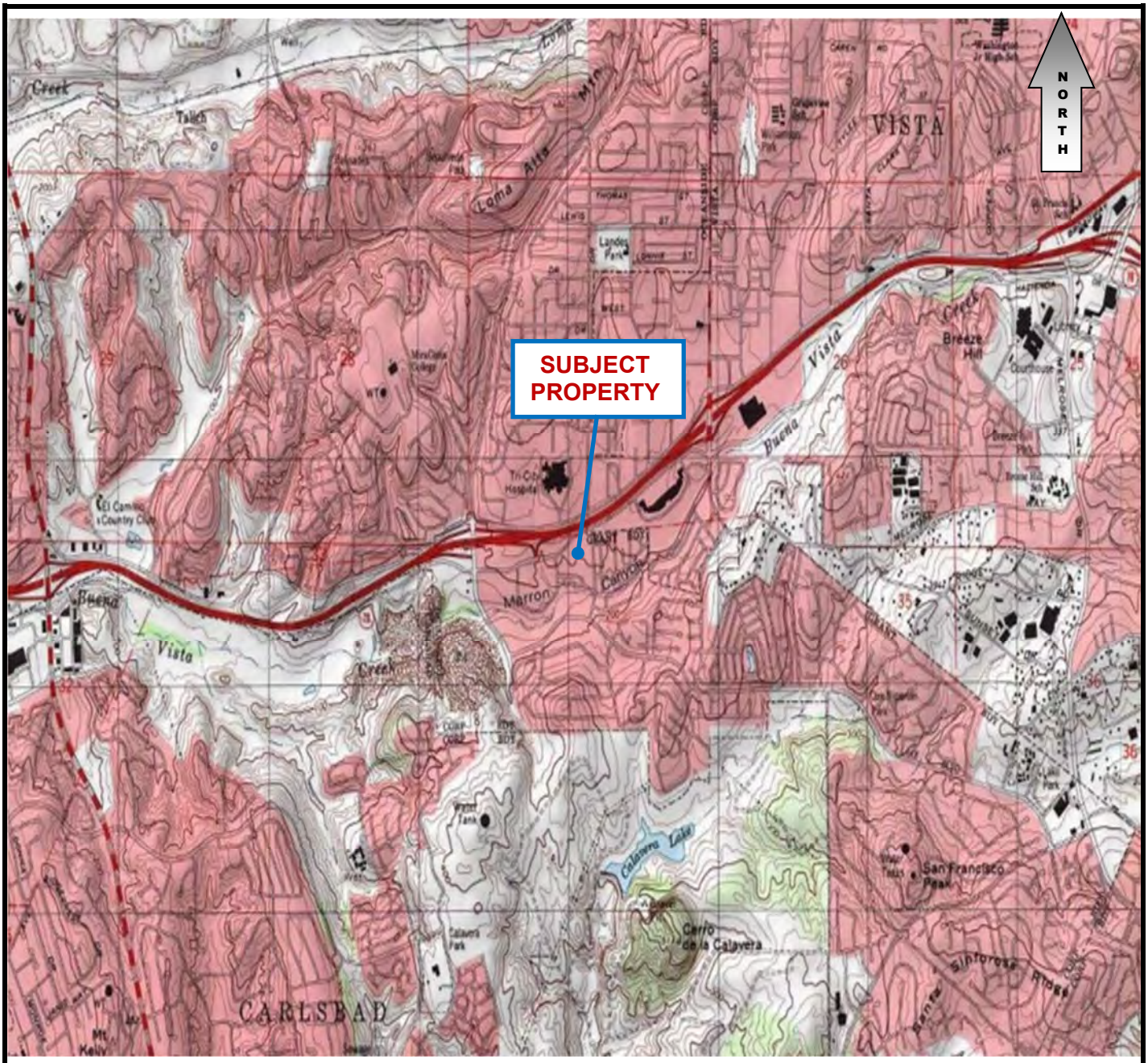


Relative Location in California

Project No.: 80.CARMAX1.19

1996 USGS TOPO MAP

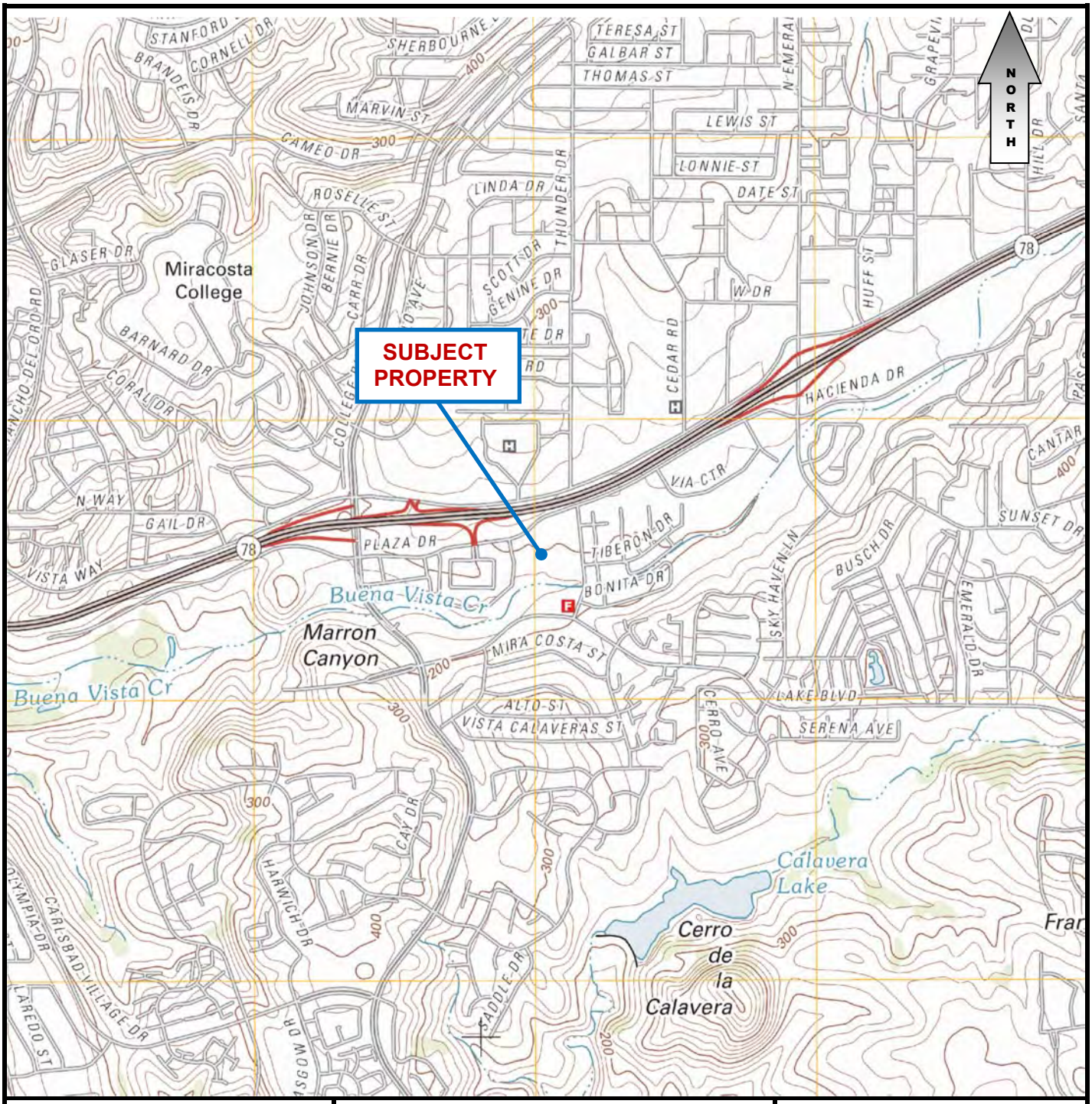
VACANT COMMERCIAL PROPERTY

3843-4003 Plaza Drive
3441-3552 Thunder Drive, Oceanside
(North) San Diego County, CA 92056

EnviroApplications, Inc.
Engineering & Consulting

Rio Sur Office Complex
2831 Camino Del Rio South
Suite 214, Mission Valley
San Diego, CA 92108-3828

Date: 07-25-2019	**Source:** USGS	**Scale:** None.	**Attachment: 6**



Relative Location in California

Project No.: 80.CARMAX1.19

2012 USGS TOPO MAP

VACANT COMMERCIAL PROPERTY

3843-4003 Plaza Drive
3441-3552 Thunder Drive, Oceanside
(North) San Diego County, CA 92056

EnviroApplications, Inc.
Engineering & Consulting

Rio Sur Office Complex
2831 Camino Del Rio South
Suite 214, Mission Valley
San Diego, CA 92108-3828

Date: 07-25-2019	**Source:** USGS	**Scale:** None.	**Attachment: 6**

ATTACHMENT 7

ENVIRONMENTAL PROFESSIONALS' QUALIFICATIONS

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Proposed Oceanside CarMax Facility
Vacant Commercial Property
3843-4003 Plaza Drive, Oceanside
(North) San Diego County, CA 92056

September 10, 2019

EAI Project No.: 80.CARMAX1.19
APNs: 168-012-42 & -43-00

FREDERIC A. ALLEE, E.I.T.
Senior Chemical/Environmental Engineer, Project Manager, QA/QC Reviewer

B.S. Chemical Engineering (Minors: Musical Performance and Numerical Analysis), 1984
University of California, San Diego (UCSD)

Overall Expertise

Mr. Allee has more than 34 years of professional experience primarily in environmental consulting, vapor intrusion and human health risk assessment, hazardous materials and waste management; project management, and, environmental due diligence. This experience includes all aspects of projects dealing with the application of technologies to the assessment and mitigation of contaminated sites.

Early work following college included geotechnical consulting, landfill gas management and construction materials testing and inspection. As an Environmental Regulator/Project Manager with the County of San Diego, he conducted compliance inspections of industries using hazardous materials and generating hazardous wastes; participated on interagency enforcement action teams; reviewed and evaluated technical reports relating to the discovery, assessment, and remediation of sites contaminated with hazardous materials/wastes; and directed the investigation and remediation of sites contaminated with petroleum, solvents, pesticides, heavy metals, asbestos, and other hazardous wastes. He provided regulatory oversight during the assessment and cleanup of over 350 contaminated sites worth more than $350 million, and was responsible for the regulatory closure of more than 200 contaminated sites.

Later, as a Project Engineer he provided technical support for the Navy's Site Characterization and Analysis Penetrometer System (SCAPS), the EPA's Hazardous Waste Compliance Monitoring for Mexican/U.S. Customs and environmental inspectors' training program, the Navy's Comprehensive Long-term Environmental Action for Navy (CLEAN) program, the DOD's Unexploded Ordnance (UXO) contaminated land Advanced Technology Demonstration (ATD) program, the Naval Environmental Leadership Program (NELP), the EPA's Superfund Innovative Technologies Evaluation (SITE) program, and several U.S.-to-Mexico technology transfer projects under the EPA's RCRA Enforcement and Permitting Assistance (REPA) program including the start of Border XXI. Mr. Allee remains active along the border as a reviewer for Border 2012 (the next milestone of border XXI). A variety of projects for private-sector clients have included contaminated site closures for major oil companies, cities, municipal water districts, and several different types of commercial companies. He additionally served as the Site Safety Officer responsible for health and safety issues during approximately 25 projects. Mr. Allee has participated in projects involving asbestos assessment and abatement, where he supervised sampling and disposal activities. He assisted the County of San Diego U.S./Mexico Border Environmental Health Specialist during the period from 1989 to 1992 in his efforts to train local health department, customs, and environmental agency inspectors on both sides of the border. Because of his interest in trans-border affairs, Mr. Allee utilized off-work hours to assist the Chief Technical Advisor to (and Hazardous Material Instructor for) the Tijuana Mayor's Office of Disaster Preparedness, the Tijuana Fire and Police Departments, the Baja California Department of Ecology, the Baja California Secretariat of Environmental Health Services, and the Federal Secretariat of Environmental Affairs. Mr. Allee has guest lectured for environmental science classes offered through both the University of California, San Diego and Riverside, Southwestern College, has instructed courses at NAS North Island; and, has been an instructor for the Certified Hazardous Materials Manager (CHMM) exam review. A sampling of his project experience is presented on the following pages.

Project Experience

Management

- Currently providing technical assistance and management for environmental due diligence, contaminant vapor intrusion risk assessment, litigation support, and closure of multiple projects involving release sites for major petroleum companies, other companies, municipalities and government.

- Lead technical teams in laboratory, office, and field settings ranging from management of 12 staff members supporting a full-service construction materials testing laboratory to management of support staff in report preparation while working in the geotechnical and environmental consulting industries. Performed management of site assessment and mitigation efforts simultaneously at as many as 140 contaminated sites, including review and comment on Work Plans, Sampling and Analysis Plans (SAPs), and a wide variety of Technical Reports. Also managed budgeting, regulatory permitting, multiple subcontractors, and sub-consultant, client and community relations and technology vendors, on a variety of both Federal government and private-sector client projects.

- Provided management, as well as regulatory, technical, and field support efforts as needed, for projects conducted at several military facilities under the Navy's CLEAN I and II with Engineering Field Activity West. Included preparation of cost estimates, work plans, sampling plans, quality assurance project plans, health and safety plans, monthly status reports, and technical memorandums and reports. Performed all work on these projects with the goal of mitigating human health and environmental impact concerns leading to closure of the sites by Records of Decision with the oversight agencies.

Engineering and Technology

- Provided project engineering services for the UXO ATDs that took place at the Yuma Proving Ground in Arizona during mid to late 1995. Performed work under contract to the Naval Explosive Ordnance Disposal Technology Division. Also conducted planning and preparation meetings with Yuma Proving Ground representatives, and arranged procurement of equipment and supplies necessary for the demonstration. Included airborne and portable earth-based innovative technologies utilizing combinations of new ground penetrating radar and magnetometer systems.

- Provided engineering support to SITE that included technical and regulatory expertise as needed for a contract to support the EPA's SITE program. Reviewed laboratory sample analysis data for the wastes generated during a SITE demonstration for the Fiery Marsh site at NAS North Island (IR Site 9); completed the necessary Navy, regulatory agency, and civilian disposal company paperwork regarding the wastes; then coordinated the proper recycling, treatment, and disposal of the wastes.

- Provided technical support on an as-needed basis for the U.S. Navy's SCAPS contract. Projects included dense data assessment of several Southwest Division CLEAN underground storage tank (UST) petroleum release sites. Also assisted with the development and testing of SCAPS (a laser-induced fluorescent detector integrated with a cone penetrometer capable of providing real time, in-situ measurement of petroleum contaminant concentrations). Assisted in the field deployment and testing of new SCAPS sensors that were to be used to detect chlorinated solvents, saturated zone interface and hydrogeologic parameters, and heavy metals.

Chemical/Environmental Emergency Response

Responded to approximately 20 emergency response incidents involving abandoned and spilled chemicals from illegal methamphetamine drug labs, fires at industrial facilities (including plating facilities), radioactive sources at landfills, and pesticide spills. Included selection and use of appropriate personal protective equipment (Levels A-C), selection and use of monitoring equipment (CGI/HNu/Draeger tubes and radiation meters), establishment of work zones, containment of spills, identification and categorization of known and unknown chemicals (HAZCAT) with supervision and documentation of cleanup actions.

- Responded to a public emergency incident that involved gasoline released to storm drain systems. Monitored areas for explosive conditions and potential ignition sources. Supervised and documented the cleanup actions taken by a contractor.

- Served on a team that investigated asbestos-contaminated soils that had been placed as fill during construction of a residential area in Paradise Hills, California. Included research of Potentially Responsible Parties (PRPs) who may have disposed of waste asbestos. Provided technical support of the U.S. EPA cleanup that was conducted based on the team's site assessment data.

- Served as the local Regulatory Oversight Specialist for a diesel and gasoline release to Rattlesnake Creek in Poway, California. Performed environmental engineering evaluations and cost analysis related to mitigating further releases to the creek. Began enforcement on PRP when they refused to abate situation as required by law. Provided all technical data to U.S. EPA Region IX when they assumed management and cleanup of the site as an emergency response in conjunction with the U.S. Coast Guard.

Preparedness and Prevention

- Inspected more than 150 businesses that were handling enough hazardous materials to necessitate creation of Chemical Emergency Contingency Plans. Assisted these businesses (including aerospace, plating, equipment manufacturing, furniture building, wastewater treatment related to coating operations, and auto painting) in the preparation of these plans. Facilitated contact between operators of similar industries in order to foster information exchange regarding process safety improvements.

- Served as Site Safety Officer and as a technology observer for the demonstration team during the UXO Detection, Identification, and Remediation Advanced Technology Demonstration at the Yuma Proving Ground in Arizona.

Spill Prevention Control and Countermeasures (SPCC) Plans

- Helped businesses to identify storm drain openings and other pathways by which accidental chemical releases might leave their control. Suggested methods (still) successfully being used to control access to pathways. Conducted re-inspections when warranted.

  Participated as a member of the San Diego Hazardous Waste Task Force (a multi-agency environmental crimes enforcement team) inspection of an aerospace company. Inspection verified and documented the complete lack of a SPCC Plan at the facility and indicated that several serious releases to the environment had occurred as a result. Involved environmental releases of post-process sludges containing heavy metals from metals finishing, plating, and production lines as well as improper handling and releases of both hydrocarbon-based and halogenated solvents.

Technical Support

- Has been instructor for more than 25 courses on emergency response, site assessment, remediation, and public relations for the University of California at San Diego, University of California at Riverside and Southwestern Community College Extensions.

- Assisted the Border Environmental Health Specialist to train County of San Diego Environmental Health Department, U.S. Customs, Environmental, Disaster Preparedness, Fire Department, and local law enforcement inspectors on both sides of the U.S./Mexico border. Regularly interacted with the EPA's REPA program staff to achieve technology transfer objectives.

- Trained U.S. and Mexican Customs and Environmental Inspectors in hazardous waste compliance monitoring. Assisted with the development of course materials for ongoing training, assembled actual contraband hazardous waste case studies, facilitated classes, and participated in the first train-the-trainers session to turn the technology transfer effort over to state and local agency experts in Arizona, California, New Mexico, and Texas.

- Worked through a REPA contract supporting EPA's Border XXI Program aimed at defining a shared vision between governments and communities along the U.S./Mexico border committed to environmental protection and sustainable development. Assisted in authoring guidance documents for Border XXI serving as both Facilitator and Note Taker during Border XXI community meetings along the Arizona/California border. Served as coauthor of the summary document for the meetings, while coordinating the delivery of court reporter transcripts from the meetings held in Arizona, California, New Mexico, and Texas to the EPA. Personal involvement continues with Border XXI as a Citizen Expert.

- Served as a Consultant to EPA officials who participated in the Border XXI binational meeting in Tijuana, Mexico that was held following the domestic community meetings. Also took notes for the public health and safety, emergency response, and solid waste management binational task group sub-meetings.

- Served as co-chairman of the County of San Diego Site Assessment and Mitigation Division's technical work group that developed guidelines for preparation of Community Health and Safety Plans prior to performing environmental assessment and cleanup work at contaminated sites in San Diego County.

- Provided technical and administrative support to US EPA Region 9 during a long-term assessment and cleanup of a release of diesel fuel, kerosene and gasoline to Rattlesnake Creek in Poway, California.

Project Work Plans

- Prepared more than 250 assessment and remediation work plans for all types and sizes of public, municipal, private and U.S. Navy contaminated sites.

- Provided technical review and comment on more than 200 assessment and remediation work plans while working as a regulator.

- Prepared the technology demonstration plan for the U.S. Navy Site Characterization and Analysis Penetrometer System, which led to Cal-EPA and U.S. EPA certification of the technology.

Enforcement

- Provided documentation and information to the County of San Diego District Attorney's Office for an enforcement case on a Clean Water Act (CWA) violation regarding a release of petroleum to a waterway at a gas station release site.

- Provided expert testimony in court for the County of San Diego District Attorney's Office on an enforcement case regarding illegal abandonment and disposal of hazardous materials to the ground. Collected samples of hazardous materials, hazardous wastes, soil, and water to help provide evidence to prove the case.

- Assisted in planning and conducting a field investigation for the County of San Diego's Hazardous Material Task Force on an illegal hazardous waste dumping case.

International

- Provided environmental engineering services on a voluntary basis as a consultant for hazardous materials and public health and safety affairs. Involvement included subterranean explosive gas migration assessment and control, explosive sewer-storm drain conditions abatement, chemical emergency response drills, and air monitoring equipment training and procurement for municipalities and clients in the Republic of Mexico.

- Provided waste sampling and characterization services to Mexican manufacturing companies to characterize waste streams for recycling, treatment, and disposal under Mexican environmental agency scrutiny.

- Provided RCRA enforcement, permitting, and assistance (REPA) for a contract to support the EPA's REPA program, which consisted primarily of technology transfer regarding the management of hazardous materials and wastes to officials of the Republic of Mexico.

Other Related Experience

- Conducted expanded scope Phase I ESAs for two cellular communications Clients to ecologically (natural resources) and archaeologically (cultural and paleontological resources) evaluate remote, FCC-approved, cellular communications equipment and antennae station sites in compliance with CEQA/NEPA guidelines and requirements. Several sites in San Diego, Imperial and Riverside Counties were evaluated. Per CEQA/NEPA requirements, prepared and submitted written requests to government agencies, non-governmental agencies, academic institutions and foundations to assemble the required information. The information was then summarized and included, along with information addressing ASTM Phase I ESA standard criteria, in written reports to the Clients for assembly of final construction permitting packages to be submitted to the FCC, other agencies and stakeholders.

- Proposed, designed, budgeted, and coordinated groundwater and soil exploration and remediation projects. Performed projects involving air pollution control and air resources management. Also provided client support and engineering services, including quality assurance/quality control (QA/QC), during projects. Assisted staff-level engineers and geologists, and provided support for all projects involving regulatory compliance and/or permitting.

- Served as a Hazardous Materials Specialist for the County of San Diego's Department of Environmental Health. Provided consultation and education related to hazardous material and waste management to industry. Inspected hazardous waste generators assisting them in complying with applicable environmental regulations. Educated generators regarding resource recovery methods for hazardous liquids (e.g., used oil and solvents). Conducted special projects as assigned for both industry compliance and site assessment and mitigation.

- Served as Staff Engineer performing various duties to help operate a full-service construction materials testing laboratory. Supervised and scheduled lab and field activities for 4 to 12 engineering and geologic technicians. Assisted environmental engineering group as Staff Chemical/Environmental Engineer on environmental projects, as necessary.

- Served as a Student Engineer at a San Diego utility performing air quality control inspections that involved power plant exhaust stack emissions monitoring and sampling, and conducted laboratory chemical analyses of the air samples. Summarized the inspections for use by the company's management in documenting compliance with local, state, and federal air pollution control regulations. Conducted boiler efficiency testing procedures for two power plants.

Professional Certifications and Registrations

Engineer-in-Training, California (No. XE065066), 1986
Certificate in Hazardous Materials Management, UCSD, 1990
Colorado Listed Environmental Consultant 2000 - 2019
Equivalent 40-Hour OSHA Health & Safety Training (Agency-Grandfathered), 1989
8-Hour OSHA Site Supervisor's Certification, 1992
8-Hour OSHA Health & Safety Annual Update Certification, 1990 - 2018

Continuing Education and Training

Petroleum Vapor Intrusion Webinars - USEPA/OSWER/OUST, Cal/EPA DTSC 2010-2019
Mold Consulting Seminar, SECOR International Inc. - P.A. Platcow, CIH, 2003
8 Hour CPR and First Aid Courses, 1987 – 2015
Chevron Loss Prevention Training, SECOR International Inc. – P.A. Platcow, CIH, 2001
Top Quality Management and Streamlining Principles in Government, MRI, 1992
Incinerable Hazardous Waste Minimization Workshop, Cal-EPA, 1991
Waste Classification and the Land Ban Courses, U.S. EPA, 1990
Hazardous Waste Element of the San Diego Regional Solid Waste Management Plan, UCSD, 1990
Bioremediation of Contaminated Groundwater, Dr. Michael Piotrowski, 1990
Introduction to Environmental/Human Toxicology, UCSD, 1990
Update on Environmental Bioremediation, CDOHS, 1990
How to be a More Effective Supervisor, Career Track, 1990
Environmental Health Services Cross Orientation, County of San Diego (SD), 1990
Hazardous Incident Response Team Annual Level A Emergency Exercises, County of SD, 1990
Court Enforcement Case Preparation, San Diego County District Attorney's Office, 1990
Regulatory Framework for Toxic Substances Courses, UCSD, 1989
Aquifer Testing Methods Symposium, CDOHS, 1989

AB3777 Risk Management and Prevention Planning, UCSD, 1989
Assessment and Remediation of Chemicals in the Environment, UCSD, 1989

Permit Variances, Permit-by-Rule, Transportable Treatment Units Courses, CDOHS, 1989
AB2588 Air Toxic Hot Spots Courses, UCSD, 1989
Quality Assurance/Quality Control for Analytical Methods, Analytical Technologies Inc., 1989
Vector Control and Environmental Health, County of San Diego Vector Control Division, 1989
Hazardous Incident Response Team Contaminated Site Sampling Safety, County of San Diego, 1989
Emergency Preparedness, Response, and Planning, UCSD, 1989
Hazardous Incident Response Team (HIRT) Drug Lab Waste Training, County of SD, 1989
HIRT Hazardous Materials Field Instruments Trials, County of San Diego, 1989
Leaking Underground Storage Tank Tech and Environmental Compliance, California SWRCB, 1988
HIRT SCBA Level A and B Training and Certification, County of San Diego, 1988
Management of Chemical Releases, California Specialized Training Institute (CSTI), 1988
Site Assessment and Mitigation Technology Update Conferences, UCSD, 1988-2002
Principles of Industrial Hygiene Courses, UCSD, 1988

Current Status of the Leaking Underground Fuel Tank (LUFT) Document, CDOHS/DTSC, 1988
Groundwater Hydrogeology Course, Dr. Paul Hargis, UCSD-Extension, 1988
Introduction to Hazardous Materials Management, UCSD-Extension, 1988
Risk Assessment at Chemically Contaminated Sites Symposiums, SDRWQCB, 1988, 1990, 1992

Honors and Awards

Letter of Promotion, County of San Diego, 1988
Letter of Commendation, County of San Diego, 1989
Letter of Commendation, County of San Diego, May 1990
Letter of Commendation, County of San Diego, June 1990
Letters of Commendation, County of San Diego, 1991, 1992 and 1993

Publications and Presentations

Allee, F.A., "Introduction to the Phase 1, 2 and 3 Environmental Site Assessment Process and Regulations: The Rattlesnake Creek, Poway Fuel Release Case Study," presented to the Fall 2017 Hazardous Materials Management Series Class, SWC, San Diego, California, October 16.

Allee, F.A., "Assessment and Cleanup Technologies for Chemically Contaminated Sites, Health & Safety Plans and Environmental Career Pathways," presented to the Hazardous Materials Management Series Class, Southwestern College, San Diego, California, Fall 1993, 1996-2006, Winter 2010, 2014 thru 2019.

Allee, F.A., "Remediation Methods for Petroleum Hydrocarbon-Contaminated Sites," instructor for the Spring 1997 Courses in Newport Beach & Fresno, University of California at Riverside Extension.

Allee, F.A., "Introduction to Wastewater Treatment: The Clean Water Act, and Underground Storage Tank Management," presented at the Fall 1996 CHMM Review Course, University of Cincinnati, St. Louis, Missouri, October 17, 1996.

Allee, F.A., "Introduction to Wastewater Treatment: The Clean Water Act, and Underground Storage Tank Management," presented at the Fall 1996 CHMM Review Course, University of Cincinnati, St. Louis, Missouri, October 17, 1996.

Allee, F.A., "Introduction to the County of San Diego's Site Assessment and Mitigation Division: Regulations, Organization Structure, and Operations." presented to the Fall 1994 Regulatory Framework for Toxic Substances Class, University of California/San Diego (UCSD), La Jolla, California, October 4, 1994.

Allee, F.A., "Assessment and Cleanup Technologies for Chemically Contaminated Sites," presented to the Fall 1994 Hazardous Materials Management Series Class, SWC, San Diego, California, September 27, 1994 and October 29, 2014.

Allee, F.A., "Introduction to the County of San Diego's Site Assessment and Mitigation Division: Regulations, Organization Structure, and Operations," presented to the Spring 1994 Regulatory Framework for Toxic Substances Class, UCSD, La Jolla, California, April 6, 1994.

Allee, F.A. and P.M. Tanner, "Accomplishments of the Department of Environmental Health's (DEH) Customer Service Improvement Team," presented to the DEH Assistant Director and Division Chief's, San Diego, California, March 21, 1994.

Allee, F.A. and C. Bejar L., "Introduction to the Regulation of Underground Storage Tank Systems and Unauthorized Releases: The Rattlesnake Creek, Poway Fuel Release Case Study," presented to the Spring 1994, 2014 and 2015 Hazardous Materials Management Series Class, SWC, San Diego, California, March 16, 1994, March 24, 2014, March 16, 2015 and March 14, 2016.

Allee, F.A., "Accomplishments of the DEH's Customer Service Improvement Team," presented to the DEH Management Enhancement Group, San Diego, California, February 23, 1994.

Allee, F.A. and C. Bejar L., "Introduction to the Regulation of Hazardous Materials and Wastes: San Diego County's Industry Compliance Program: The Nelco Oil Co., National City Case Study," presented to the Fall 1994 Hazardous Materials Management Series Class, SWC, San Diego, California, November 9, 1994.

Allee, F.A., "Introduction to the County of San Diego's Site Assessment and Mitigation Division: Regulations, Organization Structure, and Operations," presented to the Fall 1993 Regulatory Framework for Toxic Substances Class, University of California/San Diego (UCSD), La Jolla, California, October 6, 1993.

Allee, F.A., "Assessment and Cleanup Technologies for Chemically Contaminated Sites," presented to the Fall 1993 Hazardous Materials Management Series Class, SWC, San Diego, California, September 30, 1993.

Allee, F.A. and C. Bejar L., "Introduction to the Regulation of Underground Storage Tank Systems and Unauthorized Releases: The Rattlesnake Creek, Poway Case Study," presented to the Spring 1993 Hazardous Materials Management Series Class, SWC, San Diego, California, April 12, 1993.

Allee, F.A., "Introduction to the County of San Diego's Site Assessment and Mitigation Division: Regulations, Organization Structure, and Operations," presented to the Spring 1993 Regulatory Framework for Toxic Substances Class, University of California/San Diego (UCSD), La Jolla, California, April 7, 1993.

Allee, F.A., "Current Status of the Poway Rattlesnake Creek Fuel Release: Community Health and Safety Concerns," presented at a special Poway Community Meeting, Poway, California, September 25, 1993.

Allee, F.A., "Current Status of the Poway Rattlesnake Creek Fuel Release: Administrative & Technical Approaches to Mitigate Community Health and Safety Concerns and Environmental Impacts," presented to the Poway Mayor and City Council, Town Hall, Poway, California, September 26, 1993.

Allee, F.A. and C. Bejar L., "Introduction to the Regulation of Hazardous Materials and Wastes: San Diego County's Industry Compliance Program: The Nelco Oil Co., National City Case Study," presented to the Fall 1992 Hazardous Materials Management Series Class, SWC, San Diego, California, October 27, 1992.

Allee, F.A., "Introduction to the County of San Diego's Site Assessment and Mitigation Division: Regulations, Organization Structure, and Operations," presented to the Fall 1992 Regulatory Framework for Toxic Substances Class, UCSD, September 1992, 1993, 1994, 1997.

BERNARD A. SENTIANIN, PG
Senior Geologist

M.S. Geology, 1989
San Diego State University
B.A. Geology, 1985
California State University, Bakersfield

As a senior project manager, he has hands on experience investigating, designing, installing, and managing large scale projects involving excavation/removals, above ground and in-situ remediation, soil vapor extraction, ventilation, and groundwater extraction/treatment. He has 30 years of environmental project management experience, and over 32 years professional geologic experience. Mr. Sentianin has extensive experience in planning, implementing and evaluating Phase I and Phase II environmental assessments in commercial real estate transactions.

Professional Experience

1997 TO 2019 Senior Geologist, EEI - As Senior Geologist of EEI since 1997, Mr. Sentianin provides consulting and technical services as a project manager, expert witness, third party reviewer, and senior geologist for development related due diligence, and well as investigation and cleanup efforts at sites impacted by Petroleum Hydrocarbons, heavy metals, pesticides, and chlorinated solvents.

1991 TO 1997 Senior Geologist, Senior Project Manager for PW Environmental - Established in-house engineering and consulting services for mid-sized environmental contractor. Established regulatory, vendor, and client contacts. Initiated policies governing technical report content and format and instituted in- house training program for new technical staff. Selected prioritized and procured required support equipment. Actively managed Phase I and Phase II investigation and remediation projects. Reviewed assessment data, prepared feasibility studies, and evaluated remedial alternatives while preparing Remedial Action Plans (RAP) for fuel, heavy metal, and solvent-impacted sites. Prepared health-based risk assessment on large cleanup site adjacent to health care facility. Permitted, implemented, and successfully completed the first in-situ groundwater bioremediation system in Ventura County. Reviewed and implemented numerous Phase I and Phase II environmental site assessments throughout Central and Southern California.

1989 TO 1991 Staff/Project Geologist for Nachant Environmental, Inc. - Planned, implemented, and managed environmental site investigations and remediation projects following appropriate regulatory and professional guidelines. Prepared and reviewed project cost proposals, correspondence, regulatory permits, assessment and investigation reports, and remedial action plans.

1987 to 1989 Teaching Assistant - San Diego State University Department of Geological Sciences and Department of Engineering.

Project Experience

Former Asphalt Plant, San Jose, CA. Assisted developer client with managing a large industrial site with multiple issues and negotiating closure requirements with Santa Clara County Environmental Health. Conducted additional investigations necessary to satisfy regulatory requirements, allowing development to continue while keeping residual petroleum contamination in place under managed conditions. Prepared closure report and summary of previous remedial and investigative efforts, obtaining closure.

Former Light Industrial Properties, Campbell, CA. Assisted residential developer with due diligence, investigation, and ultimately remediation of several contiguous industrial properties, formerly utilized for automotive repair, auto body work, construction material sales, and heavy equipment rental. Addressed City of Campbell and San Francisco Regional Water Quality Control Board concerns, obtaining approval/closure of open cases, allowing full development as multifamily residential.

Residential and Commercial Redevelopment Projects, Bay Area, CA. Conducted environmental due diligence and assisted with redevelopment planning for residential and commercial developers throughout the Bay Area and Sacramento Basin, including the communities of San Jose, Millbrae, Menlo Park, Sunnyvale, Oakland, Berkeley, Union City, Fremont, Antioch, Santa Rosa, Windsor, and the greater Sacramento metropolitan area including Stockton, Sacramento, West Sacramento, Roseville, Lincoln, Linda, and Auburn.

Southside Garden and Fremont Mews, Sacramento, CA. Conducted Phase I and Phase II environmental site assessments and evaluated environmental concerns on two community garden projects on behalf of the Capitol Area Development Authority. Coordinated regulatory oversight with Sacramento County Environmental Management Division and the State Office of Environmental Health Hazard Assessment. Prepared and evaluated requests for proposals for cleanup contractors and provided remediation oversight and management. Prepared closure documentation and obtained regulatory signoff form both the Southside Garden and Fremont Mews projects.

K Street Corridor – Sacramento, CA. Evaluated and conducted Phase I environmental site assessments on three block area of downtown Sacramento, as well as a number of individual properties in other areas within the K Street Corridor, on behalf of the City of Sacramento Downtown Development Group.

Globe Mills, Sacramento, CA. Conducted Phase I and Phase II environmental site assessment, evaluated environmental concerns and managed remediation for adaptive reuse project on behalf of Sacramento Housing and Redevelopment Agency. Coordinated regulatory oversight of the project with Sacramento County Environmental Management Division.

Electronics Manufacturing Facility/Fueling Depot, Santa Monica, CA. Performed soil and groundwater investigation, feasibility testing and evaluation of fuel hydrocarbon and chlorinated solvent plumes. Prepared RAP with design criteria for soil vapor extraction. After approval of RAP by State regulators, implemented and successfully completed remediation at site, obtaining closure.

Former Aerospace Facility, Santa Ana, CA. Evaluated existing Phase I and Phase II assessments. Performed soil, soil vapor, and groundwater investigations of chlorinated solvent plumes at multiple locations on site. Modeled and evaluated potential plume source areas. Initiated site-specific sampling protocol for chlorinated solvents. Liaison with lead regulatory agency regarding regional contamination issues and site closure requirements.

Major Land Owner/Developer, San Juan Capistrano, CA. Conducted Phase I and Phase II environmental site assessments at multiple sites in southern Orange County. Evaluated potential environmental concerns related to sand & gravel operations, fueling facilities, ordinance testing facilities, aerospace engineering labs, vehicle maintenance and repair facilities, agricultural operations, and illicit dump sites.

Professional Certifications and Registrations

Professional Geologist No. 5530, State of California.
40-Hour OSHA Health & Safety Training (29 CFR 1910.120)
8-Hour OSHA Health & Safety Annual Refresher Training

CRAIG SMITH, PG
Principal Scientist

M.S. Geology, 1986
San Diego State University
B.A. Chemistry, 1981
University of California, San Diego

Mr. Smith has over 25 years of professional experience in research, development, analyses and project management for both the U.S. Government and private sectors. His areas of expertise include environmental site assessment, due diligence for real estate transactions, site remediation and remedial system design, soil vapor and indoor air quality with respect to human health risk assessment, chemical engineering, analytical chemistry, modeling of groundwater and air, regulatory permitting (air and health agency), project supervision and strategy. Mr. Smith has been involved with development of *in-situ* environmental sensor technology and applications. Mr. Smith's academic and professional work has resulted in journal publication of several publications.

Professional Experience

Assessment

- Managed hazardous waste site assessments and supervised site remediation activities. Prepared proposals, cost estimates, performed modeling and analysis of environmental data and trends, prepared reports, and supervised all phases of projects. Involved with over 400 subsurface hazardous waste investigations focusing on petroleum, hydrocarbon, volatile organic compounds (VOCs), dry cleaning solvents, pesticide, asbestos, and metal contaminants. Mr. Smith personally managed over 100 of these projects.

- Managed regional account with major financial institution performing Phase I due diligence environmental assessments and subsequent Phase II assessments as necessary; over 100 annually. Assessments performed in accordance with current ASTM Standards, Bank Standards, and SBA.

- Both managed and conducted environmental site assessment of former and active dry cleaning facilities and plants involving tetrachloroethylene, Stoddard Solvent, and associated product impurities and degradation products.

- Managed assessment of downtown San Diego city block occupied by abandoned dairy industrial/commercial outlet. Performed investigation of fuel oil, waste oil, gasoline and kerosene in soil and ground water and ammonia refrigeration system with asbestos insulation. Prepared a feasibility study discussing remedial options, management plans, and cost/benefit analysis.

- Planned and directed assessment of heavy metal contaminated soil (lead, nickel, cadmium, copper, zinc) at a downtown San Diego metal supply company historically specializing in steel distribution, wagon makers' materials, blacksmith's supplies, while later plumbing and on-site galvanizing was performed.

- Performed subsurface assessment of 50,000-gallon gasoline spill at retail service station. Contamination extended greater than 100 feet below the ground surface. Modeled, designed and installed vapor-extraction well system.

- Directed assessment of non-permitted landfill at industrial-complex construction site in Southern California. Identified high molecular weight hydrocarbons, metals, pesticides and VOCs. Prepared remedial feasibility/risk assessment study with associate costs/benefit analysis involving 30,000 yards of stockpiled soils and remaining in-situ soils.

Remediation

- Managed and designed over fifteen fuel hydrocarbon remediation projects including high and low-volume soil vacuum extraction, soil ventilation, above- and below-ground water perfusion bioremediation and in-situ bioremediation. Monitored and interpreted data related to changes of subsurface environments due to the effects of remediation. Prepared and obtained Air District Permits and performed source compliance demonstrations.

- Designed and directed air permitting and RAP preparation of in-situ vapor extraction of paint-thinner contaminated soil extending to 50 feet below the ground surface. Both catalytic and thermal-oxidation vapor treatment technologies were implemented. Preliminary verification borings indicate residual hydrocarbon concentration less than 100 ppm remain in subsurface soils.

- Supervised and directed remedial excavation of soil contaminated with fuel hydrocarbons, solvents, and/or metals. Soils were segregated based on olfactory observations and field instrument measurements, and statistically characterized (where beneficial), to assess the most cost-effective disposal/treatment options.

- Installation of dual-pump free-product recovery system at service station. Pump effluent directed through separators and water polished with carbon prior to disclosure to POTW.

- Installed and operated vapor extraction equipment at multiple dry cleaning facilities reducing soil and soil vapor contaminant concentrations to regulatory acceptable levels to allow case site closure.

Research and Development

- Involved with development and improvement of vapor extraction systems and their controls.

- Developed electrode/electrolyte/buffer system to accurately measure pH *in situ*, for use in oceanographic expeditions. pH accuracy to ± 0.001 pH units.

- Synthesized experimental organic semiconductors followed by chemical modification and semiconductor property measurements.

- Performed engineering of water soluble drag reducing polymers. Experience included polymer design, synthesis, and property evaluation. Molecular weight measurements performed using HPLC,

LC, LALLS, and viscosity techniques. Polymer performance evaluated using varying diameter pipe flow studies.

- Utilized X-ray diffraction analyses of clay cuttings derived from oil exploration and production wells to assess petroleum mitigation and accumulation. Identified chemical and diagenetic trends and their relationships to natural gas production. Prepared journal publications.

- Performed general DOD chemical research, development, and experimentation using PID, FID, AA, XRD, and FTIR instrumentation. Security clearance: Secret.

- Analyzed oceanographic data, programmed, designed/engineered and executed chemical experiments. Alkalinity, pH, $C0_2$ and O_2 were emphasized for evaluation of bioactivity. Involved with ultrapurification of chemicals used in organic syntheses, extensive use of diffusion pumps; and inert environment settings (glove box). Security clearance: Secret

Professional Memberships

National Water Well Association
Member - San Diego County Health Department guidelines committees:
Past Member Technical Work Group for On-Site Treatment and Permitting
Past Member Technical Work Group for Hazardous Waste Determination

Professional Certifications and Registrations

Professional Geologist, California No. 8225
General Engineering and Contracting License (A), California (August 1997, 654498) w/ HAZ endorsement.
Registered Environmental Assessor, California (No. 3166)
40-Hour OSHA Health & Safety Training (29 CFR 1910.120)
8-Hour OSHA Health & Safety Annual Refresher Training 2016

Publications

"Long-Lived Optically Excited Infrared Modes in Cis-Rich Polyacetylene"; 1987, Bull, Am. Phys. Soc. 32 (3), p. 421.

"Smectite to Illite Transformation in the Forbes Formation"; 1987, 24th Annual Meeting of the Clay Mineral Society, Socorro, New Mexico, Abstracts p. 31.

"Smectite Dehydration and Gas Production in the Forbes Formation, Sacramento Valley, California"; Abstract, 1988, American Association of Petroleum Geologists Bulletin, Vol. 2, p. 395.

"Control of Air Emissions from Soil Venting Systems"; 1990, Innovative Hazardous Waste Technology Series; Physical/Chemical Processes, Technomic Publishing Co., Inc., Vol. 2, pp. 205-210.

"Interchain Decay of Soliton Pairs in Polyacetylene; 1988, Phys. Rev. V. 37, pg. 10814.

"Drag Reduction in Fluid Flows: Techniques for Friction Control", 1989, in Sellin, R. and Moses, R., Ellis Horwood Limited, Chichester, England, Chapter 3.

“The California Ground Water Purging Study for Petroleum Hydrocarbons,” Eleventh National Outdoor Action Conference and Exposition, Las Vegas, Nevada, p. 109, 1997.

APPENDIX C
Air Quality Assessment

AIR QUALITY ASSESSMENT

CarMax Auto Store
City of Oceanside, CA

Prepared By:

Ldn Consulting, Inc.
42428 Chisolm Trail
Murrieta, California 92562
760-473-1253

Prepared For:

REC Consultants
2442 Second Avenue
San Diego, CA 92101

October 1, 2020

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COMMON ACRONYMS

Air Quality Impact Assessments (AQIA)
Assembly Bill 32 (AB32)
California Air Resource Board (CARB)
California Ambient Air Quality Standards (CAAQS)
California Environmental Quality Act (CEQA)
Carbon Dioxide (CO_2)
Cubic Yards (CY)
Diesel Particulate Matter (DPM)
Environmental Protection Agency (EPA)
EPA Office of Air Quality Planning and Standards (OAQPS)
Hazardous Air Pollutants (HAPs)
Hydrogen Sulfide (H2S)
International Residential Code (IRC)
Level of Service (LOS)
Low Carbon Fuel Standard (LCFS)
Methane (CH4)
National ambient air quality standards (NAAQS)
Nitrous Oxide (N2O)
Reactive Organic Gas (ROG)
Regional Air Quality Strategy (RAQS)
San Diego Air Basin (SDAB)
San Diego Air Pollution Control District (SDAPCD)
South Coast Air Quality Management District (SCAQMD)
Specific Plan Area (SPA)
State Implementation Plan (SIP)
Toxic Air Contaminants (TACs)
Vehicle Miles Traveled (VMT)
Volatile Organic Compounds (VOC)

EXECUTIVE SUMMARY

This air quality impact study has been completed to determine air quality impacts (if any) associated with the development of the proposed CarMax auto sales dealership. The project is to be located on the southside of the 4000 block of Plaza Drive west of the Oceanside DMV in Oceanside, California. The project site is 10.98 acres.

Based upon this analysis, no direct or cumulative air quality impacts are expected from construction. Therefore, mitigation measures for criteria pollutants and fugitive dust from construction are not required. It should be noted that the project applicant has indicated that as a design feature all diesel equipment would be Tier 4 and that the grading contractor follow Best Management Practices (BMPs) for grading as it relates to minimizing air quality emissions and would comply with all SDAPCD rules and regulations.

A diesel particulate health risk analysis was conducted, and based on diesel exhaust emission quantities, the proposed project would generate less than significant diesel particulate health risk impacts during construction. Again, as a design feature, the project will utilize Tier 4 construction equipment and since all air quality modeling assumptions have included this feature, the Tier 4 construction equipment would be a requirement for the project to implement and would be a condition of approval by the City of Oceanside for this project.

The proposed project was analyzed for both a winter and summer operational environment. Based on the models, the project would not create any significant operation air quality impacts. Therefore, no operational mitigation measures are required.

Odor impacts from construction operations would be expected though would be considered short-term events and would not be considered a significant impact. Long term operational odors would not be expected.

Based on review of the traffic study, the nearest cumulative construction projects would be two housing projects located over ½ mile away each and the Tri City Hospital which in mostly constructed and operational. Given this, the proposed project is expected to generate less than significant cumulative construction emission impacts.

Finally, the Project site is zoned commercial and would not require a rezone for construction and operations. Thus, the project would be consistent with the growth assumptions in the City's General Plan and would not conflict with the RAQS or SIP.

1.0 INTRODUCTION

1.1 Purpose of this Study

The purpose of this Air Quality study is to determine potential air quality impacts (if any) that may be created by construction, area or operational emissions (short term or long term) from the proposed Project. Should impacts be determined, the intent of this study would be to recommend suitable mitigation measures to mitigate those impacts to the extent feasible.

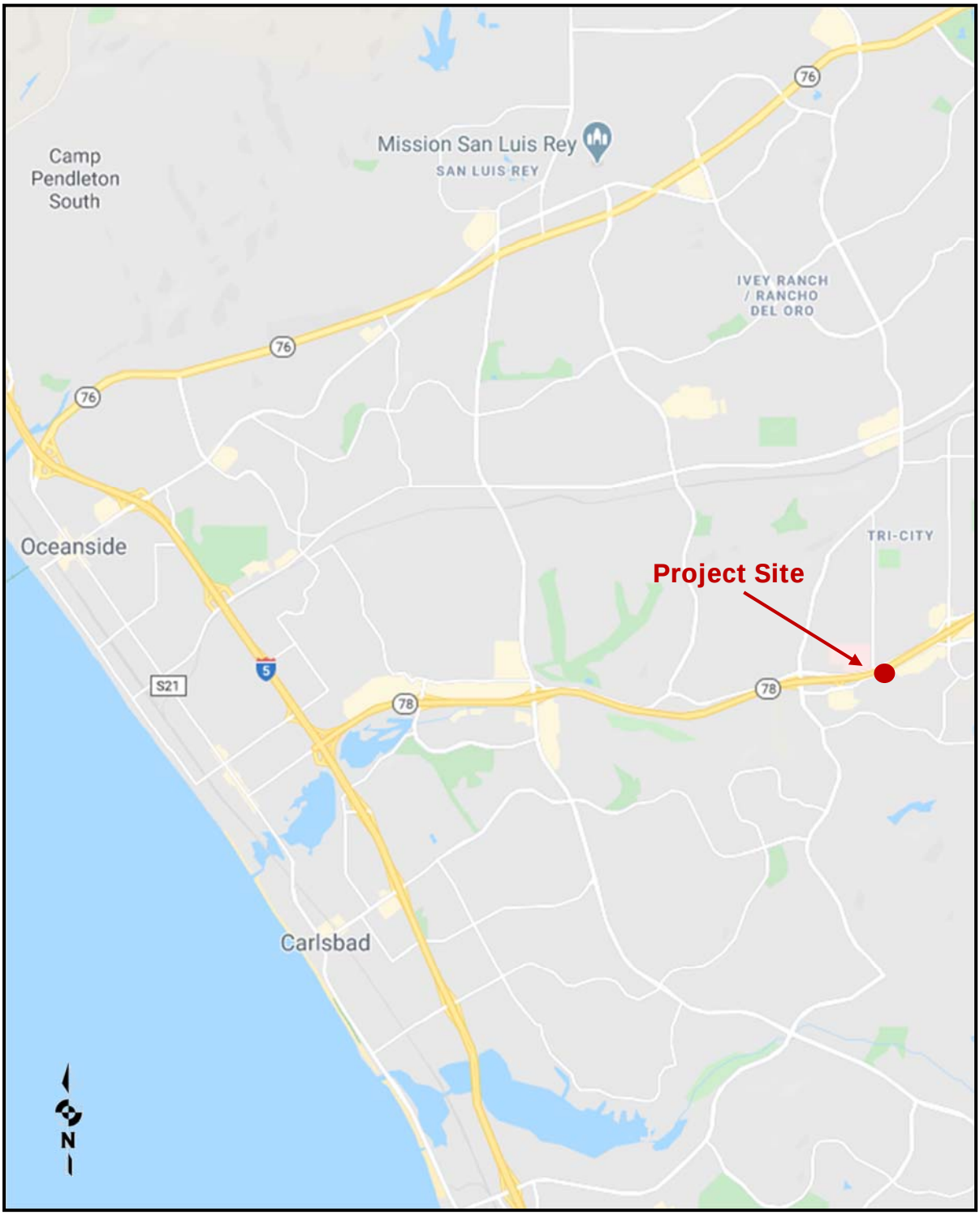
1.2 Project Location

The project is located on the south side of the 4000 block of Plaza Drive west of the Oceanside DMV in Oceanside, California. The project site is south of State Route 78 and approximately 4 miles east of Interstate 5. Locally, the project site is located south of the intersection of Plaza Drive and Thunder Drive. The project site is more specifically situated just south of the Tri-City Hospital. A general project vicinity map is shown in Figure 1–A on the following page.

1.3 Project Description

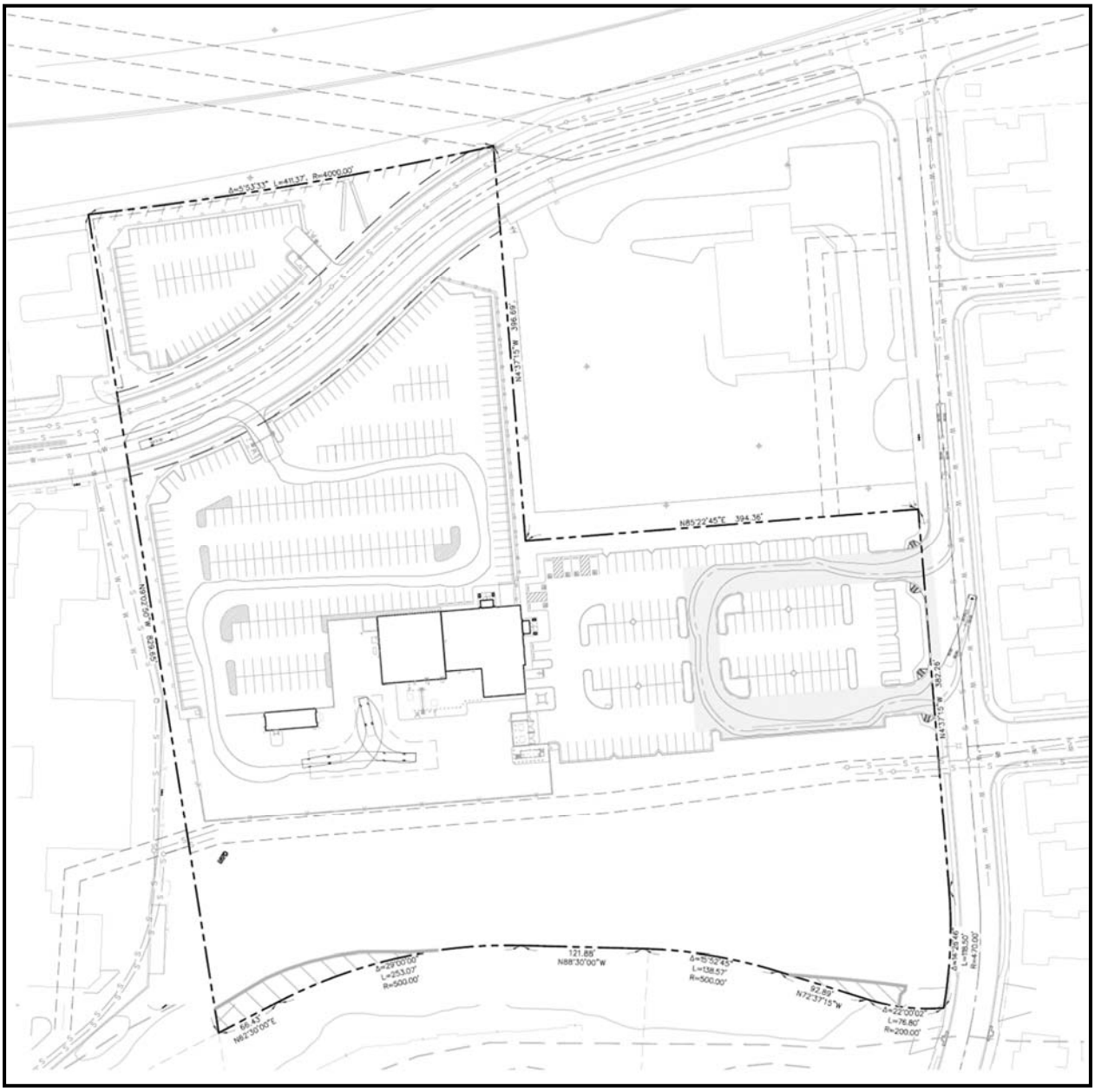
The proposed CarMax project would be situated on an overall vacant site which is 10.98 acres in total size. The project would consist of roughly 11,450 square feet (SF) of facilities and 476 parking spaces of which the majority of the locations would be for car sales. The project would also have roughly 2.34 acres of open space and landscaped areas. Construction of the project would begin early 2021 and be completed in just over one year. A site development plan is shown in Figure 1-B on Page 3 of this report.

Figure 1-A: Project Vicinity Map



Source: (Google 2020)

Figure 1-B: Proposed Project Site Plan



Source: (REC Consultants, 2020)

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Existing Setting

The existing site is located in the City of Oceanside and is zoned commercial. Land uses surrounding the Project mostly include both commercial and single family residential which are adjacent to the Project site. Finally, the Tri-City Hospital is located just north of the project. Elevations at the property range between 190 and 210 feet above mean sea level.

2.2 Climate and Meteorology

Climate within the San Diego Air Basin (SDAB) area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing winds from the west heats up. Most of southern California is dominated by high-pressure systems for much of the year, which keeps San Diego mostly sunny and warm. Typically, during the winter months, the high-pressure system drops to the south and brings cooler, moister weather from the north. It is common for inversion layers to develop within high-pressure areas, which mostly define pressure patterns over the SDAB. These inversions are caused when a thin layer of the atmosphere increases in temperature with height. An inversion acts like a lid preventing vertical mixing of air through convective overturning.

Meteorological trends within Oceanside produce daytime highs typically ranging between 65ºF in the winter to approximately 78ºF in the summer with August usually being the hottest month. Median temperatures range from approximately 55ºF in the winter to approximately 70ºF in the summer. The average humidity is approximately 64% in the winter and about 72% in the summer (City-Data, 2020).

2.3 Regulatory Standards

2.3.1 Federal Standards and Definitions

The Federal Air Quality Standards were developed per the requirements of The Federal Clean Air Act, which is a federal law that was passed in 1970 and further amended in 1990. This law provides the basis for the national air pollution control effort. An important element of the act included the development of national ambient air quality standards (NAAQS) for major air pollutants.

The Clean Air Act established two types of air quality standards otherwise known as primary and secondary standards. ***Primary Standards*** set limits for the intention of protecting public

health, which includes sensitive populations such as people with asthma, children and elderly. ***Secondary Standards*** set limits to protect public welfare to include the protection against decreased visibility, damage to animals, crops, vegetation and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards for principal pollutants, which are called "criteria" pollutants. These pollutants are defined below:

1. ***Carbon Monoxide (CO):*** *is a colorless, odorless, and tasteless gas and is produced from the partial combustion of carbon-containing compounds, notably in internal-combustion engines. Carbon monoxide usually forms when there is a reduced availability of oxygen present during the combustion process. Exposure to CO near the levels of the ambient air quality standards can lead to fatigue, headaches, confusion, and dizziness. CO interferes with the blood's ability to carry oxygen.*
2. ***Lead (Pb):*** *is a potent neurotoxin that accumulates in soft tissues and bone over time. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Because lead is only slowly excreted, exposures to small amounts of lead from a variety of sources can accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms can include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children.*
3. ***Nitrogen Dioxide (NO_2):*** *is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract and is one of the nitrogen oxides emitted from high-temperature combustion, such as those occurring in trucks, cars, power plants, home heaters, and gas stoves. In the presence of other air contaminants, NO_2 is usually visible as a reddish-brown air layer over urban areas. NO_2 along with other traffic-related pollutants is associated with respiratory symptoms, respiratory illness and respiratory impairment. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO_2 above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO_2 exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children.*
4. ***Particulate Matter (PM_{10} or $PM_{2.5}$):*** *is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary in shape, size and chemical composition, and can be made up of multiple materials such as metal, soot, soil, and dust. PM_{10} particles are 10 microns (µm) or less and $PM_{2.5}$ particles are 2.5 (µm) or less. These particles can contribute significantly to regional haze and reduction of visibility in California. Exposure to PM levels exceeding current air quality standards increases the risk of allergies such as asthma and respiratory illness.*

5. ***Ozone (O_3)****: is a highly oxidative unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Exposure to ozone above ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung functioning. Ozone can also damage materials such as rubber, fabrics and plastics.*
6. ***Sulfur Dioxide (SO_2)****: is a gaseous compound of sulfur and oxygen and is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO_2 is also emitted from several industrial processes, such as petroleum refining and metal processing. Effects from SO_2 exposures at levels near the one-hour standard include bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Children, the elderly, and people with asthma, cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most susceptible to these symptoms. Continued exposure at elevated levels of SO_2 results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.*

2.3.2 State Standards and Definitions

The State of California Air Resources Board (ARB) sets the laws and regulations for air quality on the state level. The California Ambient Air Quality Standards (CAAQS) are either the same as or more restrictive then the NAAQS and also set limits for four additional contaminants. Table 2.1 on the following page identifies both the NAAQS and CAAQS. The additional contaminants as regulated by the CAAQS are defined below:

1. ***Visibility Reducing Particles****: Particles in the air that obstruct the visibility.*
2. ***Sulfates****: are salts of Sulfuric Acid. Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. They increase the acidity of the atmosphere and form acid rain.*
3. ***Hydrogen Sulfide (H_2S)****: is a colorless, toxic and flammable gas with a recognizable smell of rotten eggs or flatulence. H_2S occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. Usually, H_2S is formed from bacterial breakdown of organic matter. Exposure to low concentrations of hydrogen sulfide may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some people with asthma. Brief exposures to high concentrations of hydrogen sulfide (greater than 500 ppm) can cause a loss of consciousness and possibly death.*
4. ***Vinyl Chloride****: also known as chloroethene and is a toxic, carcinogenic, colorless gas with a sweet odor. It is an industrial chemical mainly used to produce its polymer, polyvinyl chloride (PVC).*

Table 2.1: Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	**Average Time**	**California Standards[1]**		**Federal Standards[2]**		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m3)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m3)		0.070 ppm (137 µg/m3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m3	Gravimetric or Beta Attenuation	150 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m3		-		
Fine Particulate Matter (PM2.5)[9]	24 Hour	No Separate State Standard		35 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m3	Gravimetric or Beta Attenuation	12.0 µg/m3	15 µg/m3	
Carbon Monoxide (CO)	8 hour	9.0 ppm (10mg/m3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m3)	-	Non-Dispersive Infrared Photometry
	1 hour	20 ppm (23 mg/m3)		35 ppm (40 mg/m3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m3)		-	-	-
Nitrogen Dioxide (NO_2)[10]	Annual Arithmetic Mean	0.030 ppm (57 µg/m3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m3)[8]	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m3)		0.100 ppm[8] (188/ µg/m3)	-	
Sulfur Dioxide (SO_2)[11]	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.030 ppm[10] (for Certain Areas)	-	Ultraviolet Flourescence; Spectrophotometry (Pararoosaniline Method)[9]
	24 Hour	0.04 ppm (105 µg/m3)		0.14 ppm[10] (for Certain Areas) (See Footnote 9)	-	
	3 Hour	-		-	0.5 ppm (1300 µg/m3)	
	1 Hour	0.25 ppm (655 µg/m3)		75 ppb (196 µg/m3)	-	
Lead[12,13]	30 Day Average	1.5 µg/m3	Atomic Absorption	-		-
	Calendar Quarter	-		1.5 µg/m3	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	-		0.15 µg/m3		
Visibility Reducing Particles	8 Hour	See footnote 13				
Sulfates	24 Hour	25 µg/m3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m3)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3 . The existing national 24- hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3 , as was the annual secondary standard of 15 µg/m3 . The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: (WRCC, 2018)

2.3.3 Regional Standards

The State of California has 35 specific air districts, which are each responsible for ensuring that the criteria pollutants are below the NAAQS and CAAQS. Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as "non-attainment areas" for that pollutant. Currently, there are 15 non-attainment areas for the federal ozone standard and two non-attainment areas for the PM2.5 standard and many areas are in non-attainment for PM10 as well. California therefore created the California State Implementation Plan (SIP), which is designed to provide control measures needed to attain ambient air quality standards.

The San Diego Air Pollution Control District (SDAPCD) is the government agency which regulates sources of air pollution within County and all Cities within. Therefore, the SDAPCD developed a Regional Air Quality Strategy (RAQS) to provide control measures to try to achieve attainment status for state ozone standards with control measures focused on Volatile Organic Compounds (VOCs) and oxides of nitrogen (NOX). Currently, San Diego is in "non-attainment" status for federal and state O3 and State PM10 and PM2.5. An attainment plan is available for O3. The RAQS was adopted in 1992 and has been updated as recently as 2016 which was the latest update incorporating minor changes to the prior 2009 update.

The 2016 update mostly summarizes how the 2009 update has lowered NOX and VOCs emissions which reduces ozone and clarifies and enhances emission reductions by introducing for discussion three new VOC and four new NOX reduction measures. NOX and VOCs are precursors to the formation of ozone in the atmosphere. The criteria pollutant standards are generally attained when each monitor within the region has had no exceedances during the previous three calendar years. A complete listing of the current attainment status for criteria pollutants with respect to both federal and state nonattainment status by pollutants for County is shown in Table 2.2 on the following page (SDAPCD, 2018).

The RAQS is largely based on population predictions by the San Diego Association of Governments (SANDAG). Projects that produce less growth than predicted by SANDAG would generally conform to the RAQS. Projects that create more growth than projected by SANDAG may create a significant impact if the Project produces unmitigable air quality emissions or if the Project produces cumulative impacts.

Table 2.2: San Diego County Air Basin Attainment Status by Pollutant

Criteria Pollutant	Federal Designation	State Designation
Ozone (8-Hour)	Nonattainment	Nonattainment
Ozone (1-Hour)	Attainment *	Nonattainment
Carbon Monoxide	Attainment	Attainment
PM10	Unclassifiable **	Nonattainment
PM2.5	Attainment	Nonattainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility	No Federal Standard	Unclassified

** The federal 1-hour standard of 12 pphm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans.*
*** At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.*
(SDAPCD, 2018)

2.4 California Environmental Quality Act (CEQA) Significance Thresholds

The California Environmental Quality Act Guidelines provide a checklist to identify the significance of air quality impacts. These guidelines are found in Appendix G of the CEQA guidelines and are as follows:

AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:

A: Conflict with or obstruct implementation of the San Diego Regional Air Quality Strategy (RAQS) or applicable portions of the State Implementation Plan (SIP)?

B: Result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation?

C: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable Federal or State ambient air quality standard (PM_{10}, $PM_{2.5}$ or exceed quantitative thresholds for O_3 precursors, oxides of nitrogen [NO_X] and Volatile Organic Compounds [VOCs]?

D: Expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, or day-care centers) to substantial pollutant concentrations?

E: *Create objectionable odors affecting a substantial number of people?*

2.5 SDAPCD Rule 20.2 – Air Quality Impact Assessment Screening Thresholds

The SDAPCD has established thresholds in Rule 20.2 for new or modified stationary sources. The County's Guidelines for Determining Significance and Report Format and Content Requirements incorporate screening level thresholds from Rule 20.2 for use in all County related Air Quality Impact Assessments (AQIA) and for determining CEQA air quality impacts (County of San Diego, 2007). These screening criteria can be used to demonstrate that a project's total emissions would not result in a significant impact as defined by CEQA. Also, since SDAPCD does not have air quality impact threshold for VOCs, it is acceptable to use the Coachella Valley VOC threshold from South Coast Air Quality Management District (SCAQMD). Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the project's total air quality impacts are below the state and federal ambient air quality standards. These screening thresholds for construction and daily operations are shown in Table 2.3 on the following page.

Non-Criteria pollutants such as Hazardous Air Pollutants (HAPs) or Toxic Air Contaminants (TACs) are also regulated by the SDAPCD. Rule 1200 (Toxic Air Contaminants - New Source Review) adopted on June 12, 1996, requires evaluation of potential health risks for any new, relocated, or modified emission unit which may increase emissions of one or more toxic air contaminants. The rule requires that projects that propose to increase cancer risk to between 1 and 10 in one million need to implement toxics best available control technology (T-BACT) or impose the most effective emission limitation, emission control device or control technique to reduce the cancer risk. At no time shall the Project increase the incremental cancer risk to over 10 in one million or a health hazard index (chronic and acute) greater than one. Projects creating cancer risks less than one in one million are not required to implement T-BACT technology.

The U.S. EPA uses the term VOC and the CARB's Emission Inventory Branch (EIB) uses the term Reactive Organic Gases (ROG) to essentially define the same thing. There are minor deviations between compounds that define each term however for purposes of this study we will assume they are essentially the same due to the fact SCAQMD interchanges these words and because Air Quality models directly calculates ROG in place of VOC.

Table 2.3: Screening Level Thresholds for Criteria Pollutants

Pollutant	Total Emissions (Pounds per Day)
Construction Emissions	
Respirable Particulate Matter (PM_{10} and $PM_{2.5}$)	100 and 55
Nitrogen Oxide (NO_x)	250
Sulfur Oxide (SO_x)	250
Carbon Monoxide (CO)	550
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75
Operational Emissions	
Respirable Particulate Matter (PM_{10} and $PM_{2.5}$)	100 and 55
Nitrogen Oxide (NO_x)	250
Sulfur Oxide (SO_x)	250
Carbon Monoxide (CO)	550
Lead and Lead Compounds	3.2
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75

2.6 Local Air Quality

Criteria pollutants are measured continuously throughout the San Diego Air Basin. This data is used to track ambient air quality patterns throughout the County. As mentioned earlier, this data is also used to determine attainment status when compared to the NAAQS and CAAQS. The SDAPCD is responsible for monitoring and reporting monitoring data (SDAPCD, 2018). SDAPCD operates monitoring sites, which collect data on criteria pollutants.

The closest monitoring locations to the Project site is the Camp Pendleton monitoring location roughly 9.0 miles to the north, and the Camp Pendleton monitoring station roughly 12.9 miles to the east. Table 2.4 on the following page identifies the criteria pollutants monitored at the aforementioned stations.

Table 2.4: Three-Year Ambient Air Quality Summary near the Project Site

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2015	2016	2017	Days Exceeded over 3 years
O_3 (ppm)	Camp Pendleton or Escondido Monitoring Station	1 Hour	0.09 ppm	No Standard	0.09	0.08	0.09	0
		8 Hour	0.070 ppm	0.070 ppm	0.08	0.07	0.08	10
* PM_{10} ($\mu g/m^3$)		24 Hour	50 $\mu g/m^3$	150 $\mu g/m^3$	30	-	-	N/A
		Annual Arithmetic Mean	20 $\mu g/m^3$	No Standard	19.4	-	-	N/A
* $PM_{2.5}$ ($\mu g/m^3$)		24 Hour	No Standard	35 $\mu g/m^3$	29.4	-	-	N/A
		Annual Arithmetic Mean	12 $\mu g/m^3$	15 $\mu g/m^3$	8.6	-	-	N/A
NO_2 (ppm)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.006	0.006	0.006	N/A
		1 Hour	0.18 ppm	0.100 ppm	0.060	0.072	0.063	N/A
* CO (ppm)		1 Hour	20 ppm	35 ppm	3.1	-	-	N/A
		8 Hour	9 ppm	9 ppm	2.0	-	-	N/A

Notes:
1. - Yearly maximums marked with "-" indicated data was not available for either monitoring station.
2. Days exceeded marked with "N/A" indicate no data available
3. * Data was selected from the Escondido Monitoring Station. All other data presented was collected at the Camp Pendleton Monitoring Station.
4. SO_2 is only monitored at the El Cajon Monitoring Station. Within the entire County of San Diego, SO_2 emissions within the County are essentially Zero for all metrics including the Average, Maximum 24 hour and 1- hour standards. The Highest 1-hr measurement identified is .004 ppm and the most restrictive standard (CAAQS for SO_2) is 0.25 ppm.

3.0 METHODOLOGY

3.1 Construction Emissions Calculations

Air Quality impacts related to construction and daily operations were calculated using the latest CalEEMod 2016.3.2 air quality model, which was developed by BREEZE Software for South Coast Air Quality Management District (SCAQMD) in 2017. The construction module in CalEEMod is used to calculate the emissions associated with the construction of the Project and uses methodologies presented in the U.S. EPA AP-42 document with emphasis on Chapter 11.9. The CalEEMod input/output model is shown in ***Attachment A*** to this report.

The AERMOD dispersion model will be used to determine the concentration for air pollutants at any location near the pollutant generator. Additionally, the model will predict the maximum exposure distance and concentrations. The notable toxic air contaminant from construction is diesel exhaust since exposure to diesel exhaust is known to cause cancer and acute and chronic health effects. Diesel exhaust emissions can be estimated using the annual PM_{10} exhaust emissions from onsite construction operations obtained from the annual CalEEMod model output by summing each onsite source for the construction duration. The AERMOD files for the Project are provided in ***Attachment B*** which include the project design feature to utilize Tier 4 diesel equipment.

Once the dispersed concentrations of diesel particulates are estimated in the surrounding air, they are used to evaluate estimated exposure to people. Exposure is evaluated by calculating the dose in milligrams per kilogram body weight per day (mg/kg/d). For residential exposure, the breathing rates are determined for specific age groups, so inhalation dose (Dose-air) is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. The following algorithms calculate this dose for exposure through the inhalation pathways. The worst-case cancer risk dose calculation is defined in Equation 1 below (OEHHA, February 2015):

Equation 1 $$Dose_{air} = C_{air} * (BR/BW) * A * EF * (1x10^{-6})$$

$Dose_{air}$	=	Dose through inhalation (mg/kg/d)
C_{air}	=	Concentration in air (µg/m3) Annual average DPM concentration in µg/m3 -AERMOD predicts annual averages.
BR/BW	=	Daily breathing rate normalized to body weight (L/kg BW-day). See Table I.2 for the daily breathing rate for each age range.
A	=	Inhalation absorption factor (assumed to be 1)
EF	=	Exposure frequency (unitless, days/365 days)
1x10-6	=	Milligrams to micrograms conversion (10^{-3} mg/ µg), cubic meters to liters conversion (10^{-3} m^3/l)

Cancer risk is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor, the frequency of time spent at home and the exposure duration divided by averaging time, to yield the excess cancer risk. As described below, the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk for any given location. Specific factors as modeled are shown within the Project models attached to this report. The worst-case cancer risk calculation is defined in Equation 2 below (OEHHA, February 2015):

Equation 2

$$RISK_{inh\text{-}res} = DOSE_{air} \times CPF \times ASF \times ED/AT \times FAH$$

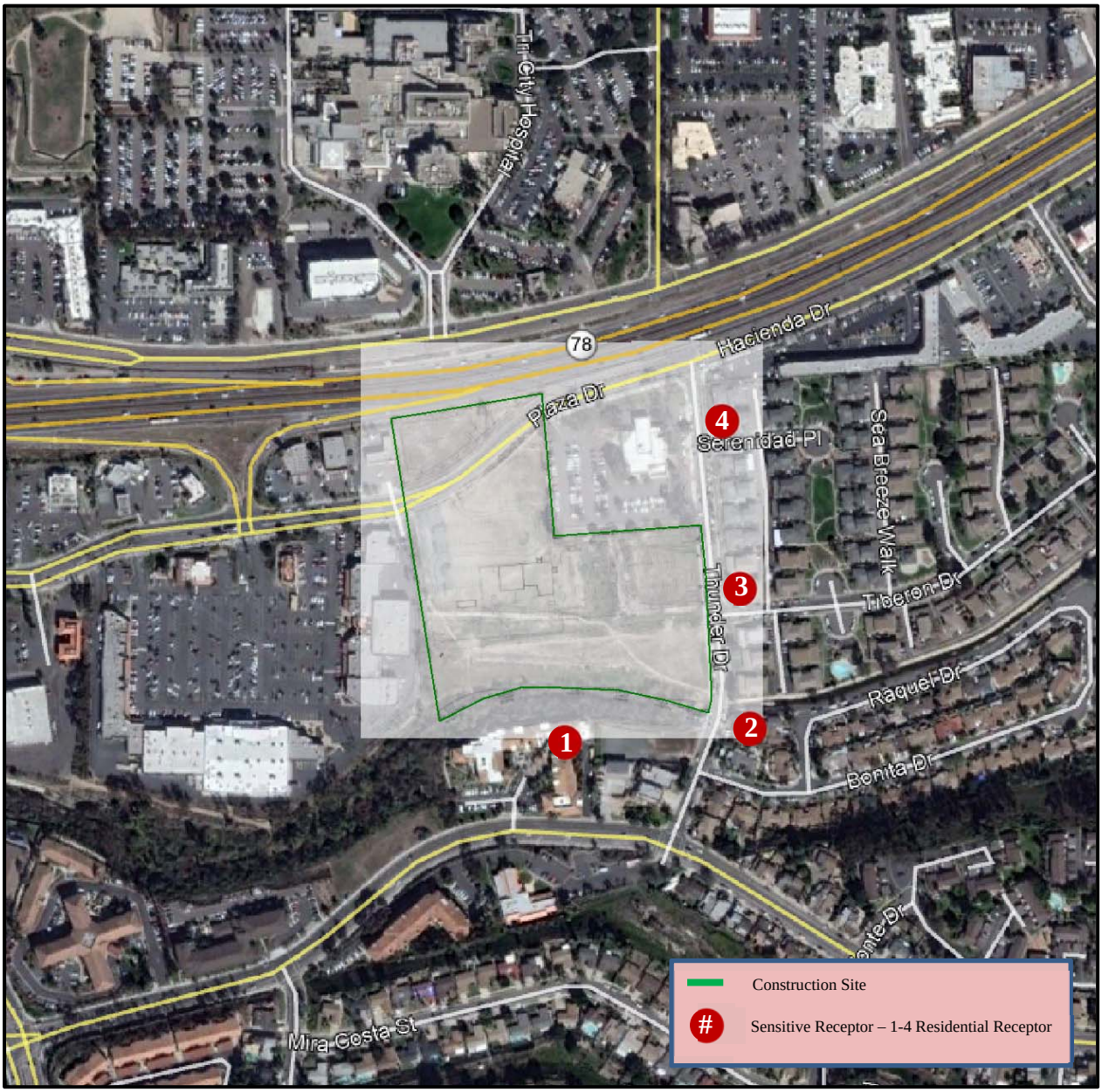
$RISK_{inh\text{-}res}$	=	Residential inhalation cancer risk
$DOSE_{air}$	=	Daily inhalation dose (mg/kg-day)
CPF	=	Inhalation cancer potency factor ($mg/kg\text{-}day^{-1}$)
ASF	=	Age sensitivity factor for a specified age group (unitless)
ED	=	Exposure duration (in years) for a specified age group
AT	=	Averaging time for lifetime cancer risk (years)
FAH	=	Fraction of time spent at home (unitless)

The California Office of Environmental Health Hazard Assessment (OEHHA) recommends that an exposure duration (residency time) of 30 years be used to estimate individual cancer risk for the Maximally Exposed Individual Resident (MEIR). OEHHA also recommends that the 30-year exposure duration be used as the basis for public notification and risk reduction audits and plans. Exposure durations of 9-years and 70-years are also recommended to be evaluated for the MEIR to show the range of cancer risk based on residency periods. If a facility is notifying the public regarding cancer risk, the 9-and 70-year cancer risk estimates are useful for people who have resided in their current residence for periods shorter and longer than 30 years. Health risk calculations are shown in ***Attachment C*** to this report.

Non-Cancer risks or risks defined as chronic or acute are also known with respect to DPM and are determined by the hazard index. To calculate hazard index, DPM concentration is divided by its chronic Reference Exposure Levels (REL). Where the total equals or exceeds one, a health hazard is presumed to exist. RELs are published by the Office of Environmental Health Hazard Assessment (OEHHA, February 2015). Diesel Exhaust has a REL of 5 $\mu g/m^3$ and targets the respiratory system.

A graphical representation of the modeling locations is shown on a site aerial below in Figure 3-A. The red points (1-4) represent the sensitive residential receptor locations where air quality emissions are calculated by AERMOD.

Figure 3-A: Construction Health Risk Model Setup



Source: (Google Earth Pro, 2019)

3.2 Construction Assumptions

The Project construction dates were estimated based on a construction kickoff in 2021 with construction completed in 2022. CalEEMod Version 2016.3.2 was utilized for all construction calculations and has been manually updated to reflect SDAPCD Rule 67 paint Volatile Organic Compound (VOC) limits. Table 3.1 shows the expected timeframes for the construction processes for all the Proposed Project infrastructure, facilities, improvements and structures at the site, as well as the expected number of pieces of equipment have been verified by the applicants Project Engineer.

Table 3.1: Expected Construction Equipment

Equipment Identification	Proposed Start	Proposed Completion	Quantity
Site Preparation	1/1/2021	1/14/2021	
Rubber Tired Dozers			3
Tractors/Loaders/Backhoes			4
Grading	1/15/2021	2/11/2021	
Excavators			1
Graders			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			3
Paving	2/12/2021	3/11/2021	
Pavers			2
Paving Equipment			2
Rollers			2
Building Construction	3/12/2021	1/27/2022	
Cranes			1
Forklifts			3
Generator Sets			1
Tractors/Loaders/Backhoes			3
Welders			1
Architectural Coating	12/31/2021	1/27/2022	
Air Compressors			1
Total Days			
This equipment list is based upon equipment inventory within CALEEMOD 2016.3.2. The quantity and types are based upon assumptions from Projects of similar size and scope in the County of San Diego and the City of Oceanside.			

3.3 Operational Emissions

Once construction is completed the Proposed Project would generate emissions from daily operations which would include sources such as area, energy, waste and water uses, which are also calculated within CalEEMod. Area Sources include consumer products, landscaping

and architectural coatings as part of regular maintenance. It is assumed that an average of 10 percent of the structural surface area will be re-painted with coatings compliant with SDAPCD Rule 67. Energy sources would be from uses such as onsite natural gas use and electricity which are based on default settings within CalEEMod.

Finally, the Project would also generate emissions through the use of vehicles for transportation. The Project was estimated to generate 475 ADT which includes test drives as identified within the project traffic study (LOS Engineering, 2020). These daily trips were utilized within the CalEEMod analysis using an urban setting. The operational model is also shown in ***Attachment A*** at the end of this report.

3.4 Odor Impacts

Potential onsite odor generators would only be expected during short term construction activities such as paving and possibly painting however, the odors would be considered short term and would not have a potential to create offensive odors and would therefore not be considered an impact under CEQA.

4.0 FINDINGS

4.1 Construction Findings

Construction of the proposed project is expected to start early 2021. The CarMax project will be constructed in two phases. Site preparation, remedial grading, and paving will last for approximately three months and construction-related activities will last for approximately 10 months for a total of 13 months. Grading activities would have a net surplus of soil and would require an export of roughly 10,700 cubic yards off site. The construction emissions are shown in Table 4.1 below.

Given these findings, no direct construction impacts are expected. Mitigation measures for criteria pollutants and fugitive dust from construction is not required. The project applicant has indicated that as a design feature all diesel equipment would be Tier 4 and that the grading contractor follow Best Management Practices (BMPs) for grading as it relates to minimizing air quality emissions and would comply with all SDAPCD rules and regulations.

Table 4.1: Expected Construction Emissions Summary – Pounds per Day

Year	ROG	NO_x	CO	SO_2	PM_{10} (Dust)	PM_{10} (Exhaust)	PM_{10} (Total)	$PM_{2.5}$ (Dust)	$PM_{2.5}$ (Exhaust)	$PM_{2.5}$ (Total)
2021	8.76	18.76	22.83	0.08	18.21	0.10	18.28	9.97	0.10	10.03
2022	8.74	5.75	22.59	0.05	1.05	0.06	1.11	0.28	0.06	0.34
Significance Threshold (lb/day)	75	250	550	250	-	-	100	-	-	55
Impact?	**No**	**No**	**No**	**No**	-	-	**No**	-	-	**No**

4.2 Construction Health Risks

The nearest sensitive receptors to the Project site are identified in Figure 3-A above. Based upon the annual air quality modeling results attached to this report, worst-case PM_{10} from exhaust emissions would cumulatively produce 0.00589 tons (over the total construction duration of 391-days) or an average of 0.000158 grams/second. The average emission rate over the grading area is 3.55×10^{-9} g/m^2/s, which was calculated as follows:

$$\frac{0.000158\,\frac{grams}{second}}{10.98\,acres * 4{,}046\,\frac{meters^2}{acre}} = 3.55 * 10^{-9}\,\frac{\frac{grams}{meters^2}}{second}$$

Utilizing the AERMOD dispersion model, we find that the worst-case annual concentration of DPM from construction is 0.036 µg/m^3. Utilizing the risk equation identified above in Section 3.1, the inhalation cancer risk for the closest residential receptor was found to be 7.97 which would not exceed the 10 per one million exposed significance threshold. Given this, a less than significant health risk impact would be expected.

Finally, there are known chronic health risks associated with diesel exhaust which are considered non-cancer risks. These risks are calculated based on methods identified in Section 3.1 of this report. From this we find that the annual concentration of 0.036 µg/m3 divided by the REL of 5 µg/m^3 yields a Health Hazard Index of 0.0072, which is less than one. Therefore, a less than significant chronic health risk is expected.

4.3 Operational Findings

Project Buildout is expected in 2022 and the first full year of operations would be expected in 2023 and was modeled as such. Additionally, the model was run for the winter, summer scenarios to determine maximum daily operational impacts for operation.

The expected daily pollutant generation can be calculated utilizing the product of the average daily miles traveled and the expected emissions inventory calculated by EMFAC2014; CALEEMOD 2016.3.2 performs this calculation. The daily pollutants calculated for summer and winter are shown in Tables 4.2 and 4.3. Based upon these calculations, the proposed project would produce less than significant air quality impacts under CEQA.

Table 4.2: Expected Summer Daily Pollutant Generation

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area	0.36	0.00	0.05	0.00	0.00	0.00
Energy	0.00	0.04	0.03	0.00	0.00	0.00
Mobile	0.53	1.75	4.05	0.01	1.01	0.28
Total (Unmitigated)	**0.90**	**1.78**	**4.13**	**0.01**	**1.02**	**0.28**
County Thresholds	75	250	550	250	100	55
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Daily pollutant generation assumes trip distances within CalEEMod
The final numbers are all rounded within Excel and are reported as rounded numbers.

Table 4.3: Expected Winter Daily Pollutant Generation

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area	0.36	0.00	0.05	0.00	0.00	0.00
Energy	0.00	0.04	0.03	0.00	0.00	0.00
Mobile	0.51	1.77	4.27	0.01	1.01	0.28
Total (Unmitigated)	**0.88**	**1.80**	**4.35**	**0.01**	**1.02**	**0.28**
County Thresholds	75	250	550	250	100	55
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Daily pollutant generation assumes trip distances within CalEEMod
The final numbers are all rounded within Excel and are reported as rounded numbers.

4.4 Odor Impact Findings

Odor impacts from construction operations would be considered short term and would not be considered an impact. The project would be a car sales facility which are not known to cause long term odor impacts. Given this a less than significant odor impact is expected for both short and long term scenarios.

4.5 Cumulative Impact Findings

The Project would not generate significant construction or operational impacts as demonstrated within this analysis. Furthermore, the Project would not cause any significant traffic impacts or add a significant number of vehicular trips to the offsite roadway network as was identified in the project traffic study.

An AERMOD analysis has been prepared with four sensitive receptors adjacent and near the Project site. It was found that no significant cancer health risks could be tied to construction assuming the project utilizes Tier 4 construction equipment which is a design feature of the project.

Based on review of the traffic study, the nearest cumulative construction projects would be two housing projects located over ½ mile away each and the Tri City Hospital which in mostly constructed and operational. Given this, the proposed project is expected to generate less than significant cumulative construction emission impacts.

Finally, the Project site is zoned commercial and would not require a rezone for construction and operations. Thus, the project would be consistent with the growth assumptions in the City's General Plan and would not conflict with the RAQS or SIP.

4.6 Conclusion of Findings

Based upon this analysis, no direct or cumulative air quality impacts are expected from construction. Therefore, mitigation measures for criteria pollutants and fugitive dust from construction are not required. It should be noted that the project applicant has indicated that as a design feature all diesel equipment would be Tier 4 and that the grading contractor follow Best Management Practices (BMPs) for grading as it relates to minimizing air quality emissions and would comply with all SDAPCD rules and regulations.

A diesel particulate health risk analysis was conducted, and based on diesel exhaust emission quantities, the proposed project would generate less than significant diesel particulate health risk impacts during construction. Again, as a design feature, the project will utilize Tier 4 construction equipment and since all air quality modeling assumptions have included this feature, the Tier 4 construction equipment would be a requirement for the project to implement and would be a condition of approval by the City of Oceanside for this project.

The proposed project was analyzed for both a winter and summer operational environment. Based on the models, the project would not create any significant operation air quality impacts. Therefore, no operational mitigation measures are required.

Odor impacts from construction operations would be expected though would be considered short-term events and would not be considered a significant impact. Long term operational odors would not be expected.

Based on review of the traffic study, the nearest cumulative construction projects would be two housing projects located over ½ mile away each and the Tri City Hospital which in mostly constructed and operational. Given this, the proposed project is expected to generate less than significant cumulative construction emission impacts.

Finally, the Project site is zoned commercial and would not require a rezone for construction and operations. Thus, the project would be consistent with the growth assumptions in the City's General Plan and would not conflict with the RAQS or SIP.

5.0 REFERENCES

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6.0 CERTIFICATIONS

The contents of this report represent an accurate depiction of the air quality environment and impacts within and surrounding the proposed project. This report was prepared utilizing the latest emission rates and reduction methodologies.

DRAFT

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Date September 28, 2020

ATTACHMENT A

CALEEMOD 2013.2.2 – Summer, Winter, Annual

CarMax Oceanside

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	476.00	Space	6.00	190,400.00	0
Automobile Care Center	11.45	1000sqft	4.98	11,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Area is 10.98 acres

Construction Phase -

Grading -

Architectural Coating - Rule 67 Paint

Vehicle Trips - Traffic Study indicates 475 ADT... trips rates updated to reflect this trip generation

Area Coating - Rule 67 Paint

Construction Off-road Equipment Mitigation - tier 4 mitigation

CarMax Oceanside - San Diego County, Summer

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_EF_Parking	250	100
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	20.00
tblConstructionPhase	NumDays	300.00	230.00
tblGrading	MaterialExported	0.00	10,700.00
tblLandUse	LotAcreage	4.28	6.00
tblLandUse	LotAcreage	0.26	4.98
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblVehicleTrips	ST_TR	23.72	41.48
tblVehicleTrips	SU_TR	11.88	41.48
tblVehicleTrips	WD_TR	23.72	41.48

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	10.5235	41.9191	21.9280	0.0825	18.2141	2.0455	20.2596	9.9699	1.8819	11.8517	0.0000	8,651.6958	8,651.6958	1.4321	0.0000	8,687.4980
2022	10.2884	20.4068	21.4791	0.0467	1.0531	0.9024	1.9555	0.2844	0.8538	1.1382	0.0000	4,580.6124	4,580.6124	0.7184	0.0000	4,598.5721
Maximum	**10.5235**	**41.9191**	**21.9280**	**0.0825**	**18.2141**	**2.0455**	**20.2596**	**9.9699**	**1.8819**	**11.8517**	**0.0000**	**8,651.6958**	**8,651.6958**	**1.4321**	**0.0000**	**8,687.4980**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	8.7613	18.7561	22.8279	0.0825	18.2141	0.1016	18.2772	9.9699	0.0993	10.0329	0.0000	8,651.6958	8,651.6958	1.4321	0.0000	8,687.4980
2022	8.7352	5.7461	22.5948	0.0467	1.0531	0.0564	1.1095	0.2844	0.0557	0.3401	0.0000	4,580.6124	4,580.6124	0.7184	0.0000	4,598.5721
Maximum	**8.7613**	**18.7561**	**22.8279**	**0.0825**	**18.2141**	**0.1016**	**18.2772**	**9.9699**	**0.0993**	**10.0329**	**0.0000**	**8,651.6958**	**8,651.6958**	**1.4321**	**0.0000**	**8,687.4980**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**15.93**	**60.69**	**-4.64**	**0.00**	**0.00**	**94.64**	**12.73**	**0.00**	**94.33**	**20.15**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3607	4.5000e-004	0.0498	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1067	0.1067	2.8000e-004		0.1137
Energy	3.9100e-003	0.0356	0.0299	2.1000e-004		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003		42.6630	42.6630	8.2000e-004	7.8000e-004	42.9165
Mobile	0.5320	1.7482	4.0545	0.0123	1.0032	9.9300e-003	1.0131	0.2681	9.2300e-003	0.2773		1,257.1661	1,257.1661	0.0718		1,258.9620
Total	**0.8966**	**1.7842**	**4.1341**	**0.0125**	**1.0032**	**0.0128**	**1.0160**	**0.2681**	**0.0121**	**0.2802**		**1,299.9357**	**1,299.9357**	**0.0729**	**7.8000e-004**	**1,301.9922**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3607	4.5000e-004	0.0498	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1067	0.1067	2.8000e-004		0.1137
Energy	3.9100e-003	0.0356	0.0299	2.1000e-004		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003		42.6630	42.6630	8.2000e-004	7.8000e-004	42.9165
Mobile	0.5320	1.7482	4.0545	0.0123	1.0032	9.9300e-003	1.0131	0.2681	9.2300e-003	0.2773		1,257.1661	1,257.1661	0.0718		1,258.9620
Total	**0.8966**	**1.7842**	**4.1341**	**0.0125**	**1.0032**	**0.0128**	**1.0160**	**0.2681**	**0.0121**	**0.2802**		**1,299.9357**	**1,299.9357**	**0.0729**	**7.8000e-004**	**1,301.9922**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	1/14/2021	5	10	
2	Grading	Grading	1/15/2021	2/11/2021	5	20	
3	Paving	Paving	2/12/2021	3/11/2021	5	20	
4	Building Construction	Building Construction	3/12/2021	1/27/2022	5	230	
5	Architectural Coating	Architectural Coating	12/31/2021	1/27/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 6

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 17,175; Non-Residential Outdoor: 5,725; Striped Parking Area: 11,424 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	1,338.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	84.00	33.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0623	0.0405	0.4774	1.4700e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		146.5994	146.5994	4.1800e-003		146.7040
Total	**0.0623**	**0.0405**	**0.4774**	**1.4700e-003**	**0.1479**	**1.0200e-003**	**0.1489**	**0.0392**	**9.4000e-004**	**0.0402**		**146.5994**	**146.5994**	**4.1800e-003**		**146.7040**

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**0.4656**	**2.0175**	**20.8690**	**0.0380**	**18.0663**	**0.0621**	**18.1283**	**9.9307**	**0.0621**	**9.9928**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0623	0.0405	0.4774	1.4700e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		146.5994	146.5994	4.1800e-003		146.7040
Total	**0.0623**	**0.0405**	**0.4774**	**1.4700e-003**	**0.1479**	**1.0200e-003**	**0.1489**	**0.0392**	**9.4000e-004**	**0.0402**		**146.5994**	**146.5994**	**4.1800e-003**		**146.7040**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6275	0.0000	6.6275	3.3789	0.0000	3.3789			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671		2,871.9285	2,871.9285	0.9288		2,895.1495
Total	**2.2903**	**24.7367**	**15.8575**	**0.0296**	**6.6275**	**1.1599**	**7.7874**	**3.3789**	**1.0671**	**4.4460**		**2,871.9285**	**2,871.9285**	**0.9288**		**2,895.1495**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4966	17.1487	4.1953	0.0516	1.1690	0.0523	1.2213	0.3204	0.0501	0.3704		5,657.6011	5,657.6011	0.4998		5,670.0952
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0337	0.3979	1.2300e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		122.1661	122.1661	3.4900e-003		122.2533
Total	**0.5485**	**17.1824**	**4.5932**	**0.0528**	**1.2922**	**0.0532**	**1.3454**	**0.3531**	**0.0508**	**0.4039**		**5,779.7673**	**5,779.7673**	**0.5033**		**5,792.3485**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6275	0.0000	6.6275	3.3789	0.0000	3.3789			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0296		0.0484	0.0484		0.0484	0.0484	0.0000	2,871.9285	2,871.9285	0.9288		2,895.1495
Total	**0.3632**	**1.5737**	**17.7527**	**0.0296**	**6.6275**	**0.0484**	**6.6759**	**3.3789**	**0.0484**	**3.4273**	**0.0000**	**2,871.9285**	**2,871.9285**	**0.9288**		**2,895.1495**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4966	17.1487	4.1953	0.0516	1.1690	0.0523	1.2213	0.3204	0.0501	0.3704		5,657.6011	5,657.6011	0.4998		5,670.0952
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0337	0.3979	1.2300e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		122.1661	122.1661	3.4900e-003		122.2533
Total	**0.5485**	**17.1824**	**4.5932**	**0.0528**	**1.2922**	**0.0532**	**1.3454**	**0.3531**	**0.0508**	**0.4039**		**5,779.7673**	**5,779.7673**	**0.5033**		**5,792.3485**

3.4 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.7860					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0416**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0337	0.3979	1.2300e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		122.1661	122.1661	3.4900e-003		122.2533
Total	**0.0519**	**0.0337**	**0.3979**	**1.2300e-003**	**0.1232**	**8.5000e-004**	**0.1241**	**0.0327**	**7.8000e-004**	**0.0335**		**122.1661**	**122.1661**	**3.4900e-003**		**122.2533**

3.4 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.7860					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0665**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0337	0.3979	1.2300e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		122.1661	122.1661	3.4900e-003		122.2533
Total	**0.0519**	**0.0337**	**0.3979**	**1.2300e-003**	**0.1232**	**8.5000e-004**	**0.1241**	**0.0327**	**7.8000e-004**	**0.0335**		**122.1661**	**122.1661**	**3.4900e-003**		**122.2533**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0998	3.3604	0.8564	8.9400e-003	0.2234	7.0600e-003	0.2305	0.0643	6.7500e-003	0.0711		961.4614	961.4614	0.0687		963.1789
Worker	0.2906	0.1888	2.2280	6.8600e-003	0.6900	4.7700e-003	0.6948	0.1830	4.3900e-003	0.1874		684.1303	684.1303	0.0195		684.6185
Total	**0.3903**	**3.5491**	**3.0844**	**0.0158**	**0.9134**	**0.0118**	**0.9253**	**0.2473**	**0.0111**	**0.2585**		**1,645.5918**	**1,645.5918**	**0.0882**		**1,647.7974**

3.5 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0998	3.3604	0.8564	8.9400e-003	0.2234	7.0600e-003	0.2305	0.0643	6.7500e-003	0.0711		961.4614	961.4614	0.0687		963.1789
Worker	0.2906	0.1888	2.2280	6.8600e-003	0.6900	4.7700e-003	0.6948	0.1830	4.3900e-003	0.1874		684.1303	684.1303	0.0195		684.6185
Total	**0.3903**	**3.5491**	**3.0844**	**0.0158**	**0.9134**	**0.0118**	**0.9253**	**0.2473**	**0.0111**	**0.2585**		**1,645.5918**	**1,645.5918**	**0.0882**		**1,647.7974**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0928	3.1757	0.8110	8.8400e-003	0.2234	6.0700e-003	0.2295	0.0643	5.8100e-003	0.0701		952.4255	952.4255	0.0666		954.0904
Worker	0.2747	0.1721	2.0718	6.6100e-003	0.6900	4.6600e-003	0.6947	0.1830	4.2900e-003	0.1873		659.0302	659.0302	0.0179		659.4776
Total	**0.3675**	**3.3478**	**2.8828**	**0.0155**	**0.9134**	**0.0107**	**0.9242**	**0.2473**	**0.0101**	**0.2575**		**1,611.4557**	**1,611.4557**	**0.0845**		**1,613.5680**

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0928	3.1757	0.8110	8.8400e-003	0.2234	6.0700e-003	0.2295	0.0643	5.8100e-003	0.0701		952.4255	952.4255	0.0666		954.0904
Worker	0.2747	0.1721	2.0718	6.6100e-003	0.6900	4.6600e-003	0.6947	0.1830	4.2900e-003	0.1873		659.0302	659.0302	0.0179		659.4776
Total	**0.3675**	**3.3478**	**2.8828**	**0.0155**	**0.9134**	**0.0107**	**0.9242**	**0.2473**	**0.0101**	**0.2575**		**1,611.4557**	**1,611.4557**	**0.0845**		**1,613.5680**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.9546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**8.1735**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0588	0.0382	0.4509	1.3900e-003	0.1397	9.6000e-004	0.1406	0.0370	8.9000e-004	0.0379		138.4550	138.4550	3.9500e-003		138.5537
Total	**0.0588**	**0.0382**	**0.4509**	**1.3900e-003**	**0.1397**	**9.6000e-004**	**0.1406**	**0.0370**	**8.9000e-004**	**0.0379**		**138.4550**	**138.4550**	**3.9500e-003**		**138.5537**

3.6 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.9546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**7.9843**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0588	0.0382	0.4509	1.3900e-003	0.1397	9.6000e-004	0.1406	0.0370	8.9000e-004	0.0379		138.4550	138.4550	3.9500e-003		138.5537
Total	**0.0588**	**0.0382**	**0.4509**	**1.3900e-003**	**0.1397**	**9.6000e-004**	**0.1406**	**0.0370**	**8.9000e-004**	**0.0379**		**138.4550**	**138.4550**	**3.9500e-003**		**138.5537**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.9546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**8.1591**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0556	0.0348	0.4193	1.3400e-003	0.1397	9.4000e-004	0.1406	0.0370	8.7000e-004	0.0379		133.3752	133.3752	3.6200e-003		133.4657
Total	**0.0556**	**0.0348**	**0.4193**	**1.3400e-003**	**0.1397**	**9.4000e-004**	**0.1406**	**0.0370**	**8.7000e-004**	**0.0379**		**133.3752**	**133.3752**	**3.6200e-003**		**133.4657**

3.6 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.9546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**7.9843**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0556	0.0348	0.4193	1.3400e-003	0.1397	9.4000e-004	0.1406	0.0370	8.7000e-004	0.0379		133.3752	133.3752	3.6200e-003		133.4657
Total	**0.0556**	**0.0348**	**0.4193**	**1.3400e-003**	**0.1397**	**9.4000e-004**	**0.1406**	**0.0370**	**8.7000e-004**	**0.0379**		**133.3752**	**133.3752**	**3.6200e-003**		**133.4657**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5320	1.7482	4.0545	0.0123	1.0032	9.9300e-003	1.0131	0.2681	9.2300e-003	0.2773		1,257.1661	1,257.1661	0.0718		1,258.9620
Unmitigated	0.5320	1.7482	4.0545	0.0123	1.0032	9.9300e-003	1.0131	0.2681	9.2300e-003	0.2773		1,257.1661	1,257.1661	0.0718		1,258.9620

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	474.95	474.95	474.95	473,135	473,135
Parking Lot	0.00	0.00	0.00		
Total	474.95	474.95	474.95	473,135	473,135

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056
Parking Lot	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.9100e-003	0.0356	0.0299	2.1000e-004		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003		42.6630	42.6630	8.2000e-004	7.8000e-004	42.9165
NaturalGas Unmitigated	3.9100e-003	0.0356	0.0299	2.1000e-004		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003		42.6630	42.6630	8.2000e-004	7.8000e-004	42.9165

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	362.636	3.9100e-003	0.0356	0.0299	2.1000e-004		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003		42.6630	42.6630	8.2000e-004	7.8000e-004	42.9165
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.9100e-003**	**0.0356**	**0.0299**	**2.1000e-004**		**2.7000e-003**	**2.7000e-003**		**2.7000e-003**	**2.7000e-003**		**42.6630**	**42.6630**	**8.2000e-004**	**7.8000e-004**	**42.9165**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0.362636	3.9100e-003	0.0356	0.0299	2.1000e-004		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003		42.6630	42.6630	8.2000e-004	7.8000e-004	42.9165
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.9100e-003**	**0.0356**	**0.0299**	**2.1000e-004**		**2.7000e-003**	**2.7000e-003**		**2.7000e-003**	**2.7000e-003**		**42.6630**	**42.6630**	**8.2000e-004**	**7.8000e-004**	**42.9165**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3607	4.5000e-004	0.0498	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1067	0.1067	2.8000e-004		0.1137
Unmitigated	0.3607	4.5000e-004	0.0498	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1067	0.1067	2.8000e-004		0.1137

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0436					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3125					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.6100e-003	4.5000e-004	0.0498	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1067	0.1067	2.8000e-004		0.1137
Total	**0.3607**	**4.5000e-004**	**0.0498**	**0.0000**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**		**0.1067**	**0.1067**	**2.8000e-004**		**0.1137**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0436					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3125					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.6100e-003	4.5000e-004	0.0498	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1067	0.1067	2.8000e-004		0.1137
Total	**0.3607**	**4.5000e-004**	**0.0498**	**0.0000**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**		**0.1067**	**0.1067**	**2.8000e-004**		**0.1137**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CarMax Oceanside

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	476.00	Space	6.00	190,400.00	0
Automobile Care Center	11.45	1000sqft	4.98	11,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Area is 10.98 acres

Construction Phase -

Grading -

Architectural Coating - Rule 67 Paint

Vehicle Trips - Traffic Study indicates 475 ADT... trips rates updated to reflect this trip generation

Area Coating - Rule 67 Paint

Construction Off-road Equipment Mitigation - tier 4 mitigation

CarMax Oceanside - San Diego County, Winter

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_EF_Parking	250	100
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	20.00
tblConstructionPhase	NumDays	300.00	230.00
tblGrading	MaterialExported	0.00	10,700.00
tblLandUse	LotAcreage	4.28	6.00
tblLandUse	LotAcreage	0.26	4.98
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblVehicleTrips	ST_TR	23.72	41.48
tblVehicleTrips	SU_TR	11.88	41.48
tblVehicleTrips	WD_TR	23.72	41.48

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	10.5758	42.0711	21.8645	0.0815	18.2141	2.0455	20.2596	9.9699	1.8819	11.8517	0.0000	8,546.4638	8,546.4638	1.4483	0.0000	8,582.6717
2022	10.3387	20.4213	21.4164	0.0460	1.0531	0.9027	1.9558	0.2844	0.8541	1.1385	0.0000	4,507.3111	4,507.3111	0.7212	0.0000	4,525.3415
Maximum	**10.5758**	**42.0711**	**21.8645**	**0.0815**	**18.2141**	**2.0455**	**20.2596**	**9.9699**	**1.8819**	**11.8517**	**0.0000**	**8,546.4638**	**8,546.4638**	**1.4483**	**0.0000**	**8,582.6717**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	8.8135	18.9081	22.7644	0.0815	18.2141	0.1027	18.2772	9.9699	0.1003	10.0329	0.0000	8,546.4638	8,546.4638	1.4483	0.0000	8,582.6717
2022	8.7854	5.7607	22.5321	0.0460	1.0531	0.0567	1.1098	0.2844	0.0560	0.3404	0.0000	4,507.3111	4,507.3111	0.7212	0.0000	4,525.3415
Maximum	**8.8135**	**18.9081**	**22.7644**	**0.0815**	**18.2141**	**0.1027**	**18.2772**	**9.9699**	**0.1003**	**10.0329**	**0.0000**	**8,546.4638**	**8,546.4638**	**1.4483**	**0.0000**	**8,582.6717**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**15.85**	**60.53**	**-4.66**	**0.00**	**0.00**	**94.59**	**12.73**	**0.00**	**94.29**	**20.15**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3607	4.5000e-004	0.0498	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1067	0.1067	2.8000e-004		0.1137
Energy	3.9100e-003	0.0356	0.0299	2.1000e-004		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003		42.6630	42.6630	8.2000e-004	7.8000e-004	42.9165
Mobile	0.5125	1.7659	4.2672	0.0117	1.0032	0.0100	1.0132	0.2681	9.3400e-003	0.2774		1,188.4009	1,188.4009	0.0745		1,190.2638
Total	**0.8770**	**1.8019**	**4.3468**	**0.0119**	**1.0032**	**0.0129**	**1.0161**	**0.2681**	**0.0122**	**0.2803**		**1,231.1706**	**1,231.1706**	**0.0756**	**7.8000e-004**	**1,233.2940**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3607	4.5000e-004	0.0498	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1067	0.1067	2.8000e-004		0.1137
Energy	3.9100e-003	0.0356	0.0299	2.1000e-004		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003		42.6630	42.6630	8.2000e-004	7.8000e-004	42.9165
Mobile	0.5125	1.7659	4.2672	0.0117	1.0032	0.0100	1.0132	0.2681	9.3400e-003	0.2774		1,188.4009	1,188.4009	0.0745		1,190.2638
Total	**0.8770**	**1.8019**	**4.3468**	**0.0119**	**1.0032**	**0.0129**	**1.0161**	**0.2681**	**0.0122**	**0.2803**		**1,231.1706**	**1,231.1706**	**0.0756**	**7.8000e-004**	**1,233.2940**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	1/14/2021	5	10	
2	Grading	Grading	1/15/2021	2/11/2021	5	20	
3	Paving	Paving	2/12/2021	3/11/2021	5	20	
4	Building Construction	Building Construction	3/12/2021	1/27/2022	5	230	
5	Architectural Coating	Architectural Coating	12/31/2021	1/27/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 6

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 17,175; Non-Residential Outdoor: 5,725; Striped Parking Area: 11,424 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	1,338.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	84.00	33.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0706	0.0454	0.4488	1.3800e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		137.6186	137.6186	3.9500e-003		137.7174
Total	**0.0706**	**0.0454**	**0.4488**	**1.3800e-003**	**0.1479**	**1.0200e-003**	**0.1489**	**0.0392**	**9.4000e-004**	**0.0402**		**137.6186**	**137.6186**	**3.9500e-003**		**137.7174**

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**0.4656**	**2.0175**	**20.8690**	**0.0380**	**18.0663**	**0.0621**	**18.1283**	**9.9307**	**0.0621**	**9.9928**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0706	0.0454	0.4488	1.3800e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		137.6186	137.6186	3.9500e-003		137.7174
Total	**0.0706**	**0.0454**	**0.4488**	**1.3800e-003**	**0.1479**	**1.0200e-003**	**0.1489**	**0.0392**	**9.4000e-004**	**0.0402**		**137.6186**	**137.6186**	**3.9500e-003**		**137.7174**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6275	0.0000	6.6275	3.3789	0.0000	3.3789			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671		2,871.9285	2,871.9285	0.9288		2,895.1495
Total	**2.2903**	**24.7367**	**15.8575**	**0.0296**	**6.6275**	**1.1599**	**7.7874**	**3.3789**	**1.0671**	**4.4460**		**2,871.9285**	**2,871.9285**	**0.9288**		**2,895.1495**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5103	17.2966	4.4594	0.0507	1.1690	0.0534	1.2224	0.3204	0.0511	0.3715		5,559.8531	5,559.8531	0.5162		5,572.7577
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0588	0.0378	0.3740	1.1500e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		114.6821	114.6821	3.2900e-003		114.7645
Total	**0.5692**	**17.3344**	**4.8334**	**0.0519**	**1.2922**	**0.0543**	**1.3465**	**0.3531**	**0.0519**	**0.4050**		**5,674.5353**	**5,674.5353**	**0.5195**		**5,687.5222**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6275	0.0000	6.6275	3.3789	0.0000	3.3789			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0296		0.0484	0.0484		0.0484	0.0484	0.0000	2,871.9285	2,871.9285	0.9288		2,895.1495
Total	**0.3632**	**1.5737**	**17.7527**	**0.0296**	**6.6275**	**0.0484**	**6.6759**	**3.3789**	**0.0484**	**3.4273**	**0.0000**	**2,871.9285**	**2,871.9285**	**0.9288**		**2,895.1495**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5103	17.2966	4.4594	0.0507	1.1690	0.0534	1.2224	0.3204	0.0511	0.3715		5,559.8531	5,559.8531	0.5162		5,572.7577
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0588	0.0378	0.3740	1.1500e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		114.6821	114.6821	3.2900e-003		114.7645
Total	**0.5692**	**17.3344**	**4.8334**	**0.0519**	**1.2922**	**0.0543**	**1.3465**	**0.3531**	**0.0519**	**0.4050**		**5,674.5353**	**5,674.5353**	**0.5195**		**5,687.5222**

3.4 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.7860					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0416**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0588	0.0378	0.3740	1.1500e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		114.6821	114.6821	3.2900e-003		114.7645
Total	**0.0588**	**0.0378**	**0.3740**	**1.1500e-003**	**0.1232**	**8.5000e-004**	**0.1241**	**0.0327**	**7.8000e-004**	**0.0335**		**114.6821**	**114.6821**	**3.2900e-003**		**114.7645**

3.4 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.7860					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0665**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0588	0.0378	0.3740	1.1500e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		114.6821	114.6821	3.2900e-003		114.7645
Total	**0.0588**	**0.0378**	**0.3740**	**1.1500e-003**	**0.1232**	**8.5000e-004**	**0.1241**	**0.0327**	**7.8000e-004**	**0.0335**		**114.6821**	**114.6821**	**3.2900e-003**		**114.7645**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1052	3.3514	0.9535	8.7100e-003	0.2234	7.3400e-003	0.2307	0.0643	7.0200e-003	0.0713		936.6037	936.6037	0.0730		938.4278
Worker	0.3295	0.2119	2.0943	6.4400e-003	0.6900	4.7700e-003	0.6948	0.1830	4.3900e-003	0.1874		642.2200	642.2200	0.0185		642.6812
Total	**0.4347**	**3.5633**	**3.0479**	**0.0152**	**0.9134**	**0.0121**	**0.9256**	**0.2473**	**0.0114**	**0.2588**		**1,578.8237**	**1,578.8237**	**0.0914**		**1,581.1090**

3.5 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1052	3.3514	0.9535	8.7100e-003	0.2234	7.3400e-003	0.2307	0.0643	7.0200e-003	0.0713		936.6037	936.6037	0.0730		938.4278
Worker	0.3295	0.2119	2.0943	6.4400e-003	0.6900	4.7700e-003	0.6948	0.1830	4.3900e-003	0.1874		642.2200	642.2200	0.0185		642.6812
Total	**0.4347**	**3.5633**	**3.0479**	**0.0152**	**0.9134**	**0.0121**	**0.9256**	**0.2473**	**0.0114**	**0.2588**		**1,578.8237**	**1,578.8237**	**0.0914**		**1,581.1090**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0979	3.1649	0.9028	8.6100e-003	0.2234	6.3300e-003	0.2297	0.0643	6.0500e-003	0.0704		927.6386	927.6386	0.0706		929.4045
Worker	0.3122	0.1932	1.9433	6.2100e-003	0.6900	4.6600e-003	0.6947	0.1830	4.2900e-003	0.1873		618.6815	618.6815	0.0169		619.1038
Total	**0.4101**	**3.3581**	**2.8462**	**0.0148**	**0.9134**	**0.0110**	**0.9244**	**0.2473**	**0.0103**	**0.2577**		**1,546.3201**	**1,546.3201**	**0.0875**		**1,548.5083**

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0979	3.1649	0.9028	8.6100e-003	0.2234	6.3300e-003	0.2297	0.0643	6.0500e-003	0.0704		927.6386	927.6386	0.0706		929.4045
Worker	0.3122	0.1932	1.9433	6.2100e-003	0.6900	4.6600e-003	0.6947	0.1830	4.2900e-003	0.1873		618.6815	618.6815	0.0169		619.1038
Total	**0.4101**	**3.3581**	**2.8462**	**0.0148**	**0.9134**	**0.0110**	**0.9244**	**0.2473**	**0.0103**	**0.2577**		**1,546.3201**	**1,546.3201**	**0.0875**		**1,548.5083**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.9546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**8.1735**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0667	0.0429	0.4239	1.3000e-003	0.1397	9.6000e-004	0.1406	0.0370	8.9000e-004	0.0379		129.9731	129.9731	3.7300e-003		130.0664
Total	**0.0667**	**0.0429**	**0.4239**	**1.3000e-003**	**0.1397**	**9.6000e-004**	**0.1406**	**0.0370**	**8.9000e-004**	**0.0379**		**129.9731**	**129.9731**	**3.7300e-003**		**130.0664**

3.6 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.9546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**7.9843**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0667	0.0429	0.4239	1.3000e-003	0.1397	9.6000e-004	0.1406	0.0370	8.9000e-004	0.0379		129.9731	129.9731	3.7300e-003		130.0664
Total	**0.0667**	**0.0429**	**0.4239**	**1.3000e-003**	**0.1397**	**9.6000e-004**	**0.1406**	**0.0370**	**8.9000e-004**	**0.0379**		**129.9731**	**129.9731**	**3.7300e-003**		**130.0664**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.9546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**8.1591**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0632	0.0391	0.3933	1.2600e-003	0.1397	9.4000e-004	0.1406	0.0370	8.7000e-004	0.0379		125.2094	125.2094	3.4200e-003		125.2948
Total	**0.0632**	**0.0391**	**0.3933**	**1.2600e-003**	**0.1397**	**9.4000e-004**	**0.1406**	**0.0370**	**8.7000e-004**	**0.0379**		**125.2094**	**125.2094**	**3.4200e-003**		**125.2948**

3.6 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.9546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**7.9843**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0632	0.0391	0.3933	1.2600e-003	0.1397	9.4000e-004	0.1406	0.0370	8.7000e-004	0.0379		125.2094	125.2094	3.4200e-003		125.2948
Total	**0.0632**	**0.0391**	**0.3933**	**1.2600e-003**	**0.1397**	**9.4000e-004**	**0.1406**	**0.0370**	**8.7000e-004**	**0.0379**		**125.2094**	**125.2094**	**3.4200e-003**		**125.2948**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5125	1.7659	4.2672	0.0117	1.0032	0.0100	1.0132	0.2681	9.3400e-003	0.2774		1,188.4009	1,188.4009	0.0745		1,190.2638
Unmitigated	0.5125	1.7659	4.2672	0.0117	1.0032	0.0100	1.0132	0.2681	9.3400e-003	0.2774		1,188.4009	1,188.4009	0.0745		1,190.2638

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	474.95	474.95	474.95	473,135	473,135
Parking Lot	0.00	0.00	0.00		
Total	474.95	474.95	474.95	473,135	473,135

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056
Parking Lot	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.9100e-003	0.0356	0.0299	2.1000e-004		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003		42.6630	42.6630	8.2000e-004	7.8000e-004	42.9165
NaturalGas Unmitigated	3.9100e-003	0.0356	0.0299	2.1000e-004		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003		42.6630	42.6630	8.2000e-004	7.8000e-004	42.9165

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	362.636	3.9100e-003	0.0356	0.0299	2.1000e-004		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003		42.6630	42.6630	8.2000e-004	7.8000e-004	42.9165
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.9100e-003**	**0.0356**	**0.0299**	**2.1000e-004**		**2.7000e-003**	**2.7000e-003**		**2.7000e-003**	**2.7000e-003**		**42.6630**	**42.6630**	**8.2000e-004**	**7.8000e-004**	**42.9165**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0.362636	3.9100e-003	0.0356	0.0299	2.1000e-004		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003		42.6630	42.6630	8.2000e-004	7.8000e-004	42.9165
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.9100e-003**	**0.0356**	**0.0299**	**2.1000e-004**		**2.7000e-003**	**2.7000e-003**		**2.7000e-003**	**2.7000e-003**		**42.6630**	**42.6630**	**8.2000e-004**	**7.8000e-004**	**42.9165**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3607	4.5000e-004	0.0498	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1067	0.1067	2.8000e-004		0.1137
Unmitigated	0.3607	4.5000e-004	0.0498	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1067	0.1067	2.8000e-004		0.1137

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0436					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3125					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.6100e-003	4.5000e-004	0.0498	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1067	0.1067	2.8000e-004		0.1137
Total	**0.3607**	**4.5000e-004**	**0.0498**	**0.0000**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**		**0.1067**	**0.1067**	**2.8000e-004**		**0.1137**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0436					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3125					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.6100e-003	4.5000e-004	0.0498	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1067	0.1067	2.8000e-004		0.1137
Total	**0.3607**	**4.5000e-004**	**0.0498**	**0.0000**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**		**0.1067**	**0.1067**	**2.8000e-004**		**0.1137**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CarMax Oceanside

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	476.00	Space	6.00	190,400.00	0
Automobile Care Center	11.45	1000sqft	4.98	11,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Area is 10.98 acres

Construction Phase -

Grading -

Architectural Coating - Rule 67 Paint

Vehicle Trips - Traffic Study indicates 475 ADT... trips rates updated to reflect this trip generation

Area Coating - Rule 67 Paint

Construction Off-road Equipment Mitigation - tier 4 mitigation

CarMax Oceanside - San Diego County, Annual

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_EF_Parking	250	100
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	20.00
tblConstructionPhase	NumDays	300.00	230.00
tblGrading	MaterialExported	0.00	10,700.00
tblLandUse	LotAcreage	4.28	6.00
tblLandUse	LotAcreage	0.26	4.98
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblVehicleTrips	ST_TR	23.72	41.48
tblVehicleTrips	SU_TR	11.88	41.48
tblVehicleTrips	WD_TR	23.72	41.48

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.3154	2.9744	2.5303	5.7200e-003	0.2654	0.1316	0.3970	0.1130	0.1232	0.2362	0.0000	514.1447	514.1447	0.0925	0.0000	516.4570
2022	0.0978	0.1943	0.2031	4.4000e-004	9.7800e-003	8.5700e-003	0.0184	2.6500e-003	8.1100e-003	0.0108	0.0000	39.0331	39.0331	6.2000e-003	0.0000	39.1881
Maximum	**0.3154**	**2.9744**	**2.5303**	**5.7200e-003**	**0.2654**	**0.1316**	**0.3970**	**0.1130**	**0.1232**	**0.2362**	**0.0000**	**514.1447**	**514.1447**	**0.0925**	**0.0000**	**516.4570**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1032	0.8293	2.6677	5.7200e-003	0.2654	7.2800e-003	0.2727	0.1130	7.1900e-003	0.1202	0.0000	514.1444	514.1444	0.0925	0.0000	516.4566
2022	0.0830	0.0551	0.2137	4.4000e-004	9.7800e-003	5.4000e-004	0.0103	2.6500e-003	5.3000e-004	3.1800e-003	0.0000	39.0331	39.0331	6.2000e-003	0.0000	39.1880
Maximum	**0.1032**	**0.8293**	**2.6677**	**5.7200e-003**	**0.2654**	**7.2800e-003**	**0.2727**	**0.1130**	**7.1900e-003**	**0.1202**	**0.0000**	**514.1444**	**514.1444**	**0.0925**	**0.0000**	**516.4566**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**54.93**	**72.09**	**-5.41**	**0.00**	**0.00**	**94.42**	**31.86**	**0.00**	**94.12**	**50.04**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	0.9890	0.2820
2	4-1-2021	6-30-2021	0.7564	0.2113
3	7-1-2021	9-30-2021	0.7647	0.2136
4	10-1-2021	12-31-2021	0.7701	0.2185
5	1-1-2022	3-31-2022	0.2966	0.1403
		Highest	0.9890	0.2820

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0654	4.0000e-005	4.4800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7100e-003	8.7100e-003	2.0000e-005	0.0000	9.2800e-003
Energy	7.1000e-004	6.4900e-003	5.4500e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	59.9376	59.9376	2.2600e-003	5.7000e-004	60.1640
Mobile	0.0902	0.3231	0.7549	2.1500e-003	0.1783	1.8100e-003	0.1801	0.0477	1.6900e-003	0.0494	0.0000	198.8963	198.8963	0.0120	0.0000	199.1969
Waste						0.0000	0.0000		0.0000	0.0000	8.8788	0.0000	8.8788	0.5247	0.0000	21.9969
Water						0.0000	0.0000		0.0000	0.0000	0.3418	6.9812	7.3230	0.0354	8.9000e-004	8.4719
Total	**0.1564**	**0.3297**	**0.7648**	**2.1900e-003**	**0.1783**	**2.3200e-003**	**0.1806**	**0.0477**	**2.2000e-003**	**0.0499**	**9.2206**	**265.8238**	**275.0444**	**0.5744**	**1.4600e-003**	**289.8389**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0654	4.0000e-005	4.4800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7100e-003	8.7100e-003	2.0000e-005	0.0000	9.2800e-003
Energy	7.1000e-004	6.4900e-003	5.4500e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	59.9376	59.9376	2.2600e-003	5.7000e-004	60.1640
Mobile	0.0902	0.3231	0.7549	2.1500e-003	0.1783	1.8100e-003	0.1801	0.0477	1.6900e-003	0.0494	0.0000	198.8963	198.8963	0.0120	0.0000	199.1969
Waste						0.0000	0.0000		0.0000	0.0000	8.8788	0.0000	8.8788	0.5247	0.0000	21.9969
Water						0.0000	0.0000		0.0000	0.0000	0.3418	6.9812	7.3230	0.0354	8.9000e-004	8.4719
Total	**0.1564**	**0.3297**	**0.7648**	**2.1900e-003**	**0.1783**	**2.3200e-003**	**0.1806**	**0.0477**	**2.2000e-003**	**0.0499**	**9.2206**	**265.8238**	**275.0444**	**0.5744**	**1.4600e-003**	**289.8389**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	1/14/2021	5	10	
2	Grading	Grading	1/15/2021	2/11/2021	5	20	
3	Paving	Paving	2/12/2021	3/11/2021	5	20	
4	Building Construction	Building Construction	3/12/2021	1/27/2022	5	230	
5	Architectural Coating	Architectural Coating	12/31/2021	1/27/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 6

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 17,175; Non-Residential Outdoor: 5,725; Striped Parking Area: 11,424 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	1,338.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	84.00	33.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530
Total	**0.0194**	**0.2025**	**0.1058**	**1.9000e-004**	**0.0903**	**0.0102**	**0.1006**	**0.0497**	**9.4000e-003**	**0.0591**	**0.0000**	**16.7179**	**16.7179**	**5.4100e-003**	**0.0000**	**16.8530**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.2000e-004	2.2500e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6305	0.6305	2.0000e-005	0.0000	0.6309
Total	**3.1000e-004**	**2.2000e-004**	**2.2500e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6305**	**0.6305**	**2.0000e-005**	**0.0000**	**0.6309**

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3300e-003	0.0101	0.1043	1.9000e-004		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530
Total	**2.3300e-003**	**0.0101**	**0.1043**	**1.9000e-004**	**0.0903**	**3.1000e-004**	**0.0906**	**0.0497**	**3.1000e-004**	**0.0500**	**0.0000**	**16.7178**	**16.7178**	**5.4100e-003**	**0.0000**	**16.8530**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.2000e-004	2.2500e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6305	0.6305	2.0000e-005	0.0000	0.6309
Total	**3.1000e-004**	**2.2000e-004**	**2.2500e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6305**	**0.6305**	**2.0000e-005**	**0.0000**	**0.6309**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0663	0.0000	0.0663	0.0338	0.0000	0.0338	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0229	0.2474	0.1586	3.0000e-004		0.0116	0.0116		0.0107	0.0107	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2644
Total	**0.0229**	**0.2474**	**0.1586**	**3.0000e-004**	**0.0663**	**0.0116**	**0.0779**	**0.0338**	**0.0107**	**0.0445**	**0.0000**	**26.0537**	**26.0537**	**8.4300e-003**	**0.0000**	**26.2644**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0200e-003	0.1747	0.0431	5.1000e-004	0.0115	5.3000e-004	0.0120	3.1400e-003	5.1000e-004	3.6500e-003	0.0000	50.9525	50.9525	4.6000e-003	0.0000	51.0674
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0508	1.0508	3.0000e-005	0.0000	1.0515
Total	**5.5400e-003**	**0.1751**	**0.0469**	**5.2000e-004**	**0.0127**	**5.4000e-004**	**0.0132**	**3.4600e-003**	**5.2000e-004**	**3.9800e-003**	**0.0000**	**52.0032**	**52.0032**	**4.6300e-003**	**0.0000**	**52.1190**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0663	0.0000	0.0663	0.0338	0.0000	0.0338	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6300e-003	0.0157	0.1775	3.0000e-004		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2643
Total	**3.6300e-003**	**0.0157**	**0.1775**	**3.0000e-004**	**0.0663**	**4.8000e-004**	**0.0668**	**0.0338**	**4.8000e-004**	**0.0343**	**0.0000**	**26.0537**	**26.0537**	**8.4300e-003**	**0.0000**	**26.2643**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0200e-003	0.1747	0.0431	5.1000e-004	0.0115	5.3000e-004	0.0120	3.1400e-003	5.1000e-004	3.6500e-003	0.0000	50.9525	50.9525	4.6000e-003	0.0000	51.0674
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0508	1.0508	3.0000e-005	0.0000	1.0515
Total	**5.5400e-003**	**0.1751**	**0.0469**	**5.2000e-004**	**0.0127**	**5.4000e-004**	**0.0132**	**3.4600e-003**	**5.2000e-004**	**3.9800e-003**	**0.0000**	**52.0032**	**52.0032**	**4.6300e-003**	**0.0000**	**52.1190**

3.4 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	7.8600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0204**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0508	1.0508	3.0000e-005	0.0000	1.0515
Total	**5.2000e-004**	**3.7000e-004**	**3.7500e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0508**	**1.0508**	**3.0000e-005**	**0.0000**	**1.0515**

3.4 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8000e-003	0.0122	0.1730	2.3000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	7.8600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0107**	**0.0122**	**0.1730**	**2.3000e-004**		**3.7000e-004**	**3.7000e-004**		**3.7000e-004**	**3.7000e-004**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0508	1.0508	3.0000e-005	0.0000	1.0515
Total	**5.2000e-004**	**3.7000e-004**	**3.7500e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0508**	**1.0508**	**3.0000e-005**	**0.0000**	**1.0515**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2006	1.8391	1.7487	2.8400e-003		0.1011	0.1011		0.0951	0.0951	0.0000	244.3773	244.3773	0.0590	0.0000	245.8513
Total	**0.2006**	**1.8391**	**1.7487**	**2.8400e-003**		**0.1011**	**0.1011**		**0.0951**	**0.0951**	**0.0000**	**244.3773**	**244.3773**	**0.0590**	**0.0000**	**245.8513**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0108	0.3578	0.0954	9.3000e-004	0.0231	7.6000e-004	0.0239	6.6700e-003	7.2000e-004	7.4000e-003	0.0000	91.0204	91.0204	6.7600e-003	0.0000	91.1892
Worker	0.0308	0.0220	0.2214	6.9000e-004	0.0711	5.0000e-004	0.0716	0.0189	4.6000e-004	0.0194	0.0000	62.0803	62.0803	1.7800e-003	0.0000	62.1248
Total	**0.0416**	**0.3798**	**0.3168**	**1.6200e-003**	**0.0942**	**1.2600e-003**	**0.0954**	**0.0256**	**1.1800e-003**	**0.0268**	**0.0000**	**153.1007**	**153.1007**	**8.5400e-003**	**0.0000**	**153.3140**

3.5 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0346	0.2358	1.8421	2.8400e-003		4.3000e-003	4.3000e-003		4.3000e-003	4.3000e-003	0.0000	244.3770	244.3770	0.0590	0.0000	245.8510
Total	**0.0346**	**0.2358**	**1.8421**	**2.8400e-003**		**4.3000e-003**	**4.3000e-003**		**4.3000e-003**	**4.3000e-003**	**0.0000**	**244.3770**	**244.3770**	**0.0590**	**0.0000**	**245.8510**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0108	0.3578	0.0954	9.3000e-004	0.0231	7.6000e-004	0.0239	6.6700e-003	7.2000e-004	7.4000e-003	0.0000	91.0204	91.0204	6.7600e-003	0.0000	91.1892
Worker	0.0308	0.0220	0.2214	6.9000e-004	0.0711	5.0000e-004	0.0716	0.0189	4.6000e-004	0.0194	0.0000	62.0803	62.0803	1.7800e-003	0.0000	62.1248
Total	**0.0416**	**0.3798**	**0.3168**	**1.6200e-003**	**0.0942**	**1.2600e-003**	**0.0954**	**0.0256**	**1.1800e-003**	**0.0268**	**0.0000**	**153.1007**	**153.1007**	**8.5400e-003**	**0.0000**	**153.3140**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0162	0.1484	0.1555	2.6000e-004		7.6900e-003	7.6900e-003		7.2300e-003	7.2300e-003	0.0000	22.0139	22.0139	5.2700e-003	0.0000	22.1458
Total	**0.0162**	**0.1484**	**0.1555**	**2.6000e-004**		**7.6900e-003**	**7.6900e-003**		**7.2300e-003**	**7.2300e-003**	**0.0000**	**22.0139**	**22.0139**	**5.2700e-003**	**0.0000**	**22.1458**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.0000e-004	0.0304	8.1300e-003	8.0000e-005	2.0800e-003	6.0000e-005	2.1400e-003	6.0000e-004	6.0000e-005	6.6000e-004	0.0000	8.1185	8.1185	5.9000e-004	0.0000	8.1333
Worker	2.6300e-003	1.8000e-003	0.0185	6.0000e-005	6.4000e-003	4.0000e-005	6.4400e-003	1.7000e-003	4.0000e-005	1.7400e-003	0.0000	5.3853	5.3853	1.5000e-004	0.0000	5.3889
Total	**3.5300e-003**	**0.0322**	**0.0266**	**1.4000e-004**	**8.4800e-003**	**1.0000e-004**	**8.5800e-003**	**2.3000e-003**	**1.0000e-004**	**2.4000e-003**	**0.0000**	**13.5038**	**13.5038**	**7.4000e-004**	**0.0000**	**13.5222**

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1100e-003	0.0212	0.1659	2.6000e-004		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	22.0139	22.0139	5.2700e-003	0.0000	22.1457
Total	**3.1100e-003**	**0.0212**	**0.1659**	**2.6000e-004**		**3.9000e-004**	**3.9000e-004**		**3.9000e-004**	**3.9000e-004**	**0.0000**	**22.0139**	**22.0139**	**5.2700e-003**	**0.0000**	**22.1457**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.0000e-004	0.0304	8.1300e-003	8.0000e-005	2.0800e-003	6.0000e-005	2.1400e-003	6.0000e-004	6.0000e-005	6.6000e-004	0.0000	8.1185	8.1185	5.9000e-004	0.0000	8.1333
Worker	2.6300e-003	1.8000e-003	0.0185	6.0000e-005	6.4000e-003	4.0000e-005	6.4400e-003	1.7000e-003	4.0000e-005	1.7400e-003	0.0000	5.3853	5.3853	1.5000e-004	0.0000	5.3889
Total	**3.5300e-003**	**0.0322**	**0.0266**	**1.4000e-004**	**8.4800e-003**	**1.0000e-004**	**8.5800e-003**	**2.3000e-003**	**1.0000e-004**	**2.4000e-003**	**0.0000**	**13.5038**	**13.5038**	**7.4000e-004**	**0.0000**	**13.5222**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.9800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1000e-004	7.6000e-004	9.1000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.1277	0.1277	1.0000e-005	0.0000	0.1279
Total	**4.0900e-003**	**7.6000e-004**	**9.1000e-004**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.1277**	**0.1277**	**1.0000e-005**	**0.0000**	**0.1279**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0595	0.0595	0.0000	0.0000	0.0596
Total	**3.0000e-005**	**2.0000e-005**	**2.1000e-004**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0595**	**0.0595**	**0.0000**	**0.0000**	**0.0596**

3.6 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.9800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0000e-005	6.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.1277	0.1277	1.0000e-005	0.0000	0.1279
Total	**3.9900e-003**	**6.0000e-005**	**9.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.1277**	**0.1277**	**1.0000e-005**	**0.0000**	**0.1279**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0595	0.0595	0.0000	0.0000	0.0596
Total	**3.0000e-005**	**2.0000e-005**	**2.1000e-004**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0595**	**0.0595**	**0.0000**	**0.0000**	**0.0596**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0756					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9400e-003	0.0134	0.0172	3.0000e-005		7.8000e-004	7.8000e-004		7.8000e-004	7.8000e-004	0.0000	2.4256	2.4256	1.6000e-004	0.0000	2.4295
Total	**0.0775**	**0.0134**	**0.0172**	**3.0000e-005**		**7.8000e-004**	**7.8000e-004**		**7.8000e-004**	**7.8000e-004**	**0.0000**	**2.4256**	**2.4256**	**1.6000e-004**	**0.0000**	**2.4295**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3000e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.0899	1.0899	3.0000e-005	0.0000	1.0906
Total	**5.3000e-004**	**3.7000e-004**	**3.7500e-003**	**1.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3000e-003**	**3.4000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.0899**	**1.0899**	**3.0000e-005**	**0.0000**	**1.0906**

3.6 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0756					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8000e-004	1.2200e-003	0.0174	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.4256	2.4256	1.6000e-004	0.0000	2.4295
Total	**0.0759**	**1.2200e-003**	**0.0174**	**3.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**2.4256**	**2.4256**	**1.6000e-004**	**0.0000**	**2.4295**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3000e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.0899	1.0899	3.0000e-005	0.0000	1.0906
Total	**5.3000e-004**	**3.7000e-004**	**3.7500e-003**	**1.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3000e-003**	**3.4000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.0899**	**1.0899**	**3.0000e-005**	**0.0000**	**1.0906**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0902	0.3231	0.7549	2.1500e-003	0.1783	1.8100e-003	0.1801	0.0477	1.6900e-003	0.0494	0.0000	198.8963	198.8963	0.0120	0.0000	199.1969
Unmitigated	0.0902	0.3231	0.7549	2.1500e-003	0.1783	1.8100e-003	0.1801	0.0477	1.6900e-003	0.0494	0.0000	198.8963	198.8963	0.0120	0.0000	199.1969

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	474.95	474.95	474.95	473,135	473,135
Parking Lot	0.00	0.00	0.00		
Total	474.95	474.95	474.95	473,135	473,135

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056
Parking Lot	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	52.8742	52.8742	2.1300e-003	4.4000e-004	53.0587
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	52.8742	52.8742	2.1300e-003	4.4000e-004	53.0587
NaturalGas Mitigated	7.1000e-004	6.4900e-003	5.4500e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	7.0633	7.0633	1.4000e-004	1.3000e-004	7.1053
NaturalGas Unmitigated	7.1000e-004	6.4900e-003	5.4500e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	7.0633	7.0633	1.4000e-004	1.3000e-004	7.1053

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	132362	7.1000e-004	6.4900e-003	5.4500e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	7.0633	7.0633	1.4000e-004	1.3000e-004	7.1053
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.1000e-004**	**6.4900e-003**	**5.4500e-003**	**4.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.9000e-004**	**4.9000e-004**	**0.0000**	**7.0633**	**7.0633**	**1.4000e-004**	**1.3000e-004**	**7.1053**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	132362	7.1000e-004	6.4900e-003	5.4500e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	7.0633	7.0633	1.4000e-004	1.3000e-004	7.1053
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.1000e-004**	**6.4900e-003**	**5.4500e-003**	**4.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.9000e-004**	**4.9000e-004**	**0.0000**	**7.0633**	**7.0633**	**1.4000e-004**	**1.3000e-004**	**7.1053**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	95149.5	31.0957	1.2500e-003	2.6000e-004	31.2042
Parking Lot	66640	21.7785	8.8000e-004	1.8000e-004	21.8545
Total		**52.8742**	**2.1300e-003**	**4.4000e-004**	**53.0587**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	95149.5	31.0957	1.2500e-003	2.6000e-004	31.2042
Parking Lot	66640	21.7785	8.8000e-004	1.8000e-004	21.8545
Total		**52.8742**	**2.1300e-003**	**4.4000e-004**	**53.0587**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0654	4.0000e-005	4.4800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7100e-003	8.7100e-003	2.0000e-005	0.0000	9.2800e-003
Unmitigated	0.0654	4.0000e-005	4.4800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7100e-003	8.7100e-003	2.0000e-005	0.0000	9.2800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.9500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0570					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.1000e-004	4.0000e-005	4.4800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7100e-003	8.7100e-003	2.0000e-005	0.0000	9.2800e-003
Total	**0.0654**	**4.0000e-005**	**4.4800e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.7100e-003**	**8.7100e-003**	**2.0000e-005**	**0.0000**	**9.2800e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.9500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0570					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.1000e-004	4.0000e-005	4.4800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7100e-003	8.7100e-003	2.0000e-005	0.0000	9.2800e-003
Total	**0.0654**	**4.0000e-005**	**4.4800e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.7100e-003**	**8.7100e-003**	**2.0000e-005**	**0.0000**	**9.2800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7.3230	0.0354	8.9000e-004	8.4719
Unmitigated	7.3230	0.0354	8.9000e-004	8.4719

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	1.07723 / 0.660237	7.3230	0.0354	8.9000e-004	8.4719
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**7.3230**	**0.0354**	**8.9000e-004**	**8.4719**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	1.07723 / 0.660237	7.3230	0.0354	8.9000e-004	8.4719
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**7.3230**	**0.0354**	**8.9000e-004**	**8.4719**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.8788	0.5247	0.0000	21.9969
Unmitigated	8.8788	0.5247	0.0000	21.9969

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	43.74	8.8788	0.5247	0.0000	21.9969
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**8.8788**	**0.5247**	**0.0000**	**21.9969**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	43.74	8.8788	0.5247	0.0000	21.9969
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**8.8788**	**0.5247**	**0.0000**	**21.9969**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

ATTACHMENT B

AERMOD Outputs

```
1                     AERMOD PRIME - (DATED  19191)

                     AERMODPrMSPx VERSION
              (C) COPYRIGHT 1998-2017, Trinity Consultants

 Run Began on  3/20/2020 at 12:16:25

** BREEZE AERMOD
** Trinity Consultants
** VERSION  9.0

CO STARTING
CO TITLEONE  PM10 Exhaust TIER4
CO MODELOPT  DFAULT  CONC  NODRYDPLT  NOWETDPLT
CO RUNORNOT  RUN
CO AVERTIME  ANNUAL
CO POLLUTID  PM10
CO FINISHED

SO STARTING
SO ELEVUNIT  METERS
SO LOCATION  S55PW000  AREAPOLY  472905  3671642.4  0
** SRCDESCR  area source
SO SRCPARAM  S55PW000  3.55E-09  3  14  1
SO AREAVERT  S55PW000  472905 3671642.4  472945.2 3671392.2  472981.5 3671410.6  473012 3671419.8
SO AREAVERT  S55PW000  473046.5 3671419.8  473094.2 3671417.5  473132.8 3671408.9  473167.9 3671398.5
SO AREAVERT  S55PW000  473170.7 3671410.6  473166.1 3671513  473161.5 3671553.8  473040.2 3671545.2
SO AREAVERT  S55PW000  473029.8 3671663.1  472905 3671642.4
SO SRCGROUP  ALL
SO FINISHED

RE STARTING
RE ELEVUNIT  METERS
RE DISCCART  473053.5  3671377.1  0  0
** SENSITIV
** RCPDESCR  R1
RE DISCCART  473196.7  3671384.4  0  0
** SENSITIV
** RCPDESCR  R2
RE DISCCART  473199.1  3671499.6  0  0
** SENSITIV
** RCPDESCR  R3
RE DISCCART  473183.6  3671640.8  0  0
** SENSITIV
** RCPDESCR  R4
RE FINISHED

ME STARTING
ME SURFFILE  "C:\USERS\RYAN\ONEDRIVE\LDNONE~1\20-23V~1\AERMOD\ESCONDIDO-2012-V15181.SFC"
** SURFFILE  "C:\USERS\RYAN\ONEDRIVE\LDNONE~1\20-23V~1\AERMOD\ESCONDIDO-2012-V15181.SFC"
ME PROFFILE  "C:\USERS\RYAN\ONEDRIVE\LDNONE~1\20-23V~1\AERMOD\ESCONDIDO-2012-V15181.PFL"
** PROFFILE  "C:\USERS\RYAN\ONEDRIVE\LDNONE~1\20-23V~1\AERMOD\ESCONDIDO-2012-V15181.PFL"
ME SURFDATA  53120 2012
ME UAIRDATA  3190 2012
ME SITEDATA  00001002 2012
ME PROFBASE  0  METERS
ME FINISHED

OU STARTING
OU FILEFORM  FIX
OU PLOTFILE  ANNUAL  ALL  ALL`ANNUAL.plt  10000
OU FINISHED

** **************************************************************************
** It is recommended that the user not edit any data below this line
** **************************************************************************


** AMPTYPE
```

```
** AMPDATUM  -1
** AMPZONE  -1
** AMPHEMISPHERE

** PROJECTIONWKT
PROJCS["UTM_6326_Zone11",GEOGCS["WGS_84",DATUM["World_Geodetic_System_1984",SPHEROID["WGS_1984",6378137,298.2572235
63],TOWGS84[0,0,0,0,0,0,0]],PRIMEM["Greenwich",0],UNIT["Degree",0.0174532925199433]],PROJECTION["Universal_Transver
se_Mercator"],PARAMETER["Zone",11],UNIT["Meter",1,AUTHORITY["EPSG","9001"]]]
** PROJECTION  UTM
** DATUM  WGE
** UNITS  METER
** ZONE  11
** HEMISPHERE  N
** ORIGINLON  0
** ORIGINLAT  0
** PARALLEL1  0
** PARALLEL2  0
** AZIMUTH  0
** SCALEFACT  0
** FALSEEAST  0
** FALSENORTH  0

** POSTFMT  UNFORM
** TEMPLATE USERDEFINED
** AERMODEXE  AERMOD_BREEZE_19191_64.EXE
** AERMAPEXE  AERMAP_EPA_18081_64.EXE



  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186      57       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.40
 MX W403      57       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION  19191 ***   ***  PM10 Exhaust Mitigated                                          ***
     03/20/20
 *** AERMET - VERSION  15181 ***   ***                                                                 ***
   12:16:25

   PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  NODRYDPLT  NOWETDPLT  RURAL  SigA Data

                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F
```

**Model Uses RURAL Dispersion Only.

**Model Uses Regulatory DEFAULT Options:
1. Stack-tip Downwash.
2. Model Accounts for ELEVated Terrain Effects.
3. Use Calms Processing Routine.
4. Use Missing Data Processing Routine.
5. No Exponential Decay.

**Other Options Specified:
CCVR_Sub - Meteorological data includes CCVR substitutions
TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: PM10

**Model Calculates ANNUAL Averages Only

**This Run Includes: 1 Source(s); 1 Source Group(s); and 4 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 0 VOLUME source(s)
and: 1 AREA type source(s)
and: 0 LINE source(s)
and: 0 RLINE/RLINEXT source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with 0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 15181

**Output Options Selected:
Model Outputs Tables of ANNUAL Averages by Receptor
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 0.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 3.5 MB of RAM.

**Input Runstream File: aermod.inp

**Output Print File: aermod.out

*** AREAPOLY SOURCE DATA ***

NUMBER	EMISSION RATE	LOCATION OF AREA	BASE	RELEASE	NUMBER	INIT.	URBAN	EMISSION RATE

```
   SOURCE       PART.  (GRAMS/SEC       X        Y      ELEV.    HEIGHT  OF VERTS.     SZ     SOURCE  SCALAR VARY
     ID         CATS.   /METER**2)   (METERS) (METERS) (METERS) (METERS)           (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - -

 S55PW000         0   0.35500E-08  472905.0 3671642.4     0.0     3.00      14         1.00     NO
```


*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	S55PW000 ,

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1
1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1
1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1
1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1
1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1
1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1
1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1
1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

```
                                      1.54,   3.09,   5.14,   8.23,  10.80,
```


*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

```
   Surface file:   C:\USERS\RYAN\ONEDRIVE\LDNONE~1\20-23V~1\AERMOD\ESCONDIDO-2012-V15181.SFC          Met Version:
```

15181
   Profile file: C:\USERS\RYAN\ONEDRIVE\LDNONE~1\20-23V~1\AERMOD\ESCONDIDO-2012-V15181.PFL
   Surface format: FREE

   Profile format: FREE

   Surface station no.:   53120   Upper air station no.:   3190
                  Name: UNKNOWN   Name: UNKNOWN
                  Year: 2012   Year: 2012

 First 24 hours of scalar data
 YR MO DY JDY HR   H0   U*   W* DT/DZ ZICNV ZIMCH M-O LEN   Z0 BOWEN ALBEDO REF WS   WD   HT REF TA
  HT
- - - -

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): S55PW000 ,

*** SENSITIVE DISCRETE RECEPTOR POINTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
473053.50	3671377.10	0.03568	473196.70	3671384.40	0.02741
473199.10	3671499.60	0.03643	473183.60	3671640.80	0.01245

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

NETWORK GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)					OF TYPE GRID-ID
ALL	1ST HIGHEST VALUE IS	0.03643 AT	473199.10,	3671499.60,	0.00,	0.00,	0.00)	SR
	2ND HIGHEST VALUE IS	0.03568 AT	473053.50,	3671377.10,	0.00,	0.00,	0.00)	SR
	3RD HIGHEST VALUE IS	0.02741 AT	473196.70,	3671384.40,	0.00,	0.00,	0.00)	SR
	4TH HIGHEST VALUE IS	0.01245 AT	473183.60,	3671640.80,	0.00,	0.00,	0.00)	SR
	5TH HIGHEST VALUE IS	0.00000 AT	0.00,	0.00,	0.00,	0.00,	0.00)	
	6TH HIGHEST VALUE IS	0.00000 AT	0.00,	0.00,	0.00,	0.00,	0.00)	
	7TH HIGHEST VALUE IS	0.00000 AT	0.00,	0.00,	0.00,	0.00,	0.00)	
	8TH HIGHEST VALUE IS	0.00000 AT	0.00,	0.00,	0.00,	0.00,	0.00)	
	9TH HIGHEST VALUE IS	0.00000 AT	0.00,	0.00,	0.00,	0.00,	0.00)	
	10TH HIGHEST VALUE IS	0.00000 AT	0.00,	0.00,	0.00,	0.00,	0.00)	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 2 Warning Message(s)
A Total of 378 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 250 Calm Hours Identified

A Total of 128 Missing Hours Identified (1.46 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
ME W186 57 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.40
MX W403 57 PFLCNV: Turbulence data is being used w/o ADJ_U* option SigA Data

****
*** AERMOD Finishes Successfully ***
****

ATTACHMENT C

Health Risk Calculations

Air Quality Health Risk Calculations (Worst-Case)
CarMax with Tier 4

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	**0.00589**
	Construction Start	**1/1/2021**
	Construction Complete	**1/27/2022**
	Days	**391**
	Construction Emission per day (lb/day)	**0.030127877**
	Annual Duration (Days)	**365**
	Annualized Emission Rate (Grams/Second)	**0.000158**
	Project Site Size (Acres)	**10.98**
	Project Site Size (meters^2)	**44434.48352**
	Length of Smalles Side (meters)	**210.7948849**
Used as an input to SCREEN3	Emission Rate over Grading Area(g/s-m^2)	**3.55E-09**
From SCREEN3*0.08	Concentration Annual (Ug/M^3)	**0.036**

	Days	Days to years					
Duration	458	1.254794521					
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70	
Cair (annual) - From F15	0.036	0.036	0.036	0.036	0.036	0.036	
Breathing Rate per agegroup BR/BW (Page 5-25)	361	1090	861	745	335	290	
A (Default is 1)	1	1	1	1	1	1	
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96	
10^-6 Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	
Dose-inh	0.00001248	0.00003767	0.00002976	0.00002575	0.00001158	0.00001002	
Construction Days	458	1.254794521					
potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1	
Age Sensitivity Factor	10	10	3	3	1	1	
ED	0.25	1.254794521	1.254794521	1.254794521	1.254794521	1.254794521	
AT	70	70	70	70	70	70	
FAH	0.85	0.85	0.72	0.72	0.73	0.73	
Risk for Each Age Group	4.16615E-07	6.31374E-06	1.26735E-06	1.09661E-06	1.66651E-07	1.44265E-07	
Risk per million Exposed	0.416614629	6.313735966	1.267353869	1.096607007	0.166651282	0.144265289	
Cancer Risk Per Million 9-years	8.00						
Cancer Risk Per Million 30-years	7.99						
Cancer Risk Per Million 70-years	**7.97**						

APPENDIX D
Biological Technical Report

BIOLOGICAL TECHNICAL REPORT
PROPOSED CARMAX AUTO SUPERSTORE PROJECT
CITY OF OCEANSIDE, SAN DIEGO COUNTY, CALIFORNIA

Prepared for:

EnviroApplications, Inc.
2831 Camino del Rio South, Suite 214
San Diego, California 92108
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September 29, 2020

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Appendix K. Focused Coastal California Gnatcatcher Survey Summary Report
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EXECUTIVE SUMMARY

This Biological Technical Report (BTR) was prepared for the proposed CarMax Auto Superstore (proposed project) located in the City of Oceanside. It documents the existing biological conditions within and adjacent to the approximately 14.915-acre survey area, which includes the approximately 10.981 acres within two undeveloped parcels and an approximately 3.935-acre, 50-foot survey buffer surrounding these parcels. The information provided in this report is based on the results of a general biological survey conducted on July 22, 2019; a focused jurisdictional delineation conducted on August 29, 2019; and subsequent focused surveys for sensitive plant species, fairy shrimp, coastal California gnatcatcher (*Polioptila californica californica*), and least Bell's vireo (*Vireo bellii pusillus*).

Eight vegetation communities and land cover types were documented within the approximately 14.915-acre survey area during the general biological survey, including disturbed Diegan coastal sage scrub, southern riparian forest, developed land, disturbed land, iceplant, ornamental, and ruderal. The proposed project has the potential to result in direct impacts to approximately 7.041 acres of vegetation communities and land cover types identified within the proposed project footprint, including approximately 6.695 acres of permanent, direct impacts within the proposed project development footprint and approximately 0.346 acre within the proposed sewer realignment footprint. Direct impacts to approximately 6.633 acres of non-sensitive upland habitats (i.e., developed land, disturbed land, iceplant, ornamental, and ruderal) would not be considered significant and would not require any avoidance, minimization, or mitigation measures. Implementation of avoidance and minimization measures (AMMs) would provide resource protection; however, unavoidable direct impacts to approximately 0.408 acre of disturbed Diegan coastal sage scrub would be considered significant and would require mitigation measures to reduce these impacts to below a level of significance.

The proposed project also has the potential to result in indirect impacts to sensitive vegetation (i.e., disturbed Diegan coastal sage scrub) that occurs adjacent to the proposed project footprint. Indirect impacts, including fugitive dust accumulation from adjacent construction activities, could occur to a small patch of disturbed Diegan coastal sage scrub located approximately 15 feet south of the proposed sewer realignment footprint. If the fugitive dust is allowed to remain on the leaves of the individual plants within this sensitive vegetation community, it could interfere with photosynthesis and germination. Through implementation of appropriate AMMs, indirect impacts to disturbed Diegan coastal sage scrub are anticipated to be avoided, and no mitigation measures are anticipated.

Focused sensitive plant species surveys and focused *Brodiaea* species surveys were conducted for the proposed project. However, the proposed project site was mowed before the second sensitive plant survey and after four of the six planned *Brodiaea* species surveys. During the general and focused surveys conducted for the proposed project, one sensitive plant species – San Diego sagewort (*Artemisia palmeri*) – was observed within the proposed project survey area. Approximately 44 individual San

Diego sagewort, a CRPR List 4.2 sensitive plant, were documented on the stream bank just south of Buena Vista Creek, adjacent to and south of the survey area, during the general biological survey conducted on July 22, 2019. Based on the results of the partial sensitive plant species surveys, three other sensitive plant species have a low to moderate potential to occur within the survey area, including southern tarplant (*Centromadia parryi* ssp. *australis*), smooth tarplant (*Centromadia pungens ssp. laevis*), and Del Mar Mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*). Implementation of the AMMs would provide resource protection; however, focused sensitive plant surveys should be conducted during spring and summer 2021, to determine if additional AMMs and mitigation measures are required to reduce unavoidable impacts to below a level of significance.

Focused sensitive wildlife species surveys were conducted for fairy shrimp, coastal California gnatcatcher, and least Bell's vireo. No fairy shrimp were detected during the 2019/2020 wet season surveys or during the 2020 dry season surveys. No coastal California gnatcatchers were detected during the focused 2020 coastal California gnatcatcher surveys; however, a pair of coastal California gnatcatchers were observed foraging within the survey area but outside of the proposed project footprint during the jurisdictional delineation conducted on August 29, 2019. Thus, this species is anticipated to forage but not nest on-site. One foraging least Bell's vireo was detected during the focused 2020 least Bell's vireo surveys and is not expected to nest on-site. In addition, two other sensitive wildlife species – Cooper's hawk (*Accipiter cooperii*) and yellow warbler (*Setophaga petechia*) were detected on-site. Implementation of the AMMs would provide additional resource protection, and implementation of mitigation measures for additional pre-construction surveys would be required to reduce unavoidable impacts to below a level of significance.

Potentially jurisdictional resources were identified and delineated during the jurisdictional delineation. The southern riparian forest along Buena Vista Creek is a potentially jurisdictional U.S. Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) Wetland Waters of the U.S. (WoUS) and Waters of the State (WoS) and potentially jurisdictional California Department of Fish and Wildlife (CDFW) Riparian; the open water is a potentially jurisdictional USACE and RWQCB Non-Wetland WoUS and WoS and potentially jurisdictional CDFW Streambed; and a portion of the disturbed land, developed land, and iceplant adjacent to Buena Vista Creek is a potentially jurisdictional CDFW Streambed. No direct or indirect impacts to riparian habitat are anticipated to result from proposed project construction. The proposed project has been designed to include the mandatory 100-foot buffer from the riparian habitat boundary, as mapped during the formal jurisdictional delineation. This 100-foot buffer includes both the 50-foot biological buffer as well as the mandatory 50-foot planning buffer. The proposed project is anticipated to encroach approximately 6 feet into a small portion of the 50-foot planning buffer during the proposed sewer realignment. As a result, temporary direct impacts would occur to approximately 0.008 acre (344 square feet) of disturbed habitat within the planning buffer. Because these impacts are so small and because they are located at least 94 feet from the riparian habitat, no direct impacts to riparian habitat is anticipated. Implementation of AMMs would provide additional resource protection; however, no additional AMMs or mitigation measures would be required.

SECTION 1.0 – INTRODUCTION

The purpose of this BTR for the proposed CarMax Auto Superstore (proposed project) located in the City of Oceanside (Appendix A: Figure 1) is (1) to document the existing biological conditions within and adjacent to the approximately 14.915-acre survey area, which includes the approximately 10.981 acres within two undeveloped parcels and an approximately 3.935-acre, 50-foot survey buffer surrounding these parcels; (2) to evaluate the proposed project survey area and the vicinity for the potential to support sensitive biological resources; (3) to provide an analysis of the potential impacts associated with the proposed project; and (4) to provide a discussion of avoidance, minimization, and mitigation measures for potential impacts to sensitive biological resources.

1.1 PROPOSED PROJECT LOCATION

The proposed project occurs within the U.S. Geological Survey (USGS) San Luis Rey 7.5-minute quadrangle, in the City of Oceanside, California (USGS 2019; Appendix A: Figures 2 and 3). The proposed project site is situated on vacant and undeveloped Assessor's Parcel Number (APN) 168-012-42 and APN 168-012-43 (Appendix A: Figures 2 and 3). It is bordered to the north by State Route 78, to east by Thunder Drive and residential development, to the south by Buena Vista Creek and residential development, and to the west by a commercial shopping center (e.g., grocery store, restaurants, motel, other retail stores). Plaza Drive separates the two parcels in the northwest portion of the proposed project area, and the Oceanside Department of Motor Vehicles occupies the property northeast of the proposed project site.

1.2 PROPOSED PROJECT DESCRIPTION

The proposed project consists of the construction of a CarMax pre-owned automobile dealership, sales building with an attached presentation area, service building, non-public carwash, sales display area, customer and employee parking lot, vehicle storage area, and associated access driveways and landscaped areas. In addition, a retaining wall will be required along the southern boundary of the proposed project footprint, because of the exiting grades within the proposed project area.

There are two existing sewer lines that currently run along the southern boundary of the proposed automobile dealership – a 12-inch sewer line owned by the City of Oceanside and a 21-inch sewer line owned by the City of Vista. The proposed retaining wall would be located within 5 feet of both of these existing sewer lines, and the footing would be located on top of the existing 21-inch sewer line. Based on the age of the existing sewer lines, both the City of Oceanside and the City of Vista will not allow the footings to be placed on top of the existing sewer lines or within 10 feet of the existing sewer lines for safety and access reasons. Therefore, both of the existing sewer lines will require relocation and realignment outside of the developed area and south of and immediately adjacent to the proposed retaining wall.

SECTION 2.0 – METHODS AND SURVEY LIMITATIONS

Busby Biological Services, Inc. (BBS) conducted background research, a general biological resources survey, a focused jurisdictional determination, and focused sensitive species surveys for the proposed project. The methods used for each of these are presented below.

2.1 BACKGROUND RESEARCH

Prior to conducting the general biological resources survey, jurisdictional delineation, and focused sensitive species surveys, BBS reviewed the draft City of Oceanside Subarea Plan (SAP; City of Oceanside 2010), the North County Multiple Habitat Conservation Plan (MHCP; San Diego Association of Governments [SANDAG] 2003), online current and historical aerial imagery (Google Earth 2019; Nationwide Environmental Title Research, LLC [NETR] 2019), U.S. Fish and Wildlife Service (USFWS) critical habitat maps (USFWS 2019a), the CDFW California Natural Diversity Database (CNDDB; CDFW 2019a); USFWS National Wetland Inventory (NWI) maps (USFWS 2019b), U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey maps (USDA 2019a), and the USGS San Luis Rey 7.5-minute topographic quadrangle map (USGS 2019). Information from these resources informed the general biological resources survey, the jurisdictional determination, and the focused surveys within the proposed project survey area.

2.2 GENERAL BIOLOGICAL RESOURCES SURVEY

The general biological resources survey, which included vegetation mapping, general sensitive species habitat assessments, and a jurisdictional resources assessment, was conducted on foot to document the existing biological resources and assess the potential for sensitive biological resources to occur within and immediately adjacent to the proposed project site.

Vegetation communities and land cover types were classified following Holland (1986) as modified by Oberbauer et al. (2008), and mapped by hand onto aerial imagery with a 1 inch equals 100 feet scale, noting dominant plant species within these vegetation communities. The hand-drawn vegetation community and land cover type boundaries were provided to a Geographic Information Systems (GIS) Analyst and were digitized in the office using GIS software.

During the general biological resources survey, the survey area was generally assessed for potential jurisdictional resources, such as Wetland and Non-Wetland WoUS as well as Wetland and Non-Wetland WoS (including potential wetlands and vernal pools) that are regulated by USACE, CDFW, RWQCB, and/or the City of Oceanside. In addition, habitats within an appropriate buffer of the proposed project area were assessed to determine the potential for these areas to support sensitive plant and wildlife species. A 50-foot buffer was used for sensitive plant species; a 300-foot buffer was used for coastal California gnatcatcher (*Polioptila californica californica*); and a 500-foot buffer

was used for least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and raptors.

Plant species observed directly and wildlife species observed and/or detected indirectly through sign (e.g., scat, tracks, burrows, vocalization) within the survey area were noted. Digital photographs of representative areas were taken during the survey (Appendix B).

2.3 JURISDICTIONAL DELINEATION

The jurisdictional delineation and mapping of the survey area was conducted on foot to determine the location and extent of resources potentially under the jurisdiction of USACE, RWQCB, and CDFW. A hand-held, sub-meter Global Positioning System (GPS) device was used to record the locations of sample points and boundaries of potentially jurisdictional resources. Mapped wetland boundaries are considered to be a line across which the vegetation, soil, and hydrologic characteristics begin/cease to meet wetland criteria.

Vegetation communities and land cover types were classified following Holland (1986) as modified by Oberbauer *et al.* (2008), and mapped by hand onto aerial imagery with a 1 inch equals 100 feet scale, noting dominant plant species within these vegetation communities. These hand-drawn vegetation community and land cover type boundaries were provided to a GIS Analyst and were digitized using GIS software. Digital photographs of sample points and representative areas were taken during the survey.

2.3.1 U.S. Army Corps of Engineers Jurisdiction

Data was collected at upland and wetland sample points by assessing the vegetative, soil, and hydrologic characteristics within and immediately adjacent to areas that were determined to support potential USACE jurisdictional resources following the technical guidelines provided in the following manuals:

- USACE *Wetlands Delineation Manual* (USACE 1987)
- USACE *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0; USACE 2008)
- *USACE A Delineation Manual, A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2010)

USACE *Wetland Determination Data Forms – Arid West Region* (USACE 2008) were completed at appropriate upland and wetland sample points. Non-Wetland WoUS were delineated based on the presence of OHWM indicators, and an OHWM data sheet was recorded where appropriate.

USACE Wetlands

Several parameters were considered to determine whether the sample point is within a USACE wetland. The following three wetland parameters typically must be satisfied to classify an area as a jurisdictional USACE wetland under normal circumstances: (1) a predominance of hydrophytic vegetation, (2) the presence of hydric soils, and (3) the presence of wetland hydrology. Details of the application of these techniques are described below.

- **Hydrophytic Vegetation:** Hydrophytic vegetation is defined as "the community of macrophytes that occurs in areas where inundation and soil saturation is either permanent, or of sufficient frequency and duration to exert a controlling influence on the plant species present" (USACE 2008). For the purposes of this jurisdictional delineation, five levels of wetland indicator status were used to assess the presence of hydrophytic vegetation, based on the most current National Wetland Plant List (USACE 2016). Plant species were classified as:
    - obligate wetland plants (OBL), which area plants that almost always (estimated probability greater than 99 percent) occur in wetlands but rarely are found in non-wetlands under natural conditions;
    - facultative wetland plants (FACW), which are plants that usually (estimated probability from 67 percent to 99 percent) occur in wetlands but are occasionally found elsewhere under natural conditions;
    - facultative plants (FAC), which are plants with a similar likelihood (estimated probability from 33 percent to 67 percent) of occurring in both wetlands and non-wetlands under natural conditions;
    - facultative upland plants (FACU), which area plants that sometimes (estimated probability from 1 percent to 33 percent) occur in wetlands, but occur more often in non-wetlands under natural conditions; or
    - obligate upland plants (UPL), which are plants that rarely (estimated probability <1 percent) occur in wetlands, but almost always occur in non-wetlands under natural conditions].
    - A no indicator (NI) status designates that insufficient information was available to determine an indicator status.

  Hydrophytic vegetation was determined to be present if any one of the following three indicator tests were satisfied:
    - the Dominance Test (Indicator 1), where "more than 50 percent of the dominant plant species across all strata were rated OBL, FACW, or FAC";
    - the Prevalence Test (Indicator 2), where there were indicators of hydric soils and wetland hydrology, and the prevalence index was 3.0 or less, which is a weighted-average wetland indicator status of all plant species by abundance (percent cover); and/or
    - the Plant Morphological Adaptations Test (Indicator 3), where there were indicators of hydric soils and wetland hydrology present, and either the Dominance Test (Indicator 1) or Prevalence Test (Indicator 2) were satisfied after reconsideration of the indicator status of certain plant species that exhibited morphological adaptations for life in wetlands.

- **Hydric Soils:** Hydric soils are defined as "a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part" (USACE 2008). For the purposes of this jurisdictional delineation, the hydric soil indicators described in the USACE *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008) and *National Technical Committee for Hydric Soils (NTCHS) Field Indicators of Hydric Soils in the United States* (USDA 2019b) were used to assess the presence of hydric soils. Soil test pits were dug to the depth needed to document the soil chroma index using the Munsell® Soil Color Charts (Munsell® Color 2000), as well as additional hydric soil indicators (*e.g.,* hydrogen sulfide, sandy redox, depleted matrix, redox dark surface, depleted dark surface) detailed in the *Arid West Supplement* (USACE 2008) and the *Field Indicators of Hydric Soils in the United States* (USDA 2019b). The soil was determined to be hydric if one or more hydric soil indicators were present.

- **Wetland Hydrology:** Wetland hydrology is indicated by the presence of surficial or sub-surficial hydrologic characteristics long enough during the growing season to show that the presence of water has an overriding influence on the characteristics of vegetation and soils due to anaerobic and reducing conditions, respectively; thus, for an area to be defined as a wetland, periodic inundation or saturation of soils during the growing season must be determined to be present (USACE 2008). For the purposes of this delineation, the wetland hydrology indicators (*e.g.* inundation, watermarks, drift lines, sediment deposits, drainage patterns, saturation) described in the USACE *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008) were used to assess the presence of wetland hydrology. Wetland hydrology was determined to be present if one or more primary indicators, or two or more secondary indicators were observed.

A USACE Wetland Determination Data Form was completed for each of the sample points to document the conditions at that point.

USACE Non-Wetland Waters of the U.S.

The USACE defines Non-Wetland WoUS as drainages, or portions thereof, which have strong hydrology indicators such as the presence of seasonal flows and an OHWM. An OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as [a] clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (USACE 1987). In general, Non-Wetland WoUS are delineated by the lateral and upstream/downstream extent of the OHWM of the particular drainage or depression. The method for identification of lateral limits for potential Non-Wetland WoUS are detailed in the USACE *A Delineation Manual, A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2010).

Areas delineated as Non-Wetland WoUS may lack hydrophytic vegetation or hydric soil characteristics. Hydrophytic vegetation may be absent for various reasons, such as the lack of sufficient water flow to support hydrophytic vegetation or the influence of frequent scouring resulting from rapid water flow. Hydric soil indicators may be missing for various reasons, such as the lack of sufficient water or the presence of steep topography that precludes ponding and prohibits the development of hydric soils.

2.3.2 Regional Water Quality Control Board Jurisdiction

RWQCB jurisdiction typically extends to all WoUS as considered jurisdictional by the USACE as well as to isolated waters and wetlands. Section 401 of the Clean Water Act (CWA) gives the RWQCB the authority to regulate any proposed activities that may affect water quality.

2.3.3 California Department of Fish and Wildlife Jurisdiction

CDFW jurisdiction typically includes water features with a defined bed and bank and associated riparian vegetation. CDFW typically extends its jurisdictional limit to the top of a stream, the bank of a lake, or the outer edge of the riparian vegetation, whichever is wider. CDFW jurisdictional habitat allows for a wide variety of habitat types to be jurisdictional, including some that do not include wetland species (e.g., oak woodland, alluvial fan sage scrub). In addition, CDFW asserts jurisdiction over vernal pools when California state threatened and/or endangered species are present.

2.4 FOCUSED SENSITIVE SPECIES SURVEYS

Focused surveys were conducted for sensitive plant species, fairy shrimp, coastal California gnatcatcher, and least Bell's vireo. The methods for each are described below.

2.4.1 Sensitive Plant Species Surveys

In addition to the database search and background research described in Section 2.1, above, other references were consulted to better understand the historical location data and distribution of the sensitive plant species in San Diego County, including research using the San Diego Natural History Museum's (SDNHM) plant distribution mapping and voucher specimen lists and local biologists' knowledge of sensitive plant species likely to occur in the area.

A focused habitat assessment for sensitive plant species was conducted during the general biological resources survey (Section 2.2, above) to evaluate the proposed project survey area for its potential to support sensitive plant species. Potentially suitable habitats were mapped in the field using aerial imagery of the proposed project survey area (1 inch = 200 feet) and a handheld GPS unit. Potentially suitable habitat areas were digitized using Google™ Earth based on field notes and waypoints collected in the field.

Based on the results of the historical species database search and the focused habitat assessment, a list of the sensitive plant species that have potential to occur within or adjacent to the proposed project survey area was developed, and focused sensitive plant surveys as well as focused *Brodiaea* species surveys were conducted. The methods used for each survey are provided, below.

Focused Sensitive Plant Species Surveys

Focused sensitive plant surveys were conducted by walking meandering transects throughout the proposed project survey area. If a sensitive plant species was observed during these focused surveys, a waypoint was taken with a handheld GPS unit that recorded the plant's location and the elevation above mean sea level (amsl) and incorporated into the Geographic Information System (GIS) database.

Focused *Brodiaea* Species Surveys

Focused *Brodiaea* species surveys consisted of proposed project survey area site checks, reference site checks, and focused surveys. The methods for each are described below.

Proposed Project Survey Area & Reference Site Checks

Early in the growing season, site checks were conducted within suitable habitat identified within the proposed project survey area to document early emergent *Brodiaea* vegetation. If a location for a potential *Brodiaea* species was observed, it was recorded using a handheld GPS unit to facilitate subsequent surveys.

In addition, known reference populations in the vicinity of the proposed project area were monitored to determine when *Brodiaea* species had emerged and were observable, to assure the focused *Brodiaea* species surveys for the proposed project were conducted during the appropriate survey windows.

Focused Surveys

Once thread-leaved brodiaea (*Brodiaea filifolia*) was observed at a reference population, focused thread-leaved brodiaea and Orcutt's brodiaea (*B. orcuttii*) surveys were initiated in the potentially suitable habitat within the proposed project survey area. If a *Brodiaea* species was documented, biologists mapped the locations of and counted all individuals observed. Each observation was also mapped by hand onto the aerial photograph (either a point or a polygon), the number of individuals was estimated, and a GPS point for the plant/population location was collected.

2.4.2 Fairy Shrimp Surveys

The protocol-level fairy shrimp surveys conducted for the proposed project followed the current USFWS survey guidelines, titled *Survey Guidelines for the Listed Large*

Branchiopods and dated November 13, 2017. These survey guidelines define a complete large branchiopod survey as a complete wet season survey and a complete dry season survey that are conducted within a 3-year period. Both wet and dry season fairy shrimp surveys were conducted for the proposed project. The methods used for each are described below.

Wet Season Fairy Shrimp Surveys

Protocol-level wet season surveys were initiated immediately following the first rain event of the 2019/2020 rainy season. During the first survey visit, the proposed project site was examined for ponded areas. All ponded areas were included in each survey visit.

During the first sampling visit to each inundated basin, data recorded included the estimated maximum surface area of each basin, the estimated maximum depth of each basin, and existing habitat condition (e.g., disturbance level, type of basin). During each sampling round, all basins that were inundated during the previous sampling round were visited to determine if the basins were still holding water and required sampling. If a rain event occurred between sampling rounds, all known basins were sampled, and the proposed project survey area was assessed for potential basins that may have been inundated by the rain event.

During each sampling round, data for each inundated basin was recorded, including air temperature, water temperature, average depth, approximate size, habitat condition (if changed), voucher information, and other relevant notes. Each inundated basin was sampled by sweeping a hand-held net through the water and examining the net contents with all aquatic species recorded. If fairy shrimp species were observed, the reproductive status and approximate numbers of fairy shrimp in each basin were noted, and, when possible, identified to species in the field with a hand lens or in the lab with a microscope.

If encountered in any inundated basins, mature male and female fairy shrimp voucher specimens were collected from sampled basins. The collected shrimp are then identified to the species level with the aid of a stereo dissection scope, and subsequently provided to the Natural History Museum of Los Angeles for preservation.

Dry Season Fairy Shrimp Surveys

Protocol-level dry season fairy shrimp surveys include soil sample collection, soil sample processing and analysis, and – if needed – fairy shrimp hydration, rearing, hatching, and identification. The methods used for each are described, below.

Soil Sample Collection

Soil samples were collected from all basins within the proposed project survey area that provided potential fairy shrimp habitat during the 2019/2020 wet season fairy shrimp

surveys. These basins had been mapped and photographed during the 2019/2020 wet season surveys.

A hand trowel was used to collect the appropriate number and volume of samples from the top 1 to 3 centimeters of soil within each basin based on Table 1 of the current USFWS protocol. These soil samples were collected into paper bags, with the basin number written on each bag to inform the lab analysis, and logged in the soil sample collection table.

Soil Sample Processing and Analysis

The soil samples were taken to an approved laboratory for processing and analysis. The soil samples were hydrated and processed through a series of sieves to separate fairy shrimp cysts from the soil. The sieves used were of 710-, 355-, and 212-micron pore size screens, and the final sieve pore size is smaller than the target fairy shrimp genera (i.e., *Branchinecta, Streptocephalus*) average cyst diameter and, therefore, would retain any cysts present within the soil samples. The remaining material on the final sieve was then placed in a brine solution to help separate organic material from inorganic material. The remaining organic material was then filtered through a standard coffee filter and allowed to dry. The dried organic material was then examined under a microscope to determine if fairy shrimp cysts were present. For all identified cysts, cyst surface characteristics were then used to identify cysts to genus.

Fairy Shrimp Hydration, Rearing, Hatching, and Identification

Two species of fairy shrimp in the genus *Branchinecta* have the potential to occur in the proposed project survey area. Because these cysts cannot be identified to species under the microscope, the *Branchinecta* cysts require hydration, hatching, rearing, and subsequent identification to identify them to species.

When identified during the soil sample processing and analysis, *Branchinecta* cysts are hydrated by placing them into plastic containers filled with approximately 525 milliliters of filtered, non-chlorinated drinking water. The coffee filters with the collected cysts are slowly opened over the containers and gently shaken to allow the material to fall into the water. The sides of the filters are then rubbed against one another to release any additional material. Finally, a squirt bottle with filtered, non-chlorinated drinking water is used to spray any additional material from the filters into the containers.

The containers are given sample identification numbers and placed on a table in a climate-controlled room. Lighting in the room is provided by indirect sunlight as well as an overhead, full spectrum light that is kept on approximately 12 hours a day to help emulate outside, spring season lighting conditions. An overhead fan also is kept on at a low level to provide for some air movement across the water surface in the sample containers.

The samples are checked daily to see if any fairy shrimp have emerged. Once nauplii are observed, feeding begins. The hatched shrimp are fed a single drop of prepared

food on a daily basis until they are collected for identification. The food used is typically a mix of active brewer's yeast, sugar, powdered fish food, and water.

The hatched shrimp are allowed to continue under these conditions until they reach maturity, as determined by reaching full size, antennal development (males), and brood pouch (females). Once mature, the fairy shrimp are collected for identification by pouring the material in the container through a small strainer. Collected shrimp are then placed into a dish of carbonated water to slowly asphyxiate them. Once dead, the collected shrimp are placed in a 27- by 57-millimeter (5-dram) clean glass vial, filled with 70 percent ethyl alcohol. The collected shrimp are then identified to the species level with the aid of a stereo dissection scope, and subsequently provided to the Natural History Museum of Los Angeles for preservation.

2.4.3 Coastal California Gnatcatcher Surveys

Focused, protocol-level coastal California gnatcatcher surveys were conducted in accordance with the current USFWS survey protocol for the species, titled *Coastal California Gnatcatcher* (Polioptila californica californica) *Presence/Absence Survey Guidelines* and dated February 28, 1997 (USFWS 1997). The proposed project survey area consisted of all suitable habitat within the proposed project area and within a 300-foot survey buffer around the proposed project area. Because proposed project is located in the City of Oceanside, currently a non-NCCP participant, a total of six focused, protocol-level coastal California gnatcatcher survey rounds, spaced at least 1 week apart were conducted during the protocol survey window of March 15 to June 30.

All coastal California gnatcatcher surveys were conducted between 0600 and 1200 and avoided periods of adverse weather conditions (e.g., excessively hot or cold temperatures, high winds, steady rain, dense fog, other inclement weather conditions) that would impede detection of the coastal California gnatcatcher. Surveys were conducted by slowly walking throughout all suitable habitat within the survey area, visually searching with binoculars, and using auditory cues to detect the coastal California gnatcatcher. Various routes were utilized to conduct an unbiased survey of the suitable habitat within the survey area. Pre-recorded coastal California gnatcatcher vocalization playbacks were only used to elicit initial calls from coastal California gnatcatcher and were not used frequently or to illicit further behaviors. Pre-recorded vocalizations were played for periods of 5 to 15 seconds and were generally repeated approximately every 100 feet within the surveyed habitat.

Sensitive species detections, including coastal California gnatcatcher detections, were recorded electronically using a hand-held GPS unit and by hand onto a high-resolution aerial image of the survey area. In addition, relevant information about the detections (e.g., age, sex, number of individuals detected) was noted when necessary. Other wildlife species observed directly or detected indirectly by sign (e.g., scat, tracks, calls, and other evidence) also were recorded.

2.4.4 Least Bell's Vireo Surveys

Focused, protocol-level least Bell's vireo surveys were conducted in accordance with the current USFWS survey protocol, titled *Least Bell's Vireo Survey Guidelines*

(USFWS 2001). Eight surveys were conducted at least 10 days apart during the protocol survey window of April 10 to July 31.

All least Bell's vireo surveys were conducted between approximately dawn and 1100 and avoided periods of adverse weather conditions (e.g., excessively hot or cold temperatures, high winds, steady rain, dense fog, and other inclement weather conditions) that would impede detection of the least Bell's vireo. Surveyors slowly walked throughout the suitable habitat within the survey area and used visual and auditory cues to detect the least Bell's vireo. Various routes were utilized to conduct an unbiased survey of the potentially suitable habitat within the survey area, while taking care not to disturb sensitive habitat or potential nest areas.

Sensitive species detections were recorded electronically using a hand-held GPS unit and/or by hand onto a high-resolution aerial image of the survey area, and relevant information (e.g., age, sex, number of individuals detected) was noted if least Bell's vireo were detected. In addition, numbers and locations of parasitic brown-headed cowbirds were recorded, if present, and other wildlife species observed directly or detected indirectly by sign, including scat, tracks, calls, and other evidence were recorded.

2.5 SURVEY LIMITATIONS

It should be noted that the results of the general biological surveys and jurisdictional delineation reflect the existing conditions at the time of the survey, which naturally change over time. In addition, the jurisdictional resource boundaries may be subject to verification by the regulatory agencies. In addition, the plant and wildlife species lists do not provide a comprehensive list of all species that occur within or utilize the survey area, because the survey conducted was a general, diurnal biological survey that does not account for all potentially occurring rare species, nocturnal species, secretive species, or seasonal/migratory species.

SECTION 3.0 – RESULTS

BBS Biologist Darin Busby conducted a general biological resources survey of the approximately 14.915-acre survey area (i.e., the proposed project site and 50-foot survey buffer) on July 22, 2019, between the hours of 1000 and 1245. Weather conditions during the survey included temperatures ranging from 73 to 82 degrees Fahrenheit, wind speeds ranging from 0 to 4 miles per hour, cloud cover ranging from 10 to 100 percent, and no precipitation. Following the general biological resources survey, biologists Darin Busby and Brian Lohstroh conducted a focused jurisdictional delineation within the approximately 14.915-acre survey area on August 29, 2019.

The following sections (1) describe the general botanical and zoological resources and the sensitive biological resources observed and/or detected within the survey area during the general biological resources survey and (2) provide an assessment of the potential for additional sensitive biological resources to occur within and immediately adjacent to the proposed project site. Table 1 below provides a summary of the general and focused surveys conducted for the proposed project.

Table 1. Summary of General and Focused Surveys

Survey Type		Date	Surveyor
Biological Resources Survey		7/22/19	D. Busby
Wetland Delineation		8/29/19	D. Busby, B. Lohstroh
Sensitive Plant Survey		5/15/20	E. Kentner
Brodiaea Species Survey		2/14/20 to 6/15/20	C. Vettes, E. LaCoste
Fairy Shrimp Surveys	Wet Season	12/3/19 to 3/19/20	E. LaCoste
	Dry Season	8/11/20	E. LaCoste, G. Mason
Coastal California Gnatcatcher Surveys		5/7/20 to 7/12/20	D. Busby, C. Vettes
Least Bell's Vireo Surveys		5/7/20 top 7/29/20	D. Busby, C. Vettes, E. LaCoste

3.1 TOPOGRAPHY AND SOILS

The majority of the proposed project area is relatively flat with a drop in elevation to the south towards Buena Vista Creek, with elevations ranging from approximately 220 to 180 feet above mean sea level (amsl). Buena Vista Creek occurs along the southern boundary of the proposed project area and runs from east to west, eventually connecting to Buena Vista Lagoon and the Pacific Ocean approximately 4 miles west of the survey area. The NWI classifies Buena Vista Creek as a freshwater forested/shrub wetland (USFWS 2019b). Buena Vista Creek is one of six creeks located within the

210-square-mile Carlsbad Hydrologic Unit (HU), which is one of 11 HUs identified in San Diego County by the RWQCB.

The following two soil types occur within the survey area: (1) Las Flores loamy fine sand, 5 to 9 percent slopes, eroded and (2) Visalia sandy loam, 2 to 5 percent slopes (USDA 2019a; Appendix A: Figure 4). Soils observed in the field within the soil test pits appeared to exhibit characteristics similar to those mapped within the proposed project area, with the exception of fill soils and riprap along some portions of Buena Vista Creek (USDA 2019a).

Las Flores loamy fine sand, 5 to 9 percent slopes, eroded is the most common soil type within the survey area. Las Flores loamy fine sands are derived from weathered marine sandstone that consist of loamy fine sands with a sandy clay subsoil. This soil is moderately well drained, has slow to medium runoff, and a slight to moderate erosion hazard. Las Flores soils are not listed as hydric soils in California (USDA 2019a).

Visalia sandy loam, 2 to 5 percent slopes occurs in and adjacent to Buena Vista Creek, in the southern portion of the survey area (USDA 2019a). Visalia sandy loams are derived from granitic parent material that developed on alluvial fans and flood plains. This soil has a topsoil rich in organic matter, is well-drained to moderately well-drained, has slow to medium runoff, is moderately permeable, and has a slight to moderate erosion hazard. Visalia sandy loams are listed as a hydric soil on the USDA Hydric Soils List (USDA 2019a).

3.2 BOTANICAL RESOURCES

A total of 63 plant species were observed within the survey area during the various general and focused surveys conducted between July 22, 2019 and July 29, 2020. Of these 63 plant species observed, 37 (59 percent) of these species are considered non-native and/or naturalized into the area, and 26 (41 percent) of these species are considered native. One of the 63 plant species, San Diego sagewort (*Artemisia palmeri*), found adjacent to and south of the survey area is considered sensitive (Appendix B). A list of plant species observed within the survey area is included as Appendix C.

BBS mapped the vegetation communities and land cover types within the approximately 14.915-acre survey area. BBS documented eight vegetation communities and land cover types within the survey area – disturbed Diegan coastal sage scrub, southern riparian forest, developed land, disturbed land, iceplant, ornamental, and ruderal (Appendix A: Figure 4; Appendix B). The eight vegetation communities and land cover types are summarized in Table 1, and briefly described in the following paragraphs. The total acreages do not always add up to the sum of the approximate acreage breakdown within the survey area; however, they represent the actual total without the rounding error(s). Appendix B provides representative photographs of the survey area.

Table 1. Vegetation Communities and Land Cover Types within the Survey area

Vegetation Community/ Land Cover Type	SAP Habitat Group	Within Parcels (acres*)	Within 50-foot Survey Buffer (acres*)	Total (acres*)
Disturbed Diegan Coastal Sage Scrub	C	0.448	0.003	0.451
Southern Riparian Forest	A	0.518	0.868	1.386
Open Water	A	0.018	0.035	0.054
Developed Land	-	0.455	2.184	2.639
Disturbed Land	F	8.109	0.542	8.650
Iceplant	F	0.454	--	0.454
Ornamental	F	0.138	0.302	0.440
Ruderal	F	0.841	--	0.841
	TOTAL**	**10.981**	**3.935**	**14.915**

*Acreages are approximate and rounded to the nearest thousandth of an acre.
**Total acreages represent the actual acreages without the rounding error.

3.2.1 Disturbed Diegan Coastal Sage Scrub (Oberbauer Code 32510, Updated Holland Code 32500)

Diegan coastal sage scrub is a vegetation community that consists mainly of low, soft-woody sub-shrubs (approximately 3 feet high) that are most actively growing in winter and early spring. Many taxa within this community are facultatively drought-deciduous. Stem- and leaf-succulents are also often present but are usually not conspicuously dominant species. Dominant shrub species in this vegetation type vary, depending on local site factors and levels of disturbance. Diegan coastal sage scrub is typically found on dry sites, such as steep, south-facing slopes or clay-rich soils ranging from coastal Los Angeles County into northern Baja California, Mexico.

Disturbed Diegan coastal sage scrub is similar to Diegan coastal sage scrub, described above, but it was classified as disturbed where mechanical or natural disturbance has reduced the overall cover of the community resulting in large areas colonized by herbaceous weedy species and/or bare ground. Some disturbance types include clearing, grading, scraping, off-road vehicle damage, or illegal trash disposal.

Approximately 0.451 acre of disturbed Diegan coastal sage scrub occurs within three small patches within the survey area, including approximately 0.448 acre on the southern parcel and approximately 0.003 acre in the 50-foot survey buffer (Appendix A: Figure 4). The disturbed Diegan coastal sage scrub is moderately dense with shrub heights primarily ranging from 1 to 4 feet, and is dominated by native plant species such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), but also contains a high proportion of non-native plant species, such as crown daisy (*Glebionis coronaria*), black mustard

(*Brassica nigra*), short-pod mustard (*Hirschfeldia incana*), sweet fennel (*Foeniculum vulgare*), Russian thistle (*Salsola tragus*), and chess (*Bromus* spp.). Some areas of disturbed Diegan coastal sage scrub have been altered by mechanical disturbance.

3.2.2 Southern Riparian Forest (Oberbauer Code 61300, Holland Code 61300)

Southern riparian forest is composed of winter-deciduous, broad-leaved tree species that require water near the soil surface and is most often found along stream courses. Typically this community contains a dense canopy of trees located within moist canyons and drainage bottoms and is dominated by species such as willow (*Salix* spp.), cottonwood (*Populus* sp.), and western sycamore (*Platanus racemosa*). Associated understory species can include species such as mulefat (*Baccharis salicifolia*), stinging nettle (*Urtica dioica* ssp. *holosericea*), and wild grape (*Vitis girdiana*).

Approximately 1.386 acres of southern riparian forest occur along Buena Vista Creek within the survey area, including approximately 0.518 acre within the southern parcel boundary and approximately 0.868 acre in the 50-foot survey buffer (Appendix A: Figure 4). This vegetation community contains a moderately dense canopy, primarily ranging in height from 15 to 20 feet, and is dominated by native plant species such as narrow-leaf willow (*Salix exigua*), arroyo willow (*Salix lasiolepis*), mulefat, cattail (*Typha* sp.), wild grape, but also contains non-native plant species such as Brazilian pepper tree (*Schinus terebinthifolius*), giant reed (*Arundo donax*), and castor bean (*Ricinus communis*).

3.2.3 Open Water (Oberbauer Code 64140, Holland Code 64140)

Open water is comprised of year-round bodies of fresh water with extremely low salinity that typically takes the form of lakes, streams, ponds, or rivers. Open water includes portions of water bodies that are usually covered by water and contain less than 10 percent vegetative cover.
Approximately 0.054 acre of open water occurs along Buena Vista Creek within the southeastern portion of the survey area, including approximately 0.018 acre within the southern parcel boundary and approximately 0.035 acre in the 50-foot survey buffer (Appendix A: Figure 4).

3.2.4 Developed Land (No Tier; Oberbauer Code 12000, No Holland Code)

Developed land has been constructed upon or otherwise physically altered to the extent that native vegetation is no longer supported. Developed land contains permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation.

A total of approximately 2.639 acres of developed land occur within the survey area, including approximately 0.455 acre within the southern parcel boundary and approximately 2.184 acres within the 50-foot survey buffer (Appendix A: Figure 4). Within the survey area, developed land occurs as sidewalks, roadways, parking lots, and commercial buildings.

3.2.5 Disturbed Land (Oberbauer Code 11300, No Holland Code)

Disturbed land includes areas that retain a soil substrate but have been physically disturbed by previous human activity. These areas are no longer recognizable as a native or naturalized vegetation community. Vegetation, if present, is typically composed of predominately non-native species introduced and established through human action. These areas are not typically artificially irrigated but receive water from precipitation and runoff. Examples of disturbed land include areas that have been graded, cleared for fuel management purposes, graded construction pads, staging areas, off-road vehicle trails, and old home sites.

A total of approximately 8.650 acres of disturbed land occur throughout the survey area, with approximately 8.109 acres within the two parcel boundaries and approximately 0.542 acre in the 50-foot survey buffer (Appendix A: Figure 4). These areas are within or adjacent to areas that appear to be altered by regular human mechanical disturbance activities, such as grading or brush management. The disturbed land is dominated by bare ground and non-native plant species such as black mustard, tocalote (*Centaurea melitensis*), spotted spurge (*Chamaesyce maculata*), bur-clover (*Medicago polymorpha*), and chess, but also contains scattered native plant species, such as spreading goldenbush (*Isocoma menziesii* var. *menziesii*), tarweed (*Deinandra fasciculata*), coyote brush (*Baccharis pilularis*), and dove weed (*Croton setigerus*).

3.2.6 Iceplant (No Oberbauer Code, No Holland Code)

Iceplant is not a vegetation community described by Holland (1986) or Oberbauer et al. (2008). However, it was used for the vegetation mapping for the proposed project to indicate areas that are dominated by iceplant (*Carpobrotus* ssp.), which has been introduced and established through human action. Areas mapped as iceplant are no longer recognizable as a native or naturalized vegetation community. These areas are not typically artificially irrigated but receive water from precipitation and runoff.

A total of approximately 0.454 acre of iceplant occurs within five small patches in the survey area, all of which occurs on the southeastern parcel boundaries (Appendix A: Figure 4). In addition to non-native iceplant, this land-cover type contains non-native grasses, such as wild oat (*Avena fatua*) and chess.

3.2.7 Ornamental (No Oberbauer Code, No Holland Code)

Ornamental vegetation is not recognized by Holland (1986) or Oberbauer et al. (2008). It typically consists of non-native landscape and/or garden plantings that have been planted in association with buildings, roads, or other development. San Diego County supports more than 250 different types of ornamental trees and numerous other shrubs and herbs that decorate urban areas.

A total of approximately 0.440 acre of ornamental vegetation occurs in small, scattered patches along the perimeter of the survey area, including approximately 0.138 acre

within the parcel boundaries and approximately 0.302 acre within the 50-foot survey buffer (Appendix A: Figure 4). Ornamental vegetation is composed of various non-native plant species used for landscaping, such as Brazilian pepper tree, red gum (*Eucalyptus camaldulensis*), natal plum (*Carissa macrocarpa*), and Mexican fan palm (*Washingtonia robusta*).

3.2.8 Ruderal (No Oberbauer Code, No Holland Code)

Ruderal areas are not recognized by Holland (1986) or Oberbauer et al. (2008). They are typically dominated by non-native, weedy species and are no longer recognizable as a native or naturalized vegetation community. These areas are not typically artificially irrigated but receive water from precipitation and runoff. The species composition in ruderal areas can be similar to the species composition in disturbed areas; however, ruderal areas do no typically receive the frequent mechanical disturbance that occurs in disturbed areas.

A total of approximately 0.841 acre of ruderal vegetation occurs within four small patches in the survey area, all of which occurs within the southern parcel boundaries (Appendix A: Figure 4). These areas are dominated by non-native plant species, such as black mustard, short-pod mustard, tocalote, wild oat, and chess, but also contain scattered native plant species, such as spreading goldenbush, tarweed, and coyote brush.

3.3 ZOOLOGICAL RESOURCES

A total of 47 wildlife species were detected within the survey area during the various general and focused surveys conducted between July 22, 2019 and July 29, 2020, including two butterflies, one reptile, 41 birds, and three mammals. Representative species detected are typical of the habitats present within and adjacent to the survey area and included cabbage white butterfly (*Pieris rapae*), western fence lizard (*Sceloporus occidentalis*), Anna's hummingbird (*Calypte anna*), western scrub-jay (*Aphelocoma californica*), spotted towhee (*Pipilo maculatus*), house finch (*Carpodacus mexicanus frontalis*), and California ground squirrel (*Spermophilus beecheyi*). A list of wildlife species detected within the survey area is included as Appendix D.

3.4 SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources include sensitive vegetation communities, sensitive plant and wildlife species, wildlife movement corridors and nursery sites, and jurisdictional resources. For purposes of this report, "sensitive species" are defined as draft Oceanside SAP-covered species; species considered rare, threatened, endangered, endemic, and/or sensitive by USFWS, California Native Plant Society (CNPS), and/or CDFW; and avian species covered by the Migratory Bird Treaty Act (MBTA) and/or California Fish and Game Code (CFGC) Section 3503.5.

Assessments for the potential occurrence of sensitive biological resources are based upon known ranges, habitat preferences for the species, historical species occurrence

records from the CNDDB (CDFW 2019a), and species occurrence records from the vicinity of the BSA from other databases (County of San Diego 2019, CNPS 2019, USFWS 2019c). No focused sensitive species surveys were conducted for the proposed project. The following sections provide definitions for each of these sensitive biological resources and describe the sensitive biological resources that are known to occur or have a potential to occur within and/or adjacent to the survey area.

3.4.1 Sensitive Vegetation Communities

Sensitive vegetation communities are vegetation assemblages, associations, or subassociations that have cumulative losses throughout the region, have relatively limited distribution, support or potentially support sensitive species, or have particular value to other wildlife. Typically, sensitive vegetation communities are considered sensitive whether or not they have been disturbed. Sensitive vegetation communities are regulated by various local, state, and federal resource agencies.

The sensitive vegetation communities that occur on-site include the following:

- Approximately 0.451 acre of disturbed Diegan coastal sage scrub
- Approximately 1.386 acres of southern riparian forest
- Approximately 0.054 acre of open water

3.4.2 Sensitive Plant Species

For purposes of this report, sensitive plant species include those that are (1) listed as threatened or endangered or proposed for listing by federal or state agencies; (2) California Rare Plant Ranks (CRPR) List 1 or List 2 (CNPS 2019); or (3) considered rare, endangered, or threatened by CDFW (CDFW 2019b) or other local conservation organizations or specialists. Noteworthy plant species are considered to be those that are CRPR List 3 or List 4 (CNPS 2019).
The literature review and database search resulted in a list of 56 sensitive plant species that have historically occurred within 3 miles of the proposed project survey area. All 56 species along with their current status, habitat description, and potential for occurrence are included in Appendix E.

Focused sensitive plant species surveys were conducted for the proposed project in 2020. The results of these sensitive plant species surveys are summarized below. The full sensitive plant species survey summary report is included as Appendix F, and the full *Brodiaea* species survey summary report is included as Appendix G.

Only one sensitive plant species – San Diego sagewort – was observed during the general and focused surveys conducted for the proposed project.

Focused Sensitive Plant Species Surveys

Based on the weather and blooming trends observed in San Diego County during spring 2020, two rounds of surveys were planned. Ed Kentner (Kentner Botanical) conducted the first focused sensitive plant survey on May 15, 2020; however, when he arrived at the proposed project site on June 8, 2020, to conduct the second focused sensitive plant survey, he found that the site had been mowed sometime between the afternoon of June 4, 2020, and the morning of June 8, 2020. Therefore, the second sensitive plant survey was not conducted. A complete list of plant species observed on-site during the 2019 general biological survey, 2019 focused jurisdictional delineation, and/or 2020 focused sensitive plant surveys is included as Appendix C.

The results of the sensitive plant species surveys and focused *Brodiaea* species surveys were used to reevaluate the potential for occurrence for the initial 56 sensitive plant species with a potential for occurrence within the proposed project survey area (Attachment 2). Of the 56 species, 52 are not expected to occur on-site based on the existing site conditions and the results of the May 2020 sensitive plant survey. Of the remaining four, only one – San Diego sagewort – was observed on-site. The other three – southern tarplant (*Centromadia parryi* ssp. *australis*), smooth tarplant (*Centromadia pungens ssp. laevis*), and Del Mar Mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*) – were not observed during the May 2020 sensitive plant survey; however, the site was mowed before the June 2020 sensitive plant survey, when these species would have been observable if on-site. Therefore, there is still a low to moderate potential for occurrence for each of these species. Detailed species accounts for these four species are provided below.

San Diego Sagewort

San Diego sagewort is a CRPR 4.2 species (limited distribution and moderately threatened in California). It is a deciduous shrub in the Asteraceae family that typically blooms from May to September. This species is found in mesic, sandy soils along drainages in chaparral, coastal sage scrub, and riparian habitats (CNPS 2020). San Diego sagewort is known from San Diego County and in Baja California, Mexico, at elevations between 0 and 2,230 feet amsl (Calflora 2020). This species is threatened by development, flood control projects, and possibly by non-native plant species (CNPS 2020).

San Diego sagewort is present adjacent to and south of the survey area (Appendix A: Figure 4). This species was observed along the southern bank of Buena Vista Creek during the 2019 general biological survey, 2019 focused jurisdictional delineation, and 2020 focused sensitive plant surveys. It is within the proposed project survey area but well outside the proposed project footprint.

Southern Tarplant

Southern tarplant is a CRPR 1B.1 species (rare, threatened, or endangered in California and elsewhere). It is an annual herb in the Asteraceae family that typically blooms from

May to November. This species is found in vernal pools, along the margins of marshes, and in vernally mesic areas within grasslands (CNPS 2020). Southern tarplant is known from coastal California, from Santa Barbara County south into Baja California, Mexico, at elevations between 0 and 1,410 feet amsl (Calflora 2020). This species is threatened by habitat disturbance, population fragmentation, urbanization, development, illegal vehicle activity, foot traffic, grazing, and competition from non-native plants (CNPS 2020).

Southern tarplant has a low to moderate potential to occur within the proposed project survey area. While no historical species occurrence records for southern tarplant exist within 3 miles of survey area (CDFW 2020a), marginally suitable habitat exists within the survey area. The survey area was mowed before the planned June 2020 survey, which would have been used to determine if this species is present onsite.

Smooth Tarplant

Smooth tarplant is a CRPR 1B.1 species (rare, threatened, or endangered in California and elsewhere). It is an annual herb in the Asteraceae family that typically blooms from April to September. This species is found in alkaline soils associated with chenopod scrub, meadows and seeps, playas, riparian woodland, and grasslands (CNPS 2020). Smooth tarplant is known from Los Angeles, Riverside, San Bernardino, and San Diego counties (CNPS 2020) at elevations between 330 to 2,000 feet amsl (Calflora 2020). This species is threatened by foot traffic, agriculture, road maintenance, disking, urbanization, hydrological alterations, and flood control projects (CNPS 2020).

Smooth tarplant has a low to moderate potential to occur within the proposed project survey area. Historical species occurrence records for smooth tarplant exist within 3 miles of survey area (CDFW 2020a), but only marginally suitable habitat exists within the survey area, and the survey area is just outside of the known elevation range for this species. The survey area was mowed before the planned June 2020 survey, which would have been used to determine if this species is present onsite.

Del Mar Mesa Sand Aster

Del Mar Mesa sand aster is a CRPR 1B.1 species (rare, threatened, or endangered in California and elsewhere) and a proposed Oceanside Subarea Plan Narrow Endemic species. It is a perennial herb in the Asteraceae family that typically blooms from May to September. This species is found in sandy soils in coastal bluff scrub, coastal sage scrub, and openings in maritime chaparral (CNPS 2020). Del Mar Mesa sand aster is endemic to San Diego County (CNPS 2020), and is found at elevations between 0 to 425 feet amsl (Calflora 2020). This species is threatened by development, trampling, non-native plant species, and road maintenance (CNPS 2020).

Del Mar Mesa sand aster has a low to moderate potential to occur within the proposed project survey area. Historical species occurrence records for Del Mar Mesa sand aster exist within 3 miles of survey area (CDFW 2020a), but only marginally suitable habitat exists within the survey area. *Corethrogyne filaginifolia* was observed during the May

2020 sensitive plant surveys; however, the survey area was mowed before the planned June 2020 survey, which would have been used to determine if the *Corethrogyne filaginifolia* present on-site is this variety or another more common one.

Focused *Brodiaea* Species Surveys

In addition to the sensitive plant species surveys, BBS conducted focused surveys for thread-leaved brodiaea and Orcutt's brodiaea. BBS biologist Erik LaCoste conducted site checks within suitable habitat identified within the proposed project survey area to document early emergent *Brodiaea* vegetation. These site checks occurred on February 14 and 25 as well as March 5, 13, and 19, 2020, in conjunction with the focused fairy shrimp surveys that were conducted for the proposed project.

To determine when to initiate focused surveys, BBS biologist Melissa Busby coordinated with regional biologists who were monitoring reference sites during the 2020 survey window to determine when other *Brodiaea* populations within the vicinity of the proposed project had emerged and were observable. In addition, BBS biologist Charles Vettes monitored a known reference population in the vicinity of the proposed project to determine when *Brodiaea* species in close proximity to the proposed project had emerged and were observable. During his site visit on May 7, 2020, Charles Vettes documented that the thread-leaved brodiaea at the reference population had emerged but only a few were blooming and easily observable. In addition, Erik LaCoste documented blooming Orcutt's brodiaea on June 2, 2020, during a survey for an additional nearby property.

Following the observation of thread-leaved brodiaea at the nearby reference population on May 7, 2020, BBS biologists began focused, presence/absence surveys within the proposed project survey area. Six surveys were conducted by BBS biologists between May 14 and June 15, 2020. No thread-leaved brodiaea or Orcutt's brodiaea were observed during the first four focused *Brodiaea* species surveys conducted between May 14 and June 4, 2020. Between June 4 and June 8, 2020, the proposed project area was mowed. BBS biologists continued to survey the proposed project area for any sign of potential *Brodiaea* species, including two additional surveys on June 12 and June 15, 2020. No potential *Brodiaea* species were documented during these two visits.

3.4.3 Sensitive Wildlife Species

For purposes of this report, sensitive wildlife species include those that are (1) listed as threatened or endangered or proposed for listing by USFWS or CDFW; (2) designated as "fully protected" by CDFW, (3) considered "species of special concern" by CDFW, and/or (4) considered "taxa to watch" by CDFW (CDFW 2019c). Species that are covered by the federal MBTA were also considered. As the list of species covered under the MBTA is extensive, these species are not included in the sensitive wildlife species table. However, they are addressed further in Section 4.1.3 and 5.2.1, below.

The literature review and database search resulted in a list of 46 sensitive wildlife species that have historically occurred within 3 miles of the survey area. All 46 species along with their current status, habitat association, and potential for occurrence are included in Appendix H.

Focused fairy shrimp, coastal California gnatcatcher, and least Bell's vireo surveys were conducted for the proposed project. The results of these sensitive wildlife species surveys are summarized below.

Four sensitive wildlife species – Cooper's hawk (*Accipiter cooperii*), coastal California gnatcatcher, least Bell's vireo, and yellow warbler (*Setophaga petechia*) – were detected during the general and focused surveys conducted for the proposed project.

Focused Fairy Shrimp Surveys

Focused protocol-level fairy shrimp surveys were conducted in 2019/2020 for the proposed project. As stated in Section 2.4.2 above, both wet and dry season fairy shrimp surveys were completed. The full wet season fairy shrimp survey summary report is included as Appendix I, and the full dry season fairy shrimp survey summary report is included as Appendix J. A summary of each of the surveys is described below.

2019/2020 Wet Season Surveys

The 2019/2020 wet season surveys were initiated on December 3, 2019, following the first significant rain event in November/December 2019, and consisted of a total of seven sampling visits by USFWS-permitted biologist Erik LaCoste (TE-027736-6). Wet season surveys continued until March 19, 2020; however, surveys were put on hold on March 24, 2020.

During the 2019/2020 wet season surveys, BBS identified and surveyed a total of 12 basins within the proposed project area (Attachment 1: Figure 4). Basins surveyed included road ruts, ditches, detention basins, and other depressions that became inundated at some point during the 2019/2020 wet season. The majority of the basins in the proposed project area appear to be continually impacted by foot traffic and vehicle activity.

Fairy shrimp were not detected in any basins during the seven surveys that were conducted during the 2019/2020 wet season survey. Additionally, no other aquatic species were observed during these surveys.

2020 Dry Season Surveys

The dry season survey consisted of soil sample collection and soil sample processing and analysis. Soil sample collection was performed by USFWS-permitted biologist Erik LaCoste (TE-027736-6) on August 11, 2020. An appropriate amount of soil was collected from each of the basins identified during the wet season survey. Collected soil was then transferred to Alden Environmental, Inc. for processing and analysis.

Soil sample processing and analysis was by performed in the lab by Alden Environmental, Inc., USFWS-permitted biologist Greg Mason (TE-58862A-1). Following the appropriate methods to separate fairy shrimp cysts from soil samples, it was determined that no cysts were present in the collected soil samples. Water fleas (class Cladocera) and seed shrimp (class Ostracoda) – both common, non-sensitive invertebrate species that occur in ephemeral basins – were identified in basins 3 and 9, respectively.

Because there were no fairy shrimp cysts extracted from any of the soil samples collected from the basins, fairy shrimp hydration, rearing, hatching, and identification was unnecessary and not performed.

Survey Completion

A complete fairy shrimp survey includes a full wet season survey and a full dry season survey. BBS provided USFWS with the results of both the partial wet season surveys and full dry season surveys. BBS also provided detailed survey information about vernal pool indicator plant species and other surveys performed for the proposed project. Based upon the data provided through these discussions, USFWS biologists Janet Stuckrath and David Zoutendyk confirmed in an email on September 15, 2020, that the data provided for the 2019/2020 wet season surveys and the 2020 dry season surveys was adequate to be considered a complete fairy shrimp survey.

Focused Coastal California Gnatcatcher Surveys

Focused, protocol-level coastal California gnatcatcher surveys were conducted for the proposed project. As stated in Section 2.4.3 above, the focused surveys were completed according to the current USFWS survey protocol for this species. The full coastal California gnatcatcher survey summary report is included as Appendix K.

A habitat assessment was conducted by USFWS-permitted biologist Darin Busby (TE-115373-4) on July 22, 2019. A total of approximately 0.57 acre of potentially suitable coastal California gnatcatcher habitat was identified within the proposed project footprint and 300-foot survey buffer during the assessment.

BBS biologists Darin Busby and Charles Vettes (TE-20160B-2) conducted six focused, protocol-level coastal California gnatcatcher surveys between May 7 and June 12, 2020. All surveys were conducted during appropriate weather conditions. Although a gnatcatcher pair was detected by Mr. Busby in the proposed project area during the wetland delineation survey on August 19, 2019, coastal California gnatcatcher was not detected during the 2020 focused, protocol-level surveys.

Focused Least Bell's Vireo Surveys

Focused, protocol-level least Bell's vireo surveys were conducted for the proposed project. As stated in Section 2.4.4 above, the focused surveys were completed

according to the current USFWS survey protocol for this species. The full least Bell's vireo survey summary report is included as Appendix L.

A habitat assessment was conducted by BBS biologist Darin Busby on July 22, 2019. A total of approximately 2.83 acres of potentially suitable least Bell's vireo habitat was identified within the proposed project footprint and 500-foot survey buffer during the assessment.

BBS biologists Darin Busby, Charles Vettes, and Erik LaCoste conducted eight focused, protocol-level least Bell's vireo surveys between May 7 and July 29, 2020. All surveys were conducted during appropriate weather conditions. Although no breeding least Bell's vireo pairs were detected in the proposed project area, a single least Bell's vireo was detected during the eighth and final survey on July 29, 2020. The least Bell's vireo was detected within the 500-foot buffer area southwest of the proposed project area. After a relatively short observation time, the individual least Bell's vireo disappeared downstream towards the west and was not detected again during the survey.

3.4.4 Critical Habitat

Under the ESA, USFWS designates certain areas as "critical habitat" if they determine that these geographic areas are essential for the conservation and/or recovery of a federally listed threatened or endangered species, whether or not the species currently occupies the area. Critical habitat areas often require special management and protection to assure they will remain suitable for the federally listed species for which they have been designated. While federally listed species are protected by the ESA whether or not they are in an area that is designated as critical habitat, projects proposed within or adjacent to critical habitat must demonstrate that implementation of the project would not destroy or significantly impact the functions and values of the critical habitat.

Critical habitat for the coastal California gnatcatcher has been designated within the Buena Vista Creek Mitigation Area, located along the southern boundary of the survey area (Appendix A: Figure 4).

No other critical habitat has been designated within the vicinity of the proposed project.

3.4.5 Wildlife Movement Corridors

Wildlife corridors are essential to maintain populations of healthy and genetically diverse plant and wildlife species. Wildlife corridors are considered sensitive by municipal, state, and federal resource conservation agencies. These corridors allow wildlife to move between adjoining open space areas that are becoming increasingly isolated due to habitat fragmentation urbanization, rugged terrain, and/or changes in vegetation (Beier and Loe 1992).

Wildlife corridors can be classified as either regional corridors or local corridors. Regional corridors are defined as those linking two or more large areas of natural open space, and local corridors are defined as those allowing resident animals to access

critical resources (e.g., food, cover, water) in a smaller area that might otherwise be isolated by some form of urban development (e.g., roads, housing tracts).

Within these wildlife corridors, wildlife movement activities typically fall into one of three movement categories: (1) dispersal (i.e., juvenile animals from natal areas or individuals extending range distributions), (2) seasonal migration, and (3) movement related to home range activities (e.g., foraging for food or water, defending territories, searching for mates).

The proposed project is dominated by disturbed and ruderal land that completely surrounded by commercial and residential development with the exception of the narrow riparian corridor along the southern boundary. Despite being surrounded by urban development, noise, and lighting, the riparian corridor provides a vital swath of undeveloped open space that appears to provide limited yet sufficient connectivity to be considered part of both a local and regional wildlife corridor. The proposed project site, however, is outside of the Wildlife Corridor Planning Zone (WCPZ).

3.4.6 Jurisdictional Resources

Jurisdictional resources are considered sensitive biological resources and are regulated by the USACE, CDFW, RWQCB, and/or the City of Oceanside pursuant to federal, state, and local regulations, outlined below.

USACE regulates the discharge of dredged and/or fill material, both temporary and permanent, into Wetland and Non-Wetland WoUS, pursuant to Section 404 of the CWA. USACE Non-Wetland WoUS are delineated by the lateral and upstream/downstream extent of the OHWM. USACE Wetland WoUS are areas that contain wetland hydrology, hydric soils, and hydrophytic vegetation. Swales and erosional features (e.g., gullies; small washes characterized by low volume, infrequent, and short duration flow) are generally not considered WoUS because they are not tributaries or they do not have a significant nexus to downstream TNWs.

RWQCB regulates wastewater discharge, dredged and/or fill material, or other alterations of Wetland and Non-Wetland WoS, including isolated waters such as vernal pools and other waters showing lack of connectivity to a TNW, pursuant to Section 401 of the CWA and Section 13000 et. seq. of the CWC under the Porter-Cologne Water Quality Control Act.

CDFW regulates activities that would substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake, pursuant to CFGC Section 1600 et. seq.. CDFW typically extends its jurisdictional limit to the top of a stream, the bank of a lake, or the outer edge of the riparian vegetation, whichever is wider. CDFW Streambeds include watercourses having a surface or subsurface flow that supports riparian vegetation. In addition, CDFW asserts jurisdiction over vernal pools when California state threatened and/or endangered species are present.

Jurisdictional status is preliminary, and the regulatory agencies will make a final determination of jurisdictional boundaries. Thus, these resources are referred to as 'potentially jurisdictional' until finalized through coordination with the resource agencies. The wetlands and riparian area within and adjacent to Buena Vista Creek in the southern portion of the survey area were the only potentially jurisdictional resources identified within the survey area. Buena Vista Creek is an intermittent creek that occurs along the southern boundary of the proposed project area and runs from east to west, eventually connecting to Buena Vista Lagoon and the Pacific Ocean approximately 4 miles west of the survey area. A desktop review of historical aerial imagery of the survey area does not show any clear evidence of potentially jurisdictional resources outside of Buena Vista Creek, which was later confirmed during the jurisdictional delineation (NETR 2019); therefore, data was collected only at Sample Points along Buena Vista Creek.

Buena Vista Creek receives moderate to high velocity water flows during wet times of the year, when groundwater and direct precipitation provide water for stream flow, and then receives either low velocity water flows from direct precipitation and urban runoff or no flows during dry times of the year when groundwater has dropped. Buena Vista Creek supported low velocity flows at the time of the jurisdictional delineation on August 29, 2019. Buena Vista Creek enters the proposed project area through a large box culvert in the southeastern corner of the survey area where it transitions from an open concrete channel upstream, east of Thunder Drive, to an earthen, riparian lined drainage within the proposed project area. Buena Vista Creek runs west to exit the proposed project area in the southwestern corner of the survey area where it continues as an earthen, riparian lined drainage off-site. The intermittent flow regime in Buena Vista Creek allows the portion of the drainage within the proposed project area to support mature southern riparian forest.

The following two sections describe the data that was collected at each Sample Point during the jurisdictional delineation on August 29, 2019, and the summary of potentially jurisdictional resources that occur within the approximately 14.915-acre survey area. Additional information can be found in the Jurisdictional Delineation Report, which is included as Appendix G to this BTR.

Summary of Sample Points

A total of six Sample Points were investigated in or adjacent to locations representative of potentially jurisdictional areas along Buena Vista Creek in the southern portion of the survey area (Appendix G). Soil pits were excavated to depths of 16 to 18 inches at all six Sample Points. Data collected at these Sample Points were recorded on USACE *Wetland Determination Data Forms – Arid West Region Version 2.0* (USACE 2008; Appendix G). Photographs of each wetland Sample Point as well as other representative photographs of these potentially jurisdictional resources are included as part of Appendix G of this report.

To summarize, Sample Points 1, 3, and 5 were determined to be within the limits of a potentially jurisdictional USACE and RWQCB Wetland WoUS and WoS and potentially

jurisdictional CDFW Riparian, while Sample Points 4 and 6 were determined to be just within the limits of a potentially jurisdictional CDFW Riparian. Sample Point 2 was determined to be within an upland and not within the limits of a potentially jurisdictional USACE, RWQCB, or CDFW resource. Sample Points were investigated only along the north bank of Buena Vista Creek because the southern bank is outside the project boundary and well beyond any proposed direct or indirect impacts. Because Sample Points were not investigated along the southern bank of Buena Vista Creek, the limits of jurisdictional areas along the southern bank of Buena Vista Creek were inferred based on data collected at Sample Points 1 through 6 along the northern bank of Buena Vista Creek. Additional information on the data collected at each of the six Sample Points along the northern bank of Buena Vista Creek can be found in the Jurisdictional Delineation Report, which is included as Appendix G to this BTR.

Summary of Potentially Jurisdictional Resources

The southern riparian forest along Buena Vista Creek is a potentially jurisdictional USACE and RWQCB Wetland WoUS and WoS and potentially jurisdictional CDFW Riparian; the open water is a potentially jurisdictional USACE and RWQCB Non-Wetland WoUS and WoS and potentially jurisdictional CDFW Streambed; and a portion of the disturbed land, developed land, and iceplant adjacent to Buena Vista Creek is a potentially jurisdictional CDFW Streambed (Appendix A: Figure 5 and Appendix G). Table 2 provides a breakdown of the potentially jurisdictional resources within the survey area. Figure 5 (Appendix A) provides the locations of these potentially jurisdictional resources and Appendix G provides representative photographs of the potentially jurisdictional resources and each Sample Point.

Table 2. Potentially Jurisdictional Resources within Survey Area

Regulatory Agency	Linear Feet	Acres*	Square Feet	Width Range (feet)
USACE/RWQCB				
Wetland WoUS/WoS	760	0.646	28,121	20 - 55
Non-Wetland WoUS/WoS	41	0.054	2,349	15 - 45
TOTAL	**801**	**0.700**	**30,470**	**15 - 55**
CDFW				
Riparian	760	1.386	60,371	70 - 105
Streambed	212	0.122	5,270	82 - 90
TOTAL	**972**	**1.508****	**65,640**	**70 - 105**

*Acreages are approximate and rounded to the nearest thousandth of an acre.
**Total acreages represent the actual acreages without the rounding error.

Potential USACE Jurisdiction

Potential USACE jurisdiction within the survey area totals approximately 0.700 acre, composed of approximately 0.646 acre of Wetland WoUS and approximately 0.054 acre of Non-Wetland WoUS (Appendix A: Figure 5; Appendix G). The potential USACE Wetland WoUS include the southern riparian forest along the portion of Buena Vista Creek within the survey area, and the potential USACE Non-Wetland WoUS include open water within Buena Vista Creek at the eastern end of the survey area (Appendix A: Figure 5; Appendix G).

Potential RWQCB Jurisdiction

There are no potentially jurisdictional isolated WoS within the survey area subject to exclusive RWQCB jurisdiction pursuant to the State Porter-Cologne Water Quality Control Act. Therefore, the RWQCB's potential jurisdiction extends to all potential USACE WoUS within the survey area, which includes a total of approximately 0.700 acre, composed of approximately 0.646 acre of Wetland WoS and approximately 0.054 acre of Non-Wetland WoS (Appendix A: Figure 5; Appendix G). The potential RWQCB Wetland WoS include the southern riparian forest along the portion of Buena Vista Creek within the survey area, and the potential RWQCB Non-Wetland WoS include open water within Buena Vista Creek at the eastern end of the survey area (Appendix A: Figure 5; Appendix G).

Potential CDFW Jurisdiction

Potential CDFW jurisdiction within the survey area totals approximately 1.508 acres, composed of approximately 1.386 acres of Riparian and approximately 0.122 acre of Streambed (Appendix A: Figure 5; Appendix G). Potential CDFW Riparian includes the southern riparian forest along the portion of Buena Vista Creek within the survey area, and potential CDFW Streambed includes open water, disturbed land, developed land, and iceplant within and adjacent to Buena Vista Creek that are outside the CDFW Riparian areas but between the lateral limits of the stream banks (Appendix A: Figure 5; Appendix G).

SECTION 4.0 – REGULATORY CONTEXT

This section provides a summary of the federal, state, and local regulations that are applicable to the proposed project

4.1 APPLICABLE FEDERAL REGULATIONS

Applicable federal regulations that apply to the proposed project are discussed in this section.

4.1.1 Federal Endangered Species Act

The federal ESA, which is administered by USFWS, provides the legal framework for the listing of species that are threatened and/or endangered with extinction as well as for the protection of listed species (i.e., threatened or endangered species) and their habitats. Projects activities that jeopardize threatened or endangered species and the habitats upon which they rely are considered 'take' under the ESA. The ESA defines 'take' as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct."

4.1.2 Rivers and Harbors Act & Clean Water Act

The Rivers and Harbors Act of 1899 and the CWA provide guidance for project activities within non-marine traditional navigable waters (TNWs) and/or WoUS. The discharge of any pollutant from a point source into TNWs is illegal unless a permit under the CWA's provisions is acquired. Permitting for projects that include both permanent and temporary dredging and filling in Wetlands and WoUS is overseen by the USACE under Section 404 of the CWA. Projects can be permitted on an individual basis or covered by one of several approved nationwide permits or regional general permits. In addition, RWQCB issues Water Quality Certifications under Section 401 of the CWA for project activities that fill or dredge within Wetland and Non-Wetland WoUS and WoS, including isolated waters such as vernal pools and other waters showing lack of connectivity to a TNW.

4.1.3 Migratory Bird Treaty Act

All migratory bird species that are native to the U.S. or its territories are protected under the federal MBTA, as amended under the Migratory Bird Treaty Reform Act of 2004. The MBTA prohibits the killing or transport of native migratory birds or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. No permit is issued under the MBTA, and the MBTA does not mandate specific protection measures. However, typical pre-construction requirements include nesting bird surveys during the avian breeding season and avoidance measures if nesting birds are discovered within or adjacent to a project. In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests.

4.2 APPLICABLE STATE REGULATIONS

Applicable state regulations that apply to the proposed project are discussed in this section.

4.2.1 California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires an environmental review for projects with potentially adverse impacts on the environment. Adverse environmental impacts are typically mitigated in accordance with existing state laws and regulations.

4.2.2 California Endangered Species Act

The California Endangered Species Act (CESA) is similar to the federal ESA in that it provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. CESA is administered by CDFW and allows "take" of listed plant and wildlife species either by concurring with a federal Incidental Take Permit under the CFGC Section 2080.1 or, for species that are state-listed but not federally listed, issuing an Incidental Take Permit under CFGC Section 2081 if specific criteria are met. The Oceanside SAP is considered an Incidental Take Permit pursuant to CFGC Section 2081.

4.2.3 California Fish and Game Code

The CFGC provides protection for several types of sensitive biological resources. CFGC Section 3503 and 3513 protects avian species, their nests, and their eggs from being "taken" unless authorized by CDFW through implementation of appropriate avoidance, minimization, and/or mitigation measures. CFGC Sections 1600 through 1603 regulate project activities within rivers, streams, lakes, wetlands, and riparian habitat. CDFW can issue a Lake or Streambed Alteration (LSA) Agreement for projects affecting these jurisdictional resources. If the activity will not substantially adversely affect any CDFW jurisdictional resources, the entity may commence the activity without a LSA Agreement.

4.2.4 Native Plant Protection Act

The Native Plant Protection Act (NPPA), under CFGC Sections 1900 through 1913, regulates collection, transport, and commerce in plants that are listed as rare or endangered.

4.2.5 Natural Community Conservation Planning Act

CDFW's Natural Community Conservation Planning Act (NCCP Act) is a combined effort by the State of California and both public and private partners to take an ecosystem approach to protecting and preserving biological diversity. CDFW and USFWS provide support, direction, and guidance to local agencies to develop an NCCP

that identifies economic activity that is compatible with the longterm, regional protection of plants, wildlife, and their habitats. The applicable NCCP for the proposed project – the Oceanside SAP within the MHCP – is discussed in Local Regulations, below.

4.2.6 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act regulates water quality for project activities in California. Pursuant to the Porter-Cologne Act, under Section 13000 et seq. of the California Water Code (CWC), the RWQCB issues Water Quality Certifications for project activities that fill or dredge within Wetland and Non-Wetland WoUS and WoS, including isolated waters – such as vernal pools – and other waters showing lack of connectivity to a TNW.

4.3 APPLICABLE LOCAL REGULATIONS

Applicable local programs and regulations are discussed in this section.

4.3.1 North County Multiple Habitat Conservation Plan

The North County Multiple Habitat Conservation Plan (MHCP; SANDAG 2003) is a comprehensive conservation planning process that was developed to create, manage, and monitor an ecosystem preserve in northwestern San Diego County. It is one of three subregional plans that will contribute to a regional preserve system in San Diego County. The MHCP is intended to conserve not only habitat that is already in public ownership but also other areas that will offer protection to rare, threatened, and endangered plants and wildlife.

The MHCP was adopted and certified by the SANDAG Board of Directors on March 28, 2003. The MHCP encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. Each of these cities must adopt its own SAP that identifies city-specific regulations and policies pertaining to the sensitive resources found within that jurisdiction.

4.3.2 Draft Oceanside Subarea Plan

The draft Oceanside SAP (City of Oceanside 2010) is a draft Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) prepared pursuant to the ESA and the NCCP Act, both described above. This SAP is a component of the MHCP and addresses how the City of Oceanside will conserve the biodiversity and ecosystem function in the City of Oceanside and surrounding areas while also allowing for continued economic development within its jurisdiction.

The draft Oceanside SAP has not been adopted by City Council, and implementing agreements with CDFW and USFWS have not been signed; therefore, incidental take permits currently cannot be issued under the draft Oceanside SAP. However, the draft Oceanside SAP provides guidance for project proponents to determine potential impacts to biological resources that may result from implementation of a proposed

project and to develop appropriate avoidance, minimization, and mitigation measures to reduce proposed project impacts to below a level of significance.

Until the draft Oceanside SAP is officially adopted, proposed projects within the City of Oceanside will need to comply with other state and federal regulations, and project proponents will have to coordinate with CDFW and/or USFWS to obtain incidental take permits for their projects.

Applicable sections of the draft Oceanside SAP include the Preserve Design and Assembly, Vegetation Community Mitigation Standards, Narrow Endemic Species Standards, Wetlands Mitigation Standards, Conservation and Buffer Requirements along Tributaries and Creeks, Off-site Mitigation Zone, and Fire and Fuel Management Standards. These are discussed in further detail, below.

Preserve Design and Assembly

Under the draft Oceanside SAP, a habitat conservation program was designed, which includes the establishment of the City of Oceanside's Preserve. The Preserve will include a variety of conserved lands, including both existing and proposed conservation banks, public and private open space, on-site and off-site mitigation land for future projects, and other lands dedicated in the future for conservation purposes. Opportunities and constraints associated with biologically valuable lands were examined during the draft Oceanside SAP Preserve assembly process. Properties that, if conserved, would best achieve the biological goals of the plan while minimizing the detrimental effects on other land use issues (e.g., property rights, economic benefits) were identified to be incorporated into the Preserve. The draft Oceanside SAP habitat conservation program is anticipated to result in the preservation of 2,873 acres of natural habitat within the City of Oceanside.

In addition to future acquisitions, the draft Oceanside SAP Preserve includes lands that currently are designated and managed as conservation banks or mitigation areas. One of the Major Mitigation Areas – the Buena Vista Creek Mitigation Area – is located along the southern boundary of the proposed project. The approximately 3.32-acre site served as mitigation for the Mossy Nissan car dealership located at just west of College Boulevard and south of Haymar Drive in the Off-site Mitigation Zone.

Narrow Endemic Species Standards

A Narrow Endemic Species is a term used for "species that are highly restricted by their habitat affinities, edaphic requirements, or other ecological factors, and that have limited but important populations within the MHCP area, such that substantial loss of these populations or their habitat within the MHCP area might jeopardize the continued existence or recovery of that species" (City of Oceanside 2010). The draft Oceanside SAP classifies 16 plant species and 6 wildlife species as Narrow Endemic Species.

For Narrow Endemic Species, the policies outlined in the MHCP and incorporated into the draft Oceanside SAP require maximum avoidance of project impacts, minimization

of unavoidable impacts, and species-specific mitigation measures for unavoidable impacts, with a goal of achieving no net loss of these populations within the Focused Planning Area (FPA), and no more than 20 percent total loss in the City of Oceanside.

Mitigation options for unavoidable impacts are discussed in Section 7 of the draft Oceanside SAP. Regardless of the mitigation measures, the City of Oceanside may not permit more than a 5 percent overall loss of a Narrow Endemic Species population or occupied acreage, whichever is most appropriate for the species as determined by the City of Oceanside and Wildlife Agencies, within Focused Planning Areas, or more than a 20 percent overall loss within the entire City of Oceanside.

Wetlands Mitigation Standards

The draft Oceanside SAP addresses avoidance, minimization, and mitigation measures for wetland habitats subject to potential impacts. All unavoidable impacts to wetlands and wetland habitats must be reviewed and approved by federal and/or state agencies having jurisdiction over those areas, and all projects will be required to comply with these terms, which meet federal and MHCP policies of no net loss of wetland functions and values. Wetland habitats are expected to continue to be regulated by federal and state agencies; however, the permitting process is expected to be expedited upon confirmation that a proposed project is consistent with the conditions outlined in the final Oceanside SAP and MHCP. Compliance with the final Oceanside SAP and MHCP will constitute the full extent of mitigation measures required or recommended by CDFW and/or USFWS for potential take of wetland dependent covered species.

The following standards and policies apply to all wetland vegetation communities within the City of Oceanside:

- **No Net Loss Policy.** For all wetland vegetation communities (Table 5-2 of the draft Oceanside SAP) the City of Oceanside will require, in priority order, maximum avoidance of impacts, minimization of unavoidable impacts, and mitigation of unavoidable impacts. Mitigation of unavoidable impacts will be designed to achieve no net loss of both wetland vegetation acreage and biological functions and values within the City of Oceanside.

- **Findings for Unavoidable Impacts.** Any proposed project that is anticipated to directly or indirectly impact wetlands or wetland vegetation communities anywhere within the City of Oceanside will fully disclose and analyze such impacts in a CEQA document and in a findings document prepared under a City of Oceanside implementing ordinance that addresses consistency with the Oceanside SAP and MHCP. The CEQA document or findings document must fully analyze and factually substantiate that impacts to wetlands were avoided and or that they area minimized to the maximum extent possible while maintaining some economic or productive use of the property. Feasible alternatives to avoid the impacts shall be described and analyzed, and reasons that these alternatives were not pursued shall be fully described and factually substantiated.

For unavoidable impacts, all feasible means of minimizing encroachment into wetlands or wetland vegetation communities shall be fully addressed. The alternative that has the fewest overall anticipated impacts is defined as that which has the least impact on sensitive biological resources and Preserve configuration, considering both wetland and upland impacts together.

- **Mitigation for Unavoidable Impacts.** To achieve the no net loss standard, mitigation for unavoidable impacts (e.g., wetland habitat creation) should occur on-site or within the affected drainage and/or watershed. Off-site mitigation may occur as long as the mitigation site contributes to the City of Oceanside's preserve design and has biological functions and values (e.g., by adjacency to other preserve areas) similar to or better than the wetland resource that is being impacted. All wetland mitigation sites shall be designated as Preserve, be protected by conservation easements, and be managed in perpetuity for their biological resources and value.

Conservation and Buffer Requirements along Tributaries and Creeks

For proposed projects that include development or other discretionary actions that are proposed in or adjacent to riparian habitats (not including the San Luis Rey River), the riparian area and other wetland habitats or associated natural habitats shall be designated as biological open space and incorporated into the Preserve. In addition, a 100-foot upland buffer on riparian habitats, which starts at the edge of the riparian vegetation, shall be established and will include a minimum 50-foot biological buffer plus a minimum 50-foot planning buffer. The 50-foot biological buffer shall occur immediately adjacent to the riparian habitat, and the following uses are prohibited in the 50-foot biological buffer: (1) new development; (2) foot paths, bikeways, and passive recreational uses not already planned; and (3) fuel modification activities for new development. In the event that natural habitats do not occur within the 50-foot biological buffer at the time of proposed project implementation, native habitats appropriate to the location and soils (e.g., coastal sage scrub). The 50-foot planning buffer shall occur immediately adjacent to the biological buffer and shall serve as an area of transition between the 50-foot biological buffer and specified land uses on adjoining uplands.

Off-site Mitigation Zone

Impacts to biological resources within the Off-site Mitigation Zone must be mitigated within the WCPZ or Pre-approved Mitigation Areas. On-site mitigation credit is generally *not* allowed within the Off-site Mitigation Zone, with the following exceptions:

- **Pre-approved Mitigation Areas**. Lands designated as Pre-approved Mitigation Areas that occur within the Off-site Mitigation Zone may receive on-site mitigation credit.

- **Narrow Endemic Species**. On-site mitigation credit may be allowed if the on-site mitigation will conserve a significant population of a narrow endemic species.

- **Wildlife Agency Approved Site.** Lands that contain critical wetlands, coastal California gnatcatcher habitat, or habitat for other covered species may receive on-site mitigation credit if written approval from the applicable wildlife agencies is obtained.

Fire and Fuel Management Standards

For all future development projects, fire breaks and fuel modification zones must be addressed in accordance with the City of Oceanside's Fire Ordinance and must be considered part of the development footprint for determining project impacts and mitigation requirements. Proposed projects occurring in or adjacent to an area designated as very high fire hazard zones are required to create a minimum of a 100-foot fuel management zone from all proposed structures. Proposed projects occurring in or adjacent to an area that is not designated as very high hazard is not required to maintain the 100-foot fuel management zones; however, new development must have a minimum setback of 30 feet from small areas of brush and grass. Generally, fuel modification activities in upland habitats (e.g., coastal sage scrub, grassland) include removal of dead brush, selective vegetation thinning, and vegetation trimming that retains root structure to prevent erosion and allows for regrowth of the vegetation. Fuel breaks and fuel modification zones shall not be permitted in the 50-foot biological buffer or in the 50-foot planning buffer and cannot be counted as biological open space for the purpose of determining on-site or off-site mitigation credit.

SECTION 5.0 – PROPOSED PROJECT IMPACTS

Biological resources may be either directly or indirectly impacted by a project. Furthermore, direct and indirect impacts may be permanent or temporary in nature. These types of impacts are defined as follows:

- ***Direct impacts*** are defined as any disturbance, alteration, or destruction of biological resources that could result from project related activities. Examples of direct impacts include diverting surface water flows, encroaching into wetlands, clearing vegetation, and taking an individual species and/or its associated plant communities.

- ***Indirect impacts*** are defined as any disturbance, alteration, or destruction of biological resources that could result from project related activities. Examples of indirect impacts include increased human activity, elevated noise and dust levels, decreased water quality, soil compaction, and the introduction of invasive wildlife (i.e., domestic cats and dogs) and plants.

- ***Permanent impacts*** are defined as those that result in the irreversible removal or destruction of biological resources. Examples of permanent impacts include constructing a building or permanent road on an area containing biological resources.

- ***Temporary impacts*** are those impacts considered to have reversible effects on biological resources. Examples of temporary impacts include the removal of vegetation for construction activities and subsequently allowing the natural vegetation to recolonize the impact area, the accumulation of dust on adjacent vegetation during construction, or the increased noise levels that may interfere with the breeding behaviors of wildlife species.

Project impacts can also be classified as cumulative impacts, which are incremental impacts from two or more past, present, or probable future projects whose individual impacts can be individually minor but when combined are considerable. However, if a project complies with the draft Oceanside SAP, it should not result in cumulative impacts to vegetation communities or to covered species.

5.1 CRITERIA FOR DETERMINING IMPACT SIGNIFICANCE

The potential proposed project impacts on biological resources were assessed according to guidelines set forth under CEQA. Based on the CEQA guidelines, an impact would be considered significant if the project would result in one of the following criteria:

A. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS

B. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS
C. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other mean
D. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites
E. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
F. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

Significant proposed project impacts would require appropriate avoidance, minimization, and/or mitigation measures to reduce the impacts to below a level of significance.

5.2 PROPOSED PROJECT IMPACT ANALYSIS

Potential impacts to sensitive biological resources identified within and adjacent to the survey area are discussed by Criterion A through F, below.

5.2.1 Criterion A

Would the proposed project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS?

The proposed project has the potential to result in significant impacts to sensitive plant and wildlife species that may occur within and/or adjacent to the proposed project footprint, which includes both the approximately 6.695-acre proposed project development footprint and the approximately 0.346-acre proposed sewer realignment footprint. These potential impacts are discussed in detail, below.

Sensitive Plant Species

Four rounds of focused *Brodiaea* species surveys were conducted within the proposed project survey area, and one round of focused sensitive plant surveys was conducted within the proposed project survey area; however, the proposed project site was mowed prior to the last two planned *Brodiaea* species surveys and prior to the second sensitive plant survey.

Based on the data collected during the *Brodiaea* species surveys and focused sensitive plant surveys, the potential for occurrence for the 56 sensitive plant species that were evaluated for their potential to occur within the survey area was updated. One sensitive

plant species – San Diego sagewort – was observed within the survey area. Of the remaining 55 species, 52 species are not expected to occur within the proposed project survey area, and three – southern tarplant, smooth tarplant, and Del Mar Mesa sand aster – have a low to moderate potential to occur within the survey area.

The proposed project has been designed to include the requisite 100-foot wetland buffer, which includes the 50-foot biological buffer on the jurisdictional resources as well as the requisite 50-foot planning buffer. Therefore, impacts to San Diego sagewort have been avoided, and no additional AMMs (Section 6.0, below) or mitigation measures (Section 7.0, below) are anticipated for this species.

Through implementation of **BIO-1** (Section 7.0, below), pre-construction sensitive plant species surveys would determine the presence/absence of sensitive plant species with a potential to occur within the proposed project survey area and would develop appropriate AMMs (Section 6.0, below) and/or mitigation measures to reduce anticipated impacts to below a level of significance.

Sensitive Wildlife Species

Focused sensitive wildlife surveys were conducted for fairy shrimp, coastal California gnatcatcher, and least Bell's vireo. While results were negative for listed fairy shrimp species and coastal California gnatcatcher, least Bell's vireo was documented in the survey area during surveys. However, because the proposed project would not result in the removal of least Bell's vireo habitat, no direct impacts are anticipated. Therefore, the proposed project has the potential to result in indirect impacts to least Bell's vireo that occur within the survey area. These potential impacts are discussed in further detail, below.

Impacts to Sensitive Invertebrate Species

No fairy shrimp or other sensitive invertebrate species were documented during the general and focused wildlife species surveys conducted for the proposed project. The focused fairy shrimp surveys are valid for 3 years, or until the beginning of the 2022/2023 wet season. Implementation of AMMs (Section 6.0, below) would provide additional resource protection, and implementation of **BIO-2** (Section 7.0, below) would assure that impacts to sensitive invertebrate species remain below a level of significance. As such, no additional AMMs or mitigation measures are anticipated for sensitive invertebrate species.

Impacts to Sensitive Herpetofauna Species

No sensitive herpetofauna species were documented within the proposed project survey area during any of the surveys conducted for the proposed project. The proposed project could result in direct impacts to sensitive herpetofauna species that occur within the proposed project footprint; however, suitable habitat within the proposed project footprint comprises a small fraction of the habitat for the local herpetofauna populations, and it is contiguous with habitat extending east and west within the fully protected

Buena Vista Creek Mitigation Area. The proposed project is not expected to reduce the populations of any herpetofauna species to below a self-sustaining level. Therefore, the proposed project is not anticipated to result in any significant impacts to sensitive herpetofauna species. Implementation of AMMs (Section 6.0, below) would provide additional resource protections to assure that impacts to sensitive herpetofauna remain below a level of significance. As such, no additional AMMs or mitigation measures would be required for sensitive herpetofauna species.

Impacts to Sensitive Bird Species

A pair of coastal California gnatcatchers was documented incidentally during the jurisdictional delineation conducted for the proposed project; however, no coastal California gnatcatchers were detected during the 2020 focused surveys. Therefore, it is assumed that the pair was foraging but not breeding within the proposed project surveys area. In addition, a single, foraging least Bell's vireo was detected during the 2020 focused surveys. Results of these surveys are valid until the beginning of breeding season 2021.

Implementation of AMMs (Section 6.0, below) would provide additional resource protection, and to and **BIO-3** (Section 7.0 below) would assure that impacts to coastal California gnatcatcher remain below a level of significance. As such, no additional AMMs or mitigation measures would be required for coastal California gnatcatcher.

Implementation of AMMs (Section 6.0, below) would provide additional resource protection, and to and **BIO-4** (Section 7.0 below) would assure that impacts to least Bell's vireo remain below a level of significance. As such, no additional AMMs or mitigation measures would be required for least Bell's vireo.

Two other sensitive bird species – Cooper's hawk and yellow warbler – were detected during the general and focused surveys conducted for the proposed project. In addition, other sensitive MBTA-covered bird species have a potential to occur on-site and within the Buena Vista Creek Mitigation Area. The proposed project could result in direct and indirect impacts to Cooper's hawk, yellow warbler, and other MBTA-covered bird species that occur within and adjacent to the proposed project footprint if construction occurs during the breeding season (i.e., January to September for raptors, February to September for other avian species). Implementation of AMMs (Section 6.0, below), specifically the additional resource protection and avian protection requirements, would assure that direct and indirect impacts to MBTA-covered species remain below a level of significance. As such, no additional AMMs or mitigation measures would be required for MBTA-covered species.

Impacts to Sensitive Mammal Species

No direct or indirect impacts to sensitive mammal species are expected to occur from implementation of the proposed project. Implementation of AMMs (Section 6.0, below) would provide additional resource protection to assure that unanticipated impacts to

sensitive mammal species remain below a level of significance. As such, no additional AMMs or mitigation measures would be required for sensitive mammal species.

5.2.2 Criterion B

Would the proposed project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS?

The proposed project has the potential to result in significant impacts to sensitive vegetation communities that occur within and adjacent to the proposed project footprint.

Direct Impacts to Sensitive Vegetation Communities

The proposed project has the potential to result in direct impacts to approximately 7.041 acres of vegetation communities and land cover types identified within the proposed project footprint, including approximately 6.695 acres of permanent, direct impacts within the proposed project development footprint and approximately 0.346 acre within the proposed sewer realignment footprint. These direct impacts are summarized in Table 3, below.

Table 3. Anticipated Impacts on Vegetation Communities/Land Cover Types

Vegetation Community/ Land Cover Type	SAP Habitat Group	Permanent Direct Impacts (acres*)	Temporary Direct Impacts (acres*)	Total Direct Impacts (acres*)
Disturbed Diegan Coastal Sage Scrub	C	0.408	--	0.408
Southern Riparian Forest	A	--	--	--
Open Water	A	--	--	--
Developed Land	-	0.007	0.001	0.007
Disturbed Land	F	5.425	0.209	5.63
Iceplant	F	0.228	0.042	0.270
Ornamental	F	0.124	0.004	0.128
Ruderal	F	0.502	0.090	0.592
	TOTAL**	**6.695**	**0.346**	**7.041**

*Acreages are approximate and rounded to the nearest thousandth of an acre.
**Total acreages represent the actual acreages without the rounding error.

Direct impacts to approximately 6.633 acres of non-sensitive upland habitats (i.e., developed land, disturbed land, iceplant, ornamental, and ruderal) would not be considered significant and would not require any avoidance, minimization, or mitigation measures. As such, these impacts are not discussed further in this report.

Unavoidable direct impacts to approximately 0.408 acre of disturbed Diegan coastal sage scrub would be considered significant. Implementation of AMMs (Section 6.0, below) would provide additional resource protection(e.g., flagging of sensitive resources/work areas, biological monitoring), and implementation of **BIO-5** (Section 7.0, below) would assure that these unavoidable direct impacts to disturbed Diegan coastal sage scrub are reduced to below a level of significance. As such, no additional AMMs or mitigation measures would be required for sensitive mammal species.

No direct impacts to riparian habitat are anticipated to result from proposed project construction. The proposed project has been designed to include the mandatory 100-foot buffer from the riparian habitat boundary, as mapped during the formal jurisdictional delineation conducted in 2019. This 100-foot buffer includes both the 50-foot biological buffer as well as the mandatory 50-foot planning buffer. The proposed project is anticipated to encroach temporarily, approximately 6 feet into a small portion of the 50-foot planning buffer during the proposed sewer realignment (Appendix A: Figure 6). As a result, temporary direct impacts would occur to approximately 0.008 acre (344 square feet) of disturbed habitat within the planning buffer. These impacts are considered temporary because they would recover on their own within one growing season. In addition, because these impacts are so small and because they are located at least 94 feet from the riparian habitat, no direct impacts to riparian habitat is anticipated. Implementation of AMMs (Section 6.0, below) would provide additional resource protection (e.g., flagging of sensitive resources/work areas, biological monitoring) to assure that no significant impacts occur to riparian habitat. As such, no additional AMMs or mitigation measures would be required.

Indirect Impacts to Sensitive Vegetation Communities

Indirect impacts to sensitive vegetation (i.e., disturbed Diegan coastal sage scrub) could occur during proposed project construction. Indirect impacts, including fugitive dust accumulation from adjacent construction activities, could occur to a small patch of disturbed Diegan coastal sage scrub located approximately 15 feet south of the proposed sewer realignment footprint. If the fugitive dust is allowed to remain on the leaves of the individual plants within this sensitive vegetation community, it could interfere with photosynthesis and germination. Implementaiton of AMMs (Section 6.0, below) would provide additional resource protection (e.g., flagging of sensitive resources/work areas, biological monitoring) to assure that indirect impacts to disturbed Diegan coastal sage scrub are avoided. Therefore, no additional AMMs or mitigation measures would be required.

No indirect impacts to riparian habitat are anticipated to result from proposed project construction. The proposed project has been designed to include the mandatory 100-foot buffer from the riparian habitat boundary, as mapped during the formal jurisdictional delineation conducted in 2019. This 100-foot buffer includes both the 50-foot biological buffer as well as the mandatory 50-foot planning buffer. Because the proposed project has been designed to include this 100-foot buffer, no indirect impacts to riparian habitat are anticipated. Implementaiton of AMMs (Section 6.0, below) would provide additional resource protection (e.g., flagging of sensitive resources/work areas, biological

monitoring) to assure that indirect impacts to riparian habitat are avoided. Therefore, no additional AMMs or mitigation measures would be required.

Impacts to Critical Habitat

No impacts to critical habitat are expected to occur from implementation of the proposed project. Critical habitat for the coastal California gnatcatcher has been designated within the Buena Vista Creek Mitigation Area. The proposed project has been designed to include the 100-foot buffer on the riparian vegetation associated with Buena Vista Creek (Appendix A: Figure 6), which equates to an approximately 80- to 140-foot buffer on the designated coastal California gnatcatcher critical habitat. In addition, implementation of Implementaiton of AMMs (Section 6.0, below) would provide additional resource protection (e.g., flagging of sensitive resources/work areas, biological monitoring) to assure that no indirect impacts occur to this critical habitat. As such, no additional AMMs or mitigation measures would be required for critical habitat.

5.2.3 Criterion C

Would the proposed project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other mean?

No impacts to potentially jurisdictional resources are expected to occur from implementation of the proposed project. The proposed project has been designed to include the mandatory 100-foot buffer from the riparian habitat boundary, as mapped during the formal jurisdictional delineation conducted in 2019. This 100-foot buffer includes both the 50-foot biological buffer as well as the mandatory 50-foot planning buffer. Because the proposed project has been designed to include this 100-foot buffer, no impacts to riparian habitat are anticipated. Implementaiton of AMMs (Section 6.0, below) would provide additional resource protection (e.g., flagging of sensitive resources/work areas, biological monitoring) to assure impacts to jurisdictional resources are avoided. As such, no additional AMMs or mitigation measures would be required for jurisdictional resources.

5.2.4 Criterion D

Would the proposed project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No impacts to wildlife corridors or native wildlife nursery sites are expected to occur from implementation of the proposed project. The proposed project is not located in the WCPZ; however, Buena Vista Creek and the associated Buena Vista Creek Mitigation Area along the southern boundary of the survey area provide sufficient connectivity to be considered part of both a local and regional wildlife corridor. Because the proposed project has been designed to include the 100-foot buffer on the riparian vegetation

associated with Buena Vista Creek (Appendix A: Figure 6), no impacts to wildlife corridors are anticipated. Implementation of AMMs (Section 6.0, below) would provide additional resource protection (e.g., flagging of sensitive resources/work areas, biological monitoring) to assure that no indirect impacts occur to this wildlife corridor. As such, no additional AMMs or mitigation measures would be required for wildlife corridors.

5.2.5 Criterion E

Would the proposed project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The proposed project is not anticipated to conflict with any local policies or ordinances. Implementaiton of AMMs (Section 6.0, below) would provide additional resource protection to protect biological resources. In addition, implementation of **BIO-1** through **BIO-5** would assure potential impacts to sensitive biological resources are mitigated to below a level of significance. As such, no additional AMMs or mitigation measures are anticipated.

5.2.5 Criterion F

Would the proposed project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The draft Oceanside SAP is the only applicable local, regional, or state plan that applies to the proposed project. While the draft Oceanside SAP has not been formally adopted, the proposed project was designed to comply with the measures outlined in the MHCP and the draft Oceanside SAP. Therefore, the proposed project is not anticipated to conflict with the draft Oceanside SAP. As such, no additional AMMs or mitigation measures are anticipated.

SECTION 6.0 – AVOIDANCE & MINIMIZATION MEASURES

The proposed project has been designed to include the following measures to avoid or minimize potential proposed project impacts to the maximum extent feasible. These AMMs were developed pursuant to Section 5.2.8 of the draft Oceanside SAP and include several AMMs and Best Management Practices (BMPs) that should be implemented because the proposed project may result in impacts to sensitive biological resources.

AMM-1: Pre-Construction Measures

Pre-Construction Meeting: A qualified biological monitor shall attend the pre-construction meeting, discuss the project's biological monitoring program with construction contractors, and arrange to perform any follow up mitigation measures and reporting for the proposed project.

Resource Delineation & Protection Measures: Prior to construction activities, a qualified biological monitor shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other project mitigation measures. This pre-construction phase shall include flagging sensitive plant species and delineating buffers to protect sensitive biological resources (e.g., habitats, flora and fauna species, nesting birds) during construction activities. In addition, appropriate BMPs shall be installed as applicable to provide fugitive dust control, minimize lighting and noise in adjacent habitats, and avoid the introduction of exotic and invasive plant and animal species into the area. Responsible construction practices as well as storm water and runoff management shall also be included as part of the BMPs.

Contractor Environmental Awareness Training: Prior to commencement of construction activities, a qualified biological monitor shall meet with all construction contractors to conduct an on-site contractor environmental awareness training to discuss the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain construction limits flagging, discuss sensitive resource flagging, review wetland buffers, clarify acceptable access routes/methods and staging areas).

Avian Protection Requirements: To avoid impacts to sensitive avian species (e.g., any species identified as a listed, candidate, sensitive, or special status species; any species covered by the MBTA), vegetation clearing should occur outside of the breeding season for these species (February 1 to September 15). If vegetation clearing must occur during the breeding season, a qualified biological monitor shall conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey shall be conducted no more than 4 calendar days prior to the start of construction activities (including removal of vegetation). The results

of the pre-construction nesting bird survey shall be submitted to the City of Oceanside for review and approval prior to initiating any construction activities.

If nesting birds are detected, a letter report or mitigation plan shall be prepared and shall include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City of Oceanside for review and approval and shall implemented to the satisfaction of the City of Oceanside. The qualified biological monitor shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.

AMM-2: Construction Measures

Biological Monitoring: All construction activities, including access and staging, shall be restricted to areas previously identified and depicted on the approved project plans. A qualified biological monitor shall monitor construction activities as needed to verify that construction activities do not encroach into biologically sensitive areas and that, if applicable, the mitigation measures developed to accommodate any sensitive species located during the pre-construction surveys are being implemented. The qualified biological monitor will complete a Daily Biological Monitoring Form to document all construction and monitoring activities.

Subsequent Resource Identification: The qualified biological monitor shall note/act to prevent any new disturbances to habitat, flora, and/or fauna on-site (e.g., flag newly identified sensitive resources for avoidance during access). If active nests or other previously unknown sensitive resources are detected, all project activities that directly impact the resource shall be delayed until species-specific local, state, or federal regulations have been determined and applied by the qualified biological monitor.

AMM-3: Post-Construction Measures

Once the proposed project has been completed, a post-construction report that summarizes the construction activities, actual project impacts, and AMMs/mitigation measures implemented before and during construction will be prepared for the proposed project. If project impacts exceed the approved totals, additional impacts shall be mitigated in accordance with the draft Oceanside SAP and other applicable local, state, and federal laws. The qualified biological monitor shall submit the post-construction report to the City of Oceanside within 30 days of construction completion.

SECTION 7.0 – MITIGATION MEASURES

Mitigation measures are required for significant impacts to sensitive biological resources to reduce impacts to below a level of significance. Mitigation measures typically include compensatory measures for unavoidable impacts. Proposed project activities could result in direct and/or indirect impacts to sensitive biological resources both within and adjacent to the proposed project footprint. The paragraphs below describe general and specific avoidance, minimization, and mitigation measures recommended to reduce potentially significant impacts to sensitive biological resources resulting from the proposed project to below a level of significance.

BIO-1: Sensitive Plant Surveys

The results of the 2020 *Brodiaea* species surveys are valid until spring 2021. The results of the 2020 sensitive plant surveys were incomplete, because the proposed project survey area was mowed prior to the second survey. Because construction is not anticipated to begin before summer 2021, additional focused sensitive plants species surveys should be conducted for the proposed project. These focused surveys should include general rare plant surveys as well as focused Brodiaea species surveys. Two general rare plant surveys should be conducted for the proposed project – one in early spring 2021 and one in late spring/early summer 2021 – to document any sensitive plant species that occur within the survey area. In addition, six focused Brodiaea species surveys should be conducted in spring 2021, with the timing based on the emergence of the species documented during reference site checks.

If no sensitive plant species are documented within the survey area, no additional AMMs or mitigation measures would be required.

If sensitive plant species are documented within the survey area, impacts to these species should be avoided to the extent feasible. Unavoidable impacts should be minimized and/or mitigated through compensatory measures (e.g., restoration, transplantation, habitat preservation) that will be determined based on the species present, population estimate, and significance of the proposed impacts. All significant, unavoidable impacts would require additional mitigation measures to reduce these impacts to below a level of significance.

BIO-2: Focused Fairy Shrimp Surveys

The results of the 2019/2020 wet season fairy shrimp surveys combined with the 2020 dry season surveys are valid until the 2022/2023 rainy season. If construction has not been initiated prior to the 2022/2023 wet season, additional pre-construction surveys should be conducted prior to construction initiation to update the status of these species within the proposed project survey area.

If sensitive fairy shrimp species are documented within the survey area, impacts to listed fairy shrimp should be avoided to the extent feasible. Unavoidable

impacts to these species would be considered significant and would require consultation with the USFWS under Section 10(a)(1)(B) of the ESA to develop project-specific minimization and mitigation measures to reduce these impacts to below a level of significance.

BIO-3: Coastal California Gnatcatcher Surveys

The results of the 2020 focused coastal California gnatcatcher surveys are valid until the beginning of breeding season 2021. If construction has not been initiated prior to the 2021 survey season, additional pre-construction surveys should be conducted prior to construction initiation to determine if coastal California gnatcatcher is present in the proposed project survey area.

Impacts to coastal California gnatcatcher should be avoided to the extent feasible. Unavoidable impacts to this species would be considered significant and would require consultation with the USFWS under Section 10(a)(1)(B) of the ESA to develop project-specific minimization and mitigation measures (e.g., construction outside of breeding season, habitat protection, noise attenuation) to reduce these impacts to below a level of significance.

BIO-4: Least Bell's Vireo Surveys

The results of the 2020 focused least Bell's vireo surveys are valid until the beginning of breeding season 2021. If construction has not been initiated prior to the 2021 survey season, additional pre-construction surveys should be conducted prior to construction initiation to determine if least Bell's vireo is present in the proposed project survey area.

Impacts to least Bell's vireo should be avoided to the extent feasible. Unavoidable impacts to this species would be considered significant and would require consultation with the USFWS under Section 10(a)(1)(B) of the ESA to develop project-specific minimization and mitigation measures (e.g., construction outside of breeding season, habitat protection, noise attenuation) to reduce these impacts to below a level of significance.

BIO-5 : Sensitive Vegetation Impacts

The proposed project would result in impacts to 0.408 acre of sensitive upland habitat (disturbed Diegan coastal sage scrub, Group C). The proposed project is located in the Off-Site Mitigation Zone; therefore, the disturbed Diegan coastal sage scrub may be removed but must be mitigated within the WCPZ or within a Pre-Approved Mitigation Area at a 3:1 ratio. As such, preservation of 1.224 acres of Diegan coastal sage scrub would be required at an existing mitigation bank or within a Pre-Approved Mitigation Area to be determined and approved through discussions with the City of Oceanside.

SECTION 7.0 – REFERENCES

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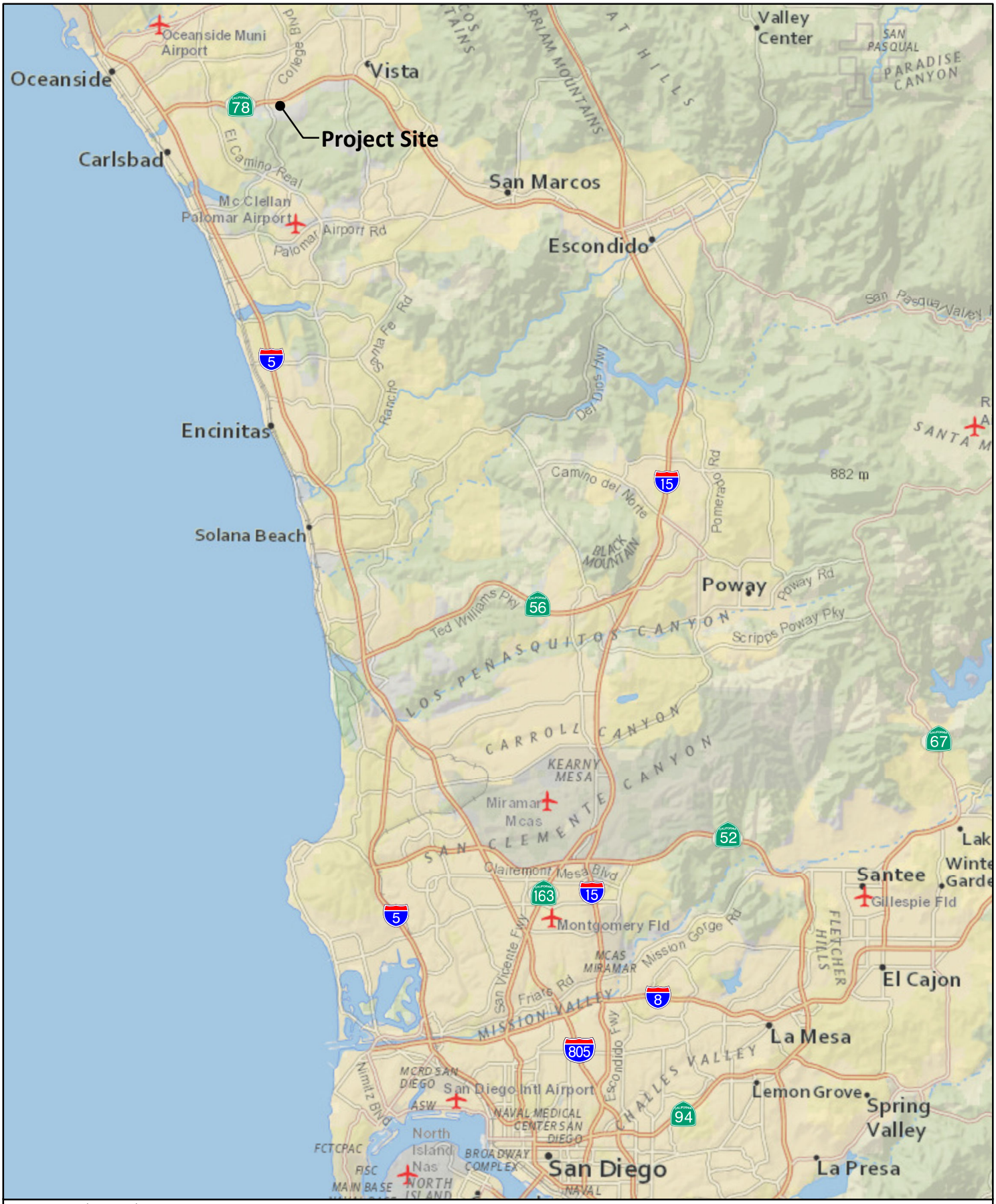
APPENDIX A
Figures



Source: National Geographic, Esri

BUSBY Biological Services

N 0 2 4 Miles

Regional Location

CARMAX OCEANSIDE

Figure 1

Source: SANDAG & SanGIS 2017

BUSBY Biological Services

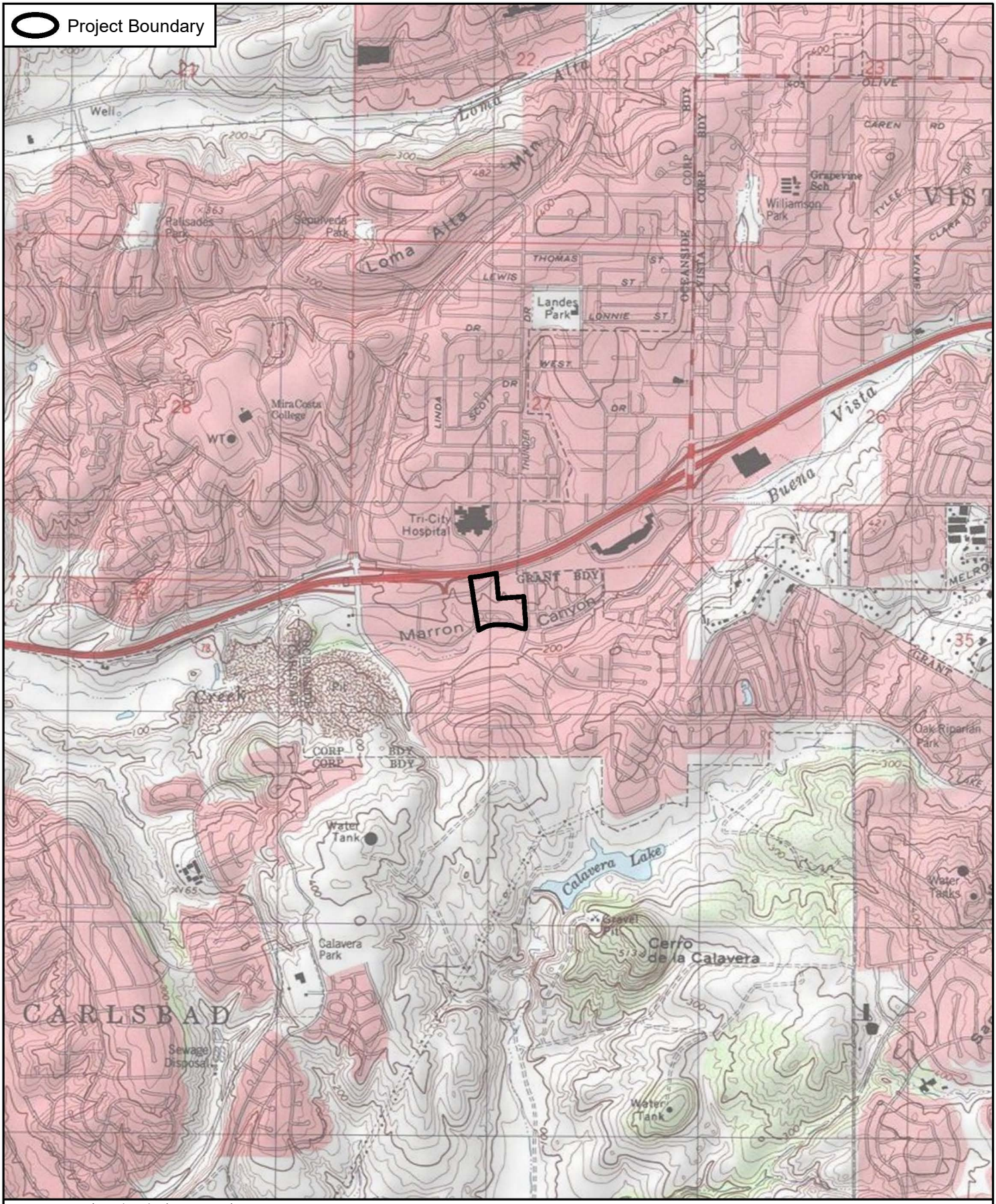
N

0 1,000 2,000 Feet

Project Vicinity - Aerial

CARMAX OCEANSIDE

Figure 2



Source: USGS 7.5' Quadrangles (San Luis Rey)

BUSBY Biological Services

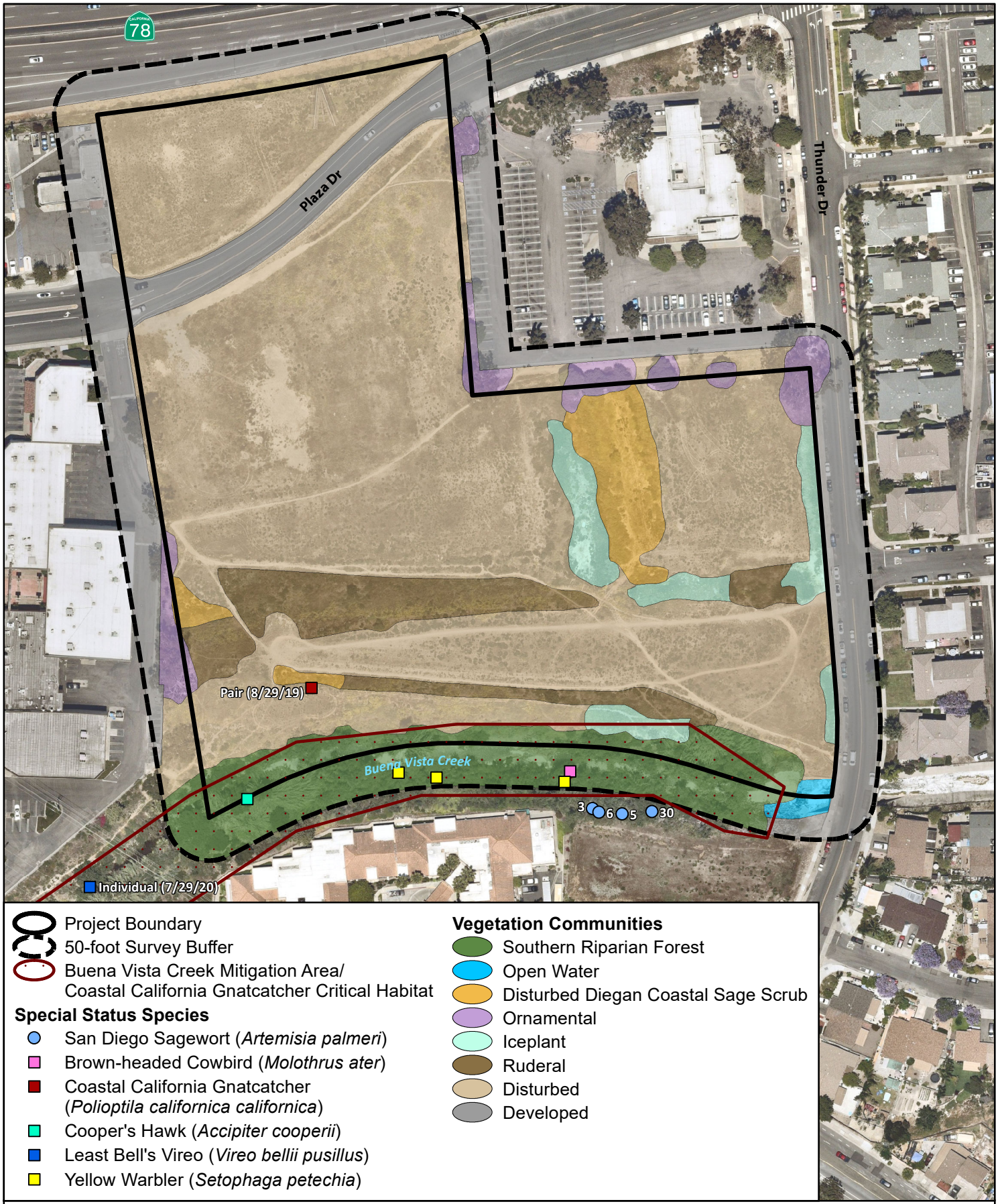
N

0 1,000 2,000 Feet

Project Vicinity - USGS Topo

CARMAX OCEANSIDE

Figure 3



Project Boundary
50-foot Survey Buffer
Buena Vista Creek Mitigation Area/
Coastal California Gnatcatcher Critical Habitat

Special Status Species

- San Diego Sagewort (*Artemisia palmeri*)
- Brown-headed Cowbird (*Molothrus ater*)
- Coastal California Gnatcatcher (*Polioptila californica californica*)
- Cooper's Hawk (*Accipiter cooperii*)
- Least Bell's Vireo (*Vireo bellii pusillus*)
- Yellow Warbler (*Setophaga petechia*)

Vegetation Communities

- Southern Riparian Forest
- Open Water
- Disturbed Diegan Coastal Sage Scrub
- Ornamental
- Iceplant
- Ruderal
- Disturbed
- Developed

Aerial Photo: Nearmap 2020

BUSBY Biological Services

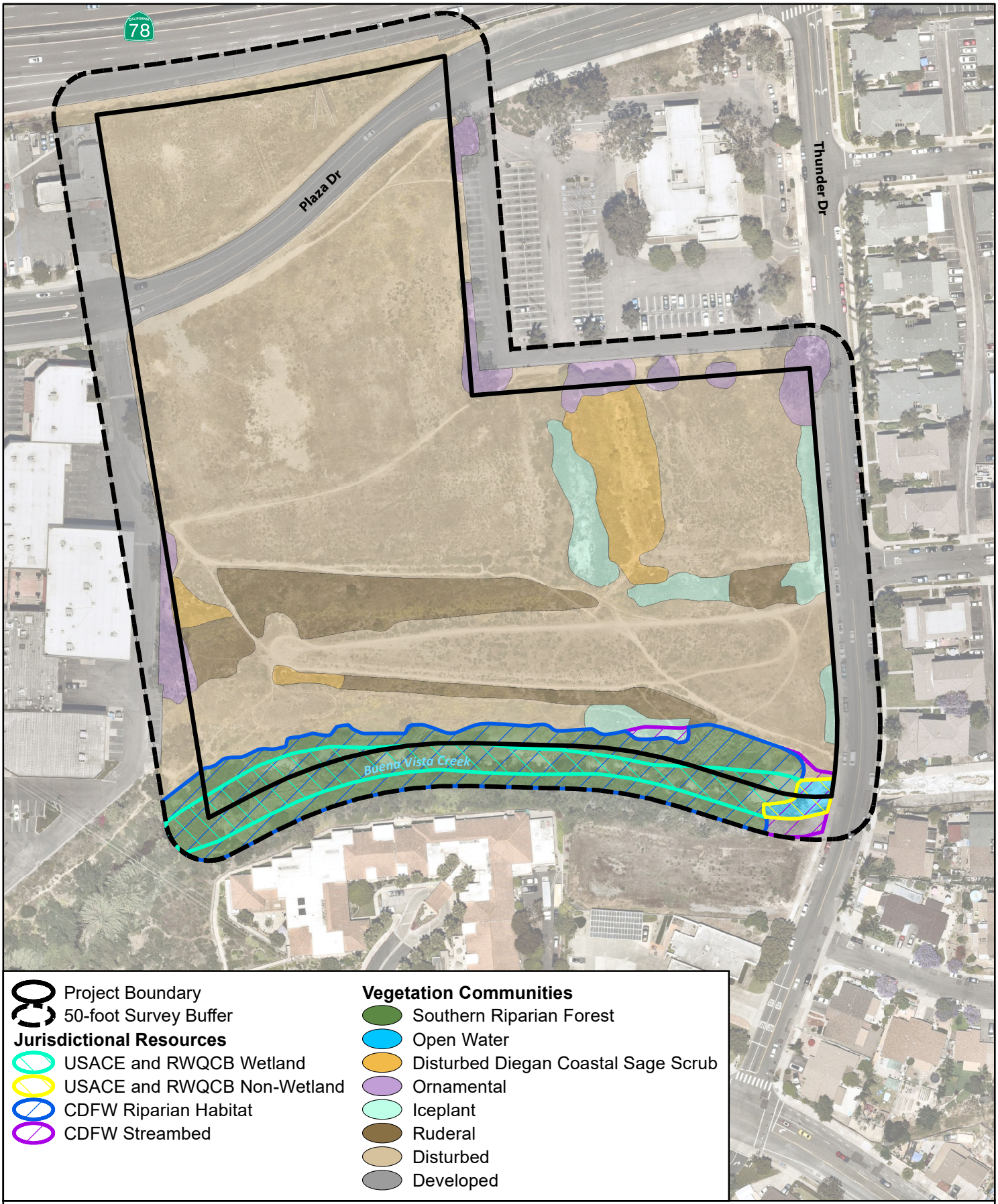
N

0 75 150 Feet

Existing Biological Resources

CARMAX OCEANSIDE

Figure 4



Project Boundary
50-foot Survey Buffer

Jurisdictional Resources
USACE and RWQCB Wetland
USACE and RWQCB Non-Wetland
CDFW Riparian Habitat
CDFW Streambed

Vegetation Communities
Southern Riparian Forest
Open Water
Disturbed Diegan Coastal Sage Scrub
Ornamental
Iceplant
Ruderal
Disturbed
Developed

Aerial Photo: Nearmap 2020

BUSBY Biological Services

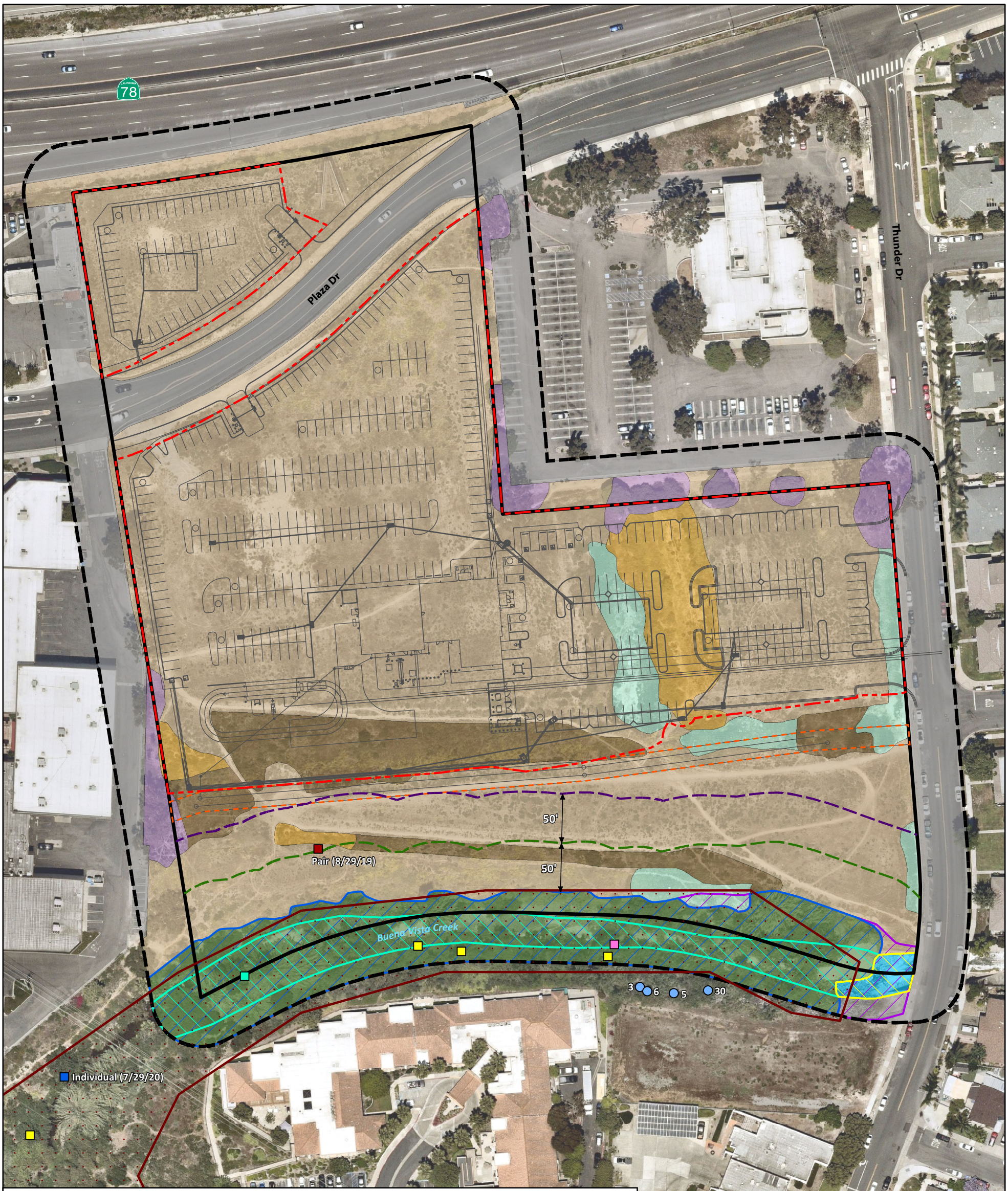
N

0 75 150 Feet

Jurisdictional Resources

CARMAX OCEANSIDE

Figure 5



Aerial Photo: Nearmap 2020

BUSBY Biological Services

N 0 50 100 Feet

Proposed Project Impacts

CARMAX OCEANSIDE

Figure 6

APPENDIX B
Representative Photographs

	Photograph 1. View of southern riparian forest in Buena Visa Creek along the southern boundary of the survey area, within the limits of potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian. Disturbed and ruderal land dominate the north side of the creek (Facing east; July 22, 2019).
	Photograph 2. View of open water and southern riparian forest in southeastern corner of the survey area, within the limits of potentially jurisdictional USACE and RWQCB wetland and non-wetland WoUS and WoS, and CDFW Riparian and Streambed (Facing west; July 22, 2019).

	Photograph 3. View of several San Diego sagewort, a CRPR 4.2 species, found adjacent to and south of the survey area along the southern bank of Buena Vista Creek (Facing west; July 22, 2019).
	Photograph 4. View of disturbed land in western portion of survey area that has cracked soils in a shallow depression, indicating this area has potential to pond and hold water long enough to support fairy shrimp, such as the federally endangered San Diego fairy shrimp (Facing east; July 22, 2019).

	Photograph 5. View of disturbed Diegan coastal sage scrub, iceplant, and disturbed land in central portion of survey area (Facing north; July 22, 2019).
	Photograph 6. View of disturbed and ruderal land in central portion of survey area (Facing west; July 22, 2019).

	Photograph 7. View of disturbed land in central portion of survey area (Facing southeast; July 22, 2019).
	Photograph 8. View of disturbed land in northern portion of survey area (Facing east; July 22, 2019).

APPENDIX C
Plant Species Observed within the Survey Area

APPENDIX C
Plant Species Observed within the Proposed Project Survey Area

Major Clade	Family	Scientific name	Common name	Nativity
Eudicots				
	Adoxaceae (Muskroot family)			
		Sambucus nigra subsp. caerulea	Mexican elderberry	Native
	Aizoaceae (Fig-marigold family)			
		Carpobrotus chilensis	Sea fig	Naturalized
		Carpobrotus edulis	Hottentot fig	Naturalized
	Anacardiaceae (Sumac family)			
		Schinus terebinthifolius	Brazilian pepper tree	Naturalized
	Apiaceae (Carrot family)			
		Apium graveolens	Common celery	Naturalized
		Conium maculatum	Poison hemlock	Naturalized
		Foeniculum vulgare	Sweet fennel	Naturalized
	Apocynaceae (Dogbane family)			
		Carissa macrocarpa	NatalpPlum	Non-native
	Asteraceae (Aster family)			
		Ambrosia psilostachya	Cuman ragweed	Native
		Artemisia californica	Coastal sagebrush	Native
		Artemisia douglasiana	Douglas' sagewort	Native
		Artemisia palmeri	San Diego sagewort	Native
		Baccharis pilularis	Coyotebrush	Native
		Baccharis salicifolia subsp. salicifolia	Mule fat	Native
		Carduus pycnocephalus subsp. pycnocephalus	Italian thistle	Naturalized
		Centaurea melitensis	Maltese star-thistle	Naturalized
		Corethrogyne filaginifolia	California aster	Native
		Deinandra fasciculata	Clustered tarweed	Native
		Erigeron bonariensis	Asthmaweed	Naturalized
		Glebionis coronaria	Crown daisy	Naturalized
		Hedypnois cretica	Cretanweed	Naturalized
		Heterotheca grandiflora	Telegraphweed	Native
		Hypochaeris glabra	Smooth cat's ear	Naturalized

Major Clade	Family	Scientific name	Common name	Nativity
		Isocoma menziesii	Menzies' goldenbush	Native
		Lactuca serriola	Prickly lettuce	Naturalized
		Logfia gallica	Narrowleaf cottonrose	Naturalized
		Osmadenia tenella	False rosinweed	Native
		Pseudognaphalium biolettii	Two-color rabbit-tobacco	Native
		Pseudognaphalium stramineum	Cottonbatting plant	Native
		Pulicaria paludosa	Spanish false fleabane	Naturalized
		Sonchus asper subsp. asper	Prickly sow thistle	Naturalized
		Sonchus oleraceus	Common sowthistle	Naturalized
		Xanthium strumarium	Rough cocklebur	Native
	Boraginaceae (Borage family)			
		Amsinckia menziesii	Menzies' fiddleneck	Native
		Plagiobothrys collinus	Cooper's popcornflower	Native
	Brassicaceae (Mustard family)			
		Brassica nigra	Black mustard	Naturalized
		Brassica tournefortii	Saharan mustard	Naturalized
		Hirschfeldia incana	Shortpod mustard	Naturalized
		Lepidium	Pepperweed	Native
		Raphanus sativus	Cultivated radish	Naturalized
		Sisymbrium orientale	Indian hedgemustard	Naturalized
	Caryophyllaceae (Pink family)			
		Achyronychia cooperi	Onyxflower	Native
		Silene gallica	Common catchfly	Naturalized
	Chenopodiaceae (Goosefoot family)			
		Atriplex semibaccata	Australian saltbush	Naturalized
		Chenopodium album	Lambsquarters	Naturalized
		Chenopodium murale	Nettleleaf goosefoot	Naturalized
		Salsola australis	Russian thistle	Naturalized
	Convolvulaceae (Morning-glory family)			
		Convolvulus arvensis	Field bindweed	Naturalized

Major Clade	Family	Scientific name	Common name	Nativity
	Crassulaceae (Stonecrop family)			
		Crassula connata	Sand pygmyweed	Native
	Euphorbiaceae (Spurge family)			
		Croton setigerus	Dove weed	Native
		Euphorbia maculata	Spotted sandmat	Naturalized
		Euphorbia peplus	Petty spurge	Naturalized
		Ricinus communis	Castorbean	Naturalized
	Fabaceae (Pea family)			
		Acmispon americanus var. americanus	Spanish clover	Native
		Acmispon glaber	Common deerweed	Native
		Acmispon micranthus	San Diego bird's-foot trefoil	Native
		Medicago polymorpha	Burclover	Naturalized
		Melilotus indicus	Sourclover	Naturalized
		Parkinsonia aculeata	Jerusalem thorn	Naturalized
	Fagaceae (Beech family)			
		Quercus agrifolia	California live oak	Native
	Geraniaceae (Geranium family)			
		Erodium botrys	Longbeak stork's bill	Naturalized
		Erodium cicutarium	Redstem stork's bill	Naturalized
		Geranium carolinianum	Carolina geranium	Native
	Lamiaceae (Mint family)			
		Marrubium vulgare	Horehound	Naturalized
		Salvia mellifera	Black sage	Native
	Lythraceae (Loosestrife family)			
		Lythrum hyssopifolia		Naturalized
	Malvaceae (Mallow family)			
		Malva parviflora	Cheeseweed mallow	Naturalized
		Malvella leprosa	Alkali mallow	Native
	Moraceae (Fig family)			
		Ficus carica	Common Fig	Naturalized
	Myrsinaceae (Myrisine family)			
		Lysimachia arvensis	Scarlet pimpernel	Naturalized

Major Clade	Family	Scientific name	Common name	Nativity
	Myrtaceae (Myrtle family)			
		Eucalyptus citriodora	Lemon-scented gum	Naturalized
		Eucalyptus camaldulensis	Red gum	Naturalized
	Onagraceae (Evening primrose family)			
		Oenothera elata	Marsh evening primrose	Native
	Oxalidaceae (Wood-Sorrel family)			
		Oxalis pes-caprae	Bermuda buttercup	Naturalized
	Plantaginaceae (Plantain family)			
		Plantago erecta	Dotseed plantain	Native
		Plantago lanceolata	Narrowleaf plantain	Naturalized
	Platanaceae (Plane-tree family)			
		Platanus racemosa	California sycamore	Native
	Polygonaceae (Buckwheat family)			
		Eriogonum fasciculatum	Eastern Mojave buckwheat	Native
		Rumex crispus	Curly dock	Naturalized
	Salicaceae (Willow family)			
		Salix exigua	Narrowleaf willow	Native
		Salix laevigata	Red willow	Native
		Salix lasiolepis	Arroyo willow	Native
	Solanaceae (Potato family)			
		Datura wrightii	Sacred thorn-apple	Native
		Nicotiana glauca	Tree tobacco	Naturalized
		Solanum rostratum	Buffalobur nightshade	Naturalized
	Tropaeolaceae (Nasturtium family)			
		Tropaeolum majus	Garden nasturtium	Naturalized
	Vitaceae (Grape family)			
		Parthenocissus quinquefolia	Virginia creeper	Non-native
		Vitis girdiana	Wild grape	Native

Major Clade	Family	Scientific name	Common name	Nativity
Monocots				
	Arecaceae (Palm family)			
		Washingtonia robusta	Washington fan palm	Naturalized
	Cyperaceae (Sedge family)			
		Cyperus eragrostis	Tall flatsedge	Native
	Iridaceae (Iris family)			
		Sisyrinchium bellum	Western blue-eyed grass	Native
	Poaceae (Grass family)			
		Arundo donax	Giant reed	Naturalized
		Avena barbata	Lopsided oat	Naturalized
		Avena fatua	Wild oat	Naturalized
		Bromus diandrus	Ripgut brome	Naturalized
		Bromus hordeaceus	Soft brome	Naturalized
		Bromus madritensis subsp. rubens	Red brome	Naturalized
		Cynodon dactylon	Bermudagrass	Naturalized
		Distichlis spicata	Saltgrass	Native
		Festuca myuros	Rattail sixweeks grass	Naturalized
		Festuca perennis	Perennial ryegrass	Naturalized
		Gastridium phleoides	Nit grass	Naturalized
		Hordeum murinum	Mouse barley	Naturalized
		Pennisetum setaceum	Crimson fountaingrass	Naturalized
		Phalaris minor	Littleseed canarygrass	Naturalized
		Polypogon monspeliensis	Annual rabbitsfoot grass	Naturalized
		Stipa miliacea var. miliacea	Smilograss	Naturalized
		Stipa pulchra	Purple needlegrass	Native
	Typhaceae (Cattail family)			
		Typha	Cattail	Native

APPENDIX D
Wildlife Species Detected within the Survey Area

APPENDIX D
Wildlife Species Detected within the Proposed Project Survey Area

SCIENTIFIC NAME	COMMON NAME	METHOD OF IDENTIFICATION
INVERTEBRATES		
Class: Insecta	**Insects**	
Order: Lepidoptera	**Butterflies**	
Pieris rapae	Cabbage White	O
Pontia protodice	Checkered White	O
VERTEBRATES		
Class: Sauropsida	**Reptiles**	
Sceloporus occidentalis	Western Fence Lizard	O
Class: Aves	**Birds**	
Order Accipitriformes	**Hawks and Vultures**	
*Accipiter cooperii**	Cooper's Hawk	O
Buteo jamaicensis	Red-tailed Hawk	
Order Anseriformes	**Ducks, Geese, and Swans**	
Anas platyrhynchos	Mallard	O
Order Columbiformes	**Pigeons and Doves**	
Zenaida macroura	Mourning Dove	O
Columba livia	Rock Pigeon	
Order Gruiformes	**Coots, Cranes, and Rails**	
Fulica americana	American Coot	
Order Apodiformes	**Swifts and Hummingbirds**	
Calypte anna	Anna's Hummingbird	O, V
*Calypte costae**	Costa's Hummingbird	
Selasphorus sasin	Allen's Hummingbird	
Order Charadriiformes	**Gulls, Terns, and Plovers**	
Charadrius vociferus	Killdeer	
Order Passeriformes	**Perching Birds**	
Psaltriparus minimus	Bushtit	
Pheucticus melanocephalus	Black-headed Grosbeak	
Sayornis nigricans	Black Phoebe	O
Tyrannus verticalis	Western Kingbird	O
Tyrannus vociferans	Cassin's Kingbird	
*Vireo bellii pusillus**	Least Bell's Vireo	O
Empidonax difficilis	Pacific-Slope Flycatcher	V
Aphelocoma californica	Western Scrub-Jay	O, V
Corvus brachyrhynchos	American Crow	O, V
Corvus corax	Common Raven	
Lonchura punctulata	Scaly-breasted Munia	
Melozone crissalis	California Towhee	
Pipilo maculatus	Spotted Towhee	O, V
*Polioptila californica californica**	Coastal California Gnatcatcher	O, V
Chamaea fasciata	Wrentit	
Melospiza melodia	Song Sparrow	V
Carpodacus mexicanus	House Finch	O, V

Carduelis psaltria	Lesser Goldfinch	O, V
Petrochelidon pyrrhonota	Cliff Swallow	
Stelgidopteryx serripennis	Northern Rough-winged Swallow	
Icterus cucullatus	Hooded Oriole	
Molothrus ater	Brown-headed Cowbird	
Mimus polyglottos	Northern Mockingbird	
Geothlypis trichas	Common Yellowthroat	
Leiothlypis celata	Orange-crowned Warbler	
*Setophaga petechia**	Yellow Warbler	
Sturnus vulgaris	European Starling	
Thryomanes bewickii	Bewick's Wren	
*Sialia Mexicana**	Western Bluebird	
Order Pelecaniformes	**Pelicans, Boobies, and Cormorants**	
*Butorides virescens**	Green Heron	
Order Piciformes	**Woodpeckers**	
Dryobates nuttallii	Nuttall's Woodpecker	
Class: Mammalia	**Mammals**	
Order Rodentia	**Rodents**	
Otospermophilus beecheyi	California Ground Squirrel	O
Order Carnivora	**Carnivores**	
Canis lupus familiaris	Domestic Dog	S
Order Lagamorpha	Hares, Rabbits, and Pikas	
Sylvilagus bachmani	Brush Rabbit	

Method of Identification:
O = observed
V = vocalization
S = scat

APPENDIX E
Sensitive Plant Species with a Potential to Occur within the Survey Area

APPENDIX E
Sensitive Plant Species with a Potential to Occur within the Proposed Project Survey Area

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
San Diego thornmint (*Acanthomintha ilicifolia*)	FT SE CRPR 1B.1 SAP PC SAP NE	Annual herb. Blooms Apr-Jun. Clay openings in vernal pools, chaparral, coastal sage scrub, grassland. (CNPS 2020) Elev 150-3,085ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, focused 2019/2020 fairy shrimp surveys, or during the focused 2020 *Brodiaea* species surveys.
Nuttall's acmispon (Acmispon prostratus)	CRPR 1B.1 SAP PC SAP NE	Annual herb. Blooms Mar-Jun/Jul. Sandy substrate in coastal dunes, coastal sage scrub (CNPS 2020) Elev 0-2,395ft. (Calfora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and limited suitable soils exist within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
spineshrub (*Adolphia californica*)	CRPR 2B.1	Perennial deciduous shrub. Blooms Dec-May. Clay soils in chaparral, coastal sage scrub, grassland. (CNPS 2020) Elev 15-1,115ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
San Diego ambrosia (*Ambrosia pumila*)	FE CRPR 1B.1 SAP PC SAP NE	Perennial rhizomatous herb. Blooms Apr-Oct. Often in disturbed areas with sandy loam or clay soils, sometimes alkaline areas, in chaparral, coastal sage scrub, grassland, vernal pools. (CNPS 2020) Elev 50-785ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, focused 2019/2020 fairy shrimp surveys, or during the focused 2020 *Brodiaea* species surveys.
Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*)	FE CRPR 1B.1 SAP NE	Perennial evergreen shrub. Blooms Dec-Jun. Sandy soils in maritime chaparral. (CNPS 2020) Elev 115-820ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
San Diego sagewort (*Artemisia palmeri*)	CRPR 4.2	Perennial deciduous shrub. Blooms May-Sep. Sandy, mesic areas in chaparral,	Present. Approximately 44 individuals were observed adjacent to and south of the survey area, on the stream bank just

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
		coastal sage scrub, riparian habitats. (CNPS 2020) Elev 0-2,230ft. (Calflora 2020)	south of Buena Vista Creek, on July 22, 2019. This species was also documented during the May 2020 focused rare plant survey.
Coulter's saltbush (*Atriplex coulteri*)	CRPR 1B.2	Perennial herb. Blooms Mar-Oct. Alkaline or clay soils in coastal dunes, coastal bluff scrub, coastal sage scrub, grassland. (CNPS 2020) Elev 0-1,510ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
South coast saltscale (*Atriplex pacifica*)	CRPR 1B.2	Annual herb. Blooms Mar-Oct. Playas, coastal dunes, coastal bluff scrub, coastal sage scrub. (CNPS 2020) Elev 8-1,050ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area but species is restricted to sandy soils along the immediate coast. In addition, this species was not observed during the May 2020 focused rare plant surveys.
Encinitas baccharis (*Baccharis vanessae*)	FT SE CRPR 1B.1 SAP NE	Perennial deciduous shrub. Blooms Aug-Nov. Sandstone in maritime chaparral, cismontane woodland. (CNPS 2020) Elev 245-2,460ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, no suitable soils exist within survey area, and the survey area is just outside of the known elevation range of this species. In addition, this species was not observed during the May 2020 focused rare plant surveys, when it would have been observable.
San Diego sunflower (*Bahiopsis laciniata*)	CRPR 4.2	Perennial shrub. Blooms Feb-Aug. Dry slopes in coastal sage scrub, chaparral. Elev 50-2,690ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
Nevin's barberry (*Berberis nevinii*)	FE SE CRPR 1B.1	Perennial evergreen shrub. Blooms Feb/Mar-Jun. Sandy or gravelly soils in chaparral, coastal sage scrub, cismontane woodland, riparian scrub. (CNPS 2020) Elev 115-1,575ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
thread-leaved brodiaea (*Brodiaea filifolia*)	FT SE CRPR 1B.1 SAP PC SAP NE	Perennial bulbiferous herb. Blooms Mar-Jun. Typically clay soils in vernal pools, playas, chaparral, coastal sage scrub, cismontane woodland, grassland. (CNPS	Not Expected. Historical records exist within 3 miles of survey area and moderately suitable habitat exists within survey area despite disturbance from mowing and past grading activities; however, this species was not observed

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
		2020) Elev 130-3,640ft. (Calflora 2020)	during the May 2020 focused rare plant surveys or during the 2020 focused *Brodiaea* species surveys that were conducted during the appropriate blooming period, before the site was mowed in early June 2020.
Orcutt's brodiaea (*Brodiaea orcuttii*)	CRPR 1B.1	Perennial bulbiferous herb. Blooms May-Jul. Typically mesic, clay soils (sometimes serpentinite) in vernal pools, chaparral, cismontane woodland, closed-cone coniferous forest, meadows & seeps, grassland. (CNPS 2020) Elev 330-5,610ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and the survey area is located just outside of the known elevation range for this species. In addition, this species was not observed during the May 2020 focused rare plant surveys or during the 2020 focused *Brodiaea* species surveys that were conducted during the appropriate blooming period, before the site was mowed in early June 2020.
Brewer's calandrinia (*Calandrinia breweri*)	CRPR 4.2	Annual herb. Blooms Mar–Jun. Sandy/loamy soils typically after fire or other disturbance in chaparral, coastal sage scrub. (CNPS 2020) Elev 150-3,510ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and limited suitable soils exist within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
Payson's jewelflower (*Caulanthus simulans*)	CRPR 4.2	Annual herb. Blooms Feb/Mar-May/Jun. Sandy, granitic areas in chaparral, coastal sage scrub. (CNPS 2020) Elev 2,460-5,805ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, limited suitable soils exist within survey area, and the survey area is well outside of the known elevation range for this species. In addition, this species was not observed during the May 2020 focused rare plant surveys.
wart-stemmed ceanothus (*Ceanothus verrucosus*)	CRPR 2B.2	Perennial evergreen shrub. Blooms Dec-May. Chaparral. (CNPS 2020) Elev 15-1,115ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
southern tarplant (*Centromadia parryi* ssp. *australis*)	CRPR 1B.1	Annual herb. Blooms May-Nov. Vernal pools, along the margins of marshes, in vernally mesic areas within grassland. (CNPS 2020) Elev 0-1,410ft. (Calflora 2020)	Low to moderate. While no historical records exist within 3 miles of survey area and only marginally suitable habitat exists within the survey area, the survey area was mowed before the planned June 2020 survey, which would have been used to determine if this species is present onsite.

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
smooth tarplant (*Centromadia pungens ssp. laevis*)	CRPR 1B.1	Annual herb. Blooms Apr-Sep. Alkaline soils within chenopod scrub, meadows & seeps, playas, riparian woodland, grassland. (CNPS 2020) Elev 330-2,000ft. (Calflora 2020)	Low to moderate. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within the survey area, the survey area is just outside of the known elevation range for this species, and the survey area was mowed before the planned June 2020 survey, which would have been used to determine if this species is present onsite.
Orcutt's spineflower (*Chorizanthe orcuttiana*)	FE SE CRPR 1B.1 SAP NE	Annual herb. Blooms Mar-May. Sandy openings in maritime chaparral, coastal sage scrub, closed-cone coniferous forest. (CNPS 2020) Elev 150-490ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and limited suitable soils exist within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*)	CRPR 1B.2	Annual herb. Blooms Apr-Jul. Clay soils, in vernal pools, chaparral, coastal sage scrub, meadows & seeps, grassland. (CNPS 2020) Elev 330-5,315ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, only marginally suitable habitat exists within survey area, and the survey area is just outside the known elevation range for this species. In addition, this species was not observed during the May 2020 focused rare plant surveys or during the focused 2020 *Brodiaea* species surveys.
seaside cistanthe (*Cistanthe maritima*)	CRPR 4.2	Annual herb. Blooms Feb/Mar-Jun/Aug. Sandy soils in coastal bluff scrub, coastal sage scrub, grassland. (CNPS 2020) Elev 50-590ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and limited suitable soils exist within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
San Miguel savory (*Clinopodium chandleri*)	CRPR 1B.2	Perennial shrub. Blooms Mar-Jul. Rocky, gabbroic, or metavolcanic areas in chaparral, coastal sage scrub, cismontane woodland, riparian woodland, grassland. (CNPS 2020) Elev 1,345-3,410ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, no suitable soils exist within survey area, and the survey area is outside the known elevation range for this species. In addition, this species was not observed during the May 2020 focused rare plant surveys.
summer-holly (*Comarostaphylis diversifolia* ssp. *diversifolia*)	CRPR 1B.2	Perennial evergreen shrub. Blooms Apr-Jun. Chaparral, cismontane woodland. (CNPS 2020) Elev 130-1,835ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
			have been observable.
Del Mar Mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*)	CRPR 1B.1 SAP NE	Perennial herb. Blooms May-Sep. Sandy soils in coastal bluff scrub, coastal sage scrub, openings in maritime chaparral. (CNPS 2020) Elev 0-425ft. (Calflora 2020)	Low to moderate. Historical records exist within 3 miles of survey area, and marginally suitable habitat exists within survey area. While this species was not observed during the May 2020 focused rare plant surveys, the survey area was mowed in early June, before the planned June 2020 rare plant survey which would have been used to determine if this species is present within the survey area.
Wiggin's cryptantha (*Cryptantha wigginsii*)	CRPR 1B.2	Annual herb. Blooms Feb-Jun. Often clay soils in coastal scrub. Elev. 65-905ft. (CNPS 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
snake cholla (*Cylindropuntia californica* var. *californica*)	CRPR 1B.1	Perennial stem succulent. Blooms Apr-May. Chaparral, coastal sage scrub. (CNPS 2020) Elev 65-885ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
western dichondra (*Dichondra occidentalis)*	CRPR 4.2	Perennial rhizomatous herb. Blooms Jan/Mar-Jul. Coastal sage scrub, chaparral, cismontane woodland, grassland. (CNPS 2020) Elev 130-1,510ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
short-leaved dudleya (*Dudleya blochmaniae* ssp. *brevifolia*)	CRPR 1B.1 SAP PC	Perennial herb. Blooms Apr-May. Sandstone in coastal sage scrub and openings in maritime chaparral. (CNPS 2020) Elev 330-460ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, no suitable soils exist within survey area, and the survey area is outside the known elevation range for this species. In addition, this species was not observed during the May 2020 focused rare plant surveys.
variegated dudleya (*Dudleya variegata*)	CRPR 1B.2 SAP NE	Perennial herb. Blooms Apr-Jun. Clay soils in vernal pools, chaparral, cismontane woodland, coastal sage scrub, grassland. (CNPS 2020) Elev 115-1,015ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
sticky dudleya (*Dudleya viscida*)	CRPR 1B.2 SAP PC	Perennial herb. Blooms May-Jun. Rocky areas in coastal bluff scrub, chaparral, coastal scrub, cismontane woodland. (CNPS 2020) Elev 15-2,330ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
Palmer's goldenbush (*Ericameria palmeri* var. *palmeri*)	CRPR 1B.1	Perennial evergreen shrub. Blooms Jul/Sep-Nov. Mesic areas in chaparral, coastal sage scrub. (CNPS 2020) Elev 100-1,085ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
coast wallflower (*Erysimum ammophilum*)	CRPR 1B.2	Perennial herb. Blooms Feb-Jun. Sandy openings in coastal dunes, maritime chaparral, coastal sage scrub. (CNPS 2020) Elev 15-330ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and limited suitable soils exist within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
San Diego button-celery (*Eryngium aristulatum* var. *parishii*)	FE SE CRPR 1B.1 SAP NE	Annual/perennial herb. Blooms Apr-Jun. Mesic soils in vernal pools, coastal sage scrub, grassland. (CNPS 2020) Elev 115-2,495ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, focused 2019/2020 fairy shrimp surveys, or during the focused 2020 *Brodiaea* species surveys.
cliff spurge (*Euphorbia misera*)	CRPR 2B.2	Perennial shrub. Blooms Dec-Aug/Oct. Rocky areas in coastal bluff scrub, coastal sage scrub, Mojavean desert scrub. (CNPS 2020) Elev 0-920ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
San Diego barrel cactus (*Ferocactus viridescens*)	CRPR 2B.1 SAP PC	Perennial stem succulent. Blooms May-Jun. Chaparral, coastal sage scrub, grassland, vernal pools. (CNPS 2020) Elev 15-885ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
Palmer's grapplinghook	CRPR 4.2	Annual herb. Blooms Mar-May. Clay soils in open grassy	Not Expected. Historical records exist within 3 miles of survey area, and

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
(*Harpagonella palmeri*)		areas associated with chaparral, coastal sage scrub, grassland. (CNPS 2020) Elev 150-3,970ft. (Calflora 2020)	moderately suitable habitat exists within survey area. However, this species was not observed during the May 2020 focused rare plant surveys.
Orcutt's hazardia (*Hazardia orcuttii*)	CRPR 1B.1 SAP PC SAP NE	Perennial evergreen shrub. Blooms Aug-Oct. Often clay soils in maritime chaparral, coastal scrub. (CNPS 2020) Elev. 0-330ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
graceful tarplant (*Holocarpha virgata* ssp. *elongata*)	CRPR 4.2	Annual herb. Blooms May-Nov. Chaparral, cismontane woodland, coastal sage scrub, grassland. (CNPS 2020) Elev 65-2,755ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
decumbent goldenbush (*Isocoma menziesii* var. *decumbens*)	CRPR 1B.2	Perennial shrub. Blooms Apr-Nov. sandy, often disturbed areas in coastal sage scrub, chaparral. (CNPS 2020) Elev 65-1,640ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
San Diego marsh-elder (*Iva hayesiana*)	CRPR 2B.2 SAP PC	Perennial herb. Blooms Apr-Oct. Marshes & swamps, playas. (CNPS 2020) Elev 15-855ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and moderately suitable habitat exists within survey area. However, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
spiny rush (*Juncus acutus* ssp. *leopoldii*)	CRPR 4.2	Perennial rhizomatous herb. Blooms Mar/May-Jun. Coastal salt marsh, alkaline meadows & seeps, mesic soils in coastal dunes. (CNPS 2020) Elev 0-1,310ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and moderately suitable habitat exists within survey area. However, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)	CRPR 1B.1	Annual herb. Blooms Feb-Jun. Coastal salt marsh, playas, vernal pools. (CNPS 2020) Elev 0-1,905ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, focused 2019/2020 fairy shrimp surveys, or during

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
			the focused 2020 *Brodiaea* species surveys.
Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*)	CRPR 4.3	Annual herb. Blooms Jan-Jul. Chaparral, coastal sage scrub. (CNPS 2020) Elev 180-2,525ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
sea dahlia (*Leptosyne maritima*)	CRPR 2B.2	Perennial herb. Blooms Mar-May. Coastal bluff scrub, coastal sage scrub. (CNPS 2020) Elev 0-425ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
little mousetail (*Myosurus minimus* ssp. *apus*)	CRPR 3.1 SAP NE	Annual herb. Blooms Mar-Jun. Alkaline soils in vernal pools, grassland. Elev 65-2,100ft. (CNPS 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, focused 2019/2020 fairy shrimp surveys, or during the focused 2020 *Brodiaea* species surveys.
Mud nama (*Nama stenocarpa*)	CRPR 2B.1	Annual/perennial herb. Blooms Jan-Jul. Marshes & swamps, lake margins, riverbanks. (CNPS 2020) Elev 15-2,100ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
spreading navarretia (*Navarretia fossalis*)	FT CRPR 1B.1 SAP NE	Annual herb. Blooms Apr-Jun. Shallow freshwater marsh, playas, vernal pools, chenopod scrub. (CNPS 2020) Elev 360-1,705ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, only marginally suitable habitat exists within survey area, and the survey area is just outside of the known elevation range for the species. In addition, this species was not observed during the May 2020 focused rare plant surveys, focused 2019/2020 fairy shrimp surveys, or during the focused 2020 *Brodiaea* species surveys.
California Orcutt grass (*Orcuttia californica*)	FE SE CRPR 1B.1 SAP NE	Annual herb. Blooms Apr-Aug. Vernal pools. (CNPS 2020) Elev 460-2,200ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, only marginally suitable habitat exists within survey area, and the survey area is just outside of the known elevation range for

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
			the species. In addition, this species was not observed during the May 2020 focused rare plant surveys, focused 2019/2020 fairy shrimp surveys, or during the focused 2020 *Brodiaea* species surveys.
short-lobed broomrape (*Orobanche parishii* ssp. *brachyloba*)	CRPR 4.2	Parasitic, perennial herb. Blooms Apr-Oct. Sandy soils associated with coastal bluff scrub, coastal dunes, coastal sage scrub. (CNPS 2020) Elev 280-655ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, limited suitable soils exist within survey area, and the survey area is just outside the known elevation range for this species. In addition, this species was not observed during the May 2020 focused rare plant surveys.
San Diego mesa mint (*Pogogyne abramsii*)	FE SE CRPR 1B.1	Annual herb. Blooms Mar-Jul. Vernal pools. (CNPS 2020) Elev 360-590ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, only marginally suitable habitat exists within survey area, and the survey area is just outside of the known elevation range for the species. In addition, this species was not observed during the May 2020 focused rare plant surveys, focused 2019/2020 fairy shrimp surveys, or during the focused 2020 *Brodiaea* species surveys.
Nuttall's scrub oak (*Quercus dumosa*)	CRPR 1B.1 SAP PC	Perennial evergreen shrub. Blooms Feb-Apr/May-Aug. Sandy or clay loam soils associated with chaparral, coastal sage scrub, closed-cone coniferous forest. (CNPS 2020) Elev 50-4,035ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
small-leaved rose (*Rosa minutifolia*)	SE CRPR 2B.1	Perennial deciduous shrub. Blooms Jan-Jun. Chaparral, coastal sage scrub. (CNPS 2020) Elev 425-560ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, only marginally suitable habitat exists within survey area, and the survey area is just outside of the known elevation range for the species. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
ashy spike-moss (*Selaginella cinerascens*)	CRPR 4.1	Perennial rhizomatous herb (fern). No blooming period. Chaparral, coastal sage scrub. (CNPS 2020) Elev. 35-1,245ft.	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
		(Calflora 2020)	focused rare plant surveys, and it would have been observable.
chaparral ragwort (*Senecio aphanactis*)	CRPR 2B.2	Annual herb. Blooms Jan-Apr/May. Chaparral, coastal sage scrub, cismontane woodland, sometimes in alkaline soils. (CNPS 2020) Elev 425-2,165ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, only marginally suitable habitat exists within survey area, and the survey area is just outside of the known elevation range for the species. In addition, this species was not observed during the May 2020 focused rare plant surveys.
purple stemodia (*Stemodia durantifolia*)	CRPR 2B.1	Perennial herb. Blooms year-round. Mesic, sandy soils in wetland/riparian. Elev 50-560ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
Parry's tetracoccus (*Tetracoccus dioicus*)	CRPR 1B.2	Perennial deciduous shrub. Blooms Apr-May. Chaparral, coastal sage scrub. (CNPS 2020) Elev 490-2,725ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, only marginally suitable habitat exists within survey area, and the survey area is just outside of the known elevation range for the species. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.

STATUS CODES

Federal

FE = Federal-listed endangered species

FT = Federal-listed threatened species

State

SE = State-listed endangered species

California Native Plant Society Rare Plant Ranking

1B =Species rare, threatened, or endangered in California and elsewhere. These species are eligible for state listing.

2B =Species rare, threatened, or endangered in California but more common elsewhere. These species are eligible for state listing.

3 = A review list for plants about which more information is needed. These species lack necessary data to assign them to another list or reject them.

4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.

.1 =Species seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)

.2 =Species fairly threatened in California (20-80% occurrences threatened; moderate degree and immediacy of threat)

.3 =Species not very threatened in California (<20% of occurrences threatened; low degree and immediacy of threat or no current threats known

Oceanside Subarea Plan

SAP PC = Proposed Covered SAP NE = Narrow Endemic

APPENDIX F
Focused Sensitive Plant Species Survey Summary Report

BUSBY
Biological Services

September 28, 2020

Ms. Megan Hill
Project Environmental Scientist
EnviroApplications, Inc.
2831 Camino del Rio South, Suite 214
San Diego, CA 92108

RE: 2020 Focused Sensitive Plant Survey Summary Report for the Proposed CarMax Auto Superstore Project, City of Oceanside, San Diego County, California

Ms. Hill:

This letter report summarizes the results of the focused, presence/absence sensitive plant surveys conducted in 2020 for the proposed CarMax Auto Superstore project (project) located in the City of Oceanside, San Diego County, California (Attachment 1: Figures 1 through 4). Busby Biological Services, Inc. (BBS) was contracted by EnviroApplications, Inc. to conduct these surveys on behalf of Centerpoint Integrated Solutions to determine the presence/absence of sensitive plant species with a potential to occur within the proposed project survey area, which includes the proposed project area and a 50-foot survey buffer (Attachment 1: Figure 4).

This survey summary report provides a brief description of the proposed project as well as the methods used for the surveys and the results of the 2020 surveys conducted for the proposed project.

PROPOSED PROJECT LOCATION AND DESCRIPTION

The proposed project consists of the construction of a CarMax pre-owned automobile dealership, sales building with an attached presentation area, service building/area, and non-public carwash with associated access driveways, parking lots, and landscaped areas. In addition, a retaining wall will be required along the southern boundary of the property because of the exiting grades in that area.

The 10.54-acre proposed project area occurs within the U.S. Geological Survey (USGS) San Luis Rey 7.5-minute quadrangle, in the City of Oceanside, California (USGS 1968; Attachment 1: Figure 3). The proposed project site is situated on vacant and undeveloped Assessor's Parcel Number (APN) 168-012-42 and APN

168-012-43 (Attachment 1: Figure 4). It is bordered to the north by State Route 78; to east by Thunder Drive, the California Department of Motor Vehicles (DMV), and residential development; to the south by Buena Vista Creek and Brookdale Senior Living facility; and to the west by the Tri-City Crossroads Shopping Center (Attachment 1: Figures 2 through 4). Plaza Drive separates the two parcels in the northwest portion of the proposed project area. Elevations within the proposed project area range from approximately 177 to 220 feet above mean sea level (Attachment 1: Figures 3 and 4).

The dominant vegetation communities and land cover types within the proposed project survey area include disturbed, ruderal, southern riparian forest, disturbed Diegan coastal sage scrub, developed and ornamental. Other vegetation communities present within the proposed project area in smaller proportions include iceplant and open water (Attachment 1: Figure 4). The section of Buena Vista Creek on the southern border of the proposed project area is part of the Buena Vista Creek Mitigation Area.

METHODS

The methods used to conduct the 2020 sensitive plant species surveys within the proposed project survey area are presented in this section.

Background Research & Habitat Assessment

A literature review was conducted to inform the general biological survey and habitat assessment conducted for the proposed project. In addition, historical species occurrence databases (e.g., California Natural Diversity Database [CNDDB; CDFW 2020a], SanGIS 2020, USFWS 2020) were searched to determine what rare plant species had been reported historically from within a 3-mile buffer of the proposed project. In addition, other references were consulted to better understand the historical location data and distribution of these sensitive species in San Diego County, including research using the San Diego Natural History Museum's (SDNHM) plant distribution mapping and voucher specimen lists and local knowledge of sensitive plant species likely to occur in the area.

For purposes of this report, sensitive plant species include those that are (1) listed as threatened or endangered or proposed for listing by federal or state agencies; (2) California Rare Plant Ranks (CRPR) List 1 or List 2 (CNPS 2020); or (3) considered rare, endangered, or threatened by CDFW (CDFW 2020b) or other local conservation organizations or specialists. Noteworthy plant species are considered to be those that are CRPR List 3 or List 4 (CNPS 2020). Table 1, below, provides additional details for each sensitivity classification.

Table 1: Status Abbreviations and Explanations

STATUS ABBREVIATION		STATUS EXPLANATION
Federal	FE	federally listed endangered species
	FT	federally listed threatened species
	FC	federal candidate species, proposed for listing
State	SE	California state-listed endangered species
	ST	California state-listed threatened species
	SR	California state-listed rare species (plants only)
California Rare Plant Rank (CRPR)	1A	presumed extirpated in California and rare or extinct elsewhere
	1B	rare, threatened, or endangered in California and elsewhere
	2A	presumed extirpated in California but more common elsewhere
	2B	rare, threatened, or endangered in California but more common elsewhere
	3	more information needed
	4	limited distribution
CRPR Threat Rank	0.1	Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
	0.2	Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
	0.3	Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

A focused habitat assessment for sensitive plant species was conducted in summer 2019 to evaluate the current proposed project survey area for its potential to support sensitive plant species. Potentially suitable habitats were mapped in the field using aerial imagery of the proposed project survey area (1 inch = 200 feet) and handheld Global Positioning Systems (GPS) units. Potentially suitable habitat areas were digitized using Google™ Earth based on field notes and waypoints collected in the field.

Based on the results of the historical species database search and the focused habitat assessment, a list of the sensitive plant species that have potential to occur within or adjacent to the proposed project survey area was developed (Attachment 2).

Focused Surveys

Focused sensitive plant surveys were conducted by walking meandering transects throughout the proposed project survey area. If a sensitive plant species was observed during these focused surveys, a waypoint was taken with a handheld Global Positioning System (GPS) that recorded the plant's location and the elevation above mean sea level (amsl) and incorporated into the Geographic Information System (GIS) database.

Plant names used herein follow the *Checklist of the Vascular Plants of San Diego County, 5th edition* (*Checklist*; Rebman and Simpson 2014). Additional plant references used included *The Jepson manual: vascular plants of California, Second Edition* (*Jepson Manual*; UC Berkeley 2020), and the San Diego Plant Atlas (SDNHM 2020).

RESULTS

The results of the 2020 sensitive plant surveys conducted for the proposed project are presented in this section.

Background Research & Habitat Assessment

The literature review and database search resulted in a list of 56 sensitive plant species that have historically occurred within 3 miles of the survey area and/or that were determined to have a potential to occur within the proposed project survey area (CDFW 2020a, USFWS 2020a). Following the habitat assessment conducted by BBS biologist Darin Busby on July 22, 2019, the majority of these sensitive plant species (49 of the 56 species) were determined to have a low potential to occur or were not expected to occur within the proposed project survey area, because of habitat specific requirements or because the survey area is outside their known range. Of the remaining seven species, six species – thread-leaved brodiaea (*Brodiaea filifolia*), Orcutt's brodiaea (*Brodiaea orcuttii*), Palmer's grapplinghook (*Harpagonella palmeri*), San Diego marsh-elder (*Iva hayesiana*), spiny rush (*Juncus acutus*), and Robinson's peppergrass (*Lepidium virginicum* var. *robinsonii*) – had a moderate potential to occur, and one – San Diego sagewort (*Artemesia palmeri*) – was observed during the general biological survey.

Focused Surveys

Based on the weather and blooming trends observed in San Diego County during spring 2020, two rounds of surveys were planned. Ed Kentner (Kentner Botanical) conducted the first focused sensitive plant survey on May 15, 2020; however, when he arrived at the proposed project site on June 8, 2020, to conduct the second focused sensitive plant survey, he found that the site had been mowed sometime between the afternoon of June 4, 2020, and the morning of June 8, 2020. Therefore, the second sensitive plant survey was not conducted. A complete list of plant species observed on-site during the 2019 general biological survey, 2019 focused jurisdictional delineation, and/or 2020 focused sensitive plant surveys is included as Attachment 3.

In addition to the sensitive plant surveys, BBS conducted focused surveys for thread-leaved brodiaea and Orcutt's brodiaea. BBS conducted site checks within suitable habitat identified within the proposed project survey area to document early emergent *Brodiaea* vegetation. These site checks occurred on February 14 and 25

as well as March 5, 13, and 19, 2020, in conjunction with the focused fairy shrimp surveys that were conducted for the proposed project. No thread-leaved brodiaea or Orcutt's brodiaea were observed during the first four focused *Brodiaea* species surveys conducted between May 14 and June 4, 2020. Between June 4 and June 8, 2020, the proposed project area was mowed. BBS biologists continued to survey the proposed project area for any sign of potential *Brodiaea* species, including two additional surveys on June 12 and June 15, 2020. No potential *Brodiaea* species were documented during these two visits. A separate survey summary report was prepared for the focused *Brodiaea* species surveys.

The results of the sensitive plant surveys were used to reevaluate the potential for occurrence for the initial 56 sensitive plant species with a potential for occurrence within the proposed project survey area (Attachment 2). Of the 56 species, 52 are not expected to occur on-site based on the existing site conditions and the results of the May 2020 sensitive plant survey. Of the remaining four, only one – San Diego sagewort – was observed on-site. The other three – southern tarplant (*Centromadia parryi* ssp. *australis*), smooth tarplant (*Centromadia pungens ssp. laevis*), and Del Mar Mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*) – were not observed during the May 2020 sensitive plant survey; however, the site was mowed before the June 2020 sensitive plant survey, when these species would have been observable if on-site. Therefore, there is still a low to moderate potential for occurrence for each of these species. Detailed species accounts for these four species are provided below.

San Diego Sagewort (*Artemisia palmeri*)

San Diego sagewort is a CRPR 4.2 species (limited distribution and moderately threatened in California). It is a deciduous shrub in the Asteraceae family that typically blooms from May to September. This species is found in mesic, sandy soils along drainages in chaparral, coastal sage scrub, and riparian habitats (CNPS 2020). San Diego sagewort is known from San Diego County and in Baja California, Mexico, at elevations between 0 and 2,230 feet amsl (Calflora 2020). This species is threatened by development, flood control projects, and possibly by non-native plant species (CNPS 2020).

San Diego sagewort is present adjacent to and south of the survey area (Appendix A: Figure 4). This species was observed along the southern bank of Buena Vista Creek during the 2019 general biological survey, 2019 focused jurisdictional delineation, and 2020 focused sensitive plant surveys. It is within the proposed project survey area but well outside the proposed project footprint.

Southern Tarplant (*Centromadia parryi* ssp. *australis*)

Southern tarplant is a CRPR 1B.1 species (rare, threatened, or endangered in California and elsewhere). It is an annual herb in the Asteraceae family that typically blooms from May to November. This species is found in vernal pools,

along the margins of marshes, and in vernally mesic areas within grasslands (CNPS 2020). Southern tarplant is known from coastal California, from Santa Barbara County south into Baja California, Mexico, at elevations between 0 and 1,410 feet amsl (Calflora 2020). This species is threatened by habitat disturbance, population fragmentation, urbanization, development, illegal vehicle activity, foot traffic, grazing, and competition from non-native plants (CNPS 2020).

Southern tarplant has a low to moderate potential to occur within the proposed project survey area. While no historical species occurrence records for southern tarplant exist within 3 miles of survey area (CDFW 2020a), marginally suitable habitat exists within the survey area. The survey area was mowed before the planned June 2020 survey, which would have been used to determine if this species is present onsite.

Smooth Tarplant (*Centromadia pungens ssp. laevis*)

Smooth tarplant is a CRPR 1B.1 species (rare, threatened, or endangered in California and elsewhere). It is an annual herb in the Asteraceae family that typically blooms from April to September. This species is found in alkaline soils associated with chenopod scrub, meadows and seeps, playas, riparian woodlan, and grasslands (CNPS 2020). Smooth tarplant is known from Los Angeles, Riverside, San Bernardino, and San Diego counties (CNPS 2020) at elevations between 330 to 2,000 feet amsl (Calflora 2020). This species is threatened by foot traffic, agriculture, road maintenance, disking, urbanization, hydrological alterations, and flood control projects (CNPS 2020).

Smooth tarplant has a low to moderate potential to occur within the proposed project survey area. Historical species occurrence records for smooth tarplant exist within 3 miles of survey area (CDFW 2020a), but only marginally suitable habitat exists within the survey area, and the survey area is just outside of the known elevation range for this species. The survey area was mowed before the planned June 2020 survey, which would have been used to determine if this species is present onsite.

Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*)

Del Mar Mesa sand aster is a CRPR 1B.1 species (rare, threatened, or endangered in California and elsewhere) and a proposed Oceanside Subarea Plan Narrow Endemic species. It is a perennial herb in the Asteraceae family that typically blooms from May to September. This species is found in sandy soils in coastal bluff scrub, coastal sage scrub, and openings in maritime chaparral (CNPS 2020). Del Mar Mesa sand aster is endemic to San Diego County (CNPS 2020), and is found at elevations between 0 to 425 feet amsl (Calflora 2020). This species is threatened by development, trampling, non-native plant species, and road maintenance (CNPS 2020).

Del Mar Mesa sand aster has a low to moderate potential to occur within the proposed project survey area. Historical species occurrence records for Del Mar Mesa sand aster exist within 3 miles of survey area (CDFW 2020a), but only marginally suitable habitat exists within the survey area. *Corethrogyne filaginifolia* was observed during the May 2020 sensitive plant surveys; however, the survey area was mowed before the planned June 2020 survey, which would have been used to determine if the *Corethrogyne filaginifolia* present on-site is this variety or another more common one.

SUMMARY

Only one sensitive plant species – San Diego sagewort – was documented within the proposed project survey area during the May 2020 sensitive plant surveys conducted for the proposed project (Attachment 1: Figure 4). Three sensitive plant species – southern tarplant, smooth tarplant, and Del Mar Mesa sand aster – continue to have a low to moderate potential for occurrence because their presence/absence could not be determined during the May 2020 sensitive plant survey, and the site was mowed prior to the planned June 8, 2020, sensitive plant survey.

Please do not hesitate to contact Melissa Busby at melissa@busbybiological.com or 858.334.9507 if you have any questions.

Sincerely,

Melissa Busby
Owner/Principal Biologist

ATTACHMENTS

Attachment 1: Figures
Attachment 2: Sensitive Plant Species with a Potential for Occurrence in the Proposed Project Survey Area
Attachment 3: Plant Species Observed within the Proposed Project Survey Area

REFERENCES

Calflora

2020 Calflora: Information on wild California plants from http://www.calflora.org. Accessed August and September 2020.

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2020b CDFW Biogeographic Data Branch, California Natural Diversity Database. Endangered, Threatened, and Rare Plant List from https://www.dfg.ca.gov/wildlife/nongame/list.html. Accessed August and September 2020.

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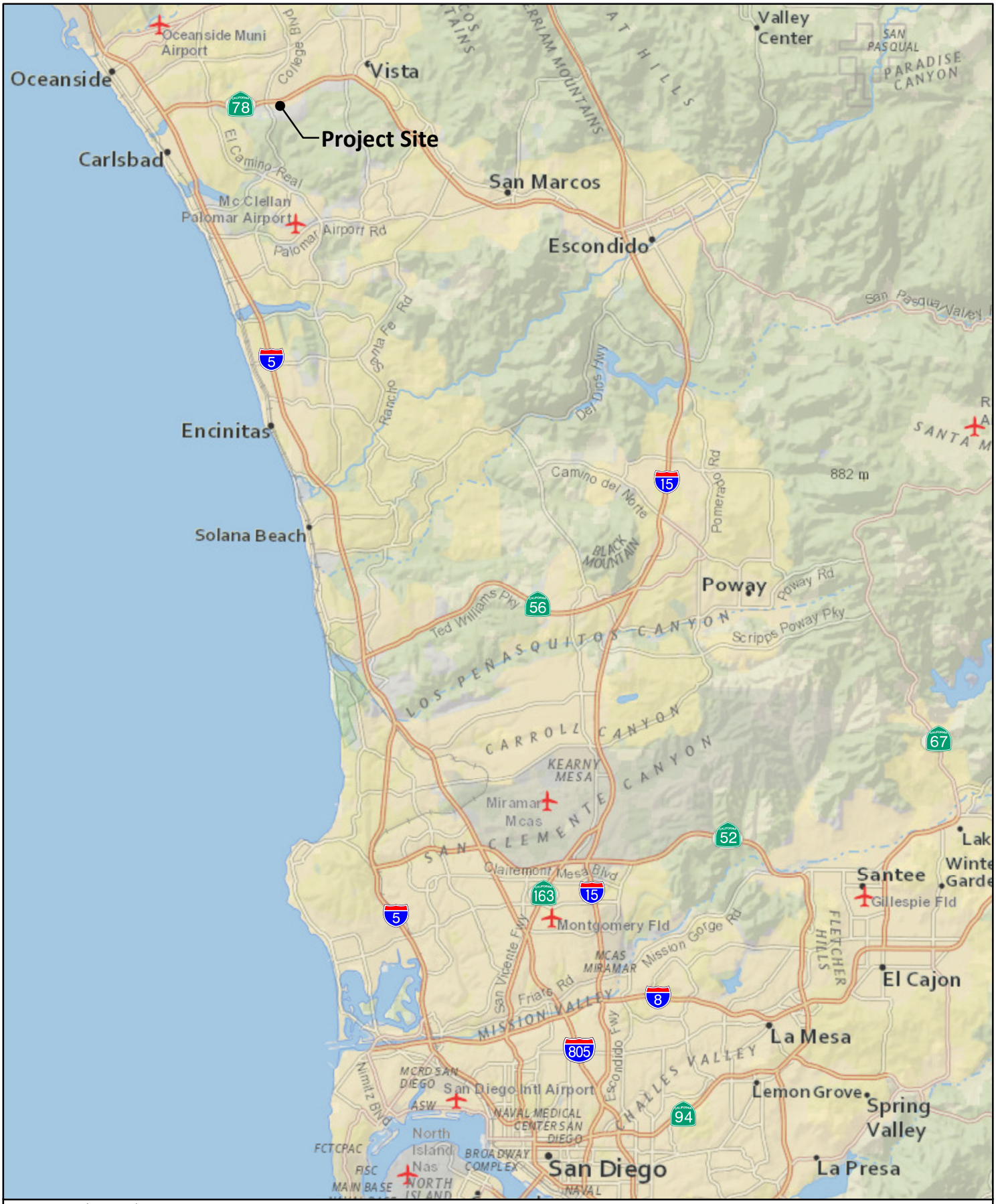
2020 *Brodiaea filifolia* (thread-leaved brodiaea) from http://fws.gov. Accessed August and September 2020.

U.S. Geological Survey (USGS)

1968 7.5-minute San Luis Rey Topographic Quadrangle (Photorevised 1975)

ATTACHMENT 1
Figures



Source: National Geographic, Esri

BUSBY Biological Services

N 0 2 4 Miles

Regional Location

CARMAX OCEANSIDE

Figure 1

Source: SANDAG & SanGIS 2017

BUSBY Biological Services

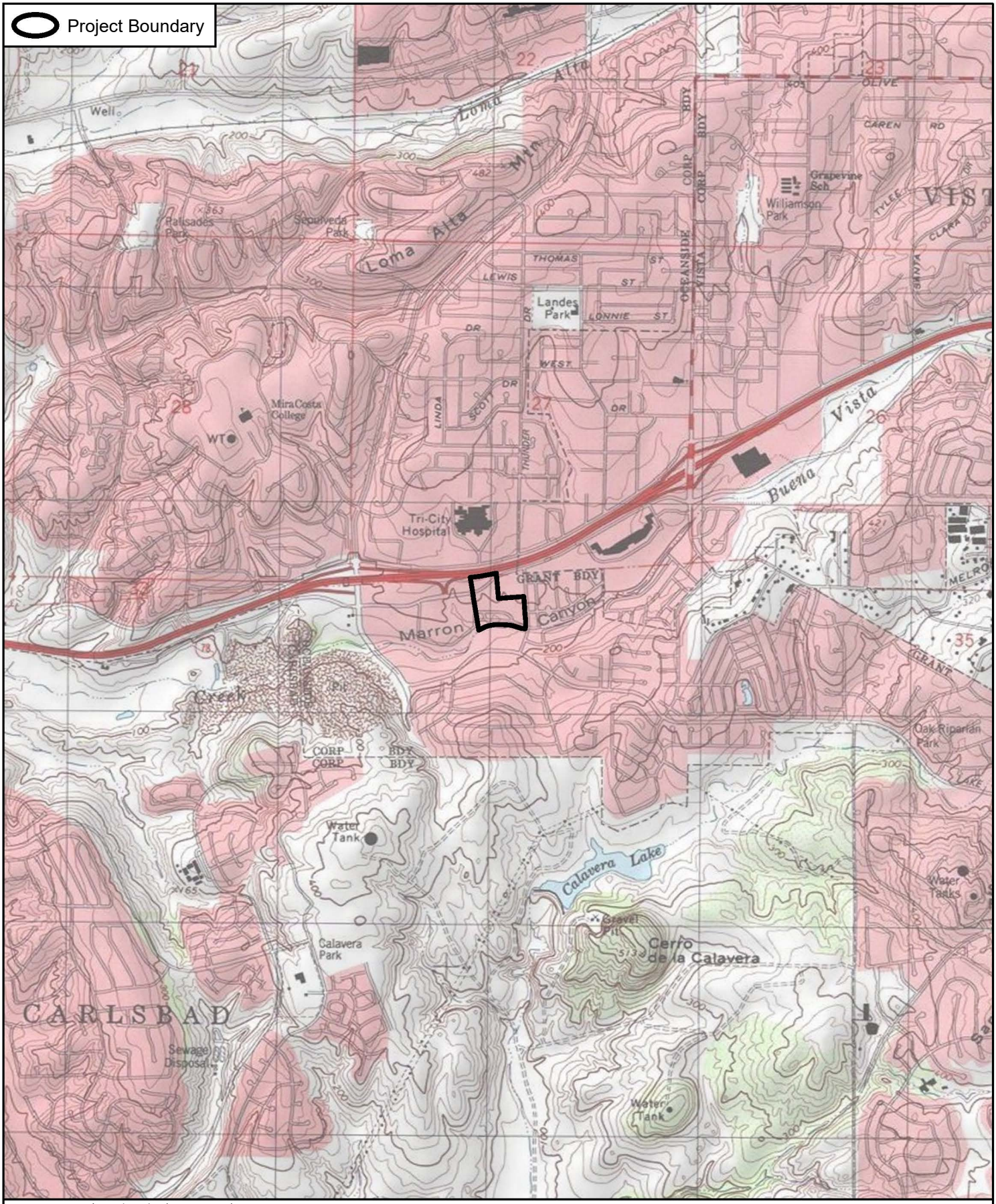
N

0 1,000 2,000 Feet

Project Vicinity - Aerial

CARMAX OCEANSIDE

Figure 2



Source: USGS 7.5' Quadrangles (San Luis Rey)

BUSBY Biological Services

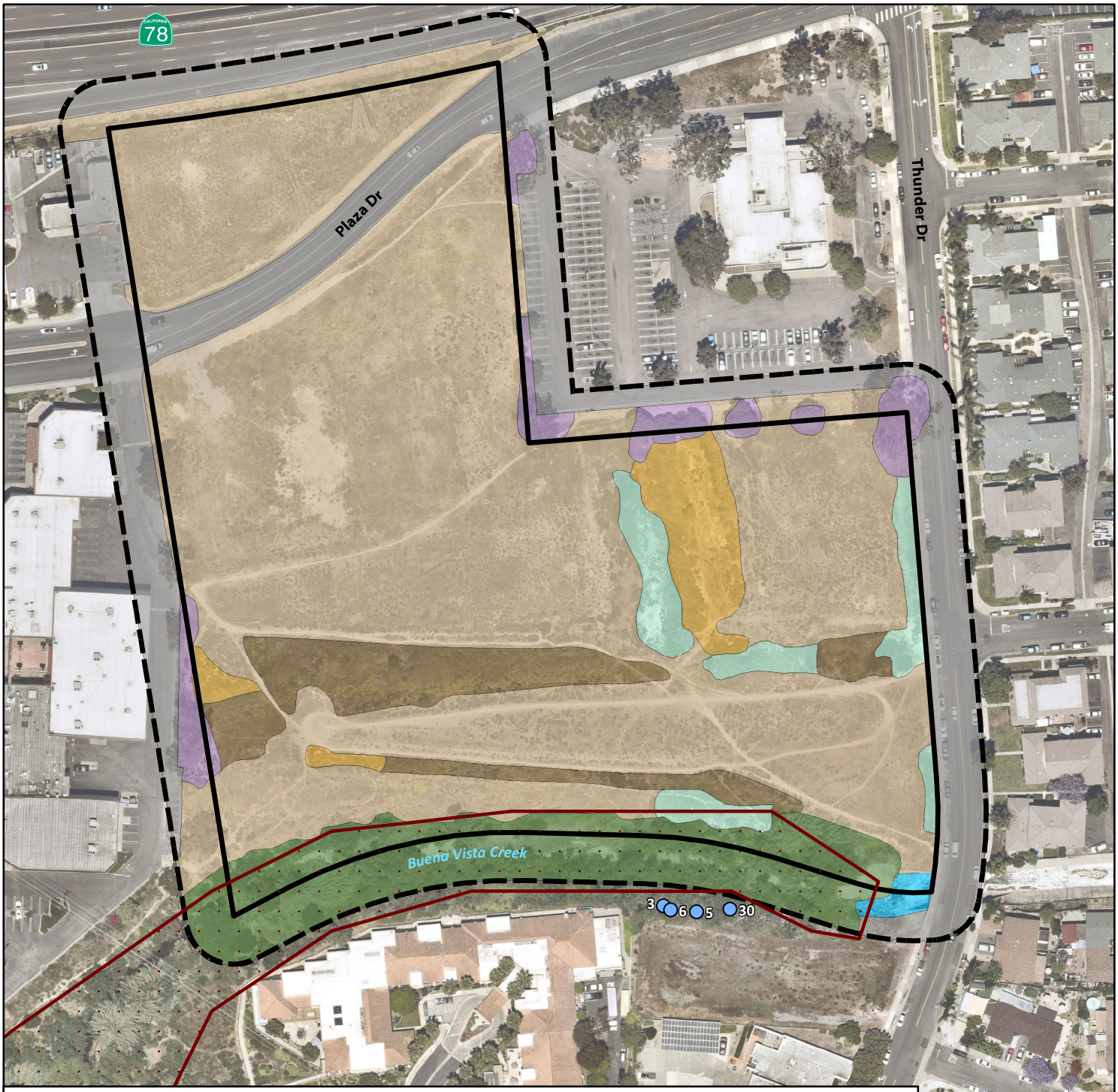
N

0 1,000 2,000 Feet

Project Vicinity - USGS Topo

CARMAX OCEANSIDE

Figure 3



Project Boundary
50-foot Survey Buffer
Buena Vista Creek Mitigation Area/
Coastal California Gnatcatcher Critical Habitat

Special Status Species

San Diego Sagewort (*Artemisia palmeri*)

Vegetation Communities

Southern Riparian Forest
Open Water
Disturbed Diegan Coastal Sage Scrub
Ornamental
Iceplant
Ruderal
Disturbed
Developed

Source: SANDAG & SanGIS 2017

BUSBY Biological Services

N

0 75 150 Feet

Rare Plant Survey Area & Results

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Figure 4

ATTACHMENT 2
Plant Species with a Potential for Occurrence in the Proposed Project Survey Area

ATTACHMENT 2
Sensitive Plant Species with a Potential to Occur within the Proposed Project Survey Area

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
San Diego thornmint (*Acanthomintha ilicifolia*)	FT SE CRPR 1B.1 SAP PC SAP NE	Annual herb. Blooms Apr-Jun. Clay openings in vernal pools, chaparral, coastal sage scrub, grassland. (CNPS 2020) Elev 150-3,085ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, focused 2019/2020 fairy shrimp surveys, or during the focused 2020 *Brodiaea* species surveys.
Nuttall's acmispon (Acmispon prostratus)	CRPR 1B.1 SAP PC SAP NE	Annual herb. Blooms Mar-Jun/Jul. Sandy substrate in coastal dunes, coastal sage scrub (CNPS 2020) Elev 0-2,395ft. (Calfora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and limited suitable soils exist within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
spineshrub (*Adolphia californica*)	CRPR 2B.1	Perennial deciduous shrub. Blooms Dec-May. Clay soils in chaparral, coastal sage scrub, grassland. (CNPS 2020) Elev 15-1,115ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
San Diego ambrosia (*Ambrosia pumila*)	FE CRPR 1B.1 SAP PC SAP NE	Perennial rhizomatous herb. Blooms Apr-Oct. Often in disturbed areas with sandy loam or clay soils, sometimes alkaline areas, in chaparral, coastal sage scrub, grassland, vernal pools. (CNPS 2020) Elev 50-785ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, focused 2019/2020 fairy shrimp surveys, or during the focused 2020 *Brodiaea* species surveys.
Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*)	FE CRPR 1B.1 SAP NE	Perennial evergreen shrub. Blooms Dec-Jun. Sandy soils in maritime chaparral. (CNPS 2020) Elev 115-820ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
San Diego sagewort (*Artemisia palmeri*)	CRPR 4.2	Perennial deciduous shrub. Blooms May-Sep. Sandy, mesic areas in chaparral,	Present. Approximately 44 individuals were observed adjacent to and south of the survey area, on the stream bank just

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
		coastal sage scrub, riparian habitats. (CNPS 2020) Elev 0-2,230ft. (Calflora 2020)	south of Buena Vista Creek, on July 22, 2019. This species was also documented during the May 2020 focused rare plant survey.
Coulter's saltbush (*Atriplex coulteri*)	CRPR 1B.2	Perennial herb. Blooms Mar-Oct. Alkaline or clay soils in coastal dunes, coastal bluff scrub, coastal sage scrub, grassland. (CNPS 2020) Elev 0-1,510ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
South coast saltscale (*Atriplex pacifica*)	CRPR 1B.2	Annual herb. Blooms Mar-Oct. Playas, coastal dunes, coastal bluff scrub, coastal sage scrub. (CNPS 2020) Elev 8-1,050ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area but species is restricted to sandy soils along the immediate coast. In addition, this species was not observed during the May 2020 focused rare plant surveys.
Encinitas baccharis (*Baccharis vanessae*)	FT SE CRPR 1B.1 SAP NE	Perennial deciduous shrub. Blooms Aug-Nov. Sandstone in maritime chaparral, cismontane woodland. (CNPS 2020) Elev 245-2,460ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, no suitable soils exist within survey area, and the survey area is just outside of the known elevation range of this species. In addition, this species was not observed during the May 2020 focused rare plant surveys, when it would have been observable.
San Diego sunflower (*Bahiopsis laciniata*)	CRPR 4.2	Perennial shrub. Blooms Feb-Aug. Dry slopes in coastal sage scrub, chaparral. Elev 50-2,690ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
Nevin's barberry (*Berberis nevinii*)	FE SE CRPR 1B.1	Perennial evergreen shrub. Blooms Feb/Mar-Jun. Sandy or gravelly soils in chaparral, coastal sage scrub, cismontane woodland, riparian scrub. (CNPS 2020) Elev 115-1,575ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
thread-leaved brodiaea (*Brodiaea filifolia*)	FT SE CRPR 1B.1 SAP PC SAP NE	Perennial bulbiferous herb. Blooms Mar-Jun. Typically clay soils in vernal pools, playas, chaparral, coastal sage scrub, cismontane woodland, grassland. (CNPS	Not Expected. Historical records exist within 3 miles of survey area and moderately suitable habitat exists within survey area despite disturbance from mowing and past grading activities; however, this species was not observed

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
		2020) Elev 130-3,640ft. (Calflora 2020)	during the May 2020 focused rare plant surveys or during the 2020 focused *Brodiaea* species surveys that were conducted during the appropriate blooming period, before the site was mowed in early June 2020.
Orcutt's brodiaea (*Brodiaea orcuttii*)	CRPR 1B.1	Perennial bulbiferous herb. Blooms May-Jul. Typically mesic, clay soils (sometimes serpentinite) in vernal pools, chaparral, cismontane woodland, closed-cone coniferous forest, meadows & seeps, grassland. (CNPS 2020) Elev 330-5,610ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and the survey area is located just outside of the known elevation range for this species. In addition, this species was not observed during the May 2020 focused rare plant surveys or during the 2020 focused *Brodiaea* species surveys that were conducted during the appropriate blooming period, before the site was mowed in early June 2020.
Brewer's calandrinia (*Calandrinia breweri*)	CRPR 4.2	Annual herb. Blooms Mar–Jun. Sandy/loamy soils typically after fire or other disturbance in chaparral, coastal sage scrub. (CNPS 2020) Elev 150-3,510ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and limited suitable soils exist within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
Payson's jewelflower (*Caulanthus simulans*)	CRPR 4.2	Annual herb. Blooms Feb/Mar-May/Jun. Sandy, granitic areas in chaparral, coastal sage scrub. (CNPS 2020) Elev 2,460-5,805ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, limited suitable soils exist within survey area, and the survey area is well outside of the known elevation range for this species. In addition, this species was not observed during the May 2020 focused rare plant surveys.
wart-stemmed ceanothus (*Ceanothus verrucosus*)	CRPR 2B.2	Perennial evergreen shrub. Blooms Dec-May. Chaparral. (CNPS 2020) Elev 15-1,115ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
southern tarplant (*Centromadia parryi* ssp. *australis*)	CRPR 1B.1	Annual herb. Blooms May-Nov. Vernal pools, along the margins of marshes, in vernally mesic areas within grassland. (CNPS 2020) Elev 0-1,410ft. (Calflora 2020)	Low to moderate. While no historical records exist within 3 miles of survey area and only marginally suitable habitat exists within the survey area, the survey area was mowed before the planned June 2020 survey, which would have been used to determine if this species is present onsite.

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
smooth tarplant (*Centromadia pungens ssp. laevis*)	CRPR 1B.1	Annual herb. Blooms Apr-Sep. Alkaline soils within chenopod scrub, meadows & seeps, playas, riparian woodland, grassland. (CNPS 2020) Elev 330-2,000ft. (Calflora 2020)	Low to moderate. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within the survey area, the survey area is just outside of the known elevation range for this species, and the survey area was mowed before the planned June 2020 survey, which would have been used to determine if this species is present onsite.
Orcutt's spineflower (*Chorizanthe orcuttiana*)	FE SE CRPR 1B.1 SAP NE	Annual herb. Blooms Mar-May. Sandy openings in maritime chaparral, coastal sage scrub, closed-cone coniferous forest. (CNPS 2020) Elev 150-490ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and limited suitable soils exist within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*)	CRPR 1B.2	Annual herb. Blooms Apr-Jul. Clay soils, in vernal pools, chaparral, coastal sage scrub, meadows & seeps, grassland. (CNPS 2020) Elev 330-5,315ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, only marginally suitable habitat exists within survey area, and the survey area is just outside the known elevation range for this species. In addition, this species was not observed during the May 2020 focused rare plant surveys or during the focused 2020 *Brodiaea* species surveys.
seaside cistanthe (*Cistanthe maritima*)	CRPR 4.2	Annual herb. Blooms Feb/Mar-Jun/Aug. Sandy soils in coastal bluff scrub, coastal sage scrub, grassland. (CNPS 2020) Elev 50-590ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and limited suitable soils exist within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
San Miguel savory (*Clinopodium chandleri*)	CRPR 1B.2	Perennial shrub. Blooms Mar-Jul. Rocky, gabbroic, or metavolcanic areas in chaparral, coastal sage scrub, cismontane woodland, riparian woodland, grassland. (CNPS 2020) Elev 1,345-3,410ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, no suitable soils exist within survey area, and the survey area is outside the known elevation range for this species. In addition, this species was not observed during the May 2020 focused rare plant surveys.
summer-holly (*Comarostaphylis diversifolia* ssp. *diversifolia*)	CRPR 1B.2	Perennial evergreen shrub. Blooms Apr-Jun. Chaparral, cismontane woodland. (CNPS 2020) Elev 130-1,835ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
			have been observable.
Del Mar Mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*)	CRPR 1B.1 SAP NE	Perennial herb. Blooms May-Sep. Sandy soils in coastal bluff scrub, coastal sage scrub, openings in maritime chaparral. (CNPS 2020) Elev 0-425ft. (Calflora 2020)	Low to moderate. Historical records exist within 3 miles of survey area, and marginally suitable habitat exists within survey area. While this species was not observed during the May 2020 focused rare plant surveys, the survey area was mowed in early June, before the planned June 2020 rare plant survey which would have been used to determine if this species is present within the survey area.
Wiggin's cryptantha (*Cryptantha wigginsii*)	CRPR 1B.2	Annual herb. Blooms Feb-Jun. Often clay soils in coastal scrub. Elev. 65-905ft. (CNPS 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
snake cholla (*Cylindropuntia californica* var. *californica*)	CRPR 1B.1	Perennial stem succulent. Blooms Apr-May. Chaparral, coastal sage scrub. (CNPS 2020) Elev 65-885ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
western dichondra (*Dichondra occidentalis)*	CRPR 4.2	Perennial rhizomatous herb. Blooms Jan/Mar-Jul. Coastal sage scrub, chaparral, cismontane woodland, grassland. (CNPS 2020) Elev 130-1,510ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
short-leaved dudleya (*Dudleya blochmaniae* ssp. *brevifolia*)	CRPR 1B.1 SAP PC	Perennial herb. Blooms Apr-May. Sandstone in coastal sage scrub and openings in maritime chaparral. (CNPS 2020) Elev 330-460ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, no suitable soils exist within survey area, and the survey area is outside the known elevation range for this species. In addition, this species was not observed during the May 2020 focused rare plant surveys.
variegated dudleya (*Dudleya variegata*)	CRPR 1B.2 SAP NE	Perennial herb. Blooms Apr-Jun. Clay soils in vernal pools, chaparral, cismontane woodland, coastal sage scrub, grassland. (CNPS 2020) Elev 115-1,015ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
sticky dudleya (*Dudleya viscida*)	CRPR 1B.2 SAP PC	Perennial herb. Blooms May-Jun. Rocky areas in coastal bluff scrub, chaparral, coastal scrub, cismontane woodland. (CNPS 2020) Elev 15-2,330ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
Palmer's goldenbush (*Ericameria palmeri* var. *palmeri*)	CRPR 1B.1	Perennial evergreen shrub. Blooms Jul/Sep-Nov. Mesic areas in chaparral, coastal sage scrub. (CNPS 2020) Elev 100-1,085ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
coast wallflower (*Erysimum ammophilum*)	CRPR 1B.2	Perennial herb. Blooms Feb-Jun. Sandy openings in coastal dunes, maritime chaparral, coastal sage scrub. (CNPS 2020) Elev 15-330ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and limited suitable soils exist within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
San Diego button-celery (*Eryngium aristulatum* var. *parishii*)	FE SE CRPR 1B.1 SAP NE	Annual/perennial herb. Blooms Apr-Jun. Mesic soils in vernal pools, coastal sage scrub, grassland. (CNPS 2020) Elev 115-2,495ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, focused 2019/2020 fairy shrimp surveys, or during the focused 2020 *Brodiaea* species surveys.
cliff spurge (*Euphorbia misera*)	CRPR 2B.2	Perennial shrub. Blooms Dec-Aug/Oct. Rocky areas in coastal bluff scrub, coastal sage scrub, Mojavean desert scrub. (CNPS 2020) Elev 0-920ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
San Diego barrel cactus (*Ferocactus viridescens*)	CRPR 2B.1 SAP PC	Perennial stem succulent. Blooms May-Jun. Chaparral, coastal sage scrub, grassland, vernal pools. (CNPS 2020) Elev 15-885ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
Palmer's grapplinghook	CRPR 4.2	Annual herb. Blooms Mar-May. Clay soils in open grassy	Not Expected. Historical records exist within 3 miles of survey area, and

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
(*Harpagonella palmeri*)		areas associated with chaparral, coastal sage scrub, grassland. (CNPS 2020) Elev 150-3,970ft. (Calflora 2020)	moderately suitable habitat exists within survey area. However, this species was not observed during the May 2020 focused rare plant surveys.
Orcutt's hazardia (*Hazardia orcuttii*)	CRPR 1B.1 SAP PC SAP NE	Perennial evergreen shrub. Blooms Aug-Oct. Often clay soils in maritime chaparral, coastal scrub. (CNPS 2020) Elev. 0-330ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
graceful tarplant (*Holocarpha virgata* ssp. *elongata*)	CRPR 4.2	Annual herb. Blooms May-Nov. Chaparral, cismontane woodland, coastal sage scrub, grassland. (CNPS 2020) Elev 65-2,755ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
decumbent goldenbush (*Isocoma menziesii* var. *decumbens*)	CRPR 1B.2	Perennial shrub. Blooms Apr-Nov. sandy, often disturbed areas in coastal sage scrub, chaparral. (CNPS 2020) Elev 65-1,640ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
San Diego marsh-elder (*Iva hayesiana*)	CRPR 2B.2 SAP PC	Perennial herb. Blooms Apr-Oct. Marshes & swamps, playas. (CNPS 2020) Elev 15-855ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and moderately suitable habitat exists within survey area. However, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
spiny rush (*Juncus acutus* ssp. *leopoldii*)	CRPR 4.2	Perennial rhizomatous herb. Blooms Mar/May-Jun. Coastal salt marsh, alkaline meadows & seeps, mesic soils in coastal dunes. (CNPS 2020) Elev 0-1,310ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and moderately suitable habitat exists within survey area. However, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)	CRPR 1B.1	Annual herb. Blooms Feb-Jun. Coastal salt marsh, playas, vernal pools. (CNPS 2020) Elev 0-1,905ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, focused 2019/2020 fairy shrimp surveys, or during

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
			the focused 2020 *Brodiaea* species surveys.
Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*)	CRPR 4.3	Annual herb. Blooms Jan-Jul. Chaparral, coastal sage scrub. (CNPS 2020) Elev 180-2,525ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
sea dahlia (*Leptosyne maritima*)	CRPR 2B.2	Perennial herb. Blooms Mar-May. Coastal bluff scrub, coastal sage scrub. (CNPS 2020) Elev 0-425ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
little mousetail (*Myosurus minimus* ssp. *apus*)	CRPR 3.1 SAP NE	Annual herb. Blooms Mar-Jun. Alkaline soils in vernal pools, grassland. Elev 65-2,100ft. (CNPS 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, focused 2019/2020 fairy shrimp surveys, or during the focused 2020 *Brodiaea* species surveys.
Mud nama (*Nama stenocarpa*)	CRPR 2B.1	Annual/perennial herb. Blooms Jan-Jul. Marshes & swamps, lake margins, riverbanks. (CNPS 2020) Elev 15-2,100ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
spreading navarretia (*Navarretia fossalis*)	FT CRPR 1B.1 SAP NE	Annual herb. Blooms Apr-Jun. Shallow freshwater marsh, playas, vernal pools, chenopod scrub. (CNPS 2020) Elev 360-1,705ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, only marginally suitable habitat exists within survey area, and the survey area is just outside of the known elevation range for the species. In addition, this species was not observed during the May 2020 focused rare plant surveys, focused 2019/2020 fairy shrimp surveys, or during the focused 2020 *Brodiaea* species surveys.
California Orcutt grass (*Orcuttia californica*)	FE SE CRPR 1B.1 SAP NE	Annual herb. Blooms Apr-Aug. Vernal pools. (CNPS 2020) Elev 460-2,200ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, only marginally suitable habitat exists within survey area, and the survey area is just outside of the known elevation range for

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
			the species. In addition, this species was not observed during the May 2020 focused rare plant surveys, focused 2019/2020 fairy shrimp surveys, or during the focused 2020 *Brodiaea* species surveys.
short-lobed broomrape (*Orobanche parishii* ssp. *brachyloba*)	CRPR 4.2	Parasitic, perennial herb. Blooms Apr-Oct. Sandy soils associated with coastal bluff scrub, coastal dunes, coastal sage scrub. (CNPS 2020) Elev 280-655ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, limited suitable soils exist within survey area, and the survey area is just outside the known elevation range for this species. In addition, this species was not observed during the May 2020 focused rare plant surveys.
San Diego mesa mint (*Pogogyne abramsii*)	FE SE CRPR 1B.1	Annual herb. Blooms Mar-Jul. Vernal pools. (CNPS 2020) Elev 360-590ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, only marginally suitable habitat exists within survey area, and the survey area is just outside of the known elevation range for the species. In addition, this species was not observed during the May 2020 focused rare plant surveys, focused 2019/2020 fairy shrimp surveys, or during the focused 2020 *Brodiaea* species surveys.
Nuttall's scrub oak (*Quercus dumosa*)	CRPR 1B.1 SAP PC	Perennial evergreen shrub. Blooms Feb-Apr/May-Aug. Sandy or clay loam soils associated with chaparral, coastal sage scrub, closed-cone coniferous forest. (CNPS 2020) Elev 50-4,035ft. (Calflora 2020)	Not Expected. Historical records exist within 3 miles of survey area, but only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
small-leaved rose (*Rosa minutifolia*)	SE CRPR 2B.1	Perennial deciduous shrub. Blooms Jan-Jun. Chaparral, coastal sage scrub. (CNPS 2020) Elev 425-560ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, only marginally suitable habitat exists within survey area, and the survey area is just outside of the known elevation range for the species. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.
ashy spike-moss (*Selaginella cinerascens*)	CRPR 4.1	Perennial rhizomatous herb (fern). No blooming period. Chaparral, coastal sage scrub. (CNPS 2020) Elev. 35-1,245ft.	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020

SPECIES NAME	STATUS	HABITAT DESCRIPTION*	POTENTIAL FOR OCCURRENCE
		(Calflora 2020)	focused rare plant surveys, and it would have been observable.
chaparral ragwort (*Senecio aphanactis*)	CRPR 2B.2	Annual herb. Blooms Jan-Apr/May. Chaparral, coastal sage scrub, cismontane woodland, sometimes in alkaline soils. (CNPS 2020) Elev 425-2,165ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, only marginally suitable habitat exists within survey area, and the survey area is just outside of the known elevation range for the species. In addition, this species was not observed during the May 2020 focused rare plant surveys.
purple stemodia (*Stemodia durantifolia*)	CRPR 2B.1	Perennial herb. Blooms year-round. Mesic, sandy soils in wetland/riparian. Elev 50-560ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, and only marginally suitable habitat exists within survey area. In addition, this species was not observed during the May 2020 focused rare plant surveys.
Parry's tetracoccus (*Tetracoccus dioicus*)	CRPR 1B.2	Perennial deciduous shrub. Blooms Apr-May. Chaparral, coastal sage scrub. (CNPS 2020) Elev 490-2,725ft. (Calflora 2020)	Not Expected. No historical records exist within 3 miles of survey area, only marginally suitable habitat exists within survey area, and the survey area is just outside of the known elevation range for the species. In addition, this species was not observed during the May 2020 focused rare plant surveys, and it would have been observable.

STATUS CODES

Federal

FE = Federal-listed endangered species

FT = Federal-listed threatened species

State

SE = State-listed endangered species

California Native Plant Society Rare Plant Ranking

1B =Species rare, threatened, or endangered in California and elsewhere. These species are eligible for state listing.

2B =Species rare, threatened, or endangered in California but more common elsewhere. These species are eligible for state listing.

3 = A review list for plants about which more information is needed. These species lack necessary data to assign them to another list or reject them.

4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.

.1 =Species seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)

.2 =Species fairly threatened in California (20-80% occurrences threatened; moderate degree and immediacy of threat)

.3 =Species not very threatened in California (<20% of occurrences threatened; low degree and immediacy of threat or no current threats known

Oceanside Subarea Plan

SAP PC = Proposed Covered SAP NE = Narrow Endemic

ATTACHMENT 3
Plant Species Observed within the Proposed Project Survey Area

ATTACHMENT 3
Plant Species Observed within the Proposed Project Survey Area

Major Clade	Family	Scientific name	Common name	Nativity
Eudicots				
	Adoxaceae (Muskroot family)			
		Sambucus nigra subsp. caerulea	Mexican elderberry	Native
	Aizoaceae (Fig-marigold family)			
		Carpobrotus chilensis	Sea fig	Naturalized
		Carpobrotus edulis	Hottentot fig	Naturalized
	Anacardiaceae (Sumac family)			
		Schinus terebinthifolius	Brazilian pepper tree	Naturalized
	Apiaceae (Carrot family)			
		Apium graveolens	Common celery	Naturalized
		Conium maculatum	Poison hemlock	Naturalized
		Foeniculum vulgare	Sweet fennel	Naturalized
	Apocynaceae (Dogbane family)			
		Carissa macrocarpa	NatalpPlum	Non-native
	Asteraceae (Aster family)			
		Ambrosia psilostachya	Cuman ragweed	Native
		Artemisia californica	Coastal sagebrush	Native
		Artemisia douglasiana	Douglas' sagewort	Native
		Artemisia palmeri	San Diego sagewort	Native
		Baccharis pilularis	Coyotebrush	Native
		Baccharis salicifolia subsp. salicifolia	Mule fat	Native
		Carduus pycnocephalus subsp. pycnocephalus	Italian thistle	Naturalized
		Centaurea melitensis	Maltese star-thistle	Naturalized
		Corethrogyne filaginifolia	California aster	Native
		Deinandra fasciculata	Clustered tarweed	Native
		Erigeron bonariensis	Asthmaweed	Naturalized
		Glebionis coronaria	Crown daisy	Naturalized
		Hedypnois cretica	Cretanweed	Naturalized
		Heterotheca grandiflora	Telegraphweed	Native
		Hypochaeris glabra	Smooth cat's ear	Naturalized

Major Clade	Family	Scientific name	Common name	Nativity
		Isocoma menziesii	Menzies' goldenbush	Native
		Lactuca serriola	Prickly lettuce	Naturalized
		Logfia gallica	Narrowleaf cottonrose	Naturalized
		Osmadenia tenella	False rosinweed	Native
		Pseudognaphalium biolettii	Two-color rabbit-tobacco	Native
		Pseudognaphalium stramineum	Cottonbatting plant	Native
		Pulicaria paludosa	Spanish false fleabane	Naturalized
		Sonchus asper subsp. asper	Prickly sow thistle	Naturalized
		Sonchus oleraceus	Common sowthistle	Naturalized
		Xanthium strumarium	Rough cocklebur	Native
	Boraginaceae (Borage family)			
		Amsinckia menziesii	Menzies' fiddleneck	Native
		Plagiobothrys collinus	Cooper's popcornflower	Native
	Brassicaceae (Mustard family)			
		Brassica nigra	Black mustard	Naturalized
		Brassica tournefortii	Saharan mustard	Naturalized
		Hirschfeldia incana	Shortpod mustard	Naturalized
		Lepidium	Pepperweed	Native
		Raphanus sativus	Cultivated radish	Naturalized
		Sisymbrium orientale	Indian hedgemustard	Naturalized
	Caryophyllaceae (Pink family)			
		Achyronychia cooperi	Onyxflower	Native
		Silene gallica	Common catchfly	Naturalized
	Chenopodiaceae (Goosefoot family)			
		Atriplex semibaccata	Australian saltbush	Naturalized
		Chenopodium album	Lambsquarters	Naturalized
		Chenopodium murale	Nettleleaf goosefoot	Naturalized
		Salsola australis	Russian thistle	Naturalized
	Convolvulaceae (Morning-glory family)			
		Convolvulus arvensis	Field bindweed	Naturalized

Major Clade	Family	Scientific name	Common name	Nativity
	Crassulaceae (Stonecrop family)			
		Crassula connata	Sand pygmyweed	Native
	Euphorbiaceae (Spurge family)			
		Croton setigerus	Dove weed	Native
		Euphorbia maculata	Spotted sandmat	Naturalized
		Euphorbia peplus	Petty spurge	Naturalized
		Ricinus communis	Castorbean	Naturalized
	Fabaceae (Pea family)			
		Acmispon americanus var. americanus	Spanish clover	Native
		Acmispon glaber	Common deerweed	Native
		Acmispon micranthus	San Diego bird's-foot trefoil	Native
		Medicago polymorpha	Burclover	Naturalized
		Melilotus indicus	Sourclover	Naturalized
		Parkinsonia aculeata	Jerusalem thorn	Naturalized
	Fagaceae (Beech family)			
		Quercus agrifolia	California live oak	Native
	Geraniaceae (Geranium family)			
		Erodium botrys	Longbeak stork's bill	Naturalized
		Erodium cicutarium	Redstem stork's bill	Naturalized
		Geranium carolinianum	Carolina geranium	Native
	Lamiaceae (Mint family)			
		Marrubium vulgare	Horehound	Naturalized
		Salvia mellifera	Black sage	Native
	Lythraceae (Loosestrife family)			
		Lythrum hyssopifolia		Naturalized
	Malvaceae (Mallow family)			
		Malva parviflora	Cheeseweed mallow	Naturalized
		Malvella leprosa	Alkali mallow	Native
	Moraceae (Fig family)			
		Ficus carica	Common Fig	Naturalized
	Myrsinaceae (Myrisine family)			
		Lysimachia arvensis	Scarlet pimpernel	Naturalized

Major Clade	Family	Scientific name	Common name	Nativity
	Myrtaceae (Myrtle family)			
		Eucalyptus citriodora	Lemon-scented gum	Naturalized
		Eucalyptus camaldulensis	Red gum	Naturalized
	Onagraceae (Evening primrose family)			
		Oenothera elata	Marsh evening primrose	Native
	Oxalidaceae (Wood-Sorrel family)			
		Oxalis pes-caprae	Bermuda buttercup	Naturalized
	Plantaginaceae (Plantain family)			
		Plantago erecta	Dotseed plantain	Native
		Plantago lanceolata	Narrowleaf plantain	Naturalized
	Platanaceae (Plane-tree family)			
		Platanus racemosa	California sycamore	Native
	Polygonaceae (Buckwheat family)			
		Eriogonum fasciculatum	Eastern Mojave buckwheat	Native
		Rumex crispus	Curly dock	Naturalized
	Salicaceae (Willow family)			
		Salix exigua	Narrowleaf willow	Native
		Salix laevigata	Red willow	Native
		Salix lasiolepis	Arroyo willow	Native
	Solanaceae (Potato family)			
		Datura wrightii	Sacred thorn-apple	Native
		Nicotiana glauca	Tree tobacco	Naturalized
		Solanum rostratum	Buffalobur nightshade	Naturalized
	Tropaeolaceae (Nasturtium family)			
		Tropaeolum majus	Garden nasturtium	Naturalized
	Vitaceae (Grape family)			
		Parthenocissus quinquefolia	Virginia creeper	Non-native
		Vitis girdiana	Wild grape	Native

Major Clade	Family	Scientific name	Common name	Nativity
Monocots				
	Arecaceae (Palm family)			
		Washingtonia robusta	Washington fan palm	Naturalized
	Cyperaceae (Sedge family)			
		Cyperus eragrostis	Tall flatsedge	Native
	Iridaceae (Iris family)			
		Sisyrinchium bellum	Western blue-eyed grass	Native
	Poaceae (Grass family)			
		Arundo donax	Giant reed	Naturalized
		Avena barbata	Lopsided oat	Naturalized
		Avena fatua	Wild oat	Naturalized
		Bromus diandrus	Ripgut brome	Naturalized
		Bromus hordeaceus	Soft brome	Naturalized
		Bromus madritensis subsp. rubens	Red brome	Naturalized
		Cynodon dactylon	Bermudagrass	Naturalized
		Distichlis spicata	Saltgrass	Native
		Festuca myuros	Rattail sixweeks grass	Naturalized
		Festuca perennis	Perennial ryegrass	Naturalized
		Gastridium phleoides	Nit grass	Naturalized
		Hordeum murinum	Mouse barley	Naturalized
		Pennisetum setaceum	Crimson fountaingrass	Naturalized
		Phalaris minor	Littleseed canarygrass	Naturalized
		Polypogon monspeliensis	Annual rabbitsfoot grass	Naturalized
		Stipa miliacea var. miliacea	Smilograss	Naturalized
		Stipa pulchra	Purple needlegrass	Native
	Typhaceae (Cattail family)			
		Typha	Cattail	Native

APPENDIX G
Brodiaea Species Survey Summary Report

BUSBY
Biological Services

September 8, 2020

Ms. Megan Hill
Project Environmental Scientist
EnviroApplications, Inc.
2831 Camino del Rio South, Suite 214
San Diego, CA 92108

RE: 2020 *Brodiaea* Species Survey Summary Report for the Proposed CarMax Auto Superstore Project, City of Oceanside, San Diego County, California

Ms. Hill:

This letter report summarizes the results of the focused, presence/absence *Brodiaea* species surveys conducted in 2020 for the proposed CarMax Auto Superstore project (project) located in the City of Oceanside, San Diego County, California (Attachment 1: Figures 1 through 4). Busby Biological Services, Inc. (BBS) was contracted by EnviroApplications, Inc. to conduct these surveys on behalf of Centerpoint Integrated Solutions to determine the presence/absence of *Brodiaea* species within the proposed project survey area, which includes the proposed project area and a 50-foot survey buffer (Attachment 1: Figure 4).

This survey summary report provides background information for the proposed project and *Brodiaea* species with a potential for occurrence within the proposed project surveys area as well as the methods used for the surveys and the results of the 2020 surveys conducted for the proposed project.

BACKGROUND INFORMATION

A brief summary of the proposed project and *Brodiaea* species information are provided in this section.

Proposed Project Location and Description

The proposed project consists of the construction of a CarMax pre-owned automobile dealership, sales building with an attached presentation area, service building/area, and non-public carwash with associated access driveways, parking lots, and landscaped areas. In addition, a retaining wall will be required along the southern boundary of the property because of the exiting grades in that area.

The 10.54-acre proposed project area occurs within the U.S. Geological Survey (USGS) San Luis Rey 7.5-minute quadrangle, in the City of Oceanside, California (USGS 1968; Attachment 1: Figure 3). The proposed project site is situated on vacant and undeveloped Assessor's Parcel Number (APN) 168-012-42 and APN 168-012-43 (Attachment 1: Figure 4). It is bordered to the north by State Route 78; to east by Thunder Drive, the California Department of Motor Vehicles (DMV), and residential development; to the south by Buena Vista Creek and Brookdale Senior Living facility; and to the west by the Tri-City Crossroads Shopping Center (Attachment 1: Figures 2 through 4). Plaza Drive separates the two parcels in the northwest portion of the proposed project area. Elevations within the proposed project area range from approximately 177 to 220 feet above mean sea level (Attachment 1: Figures 3 and 4).

The dominant vegetation communities and land cover types within the proposed project survey area include disturbed, ruderal, southern riparian forest, disturbed Diegan coastal sage scrub, developed and ornamental. Other vegetation communities present within the proposed project area in smaller proportions include iceplant and open water (Attachment 1: Figure 4). The section of Buena Vista Creek on the southern border of the proposed project area is part of the Buena Vista Creek Mitigation Area.

Brodiaea **Species Information**

Two sensitive *Brodiaea* species have a potential to occur within the proposed project survey area – thread-leaved brodiaea (*Brodiaea filifolia*) and Orcutt's brodiaea (*Brodiaea orcutti*). Species information for each of these is provided below.

Thread-leaved Brodiaea

Thread-leaved brodiaea is a federally listed threatened species, a state-listed endangered species, a California Rare Plant Rank (CRPR) 1B.1 species (seriously threatened in California and elsewhere), and a proposed Oceanside SAP-covered species. This species is a perennial, bulbiferous herb in the Themidaceae family that is native to and endemic to California; it regrows annually from an underground corm and typically blooms from March to July. Not all thread-leaved brodiaea individuals in a population emerge and/or flower each year. Thus, only a portion of the actual thread-leaved brodiaea population is observable each year, as many non-emergent corms remain dormant below the ground during each growing season.

Thread-leaved brodiaea is found in southern California from northwestern San Diego County, southern Orange County, western San Bernardino County, eastern Los Angeles County, and far southwest Riverside County (NatureServe 2020, Calflora 2020). This species is typically found in clay soils associated with vernal pools within grasslands, coastal sage scrub, chaparral, and cismontane woodland.

at elevations ranging from 130 feet to 3,640 feet above mean sea level (NatureServe 2020, Calfora 2020).

Threats to thread-leaved brodiaea include loss of habitat from urbanization, agricultural conversion, alteration of hydrology, impacts from livestock grazing, vehicle and foot traffic, discing for fire suppression, and competition from non-native plants (California Native Plant Society [CNPS] 2020). Thread-leaved brodiaea was state-listed as endangered in 1982 and federally listed as threatened in 1998. When the species was listed by USFWS in 1998, there were fewer than 40 known extant occurrences; however, this number has increased to about 106 known extant occurrences (CNPS 2020).

Orcutt's Brodiaea

Orcutt's brodiaea is a CRPR 1B.1 species (seriously threatened in California and elsewhere). It is a bulbiferous herb in the Themidaceae family herb that regrows annually from an underground corm, typically blooming from May to July (Calfora 2020). Like thread-leaved brodiaea discussed above, not all Orcutt's brodiaea individuals in a population emerge and/or flower each year. Thus, many non-emergent corms may remain dormant below the ground during each growing season.

Orcutt's brodiaea is found in a narrow range, from San Bernardino County south through San Diego County and into northern Baja California, Mexico (Calflora 2020, NatureServe 2020). This species is typically found in mesic, clay soils and sometimes in serpentinite soils in vernal pools associated with chaparral, cismontane woodland, closed-cone coniferous forest, meadows and seeps, and grassland at elevations ranging from 330 feet to 5,610 feet above mean sea level (NatureServe 2020, Calfora 2020).

Threats to Orcutt's brodiaea include loss of habitat from urbanization, agricultural conversion, alteration of hydrology, impacts from livestock grazing, competition from non-native plants, military activities, vehicle and foot traffic, road construction and maintenance, and illegal dumping (CNPS 2020).

METHODS

The methods used to conduct the 2020 *Brodiaea* species surveys within the proposed project survey area are presented in this section.

Background Research & Habitat Assessment

A literature review was conducted to inform the general biological survey and habitat assessment conducted for the proposed project. In addition, historical species occurrence databases (e.g., California Natural Diversity Database [CNDDB], SanGIS, CNPS) were searched, and other references were consulted to

better understand the historical location data and distribution of these sensitive species in San Diego County.

A focused habitat assessment for sensitive plant species was conducted in summer 2019 to evaluate the current proposed project survey area for its potential to support sensitive plant species. Potentially suitable habitats were mapped in the field using aerial imagery of the proposed project survey area (1 inch = 200 feet) and handheld Global Positioning Systems (GPS) units. Potentially suitable habitat areas were digitized using Google™ Earth based on field notes and waypoints collected in the field.

Proposed Project Survey Area & Reference Site Checks

Early in the growing season, BBS conducted site checks within suitable habitat identified within the proposed project survey area to document early emergent *Brodiaea* vegetation. When identified, locations of potential *Brodiaea* species were documented using a handheld GPS unit.

In addition, BBS biologists monitored known reference populations in the vicinity of the proposed project area to determine when *Brodiaea* species had emerged and were observable, to assure the focused surveys for the proposed project were conducted during the appropriate survey windows.

Focused Surveys

Once thread-leaved brodiaea was observed at the reference population, focused thread-leaved brodiaea and Orcutt's brodiaea surveys were initiated in the potentially suitable habitat within the proposed project survey area. For all *Brodiaea* species observations, biologists mapped the locations of and counted all individuals observed. Biologists also mapped the observations by hand onto the aerial photograph (either a point or a polygon), estimated the number of individuals, and collected a GPS point for the plant/population location.

RESULTS

The results of the 2020 *Brodiaea* species surveys conducted for the proposed project are presented in this section.

Background Research & Habitat Assessment

The literature review and historical occurrence database search conducted for the proposed project indicted that historical records for two *Brodiaea* species – thread-leaved brodiaea and Orcutt's brodiaea – exist within 3 miles of the proposed project survey area (CDFW 2019).

The habitat assessment conducted by BBS biologist Darin Busby on July 22, 2019, confirmed that moderately suitable habitat for both of these species occurs within the proposed project survey area. The suitable habitat within the proposed project survey area is dominated by disturbed habitat with pockets of ruderal, iceplant, ornamental, and disturbed Diegan coastal sage scrub (Attachment 1: Figure 4).

Based on the historical occurrence data and presence of moderately suitable habitat on-site, thread-leaved brodiaea and Orcutt's brodiaea were determined to have a moderate potential to occur within the proposed project survey area, and focused presence/absence surveys for both species were scheduled for 2020.

Proposed Project Survey Area & Reference Site Checks

BBS biologist Erik LaCoste conducted site checks within suitable habitat identified within the proposed project survey area to document early emergent *Brodiaea* vegetation. These site checks occurred on February 14 and 25 as well as March 5, 13, and 19, 2020, in conjunction with the focused fairy shrimp surveys that were conducted for the proposed project.

To determine when to initiate focused surveys, BBS biologist Melissa Busby coordinated with regional biologists who were monitoring reference sites during the 2020 survey window to determine when other *Brodiaea* populations within the vicinity of the proposed project had emerged and were observable. In addition, BBS biologist Charles Vettes monitored a known reference population in the vicinity of the proposed project to determine when *Brodiaea* species in close proximity to the proposed project had emerged and were observable. During his site visit on May 7, 2020, Charles Vettes documented that the thread-leaved brodiaea at the reference population had emerged but only a few were blooming and easily observable. In addition, Erik LaCoste documented blooming Orcutt's brodiaea on June 2, 2020, during a survey for an additional nearby property.

Focused Survey

Following the observation of thread-leaved brodiaea at the nearby reference population on May 7, 2020, BBS biologists began focused, presence/absence surveys within the proposed project survey area. Six surveys were conducted by BBS biologists between May 14 and June 15, 2020. Surveys were conducted during appropriate weather conditions. Dates and survey conditions during the focused surveys are provided in Table 1, below.

Table 1. Brodiaea Survey Conditions

Survey #	Date	Time		Weather				Surveyor
				Temp (°F)	Wind (mph)	Clouds (% cover)	Precipitation	
1	5/14/20	Start	0945	67	2-3	25	0	D. Busby C. Vettes
		End	1215	70	4-6	5	0	
2	5/21/20	Start	1130	72	3-5	0	0	D. Busby
		End	1530	75	4-8	0	0	
3	5/28/20	Start	0845	67	0-1	50	0	D. Busby
		End	1245	76	3-5	0	0	
4	6/4/20	Start	0900	66	1-3	100	0	D. Busby
		End	1145	71	3-5	50	0	
6/4/20 -6/8/20		*Project Area Mowed*						
5	7/7/20	Site check for Emergent *Brodiaea*						C. Vettes
6	7/17/20	Site check for Emergent *Brodiaea*						C. Vettes

No thread-leaved brodiaea or Orcutt's brodiaea were observed during the first four focused *Brodiaea* species surveys conducted by Darin Busby and/or Charles Vettes between May 14 and June 4, 2020. Between June 4 and June 8, 2020, the proposed project area was mowed. BBS biologists continued to assess the proposed project area for any sign of potential *Brodiaea* species, including two additional surveys on June 12 and June 15, 2020. No potential *Brodiaea* species were documented during these two visits.

SUMMARY

No thread-leaved brodiaea or Orcutt's brodiaea were observed during the focused Brodiaea surveys conducted during the 2020 survey window.

Please do not hesitate to contact Melissa Busby at melissa@busbybiological.com or 858.334.9507 if you have any questions.

Sincerely,

Melissa Busby
Owner/Principal Biologist

ATTACHMENTS

Attachment 1: Figures

REFERENCES

Calflora

2020 Calflora: Information on wild California plants from http://www.calflora.org. Accessed August and September 2020.

California Department of Fish and Wildlife (CDFW)

2019 Natural Diversity Data Base. Nongame-Heritage Program, California Department of Fish and Wildlife, Sacramento. Accessed August 2019.

2020 Thread-leaved brodiaea (*Brodiaea filifolia*) from http://wildlife.ca.gov. Accessed August and September 2020.

California Native Plant Society (CNPS)

2020 Inventory of Rare and Endangered Vascular Plants of California from http://www.rareplants.cnps.org/. Accessed August and September 2020.

NatureServe

2020 NatureServe: Connecting Science with Conservation. Species information for Brodiaea filifolia and Brodiaea orcuttii from http://natureserve.org. Accessed August and September 2020.

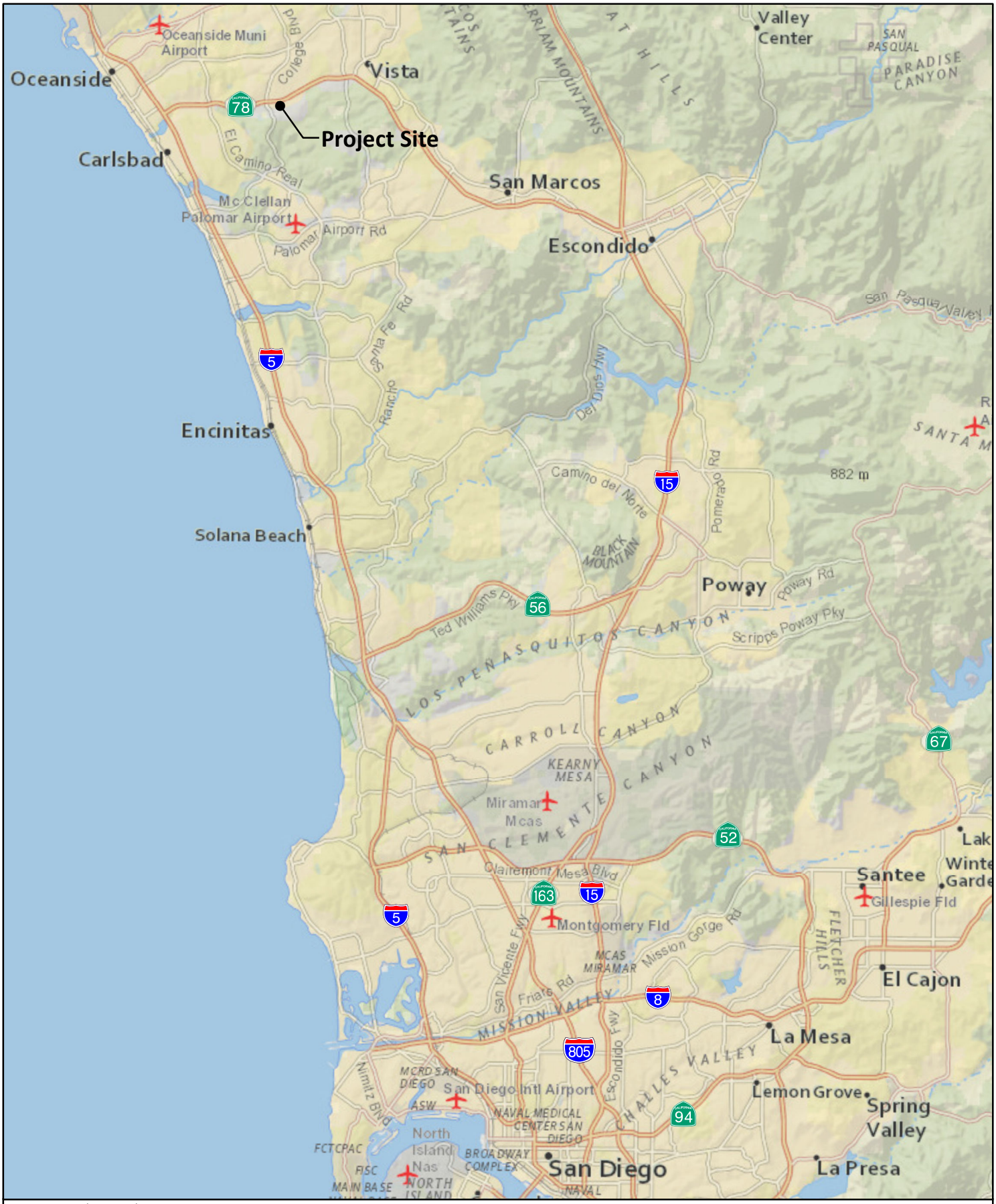
U.S. Fish and Wildlife Service (USFWS)

2020 *Brodiaea filifolia* (thread-leaved brodiaea) from http://fws.gov. Accessed August and September 2020.

U.S. Geological Survey (USGS)

1968 7.5-minute San Luis Rey Topographic Quadrangle (Photorevised 1975)

ATTACHMENT 1
Figures



Source: National Geographic, Esri

BUSBY Biological Services

N 0 2 4 Miles

Regional Location

CARMAX OCEANSIDE

Figure 1

Source: SANDAG & SanGIS 2017

BUSBY Biological Services

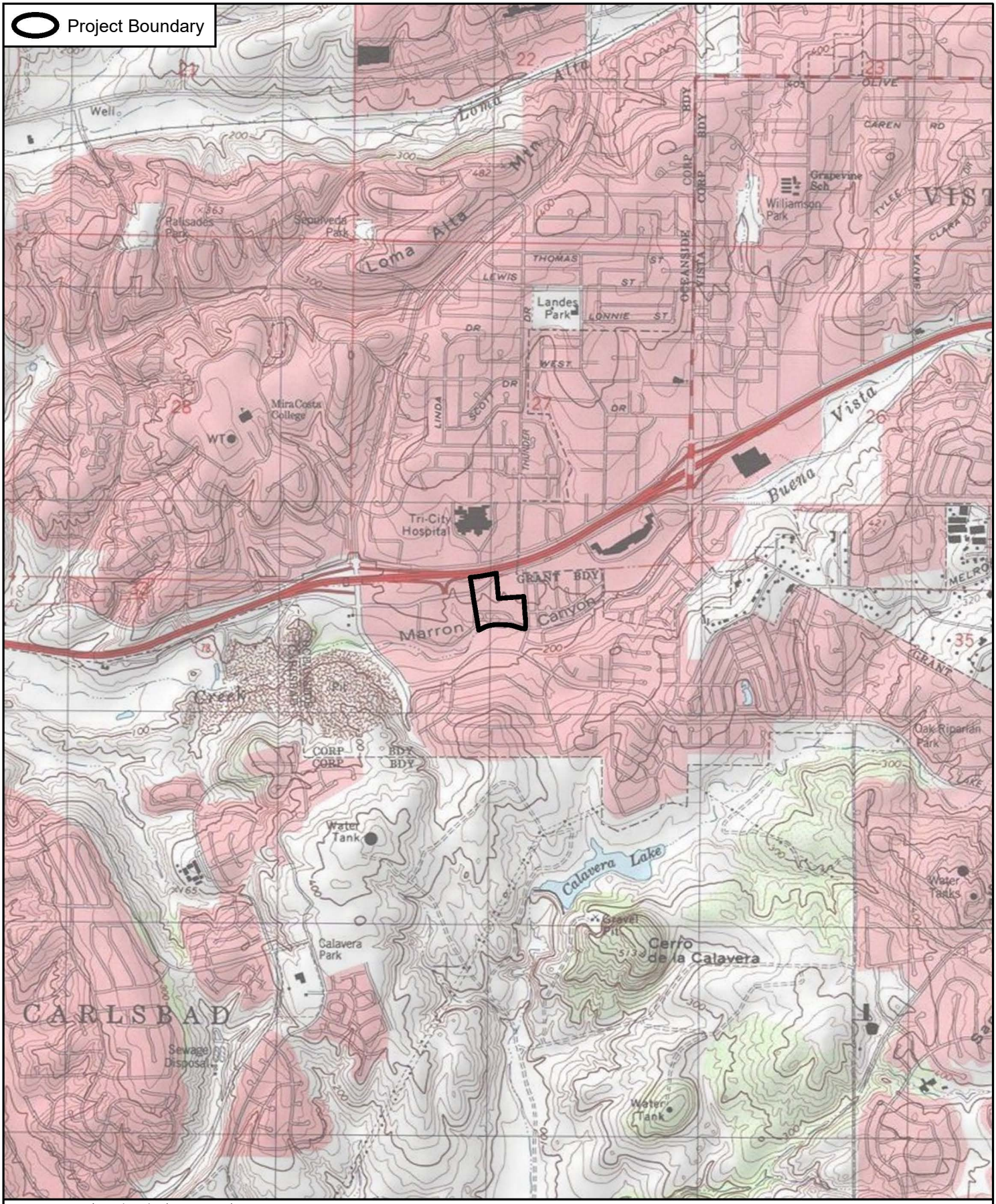
N

0 1,000 2,000 Feet

Project Vicinity - Aerial

CARMAX OCEANSIDE

Figure 2



Source: USGS 7.5' Quadrangles (San Luis Rey)

BUSBY Biological Services

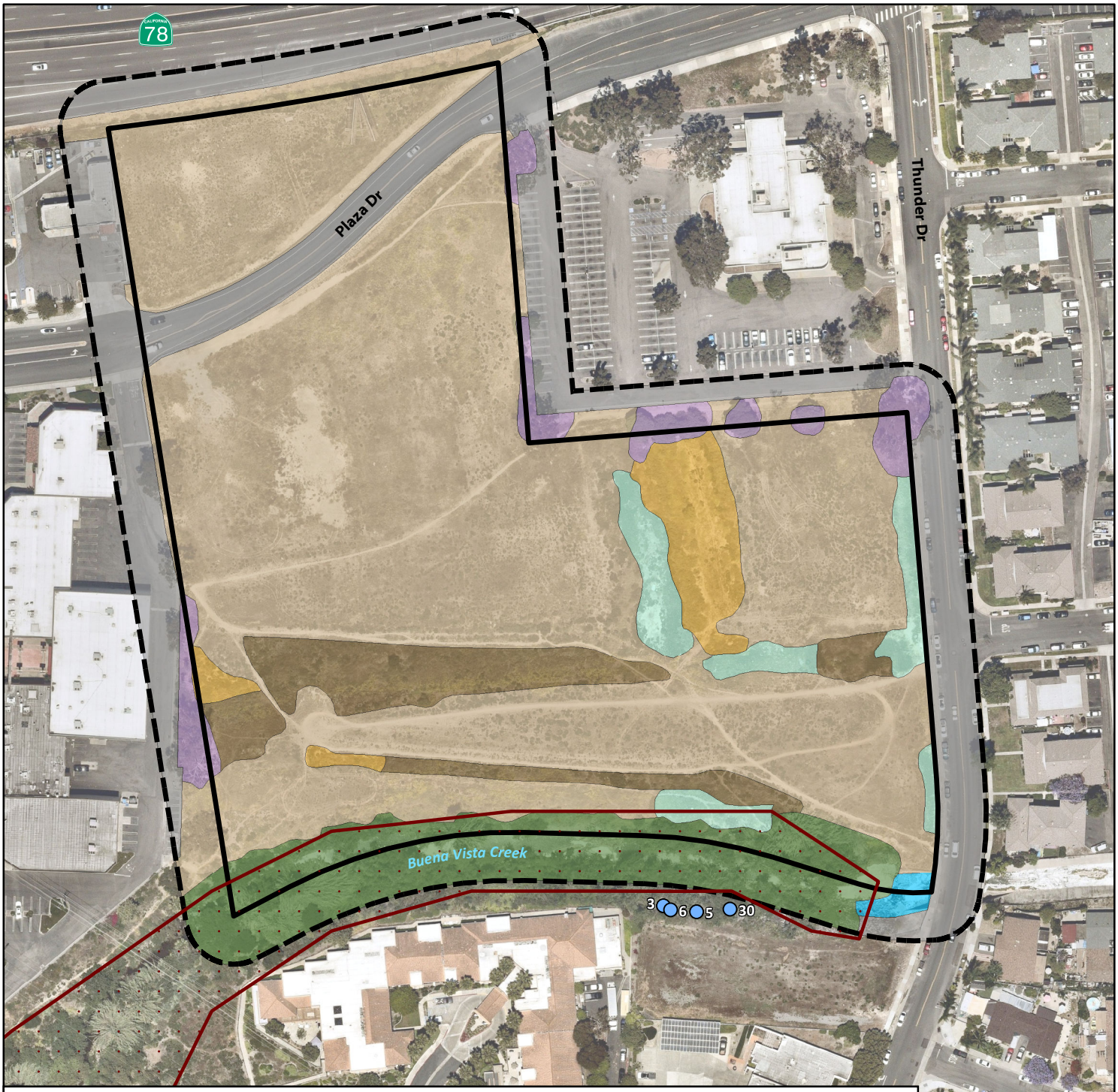
N

0 1,000 2,000 Feet

Project Vicinity - USGS Topo

CARMAX OCEANSIDE

Figure 3



Project Boundary
50-foot Survey Buffer
Buena Vista Creek Mitigation Area/
Coastal California Gnatcatcher Critical Habitat

Special Status Species

- San Diego Sagewort (*Artemisia palmeri*)

Vegetation Communities

- Southern Riparian Forest
- Open Water
- Disturbed Diegan Coastal Sage Scrub
- Ornamental
- Iceplant
- Ruderal
- Disturbed
- Developed

Source: SANDAG & SanGIS 2017

BUSBY Biological Services

N

0 75 150 Feet

Brodiaea Survey Area & Results

CARMAX OCEANSIDE

Figure 4

APPENDIX H
Sensitive Wildlife Species with a Potential to Occur within the Survey Area

APPENDIX H
Sensitive Wildlife Species with a Potential to Occur within the Proposed Project Survey Area

COMMON NAME	STATUS	HABITAT ASSOCIATION	POTENTIAL FOR OCCURRENCE
Invertebrates			
San Diego fairy shrimp (*Branchinecta sandiegonensis*)	FE SAP NE	Vernal pools, swales, ditches, road ruts. Adult emerge typically mid-December to early May.	Not expected. No historical records exist within 3 miles of survey area, and limited suitable habitat exists within survey area. In addition, this species was not observed during focused 2019/2020 large Brachiopod surveys.
Riverside fairy shrimp (*Streptocephalus woottoni*)	FE SAP NE	Vernal pools, swales, ditches, road ruts that are long-lasting (i.e., several months).	Not expected. No historical records exist within 3 miles of survey area, and limited suitable habitat exists within survey area. In addition, this species was not observed during focused 2019/2020 large Brachiopod surveys.
Quino checkerspot butterfly (*Euphydryas editha quino*)	FE	Open, dry areas in foothills, mesas, lake margins where principal larval host plants dot-seed plantain, and secondary host plants woolly plantain, white snapdragon, thread-leaved bird's beak, and purple owl's clover occurs. Adult emergence mid-January to April.	Not expected. Suitable habitat does not exist within survey area, historical records do not exist within 3 miles of survey area, survey area is not in known range of this species, and survey area is outside USFWS Recommended Survey Area.
Vertebrates			
Amphibians			
arroyo toad (*Anaxyrus californicus*)	FE SSC SAP PC	Breeds in shallow pools along stream edges with sand/gravel flats between March and June. Adults use upland habitat up to within one mile of breeding sites. Non-breeding habitat includes sage scrub, mixed chaparral, oak woodland habitats.	Not expected. Survey area in known range of species; however, suitable habitat does not exist within survey area and historical records do not exist within 3 miles of survey area.

COMMON NAME	STATUS	HABITAT ASSOCIATION	POTENTIAL FOR OCCURRENCE
western spadefoot (*Spea hammondii*)	SSC SAP PC	Breeds in temporal pools and slow-moving sections of streams. Adults use lowland, foothill, and mountain habitats including washes, river floodplains, alluvial fans, playas, alkali flats, temporary ponds, vernal pools, mixed woodlands, grasslands, coastal sage scrub, and chaparral. Prefers open areas with sandy or gravelly soils but may be found in vernal pools containing clay soils.	Low. No historical records exist within 3 miles of survey area; however, survey area in known range of this species and moderately suitable habitat exists in survey area. However, not detected during 2019/2020 large Brachiopod surveys when the species would likely have been detected.
Reptiles			
Western pond turtle (*Emys marmorata*)	SSC SAP PC	Ponds, small lakes, marshes, slow-moving, sometimes brackish water with abundant vegetation, rocky or muddy bottoms, basking areas, in woodland, forest, and grassland. Breeds on land April-May, hibernates during the winter.	Not expected. Survey area in known range of species; however, historical records do not exist within 3 miles of survey area and only marginally suitable habitat exists within survey area.
silvery legless lizard (*Anniella pulchra pulchra*)	SSC	Leaf litter and loose soil on beaches and in coastal scrub, chaparral, and open riparian habitats. Sandy washes and beach dunes are used for burrowing, while logs and leaf litter are used for cover and feeding.	Low. No historical records exist within 3 miles of survey area; however, survey area in known range of this species and marginally suitable habitat exists in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
coast [Blainville's] horned lizard (*Phrynosoma blainvillii)*	SSC	Open chaparral, coastal sage scrub with sandy, loose soil. Partially dependent on harvester ants for forage.	Low. Survey area in known range of this species and historical records exist within 3 miles of survey area; however, marginally suitable habitat exists in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
Coronado skink (*Plestiodon skiltonianus interparietalis*)	SSC	Associated with mesic areas. grasslands, open woodlands and forest, broken chaparral, rocky habitats near streams.	Low. Survey area in known range of this species; however, no historical records exist within 3 miles of survey area and only marginally suitable habitat exists in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
Belding's orange-throated whiptail (*Aspidoscelis*	SSC SAP PC	Pristine open coastal sage scrub, chaparral, and streamside growth with loose sandy soils,	Low. Survey area in known range of this species, historical records exist within 3 miles of survey area, and

COMMON NAME	STATUS	HABITAT ASSOCIATION	POTENTIAL FOR OCCURRENCE
hyperythra beldingi)		revegetation sites.	moderately suitable habitat exists within survey area. However, not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
coast patch-nosed snake (*Salvadora hexalepis virgultea*)	SSC	Chaparral and semi-arid areas with brushy or shrubby vegetation in canyons, plains and rocky hillsides.	Low. Survey area in known range of this species; however, no historical records exist within 3 miles of survey area and only marginally suitable habitat exists in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
red diamond rattlesnake (*Crotalus ruber*)	SSC	Coastal sage scrub, open chaparral, woodland, grassland, and cultivated areas.	Low. Survey area in known range of this species; however, no historical records exist within 3 miles of survey area and only marginally suitable habitat exists in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
south coast gartersnake (*Thamnophis sirtalis*)	SSC	Habitats near permanent water with riparian vegetation for foraging and refuge.	Low. Survey area in known range of this species; however, no historical records exist within 3 miles of survey area and only marginally suitable habitat exists in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
two-striped gartersnake (*Thamnophis hammondii*)	SSC	Permanent fresh water, inhabiting streams, ponds, vernal pools. Occupies adjacent coastal sage scrub and grasslands during the winter.	Low. Survey area in known range of this species; however, no historical records exist within 3 miles of survey area and only marginally suitable habitat exists in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
Birds			
least bittern (*Ixobrychus exilis hesperis*)	SSC	Brackish and freshwater marshes in the coastal lowland. Rare summer resident, rare in winter.	Low. Survey area in known range of this species; however, no historical records exist within 3 miles of survey area and only marginally suitable habitat exists in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.

COMMON NAME	STATUS	HABITAT ASSOCIATION	POTENTIAL FOR OCCURRENCE
Cooper's hawk (*Accipiter cooperii*)	WL (nesting) SAP PC	Mature forest, open woodlands, wood edges, river groves. Parks and residential areas.	Present. A single Cooper's hawk was detected during least Bell's vireo surveys conducted on May 7, June 26, and July 17, 2020. Survey area in known range of this species and moderately suitable habitat exists in survey area.
osprey (*Pandion haliaetus*)	WL (nesting) SAP PC	Coast, lowland lakes, rarely foothills and mountain lakes. Uncommon fall/winter resident, rare in spring and summer. Fish are the primary prey item.	Not expected. Survey area in known range of this species; however, no historical records exist within 3 miles of the survey area and suitable habitat does not exist in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
golden eagle (*Aquila chrysaetos*)	FP WL BGEPA (nesting and wintering) SAP PC	Require vast foraging areas in grassland, broken chaparral, or sage scrub. Nest in cliffs and boulders. In the county, wintering range does not differ greatly from breeding distribution. Uncommon resident.	Not expected. Survey area in known range of this species; however, no historical records exist within 3 miles of the survey area and suitable habitat does not exist in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
Swainson's hawk (*Buteo swainsoni*)	ST (nesting)	Plains, range, open hills, sparse trees. Rare spring migrant. Local breeding population now extirpated.	Not expected. Although survey area in known range of this species and historical records exist within 3 miles of the survey area, suitable habitat does not exist in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
Northern harrier (*Circus cyaneus*)	SSC (nesting)	Coastal lowland, marshes, grassland, agricultural fields. Migrant and winter resident, rare summer resident.	Not expected. Survey area in known range of this species; however, no historical records exist within 3 miles of the survey area and suitable habitat does not exist in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
White-tailed kite (*Elanus leucurus majusculus*)	FP (nesting)	Nest in riparian woodland, oaks, sycamores. Forage in open, grassy areas. Year-round resident.	Low. Survey area in known range of this species, historical records exist within 3 miles of survey area, and marginal and limited suitable nesting habitat exists in survey area. However, not detected during any of the 2019 or 2020 focused surveys conducted in the project area.

COMMON NAME	STATUS	HABITAT ASSOCIATION	POTENTIAL FOR OCCURRENCE
Bald eagle (*Haliaeetus leucocephalus*)	FDL SE BGEPA FP (nesting and wintering)	Rivers, lakes. Rare winter visitor, rare fall migrant. Feed mainly on fish.	Not expected. Survey area in known range of this species; however, no historical records exist within 3 miles of the survey area and suitable habitat does not exist in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
American peregrine falcon (*Falco peregrinus anatum*)	FDL SDL FP (nesting) SAP PC	Nests on cliff ledges, old raptor or raven nests, and man-made structures. Forages in open coastal areas, mud flats. Rare inland. Rare fall and winter resident, casual in late spring and early summer.	Not expected. Survey area in known range of this species; however, no historical records exist within 3 miles of the survey area and suitable habitat does not exist in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	FT SE (nesting)	Extensive riparian woodlands. Summer resident. Very localized breeding.	Not expected. Survey area in known range of this species; however, no historical records exist within 3 miles of the survey area and suitable nesting habitat does not exist in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
burrowing owl (*Athene cunicularia*)	SSC (burrow sites and some wintering sites)	Grassland, agricultural land, coastal dunes. Declining resident.	Not expected. Survey area in known range of this species; however, no historical records exist within 3 miles of the survey area and suitable habitat or burrow complexes do not exist in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
southwestern willow flycatcher (*Empidonax traillii extimus*)	FE SE (nesting) SAP PC	Nests in extensive willow-dominated riparian foists and woodlands. Occasionally oak woodlands. Rare spring and fall migrant, rare summer resident.	Not expected. Survey area in known range of this species and historical records exist within 3 miles of the survey area; however, suitable and extensive riparian nesting habitat does not exist in survey area. Not detected during 2020 least Bell's vireo surveys when the species would most likely have been detected.
least Bell's vireo (*Vireo bellii pusillus*)	FE SE (nesting) SAP PC	Willow-dominated successional woodland or scrub, Baccharis scrub, mixed oak/willow woodland, and elderberry scrub in riparian habitat. Nests and forages in vegetation along streams and rivers that measures approximately 3 to 6 feet in height and has a dense,	Present. A single least Bell's vireo was observed during a focused survey for this species conducted on July 29, 2020. Survey area in known range of this species, historical records exist within 3 miles of survey area, and moderately suitable riparian habitat exists in survey area.

COMMON NAME	STATUS	HABITAT ASSOCIATION	POTENTIAL FOR OCCURRENCE
		stratified canopy.	
California horned lark (*Eremophila alpestris actia*)	WL	Sandy shores, mesas, disturbed areas, grasslands, agricultural lands, sparse scrub communities.	Low. Survey area in known range of this species, historical records exist within 3 miles of survey area, and moderately suitable habitat exists in survey area. However, not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*)	SSC SAP NE	Maritime succulent scrub, coastal sage scrub with Opuntia thickets. Rare localized resident.	Not expected. Survey area in known range of this species and historical records exist within 3 miles of survey area but no suitable habitat exists in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
Clark's marsh wren (*Cistothorus palustris clarkae*)	SSC	Marsh habitat, primarily freshwater and brackish marshes dominated by bulrushes (*Scirpus* spp.) or cattails (*Typha* spp.).	Low. Survey area in known range of this species; however, historical records do not exist within 3 miles of survey area and only limited and marginal habitat exists in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
coastal California gnatcatcher (*Polioptila californica californica*)	FT SSC SAP PC	Coastal sage scrub, maritime succulent scrub. Resident.	Present. Pair was detected foraging in survey area during jurisdictional wetland delineation on August 29, 2019. Marginally suitable nesting habitat in survey area but moderately suitable nesting habitat adjacent to survey area. However, coastal California gnatcatcher was not detected during 2020 focused surveys for this species.
yellow warbler (*Setophaga petechia*)	SSC (nesting)	Well-developed riparian habitats, often with mature willows	Present. Yellow warbler was detected during focused least Bell's vireo surveys conducted on May 7, May 21, June 4, and June 26, 2020. Survey area in known range of this species, historical records exist within 3 miles of survey area, and suitable habitat exists in survey area.

COMMON NAME	STATUS	HABITAT ASSOCIATION	POTENTIAL FOR OCCURRENCE
yellow-breasted chat (*Icteria virens*)	SSC (nesting) SAP PC	Dense riparian woodland. Localized summer resident.	Not expected. Survey area in known range of this species and historical records exist within 3 miles of survey area, but limited suitable nesting habitat exists in survey area. Not detected during focused 2020 least Bell's vireo surveys when this species would most likely have been detected.
tricolored blackbird (*Agelaius tricolor*)	ST SSC (nesting colonies)	Freshwater marshes agricultural areas, lakeshores, parks. Localized resident. Breeding colonies well documented, inland San Diego County	Not expected. Survey area in known range of species; however, no historical records exist within 3 miles of the survey area and suitable habitat does not exist in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	WL SAP PC	Coastal sage scrub, chaparral, grassland. Resident.	Low. Survey area in known range of this species, historical records exist within 3 miles of survey area, and moderately suitable habitat exists in survey area. However, this species was not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
grasshopper sparrow (*Ammodramus savannarum*)	SSC (nesting)	Tall grass areas. Localized summer resident, rare in winter.	Low. Survey area in known range of species; however, no historical records exist within 3 miles of the survey area and marginally suitable habitat exists in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
Mammals			
Mexican long-tongued bat (*Choeronycteris mexicana*)	SSC	Sightings in San Diego County very rare. Migratory.	Low. No historical records exist within 3 miles of survey area; however, survey area in known range of this species and marginally suitable roosting and foraging habitat present in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
Townsend's big-eared bat (*Corynorhinus townsendii*)	SSC	Caves, mines, buildings. Found in a variety of habitats, arid and mesic. Individual or colonial. Extremely sensitive to disturbance.	Low. No historical records exist within 3 miles of survey area; however, survey area in known range of this species and marginally suitable roosting and foraging habitat present in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
western red bat	SSC	Roosts in small colonies in the	Low. No historical records exist within

COMMON NAME	STATUS	HABITAT ASSOCIATION	POTENTIAL FOR OCCURRENCE
(*Lasiurus blossevillii*)		foliage of trees and shrubs in edge areas adjacent to streams and open fields, preferring foraging areas that are distant from human habitation	3 miles of survey area; however, survey area in known range of this species and marginally suitable roosting and foraging habitat present in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
western yellow bat (*Lasiurus xanthinus*)	SSC	Roosts in trees on the underside of leaves, particularly palm trees. Associated with dry, thorny vegetation and palm oases in desert habitats.	Low. Survey area in known range of this species, historical records exist within 3 miles of survey area, and marginally suitable roosting and foraging habitat present in survey area. However, not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
pocketed free-tailed bat (*Nyctinomops femorosaccus*)	SSC	Rugged canyons of arid desert areas. Roosts in crevices high on cliff faces.	Not expected. Survey area in known range of this species and historical records exist within 3 miles of survey area, but no foraging or roosting habitat in survey area. However, not detected during any of the surveys conducted during 2019 or 2020 in the project area.
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	SSC SAP PC	Open areas of scrub, grasslands, agricultural fields.	Not expected. Survey area in known range of this species; however, no historical records exist within 3 miles of survey area and only marginally suitable habitat exists in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
Stephens' kangaroo rat (*Dipodomys simulans*)	FE SE SAP PC	Grassland, open areas.	Not expected. Survey area in known range of this species and historical records exist within 3 miles of survey area, but no suitable habitat exists in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
Dulzura pocket mouse (*Chaetodipus californicus femoralis*)	SSC	Dense chamise-redshank & montane chaparral, coastal sage scrub, sagebrush, annual grassland, probably most attracted to interface of grassland and brush.	Low. Survey area in known range of this species; however, no historical records exist within 3 miles of survey area and only marginally suitable habitat exists in survey area. Not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)	SSC SAP PC	San Diego County west of mountains in sparse, disturbed coastal sage scrub or grasslands with sandy soils.	Low. Survey area in known range of this species, historical records exist within 3 miles of survey area, and marginally suitable habitat present in

COMMON NAME	STATUS	HABITAT ASSOCIATION	POTENTIAL FOR OCCURRENCE
			survey area. However, not detected during any of the 2019 or 2020 focused surveys conducted in the project area.
San Diego desert woodrat (*Neotoma lepida intermedia*)	SSC	Open coastal sage scrub and chaparral.	Low. Survey area in known range of this species, historical records exist within 3 miles of survey area, and marginally suitable habitat present in survey area. However, not detected during any of the 2019 or 2020 focused surveys conducted in the project area.

STATUS CODES

Federal

FDL = Federally delisted species
FE = Federal-listed endangered species
FT = Federal-listed threatened species

State

SDL = State delisted species
SE = State-listed endangered
ST = State-listed threatened
SSC= Species of special concern
FP = Fully protected species
WL = CDFW watch list species

Other

BGEPA = Bald and Golden Eagle Protection Act
SAP PC = Proposed covered species Oceanside Subarea Plan
SAP NE = Oceanside Subarea Plan Narrow Endemic

APPENDIX I
Focused Wet Season Fairy Shrimp Survey Summary Report

BUSBY
Biological Services

September 18, 2020

Ms. Stacey Love
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

RE: Survey Summary Report for the 2019/2020 Protocol-Level, Wet Season Large Branchiopod Survey for the Proposed Carmax Development Project, Oceanside, California

Ms. Love:

This letter provides a summary of the 2019/2020 protocol-level, wet season survey for federally listed large branchiopod species (i.e., fairy shrimp species) conducted by Busby Biological Services, Inc. (BBS) for EnviroApplications, Inc. on behalf of Centerpoint Integrated Solutions for the proposed CarMax Auto Superstore Project (proposed project) located in Oceanside, California (Attachment 1: Figures 1 through 3).

The 2019/2020 focused, protocol-level, wet season fairy shrimp survey followed the most recent U.S. Fish and Wildlife Service (USFWS) survey guidelines, titled *Survey Guidelines for the Listed Large Branchiopods* and dated November 13, 2017 (USFWS 2017); however, the surveys were put on hold as of March 24, 2020.

The following report provides a brief description of the proposed project, the fairy shrimp species that have a potential to occur within the proposed project survey area, the survey methods, and the results of the 2019/2020 focused wet season fairy shrimp surveys that were conducted through March 24, 2020.

BACKGROUND INFORMATION

A brief summary of the proposed project and fairy shrimp with a potential for occurrence are provided in this section.

Proposed Project Location and Description

The proposed project consists of the construction of a CarMax pre-owned automobile dealership, sales building with an attached presentation area, service building/area, and non-public carwash with associated access driveways, parking lots, and landscaped

areas. In addition, a retaining wall will be required along the southern boundary of the proposed project because of the exiting grades within the proposed project area.

The proposed project occurs within the U.S. Geological Survey (USGS) San Luis Rey 7.5-minute quadrangle, in the City of Oceanside, California (USGS 2019; Attachment 1: Figures 2 and 3). The proposed project site is situated on vacant and undeveloped Assessor's Parcel Number (APN) 168-012-42 and APN 168-012-43 (Attachment 1: Figures 2 and 3). It is bordered to the north by State Route 78, to east by Thunder Drive and residential development, to the south by Buena Vista Creek and residential development, and to the west by a commercial shopping center (e.g., grocery store, restaurants, motel, other retail stores). Plaza Drive separates the two parcels in the northwest portion of the proposed project area, and the Oceanside Department of Motor Vehicles (DMV) occupies the property northeast of the proposed project site.

Elevations within the proposed project area range from approximately 177 to 220 feet above mean sea level. The dominant vegetation communities and land cover types within the proposed project area include disturbed, ruderal, southern riparian forest, disturbed Diegan coastal sage scrub, developed and ornamental. Other vegetation communities present within the proposed project area in smaller proportions include iceplant and open water (Attachment 1: Figure 3). The section of Buena Vista Creek on the southern border of the proposed project area is part of the Buena Vista Creek Mitigation Area.

Fairy Shrimp Species Information

The proposed project area supports several basins (e.g. road ruts, tire tracks, other depressions) that have the potential to support fairy shrimp species. In addition to the common, non-sensitive versatile fairy shrimp (*Branchinecta lindahli*), two federally listed fairy shrimp species have a potential to occur, including San Diego fairy shrimp (*Branchinecta sandiegonensis*) and Riverside fairy shrimp (*Streptocephalus woottoni*).

The San Diego fairy shrimp was federally listed as endangered in February 1997 (USFWS 1997). On December 12, 2007, USFWS published a Final Rule revising the critical habitat for the San Diego fairy shrimp that became effective on January 11, 2008 (USFWS 2007). This revised Final Rule designated critical habitat for the San Diego fairy shrimp to include approximately 3,082 acres of habitat in five units, with a total of 29 subunits throughout Orange and San Diego counties, California. Critical habitat for San Diego fairy shrimp does not occur on or adjacent to the proposed project area (USFWS 2007).

The Riverside fairy shrimp was federally listed as endangered in August 1993 (USFWS 1993). On December 4, 2012, USFWS published a Final Rule revising the critical habitat for the Riverside fairy shrimp that became effective on January 3, 2013 (USFWS 2012). The previous critical habitat consisted of land in four units in Ventura, Orange, and San Diego counties, California. The revised critical habitat now includes land in

three units in Ventura, Orange, and San Diego counties, California, for a total of approximately 1,724 acres. Critical habitat for Riverside fairy shrimp does not occur on or adjacent to the proposed project area (USFWS 2012).

SURVEY METHODS

The focused 2019/2020 wet season fairy shrimp survey was conducted in accordance with the current USFWS survey guidelines, titled *Survey Guidelines for the Listed Large Branchiopods* and dated November 13, 2017. Following approval from USFWS, BBS initiated surveys immediately following the first rain event of the 2019/2020 rainy season. During the first survey visit, the proposed project site was examined for ponded areas. All ponded areas were included in each survey visit. During the first sampling visit to each inundated basin, BBS recorded the estimated maximum surface area of each basin, the estimated maximum depth of each basin, and existing habitat condition (e.g., disturbance level, type of basin). During each sampling round, BBS visited all basins that were inundated during the previous sampling round to determine if the basins were still holding water. If a rain event occurred between sampling rounds, BBS also visited all known and potential basins that may have been inundated by the rain event.

During each sampling round, BBS biologists recorded information about each inundated basin, such as air temperature, water temperature, average depth, approximate size, habitat condition (if changed), voucher information, and other relevant notes. BBS sampled each inundated basin by sweeping a hand-held net through the water and examining the net contents with all aquatic species recorded. If fairy shrimp species were observed, BBS noted the reproductive status and approximate numbers of fairy shrimp in each basin and, when possible, identified the species in the field with a hand lens or in the lab with a microscope.

If encountered in any inundated basins, mature male and female fairy shrimp voucher specimens were collected from sampled basins during the 2019/2020 wet season surveys. All fairy shrimp voucher specimens, along with a copy of the Vernal Pool Data Sheet, would be submitted to the collections department at the Natural History Museum of Los Angeles.

RESULTS

The 2019/2020 wet season survey consisted of a total of seven sampling visits by USFWS-permitted biologists Erik LaCoste (TE-027736-6). Surveys were initiated on December 3, 2019, and continued until March 19, 2020; however, surveys were put on hold on March 24, 2020. Table 1 below, provides a summary of the 2019/2020 wet season survey effort.

Table 1. Summary of 2019/2020 Wet Season Survey Effort

Survey Round	Date	Surveyor	FS Species Detected
1	12/3/19	E. LaCoste	None
2	12/11/19	E. LaCoste	None
3	12/18/19	E. LaCoste	None
4	1/22/20	E. LaCoste	None
5	1/31.20	E. LaCoste	None
6	3/13/20	E. LaCoste	None
7	3/19/20	E. LaCoste	None

None = All basins sampled but no fairy shrimp

Summary of Rainfall for 2019/2020 Wet Season

BBS monitored the rain events for the 2019/2020 rainy season using rainfall data from the National Oceanic and Atmospheric Administration website (NOAA 2019 and 2020) to determine an appropriate sampling schedule. Table 2, below, provides a summary of the monthly rainfall totals for the 2019/2020 survey season as well as the historical average monthly rainfall totals based on the weather data from the Oceanside Municipal Airport, California weather station (NOAA 2019 and 2020).

Table 2. Summary of Rainfall for Oceanside Municipal Airport, CA

Month	Rainfall Total (inches)*	
	2019/2020	Historical Average
October 2019	0	0.07
November 2019	3.55	1.03
December 2019	3.61	2.15
January 2020	0.61	2.65
February 2020	0.42	3.07
March 2020	3.81**	1.87
Total	**12.0**	**10.84**

* https://w2.weather.gov/climate/xmacis.php?wfo=sgx
** Represents rainfall totals through March 22, 2020

Rainfall totals for the area began with above average totals during November and December 2019, fell below average for January and February 2020, then rebounded to above average again during the first 3 weeks of March 2020 (NOAA 2019 and 2020). Although a significant amount of rain fell early (November and December 2019), pools in the project area failed to inundate for longer than a week at a time (Surveys 1 through 3). Following rain events in January and February, pools failed again to inundate for significant time (Surveys 4 and 5). Not until March 2020, following significant and consistent rainfall, did pools on site inundate for greater than 2 weeks (Surveys 6 and 7).

Southern California is currently classified as being under “normal conditions” according to the Palmer Drought Index (National Integrated Drought Information Center 2020). The Palmer Drought Index is a measurement of dryness based on

recent precipitation and temperature, which can be used to determine long-term drought conditions on a regional level. The index classifies a 0 as “normal conditions”, with negative numbers under “drought conditions” and positive numbers under “moist conditions”.

2019/2020 Wet Season Sampling

For the 2019/2020 wet season, the survey was initiated immediately following the first significant rain event in November/December 2019. During the 2019/20120 wet season survey, BBS surveyed a total of 12 basins within the proposed project area (Attachment 1: Figure 4). Basins surveyed included road ruts, ditches, detention basins, and other depressions that became inundated at some point during the 2019/2020 wet season. The majority of the basins in the proposed project area appear to be impacted by foot traffic and vehicle activity.

Midway through the wet season fairy shrimp surveys, Basin 4 was destroyed by illegal vehicle activity. Basin 4 was a manmade, road rut located in the abandoned parking lot used by the seasonal pumpkin patch/Christmas tree farm. This basin measured approximately 8 inches wide, 2 feet long, and 1 inch deep with a substrate of decomposed granite. Once it was destroyed, no ponding was documented; therefore, it was not surveyed again during the 2020 wet season surveys or during the 2020 dry season sampling.

Fairy shrimp were not detected in any basins during the seven surveys that were conducted during the 2019/2020 wet season survey. Additionally, no other aquatic species were observed during these surveys.

Attachment 1: Figure 4 depicts the location of the sampled basins. Attachment 2: Basin Conditions by Survey provides a summary for each basin by date and includes information specific to the date each basin was sampled. Attachment 3: Basin Conditions Summary Table provides the basin number, actual maximum depth, estimated maximum depth, actual maximum surface area, and estimated maximum surface area for each basin. The table also summarizes the habitat condition, disturbance type, and disturbance level and provides the GPS coordinates for each basin. Attachment 4 provides example photographs of several sampled basins. Copies of the original field datasheets are provided in Attachment 5.

SUMMARY

No fairy shrimp species were detected in any of the 12 basins during the seven focused survey visits conducted during the 2019/2020 wet season survey. Rainfall during the 2019/2020 wet season was slightly above average, and southern California is currently classified as being under “Normal” moisture conditions according to the Palmer Drought Index (National Integrated Drought Information Center 2020). Surveys were put on hold as of March 24, 2020, before the 2019/2020 wet season survey was completed.

I certify that the information in this survey report and attached exhibits fully and accurately represent my work.

Please do not hesitate to contact me at erik@busbybiological.com or 760.500.8802 if you have any questions.

Sincerely,

Erik LaCoste
Senior Biologist
USFWS Permit Number TE-027736-6

REFERENCES

National Integrated Drought Information Center

2019 National Integrated Drought Information Center: US Drought Portal. https://www.drought.gov/drought/data-maps-tools/current-conditions

National Oceanic and Atmospheric Administration (NOAA)

2019 and 2020 National Weather Service Forecast Office, San Diego Weather. https://w2.weather.gov/climate/xmacis.php?wfo=sgx

U.S. Fish and Wildlife Service (USFWS)

1993 Determination of Endangered Status for Three Vernal Pool Plants and the Riverside Fairy Shrimp. *Federal Register* 58(147): 41384-41392. Washington, D.C.: USFWS.

1997 Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the San Diego Fairy Shrimp. 50 CFR Part 17. February 3, 1997.

2007 Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the San Diego Fairy Shrimp (*Branchinecta sandiegonensis*). 50 CFR Part 17**.**

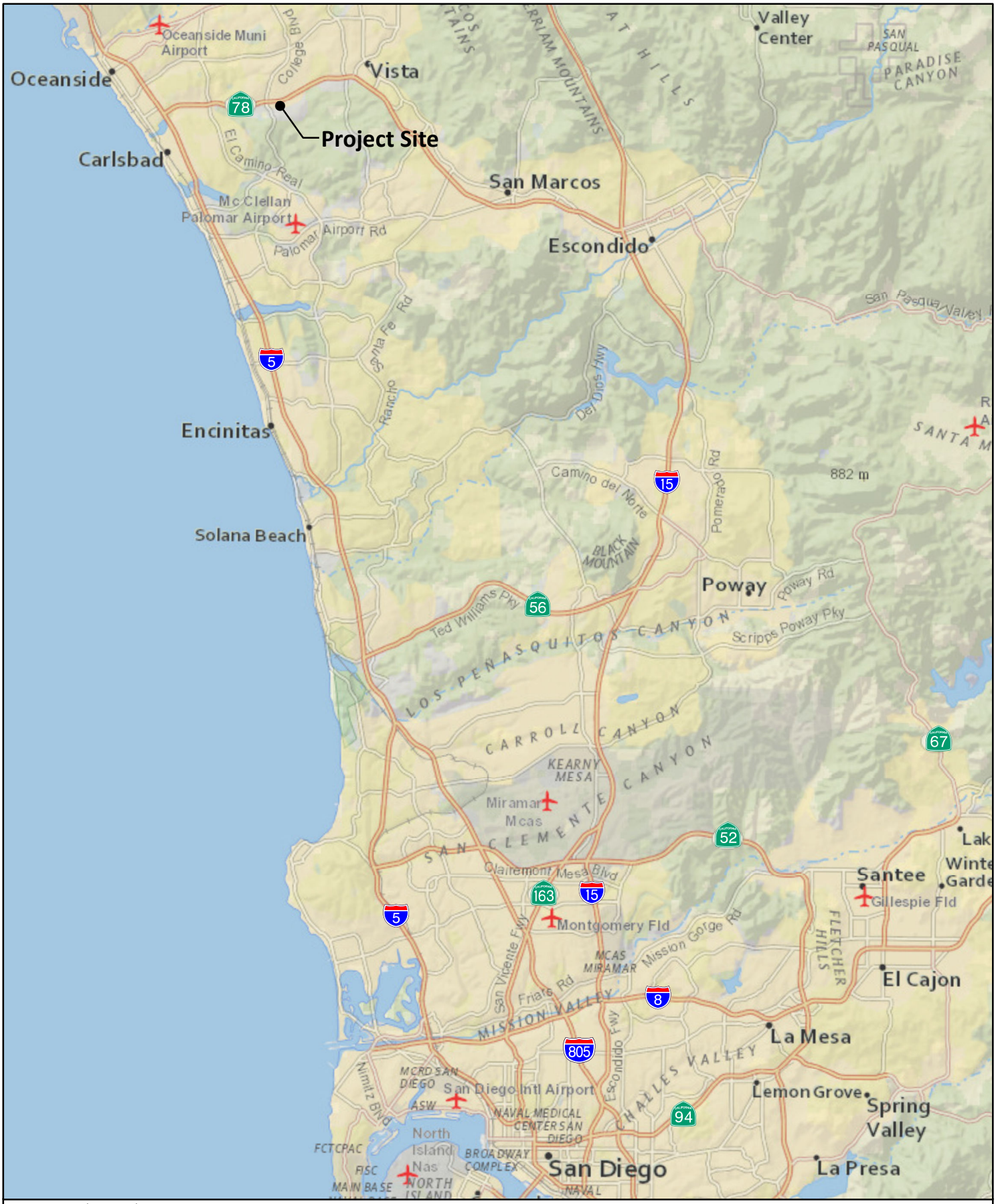
2012 Endangered and Threatened Wildlife and Plants; Revised Critical Habitat for the Riverside Fairy Shrimp; Final Rule. *Federal Register* 77(233): 72070–72140. Washington, D.C.: USFWS.

2017 Survey Guidelines for the Listed Large Branchiopods. Nov 13.

U.S. Geological Survey (USGS)

1975 San Luis Rey 7.5-Minute Topographic Map.

ATTACHMENT 1
Figures



Source: National Geographic, Esri

BUSBY Biological Services

N 0 2 4 Miles

Regional Location

CARMAX OCEANSIDE

Figure 1

Source: SANDAG & SanGIS 2017

BUSBY Biological Services

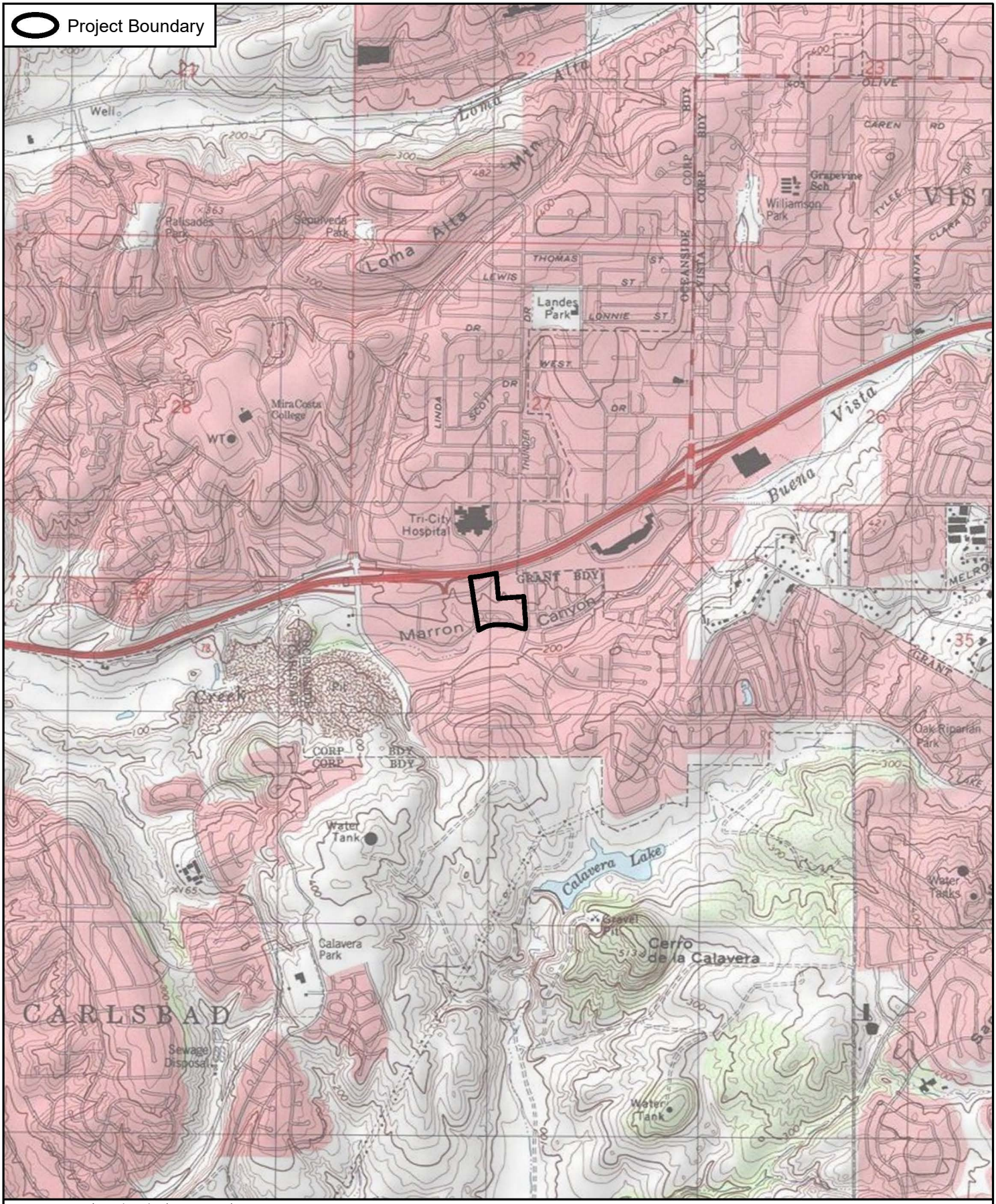
N

0 1,000 2,000 Feet

Project Vicinity - Aerial

CARMAX OCEANSIDE

Figure 2



Source: USGS 7.5' Quadrangles (San Luis Rey)

BUSBY Biological Services

N

0 1,000 2,000 Feet

Project Vicinity - USGS Topo

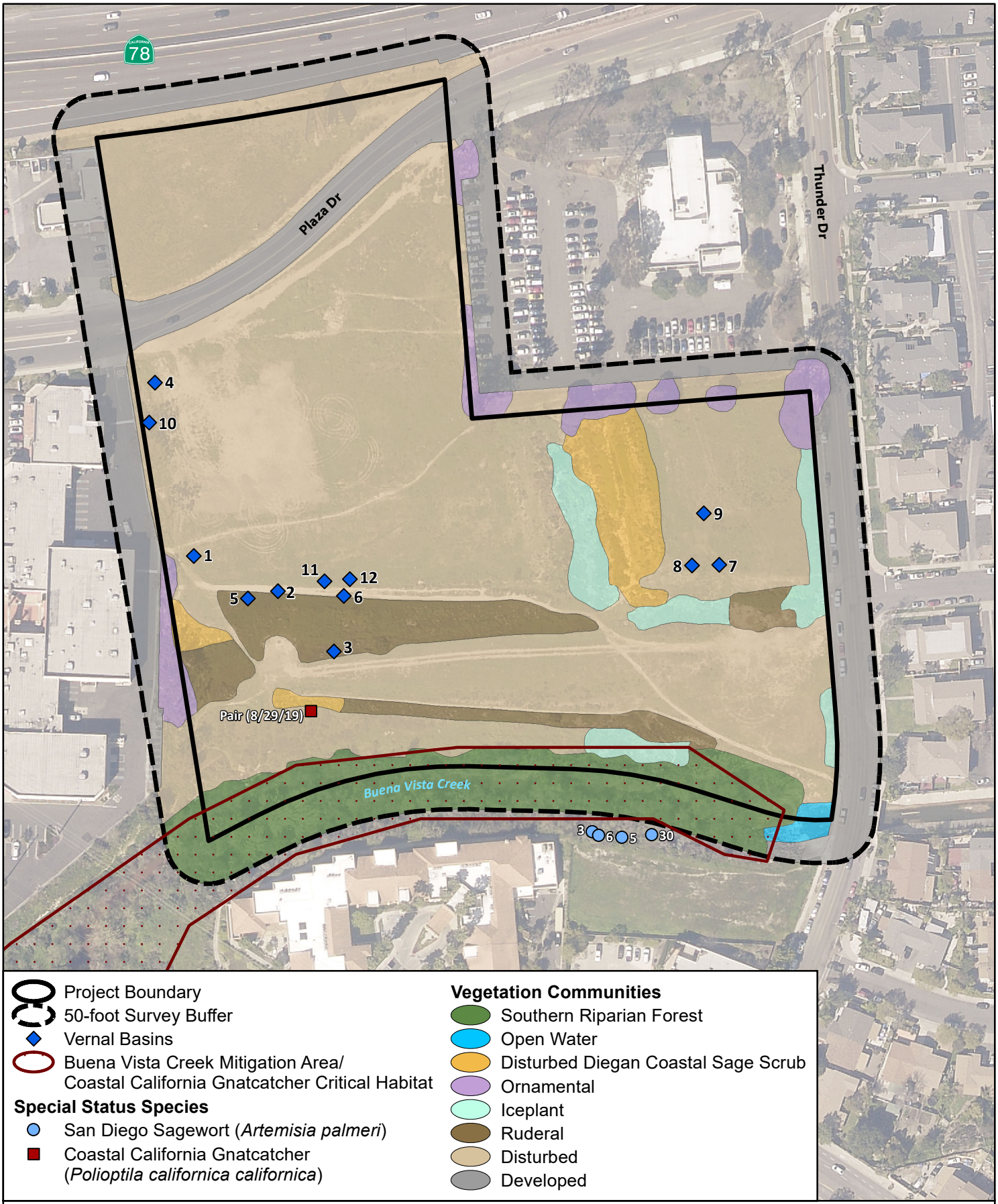
CARMAX OCEANSIDE

Figure 3

Basin Locations

CARMAX OCEANSIDE

Figure 4



Project Boundary
50-foot Survey Buffer
Vernal Basins
Buena Vista Creek Mitigation Area/
Coastal California Gnatcatcher Critical Habitat

Special Status Species

San Diego Sagewort (*Artemisia palmeri*)
Coastal California Gnatcatcher
(*Polioptila californica californica*)

Vegetation Communities

Southern Riparian Forest
Open Water
Disturbed Diegan Coastal Sage Scrub
Ornamental
Iceplant
Ruderal
Disturbed
Developed

Source: SANDAG & SanGIS 2017

BUSBY Biological Services

N

0 75 150 Feet

Existing Biological Resources

CARMAX OCEANSIDE

Figure 4

ATTACHMENT 2
Basin Conditions by Survey

BASIN CONDITIONS PER SURVEY

Round	Survey Date	Feature ID	Temp (°C)		Depth (cm)		Surface Area (sq m)		Anostracans (1s, 10s, 100s, 1000s)				Other Inverts/Verts (check box/specify)								Habitat Conditions	Notes/Voucher Info
			Air	Water	Present Average	Est. Max	Present	Est. Max	BRLI	BRSA	STWO	Unknown (Naup./Imm./fem.)	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Mosquito larvae	Midge larvae	Amphibian (E, T, A)	AB = algal bloom C = constructed N = natural D = disturbed UD = undisturbed TT = tire tracks	
1	12/3/19	1																			D, TT, Trash	Dry
		2																			D, TT	Dry
		3																			D, TT, Trash	Dry
		4																			D, TT	Dry
2	12/11/19	1	23	23	3.0	10.0	7.00	45.00													D, TT, Trash	
		2	23	23	3.0	10.0	0.50	1.00													D, TT	
		3	23	23	3.0	20.0	1.00	24.00													D, TT, Trash	
		4	23	23	1.0	5.0	0.25	1.00													D, TT	
3	12/18/19	1																			D, TT, Trash	Dry
		2																			D, TT	Dry
		3																			D, TT, Trash	Dry
		4																			D, TT	Dry
4	1/22/20	1																			D, TT, Trash	Dry
		2	18	15	3.0		0.50														D, TT	Tardigrades
		3																			D, TT, Trash	Dry
		4																			D, TT	Dry
5	1/31/20	1																			D, TT, Trash	Dry
		2																			D, TT	Dry
		3																			D, TT, Trash	Dry
		4																			D, TT	Dry
6	3/13/20	1	17	18	5.0		45.00														D, TT, Trash	
		2	17	18	4.0		1.00														D, TT	
		3	17	18	6.0		24.00														D, TT, Trash	
		4																			D, TT	Filled by erosion
		5	17	18	4.0		2.00	2.00													D	new
		6	17	18	2.0		1.00	1.00													D, TT	new
		7	17	18	3.0		18.00	18.00													D	new
		8	17	18	3.0		5.00	5.00													D, TT	new
		9	17	18	2.0		8.00	8.00													D	new
		10	17	18	2.0		1.00	1.00													D	new
		11	17	18	2.0		4.00	6.00													D	new
		12	17	18	2.0		4.00	6.00													D, Trash	new

7	3/19/20	1	13	16	4.0		35.00														D, TT, Trash	
		2	13	16	4.0		1.50														D, TT	
		3	13	16	8.0		16.00														D, TT, Trash	
		4																			D, TT	Filled by erosion
		5	13	16																	D	Dry
		6	13	16	2.0		4.00														D, TT	
		7	13	16																	D	Dry
		8	13	16	2.0		1.00														D, TT	
		9	13	16	2.0		8.00														D	
		10	13	16	2.0																D	
		11	13	16																	D	Dry
		12	13	16																	D, Trash	Dry

ATTACHMENT 3
Basin Conditions Summary

BASIN CONDITIONS SUMMARY

Feature ID	Depth (cm)		Surface Area (sq m)		Anostracans (1s, 10s, 100s, 1000s)				Other Inverts/Verts (check box/specify)								Habitat Conditions	Numebr of Samples	GPS Coordinates		Notes/Voucher Info
	Depth - Actual Average	Depth - Est. Actual	Surface Area - Actual Average	Surface Area - Est. Actual	BRLI	BRSA	STWO	Unknown (Naup./Imm./fem.)	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Mosquito larvae	Midge larvae	Amphibian (E, T, A)	AB = algal bloom C = constructed N = natural D = disturbed UD = undisturbed TT = tire tracks		latitude	longitude	
1	4	10	29	45.00													D, TT, Trash		33.181840	-117.290220	
2	3.5	10	0.8	1.00													D, TT		33.181790	-117.289930	Tardigrades
3	5.7	20	12.5	24.00													D, TT, Trash		33.181600	-177.289720	
4	5	5	0.25	1.00													D, TT		33.182460	-117.290410	Filled in with sediment
5	4	8	2	2.00													D		33.181770	-117.290050	
6	2	4	2.5	4.00													D, TT		33.181780	-117.289680	
7	3	5	18	18.00													D		33.181890	-117.288250	
8	2.5	5	3	5.00													D, TT		33.181890	-117.288350	
9	2	4	8	8.00													D		33.182060	-117.288310	
10	2	4	1	1.00													D		33.182330	-117.290430	
11	2	8	4	6.00													D		33.181830	-117.289760	
12	2	8	4	6.00													D, Trash		33.181840	-117.289660	

ATTACHMENT 4
Representative Photographs

REPRESENTATIVE PHOTOS

	Photograph 1. View of basin 1 (taken 3/13/2020; facing east; Figure 4).
	Photograph 2. View of basin 7 (taken 3/13/2020; facing north; Figure 4).
	Photograph 3. View of basin 2 (taken 3/13/2020; facing east; Figure 4).

ATTACHMENT 5
Datasheets

USFWS Data Sheet - Wet Season Survey for Listed Large Branchiopods

Project :	CALMAX OSIDE ~~Southwest Village~~			Start/End Time	Weather Conditions
Surveyors:	ERIK LaCoste	Permit #	TE-027736-6	0730 - 1000	52 F, 0-1, 100% O.C
Date:	12/3/19				52 F, 0-1, 100% O.C.
Survey #:	1	Sheet #:	1 of 1		

Feature ID	Temp (°C)		Depth (cm)		Surface Area (sq m)		Anostracans (1s, 10s, 100s, 1000s)				Other Inverts/Verts (check box/specify)								Habitat Conditions	Notes/Voucher Info
	Air	Water	Present Average	Est. Max	Present	Est. Max	BRLI	BRSA	STWO	Unknown (Naup./Imm./fem.)	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Mosquito larvae	Midge larvae	Amphibian (E, T, A)	AB = algal bloom C = constructed N = natural D = disturbed UD = undisturbed TT = tire tracks	
																				All Basins Dry.

USFWS Data Sheet - Wet Season Survey for Listed Large Branchiopods

Project :	CARMAX ~~Southwest Village~~			Start/End Time	Weather Conditions
Surveyors:	ERIK LaCoste	Permit #	027736-6	12:45	68, 2-4 MPH, 25% Clouds
Date:	12/11/19				
Survey #:	1	Sheet #:	1 of 1	13.30	68, 2-4 MPH, 25% Clouds.

Feature ID	Temp (°C)		Depth (cm)		Surface Area (sq m)		Anostracans (1s, 10s, 100s, 1000s)				Other Inverts/Verts (check box/specify)								Habitat Conditions	Notes/Voucher Info
	Air	Water	Present Average	Est. Max	Present	Est. Max	BRLI	BRSA	STWO	Unknown (Naup./Imm./fem.)	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Mosquito larvae	Midge larvae	Amphibian (E, T, A)	AB = algal bloom C = constructed N = natural D = disturbed UD = undisturbed TT = tire tracks	
1	23	23	3	10	7	12													D, TT, Trash	
2	23	23	3	10	0.5	1.0													D, TT	
3	23	23	3	20	1	5													D, TT, Trash	
4	23	23	1	5	0.25	1.0													D, TT	Tire Rut -

USFWS Data Sheet - Wet Season Survey for Listed Large Branchiopods

Project :	CARMAX ~~Southwest Village~~			Start/End Time	Weather Conditions
Surveyors:	ERIK LaLoste	Permit #	02ETTB6-6	0745	52F 0-1 10% Clouds.
Date:	12/18/14				
Survey #:	2	Sheet #:	1 of 1		

Feature ID	Temp (°C)		Depth (cm)		Surface Area (sq m)		Anostracans (1s, 10s, 100s, 1000s)				Other Inverts/Verts (check box/specify)								Habitat Conditions	Notes/Voucher Info
	Air	Water	Present Average	Est. Max	Present	Est. Max	BRLI	BRSA	STWO	Unknown (Naup./Imm./fem.)	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Mosquito larvae	Midge larvae	Amphibian (E, T, A)	AB = algal bloom C = constructed N = natural D = disturbed UD = undisturbed TT = tire tracks	
1																				DRY
2																				DRY
3																				DRY
4																				DRY

USFWS Data Sheet - Wet Season Survey for Listed Large Branchiopods

Project :	CarMax Oceanside			Start/End Time	Weather Conditions
Surveyors:	E. LaCoste	Permit #	027736-6	12:45 - 1:15	18°C, 2-4, 20% clouds 18°C, 2-4, 20% clouds.
Date:	1-22-20				
Survey #:	4	Sheet #:	1 of 1		

Feature ID	Temp (°C)		Depth (cm)		Surface Area (sq m)		Anostracans (1s, 10s, 100s, 1000s)				Other Inverts/Verts (check box/specify)								Habitat Conditions		Notes/Voucher Info
	Air	Water	Present Average	Est. Max	Present	Est. Max	BRLI	BRSA	STWO	Unknown (Naup./Imm./fem.)	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Mosquito larvae	Midge larvae	Amphibian (E, T, A)	AB = algal bloom C = constructed N = natural D = disturbed UD = undisturbed TT = tire tracks		
1	DRY																				
2	18	15	3		0.5		—	—	—	—	-	-	-	-	-	-	-	-	—		TARDIGRADES.
3	Dry																				
4	Dry																				

USFWS Data Sheet - Wet Season Survey for Listed Large Branchiopods

Project :	CarMax Oceanside			Start/End Time	Weather Conditions
Surveyors:	E.L.	Permit #	027736	1015 – 1050	70F, 0-1 mph, 0% clouds.
Date:	1-31-20				
Survey #:	5	Sheet #:	1 of 1		

Feature ID	Temp (°C)		Depth (cm)		Surface Area (sq m)		Anostracans (1s, 10s, 100s, 1000s)				Other Inverts/Verts (check box/specify)								Habitat Conditions	Notes/Voucher Info
	Air	Water	Present Average	Est. Max	Present	Est. Max	BRLI	BRSA	STWO	Unknown (Naup./Imm./fem.)	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Mosquito larvae	Midge larvae	Amphibian (E, T, A)	AB = algal bloom C = constructed N = natural D = disturbed UD = undisturbed TT = tire tracks	
1	1																			Dry
2	1																			Dry
3	1																			Dry
4	1																			Dry

USFWS Data Sheet - Wet Season Survey for Listed Large Branchiopods

Project :	CARMAX ~~Southwest Village~~	Start/End Time	Weather Conditions
Surveyors:	EL Permit #	3 30	61 F 0-1 100% - off/on Rain -
Date:	3/13/20	4 30	61 F 0-1 100% - NO RAIN
Survey #:	Sheet #: / of 1		

Feature ID	Temp (°C)		Depth (cm)		Surface Area (sq m)		Anostracans (1s, 10s, 100s, 1000s)				Other Inverts/Verts (check box/specify)								Habitat Conditions	Notes/Voucher Info
	Air	Water	Present Average	Est. Max	Present	Est. Max	BRLI	BRSA	STWO	Unknown (Naup./Imm./fem.)	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Mosquito larvae	Midge larvae	Amphibian (E, T, A)	AB = algal bloom C = constructed N = natural D = disturbed UD = undisturbed TT = tire tracks	
1	17	18	5		45	45													T, 9 Foot, D	
2	17	18	4		1														FT, D.	
3	17	18	16	-	24	24													T, D	long & thin - Drainage Culvert
* (4)	17																			GONE - Filled in w sediment
NEW 5	17	18	4	8	2	2													D,	New
NEW 6	17	18	2	4	1	1													FT, D.	New
NEW 7	17	18	3	5	18	18													D,	New
NEW 8	17	18	3	5	5	5													D, TT	New
9	17	18	2	4	8	8													D	New
10	17	18	2	4	1	1													D,	New
11	17	18	2	8	4	6													D.	New
12	17	18	2	8	4	10													D.	New

USFWS Data Sheet - Wet Season Survey for Listed Large Branchiopods

Project :	CarMax Oceanside			Start/End Time	Weather Conditions
Surveyors:	E.L.	Permit # 027736-6		0900	13°C 0-1 50% O.C. w/ RAIN.
Date:	3/19/20			1000	15C 0-1 50% O.C. NO RAIN
Survey #:	7 ~~(6)~~ (9)	Sheet #:	1 of 1		

Feature ID	Temp (°C)		Depth (cm)		Surface Area (sq m)		Anostracans (1s, 10s, 100s, 1000s)				Other Inverts/Verts (check box/specify)								Habitat Conditions					Notes/Voucher Info
	Air	Water	Present Average	Est. Max	Present	Est. Max	BRLI	BRSA	STWO	Unknown (Naup./Imm./fem.)	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Mosquito larvae	Midge larvae	Amphibian (E, T, A)	AB = algal bloom	C = constructed	N = natural	D = disturbed	UD = undisturbed	TT = tire tracks	
1	13	16	4	9	35	35													TT, D, T						≈ 33M Long (MAXED OUT)
2	13	16	4	8	1.5	1.5													TT, D, T.						MAXED OUT
3	13	16	8	15	16	16													TR, D,						Drainage
4	13	16	—																						No longer exists, was RUT
D 5	13	16	—																						Dry.
6	13	16	2	4	4	4													TT, D, T						MAXED OUT.
D 7	13	16	—																						DRY.
8	13	16	2	5	1	1																			
9	13	16	2	4	8	10																			
10	13	16	2	4	1.0	1.5																			
D 11	13	16	—			1.0																			Dry
D 12	13	16	—																						Dry

APPENDIX J
Focused Dry Season Fairy Shrimp Survey Summary Report

BUSBY
Biological Services

September 18, 2020

Ms. Stacey Love
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

RE: 2020 Survey Summary Summary Report for the Protocol-Level, Dry Season Large Branchiopod Survey for the Proposed Carmax Development Project, Oceanside, California

Ms. Love:

This letter report provides a summary of the 2020 protocol-level, dry season survey for federally listed large branchiopod species (i.e., fairy shrimp species) conducted for the proposed CarMax Auto Superstore project (proposed project). Busby Biological Services, Inc. (BBS) was contracted by EnviroApplications, Inc. to conduct these surveys on behalf of Centerpoint Integrated Solutions to determine the presence/absence of listed large brachiopod species within the proposed project area.

The 2020 focused, protocol-level, dry season fairy shrimp survey followed the most recent U.S. Fish and Wildlife Service (USFWS) survey guidelines, titled *Survey Guidelines for the Listed Large Branchiopods* and dated November 13, 2017 (USFWS 2017).

The following report provides a brief description of the proposed project, the fairy shrimp species that have a potential to occur within the proposed project survey area, the survey methods, and the results of the 2020 focused dry season fairy shrimp survey.

BACKGROUND INFORMATION

A brief summary of the proposed project and fairy shrimp with a potential for occurrence are provided in this section.

Proposed Project Location and Description

The proposed project consists of the construction of a CarMax pre-owned automobile dealership, sales building with an attached presentation area, service building/area, and non-public carwash with associated access driveways, parking

lots, and landscaped areas. In addition, a retaining wall will be required along the southern boundary of the property because of the exiting grades in that area.

The 10.54-acre proposed project area occurs within the U.S. Geological Survey (USGS) San Luis Rey 7.5-minute quadrangle, in the City of Oceanside, California (USGS 1968; Attachment 1: Figures 1 through 3). The proposed project site is situated on vacant and undeveloped Assessor's Parcel Number (APN) 168-012-42 and APN 168-012-43 (Attachment 1: Figures 2 and 3). It is bordered to the north by State Route 78, to east by Thunder Drive and residential development, to the south by Buena Vista Creek and residential development, and to the west by a commercial shopping center (e.g., grocery store, restaurants, motel, other retail stores). Plaza Drive separates the two parcels in the northwest portion of the proposed project area, and the Oceanside Department of Motor Vehicles (DMV) occupies the property northeast of the proposed project site.

Elevations within the proposed project area range from approximately 177 to 220 feet above mean sea level. The dominant vegetation communities and land cover types within the proposed project area include disturbed, ruderal, southern riparian forest, disturbed Diegan coastal sage scrub, developed and ornamental. Other vegetation communities present within the proposed project area in smaller proportions include iceplant and open water (Attachment 1: Figure 3). The section of Buena Vista Creek on the southern border of the proposed project area is part of the Buena Vista Creek Mitigation Area.

Fairy Shrimp Species Information

The proposed project area supports few basins (e.g. road ruts, tire tracks, other depressions) that have the potential to support fairy shrimp species. In addition to the common, non-sensitive versatile fairy shrimp (*Branchinecta lindahli*), two federally listed fairy shrimp species have a potential to occur, including San Diego fairy shrimp (*Branchinecta sandiegonensis*) and Riverside fairy shrimp (*Streptocephalus woottoni*).

The San Diego fairy shrimp was federally listed as endangered in February 1997 (USFWS 1997). On December 12, 2007, USFWS published a Final Rule revising the critical habitat for the San Diego fairy shrimp that became effective on January 11, 2008 (USFWS 2007). This revised Final Rule designated critical habitat for the San Diego fairy shrimp to include approximately 3,082 acres of habitat in five units, with a total of 29 subunits throughout Orange and San Diego counties, California. Critical habitat for San Diego fairy shrimp does not occur on or adjacent to the proposed project area (USFWS 2007).

The Riverside fairy shrimp was federally listed as endangered in August 1993 (USFWS 1993). On December 4, 2012, USFWS published a Final Rule revising the critical habitat for the Riverside fairy shrimp that became effective on January 3, 2013 (USFWS 2012). The previous critical habitat consisted of land in four units in

Ventura, Orange, and San Diego counties, California. The revised critical habitat now includes land in three units in Ventura, Orange, and San Diego counties, California, for a total of approximately 1,724 acres. Critical habitat for Riverside fairy shrimp does not occur on or adjacent to the proposed project area (USFWS 2012).

SURVEY METHODS

The focused 2020 dry season fairy shrimp survey followed the most recent U.S. Fish and Wildlife Service (USFWS) survey guidelines, titled *Survey Guidelines for the Listed Large Branchiopods* and dated November 13, 2017, which defines a complete large branchiopod survey as a complete wet season survey and a complete dry season survey that are conducted within a 3-year period.

Soil Sample Collection

Soil samples were collected from all basins within the proposed project survey area that provided potential fairy shrimp habitat during the 2019/2020 wet season fairy shrimp surveys (Attachment 1: Figure 4). These basins had been mapped (Attachment 1: Figure 4) and photographed (Attachment 2) previously during the 2019/2020 wet season surveys.

A hand trowel was used to collect the appropriate number and volume of samples from the top 1 to 3 centimeters of soil within each basin based on Table 1 of the current USFWS protocol. These soil samples were collected into paper bags, with the basin number written on each bag to inform the lab analysis, and logged in the soil sample collection table.

Soil Sample Processing and Analysis

The soil samples were taken to an approved laboratory for processing and analysis. The soil samples were hydrated and processed through a series of sieves to separate fairy shrimp cysts from the soil. The sieves used were of 710-, 355-, and 212-micron pore size screens, and the final sieve pore size is smaller than the target fairy shrimp genera (i.e., *Branchinecta, Streptocephalus*) average cyst diameter and, therefore, would retain any cysts present within the soil samples. The remaining material on the final sieve was then placed in a brine solution to help separate organic material from inorganic material. The remaining organic material was then filtered through a standard coffee filter and allowed to dry. The dried organic material was then examined under a microscope to determine if fairy shrimp cysts were present. For all identified cysts, cyst surface characteristics were then used to identify cysts to genus.

Fairy Shrimp Hydration, Rearing, Hatching, and Identification

Two species of fairy shrimp in the genus *Branchinecta* have the potential to occur in the proposed project survey area. Because these cysts cannot be identified to

species under the microscope, the *Branchinecta* cysts require hydration, hatching, rearing, and subsequent identification to identify them to species.

When identified during the soil sample processing and analysis, *Branchinecta* cysts are hydrated by placing them into plastic containers filled with approximately 525 milliliters of filtered, non-chlorinated drinking water. The coffee filters with the collected cysts are slowly opened over the containers and gently shaken to allow the material to fall into the water. The sides of the filters are then rubbed against one another to release any additional material. Finally, a squirt bottle with filtered, non-chlorinated drinking water is used to spray any additional material from the filters into the containers.

The containers are given sample identification numbers and placed on a table in a climate-controlled room. Lighting in the room is provided by indirect sunlight as well as an overhead, full spectrum light that is kept on approximately 12 hours a day to help emulate outside, spring season lighting conditions. An overhead fan also is kept on at a low level to provide for some air movement across the water surface in the sample containers.

The samples are checked daily to see if any fairy shrimp have emerged. Once nauplii are observed, feeding begins. The hatched shrimp are fed a single drop of prepared food on a daily basis until they are collected for identification. The food used is typically a mix of active brewer's yeast, sugar, powdered fish food, and water.

The hatched shrimp are allowed to continue under these conditions until they reach maturity, as determined by reaching full size, antennal development (males), and brood pouch (females). Once mature, the fairy shrimp are collected for identification by pouring the material in the container through a small strainer. Collected shrimp are then placed into a dish of carbonated water to slowly asphyxiate them. Once dead, the collected shrimp are placed in a 27- by 57-millimeter (5-dram) clean glass vial, filled with 70 percent ethyl alcohol. The collected shrimp are then identified to the species level with the aid of a stereo dissection scope, and subsequently provided to the Natural History Museum of Los Angeles for preservation.

SURVEY RESULTS

The results for these surveys are summarized below and are also provided in Attachments 3 and 4.

Soil Sample Collection

BBS biologist Erik LaCoste (TE-027736-6) collected samples from each of the basins identified within the proposed project survey area during the 2019/2020 wet season surveys conducted for the proposed project. The samples collected are summarized in Table 1, below.

Table 1. Soil Sample Collection Summary

Feature ID	Depth (cm)		Surface Area (sq m)		Dry Season Samples		
	Depth - Actual Average	Depth - Est. Actual	Surface Area - Actual Average	Surface Area - Est. Actual	Min. Number of Samples	Actual number of Samples	Approximate Volume (mL)
1	4	10	29	45.00	25	30	2500
2	3.5	10	0.8	1.00	<10	2	200
3	5.7	20	12.5	24.00	10-25	20	2000
4	5	5	0.25	1.00	<10	N/A	N/A
5	4	8	2	2.00	<10	4	400
6	2	4	2.5	4.00	<10	2	200
7	3	5	18	18.00	10-25	15	1500
8	2.5	5	3	5.00	10-25	10	1000
9	2	4	8	8.00	10-25	10	1000
10	2	4	1	1.00	<10	2	200
11	2	8	4	6.00	10-25	12	1200
12	2	8	4	6.00	10-25	12	1200

*samples were no more than 100 mL each

Originally, 12 basins were included in the wet season analysis. However, midway through the wet season fairy shrimp surveys, Basin 4 was destroyed by illegal vehicle activity. Basin 4 was a manmade, road rut located in the abandoned parking lot used by the seasonal pumpkin patch/Christmas tree farm. This basin measured approximately 8 inches wide, 2 feet long, and 1 inch deep with a substrate of decomposed granite. Once it was destroyed, no ponding was documented, and soil samples were not collected for dry season analysis.

Mr. LaCoste collected soil from the 11 remaining basins on August 11, 2020 (Attachment 1: Figure 4). Soil samples were then submitted to Alden Environmental, Inc. for processing and identification. Table 2 provides the results of the dry season collection.

Table 2. Dry Season Survey Results

Basin Number	Dry Season Collection		Dry Season Results		Basin Conditions			GPS Coordinates
	Number of Samples	Sample Volume (mL)	Cysts Present (Y/N)	Species Present	Depth Est Max (in.)	Surface Area Est Max (sq. ft.)	Habitat Conditions	
1	38	380	N	-	10	45.00	D, TT, Trash	33.181840, -117.290220
2	2	20	N	-	10	1.00	D, TT	33.181790, -117.289930
3	20	200	N	-	20	24.00	D, TT, Trash	33.181600, -177.289720
5	4	40	N	-	8	2.00	D	33.181770, -117.290050
6	2	20	N	-	4	4.00	D, FT	33.181780, -117.289680
7	15	150	N	-	5	18.00	D	33.181890, -117.288250
8	10	100	N	-	5	5.00	D, TT	33.181890, -117.288350
9	10	100	N	-	4	8.00	D	33.182060, -117.288310
10	2	20	N	-	4	1.00	D	33.182330, -117.290430
11	12	120	N	-	8	6.00	D	33.181830, -117.289760
12	12	120	N	-	8	6.00	D, Trash	33.181840, -117.289660

Soils Sample Processing and Analysis

Alden Environmental, Inc. biologist Greg Mason (TE-58862A-1) processed the soil samples from all 11 basins. A total of 127 subsamples from the 11 basins were analyzed to determine if fairy shrimp cysts were present. No fairy shrimp cysts from either the genus *Branchinecta* or *Streptocephalus* were recovered from any of the basins.

Water fleas (class Cladocera) and seed shrimp (class Ostracoda) – both common, non-sensitive species that occur in ephemeral basins – were identified in basins 3 and 9, respectively.

Representative photographs of the basins are provided in Attachment 2. A summary of results by basin is provided in Table 2, above, and Attachments 3 and 4.

Fairy Shrimp Hydration, Rearing, Hatching, and Identification

Soil hydration was unnecessary due to the lack of cyst presence in any of the analyzed soil samples.

SUMMARY

No *Branchinecta* spp. or *Streptocephalus woottoni* cysts were identified during the dry season soil analysis.

This dry season fairy shrimp survey satisfies a portion of the current USFWS survey requirements, which include a minimum of one complete dry season survey and one complete wet season survey within a 3-year period.

I certify that the information in this survey report and attached exhibits fully and accurately represent my work.

If you have any questions or comments regarding this survey report, please do not hesitate to contact me at 760.500.8802 or erik@busbybiological.com.

Sincerely,

Erik LaCoste
Senior Biologist
USFWS Permit Number TE-027736-6

ATTACHMENTS

Attachment 1: Figures
Attachment 2: Representative Photographs
Attachment 3: Dry Season Results Letter (August 31, 2020)
Attachment 4: Dry Season Sampling Data Forms

REFERENCES

U.S. Fish and Wildlife Service (USFWS)

1993 Determination of Endangered Status for Three Vernal Pool Plants and the Riverside Fairy Shrimp. *Federal Register* 58(147): 41384-41392. Washington, D.C.: USFWS.

1997 Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the San Diego Fairy Shrimp. 50 CFR Part 17. February 3, 1997.

2007 Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the San Diego Fairy Shrimp (*Branchinecta sandiegonensis*). 50 CFR Part 17**.**

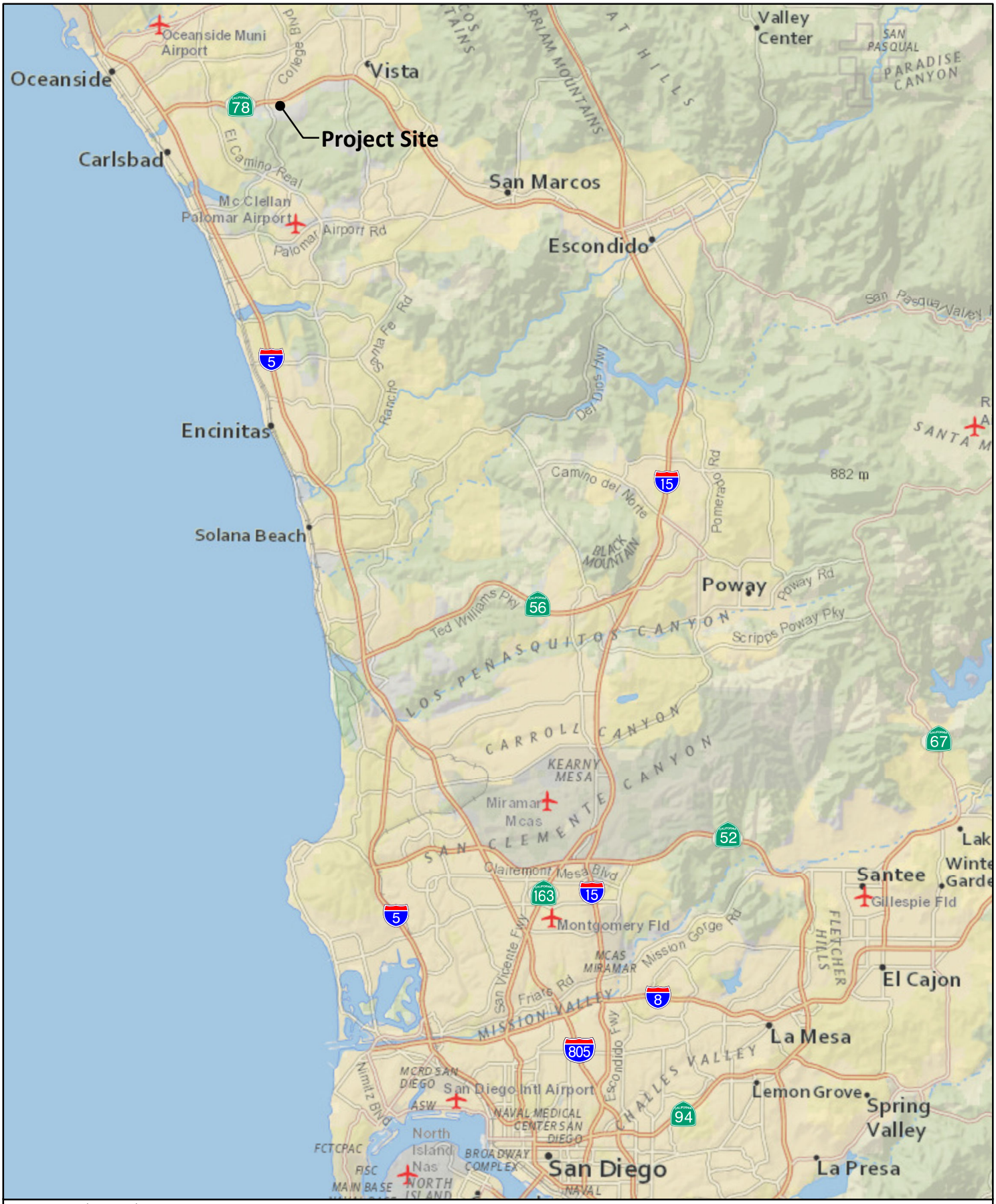
2012 Endangered and Threatened Wildlife and Plants; Revised Critical Habitat for the Riverside Fairy Shrimp; Final Rule. *Federal Register* 77(233): 72070–72140. Washington, D.C.: USFWS.

2017 Survey Guidelines for the Listed Large Branchiopods. Nov 13.

U.S. Geological Survey (USGS)

1975 San Luis Rey 7.5-Minute Topographic Map.

ATTACHMENT 1
Figures



Source: National Geographic, Esri

BUSBY Biological Services

N 0 2 4 Miles

Regional Location

CARMAX OCEANSIDE

Figure 1

Source: SANDAG & SanGIS 2017

BUSBY Biological Services

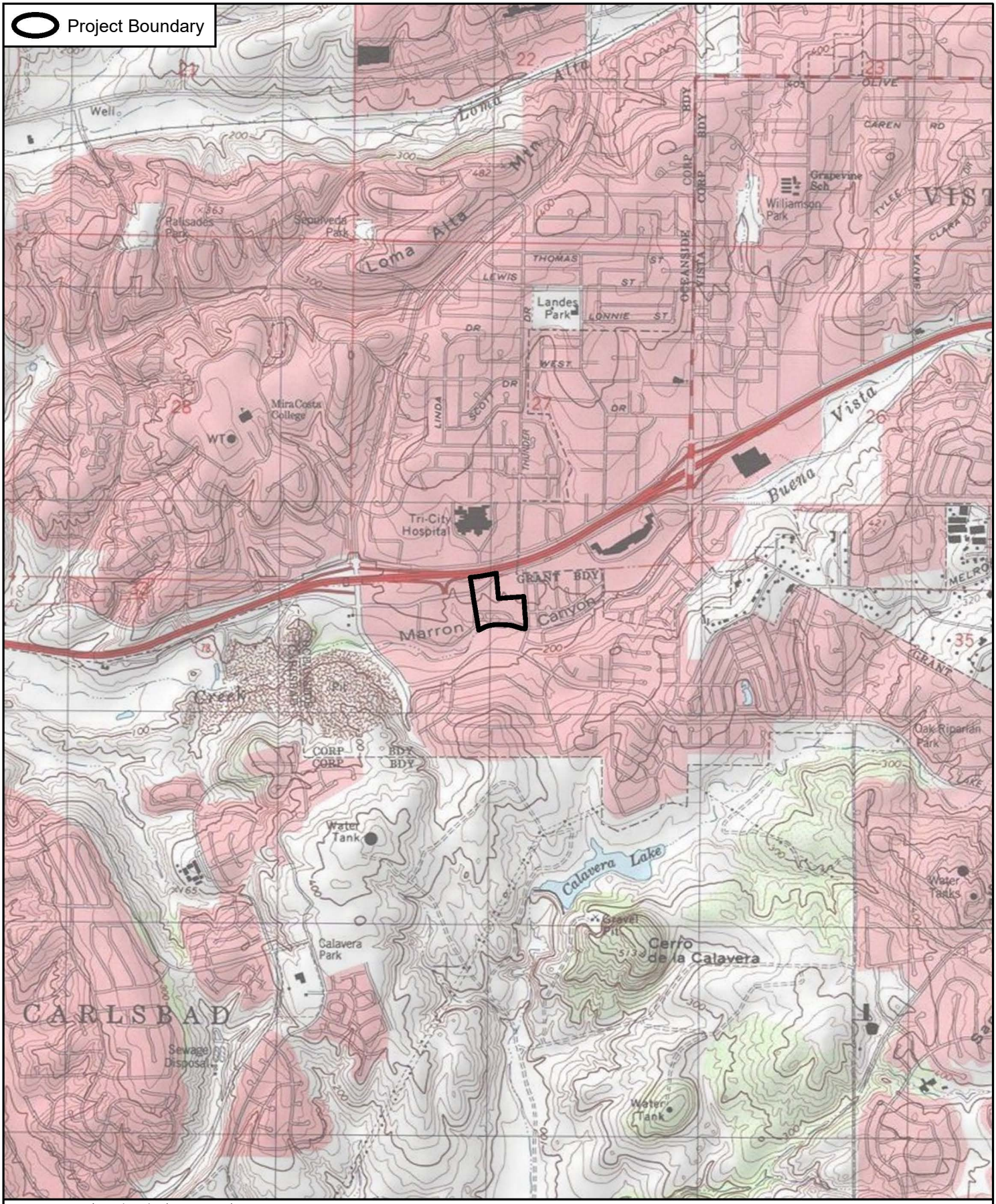
N

0 1,000 2,000 Feet

Project Vicinity - Aerial

CARMAX OCEANSIDE

Figure 2



Source: USGS 7.5' Quadrangles (San Luis Rey)

BUSBY Biological Services

N

0 1,000 2,000 Feet

Project Vicinity - USGS Topo

CARMAX OCEANSIDE

Figure 3

Basin Locations

CARMAX OCEANSIDE

Figure 4

ATTACHMENT 2
Representative Photographs

REPRESENTATIVE PHOTOGRAPHS

	Photograph 1. View of Basin 1 facing east (taken 1/23/2020).
	Photograph 2. View of Basin 2 facing east (taken 1/23/2020).
	Photograph 3. View of Basin 3 facing southwest (taken 1/23/2020).

ATTACHMENT 3
Dry Season Results Letter (August 31, 2020)

ALDEN ENVIRONMENTAL, INC
3245 University Ave, #1188 | San Diego, CA 92104 | **Phone/Fax:** 619.284.3815

August 30, 2020

Ms. Melissa Busby
4629 Cass Street, #192
San Diego, CA 92109

Subject: Dry Sampling Results

Dear Ms. Busby:

This letter presents the results of dry season sampling conducted on soil samples collected from 11 basins on the Oceanside Carmax project.

Methods

On Wednesday, August 12, 2020 Alden received soil samples collected from 11 basins determined to have potential to support fairy shrimp species. The soil was provided in bags labeled with the basin number. The collected soil from each basin was divided into100ml subsamples, based on the area of the pool. Each sample was then hydrated and processed through a series of sieves to separate out fairy shrimp cysts that may be present. The sieves used were of 710-, 355-, and 212-µm pore size screens. The final sieve pore size is smaller than the target fairy shrimp genera (*Branchinecta* and *Streptocephalus*) average cyst diameter and therefore would retain cysts. The material remaining on the final sieve was next placed in a brine solution to help separate organic from inorganic material. The organic portion was then filtered through a standard coffee filter and allowed to dry. The dried material on the filters was then examined under a stereo dissecting scope to determine if cysts were present. Cyst surface characteristics were then used to identify cysts to genus, if present.

Results

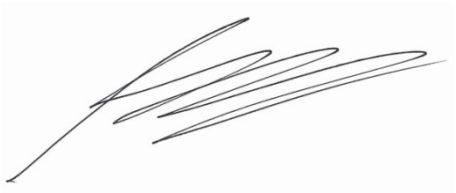
A total of 127 subsamples from the 11 basins were analyzed to determine if fairy shrimp cysts were present. No fairy shrimp cysts from either the genus *Branchinecta* or *Streptocephalus* were recovered from any of the basins (Table 1).

ALDEN ENVIRONMENTAL, INC
3245 University Ave, #1188 | San Diego, CA 92104 | **Phone/Fax:** 619.284.3815

Table 1 **Dry Season Sampling Results**			
Basin	**Subsamples**	***Branchinecta***	***Streptocephalus***
1	38	-	-
2	2	-	-
3	20	-	-
5	4	-	-
6	2	-	-
7	15	-	-
8	10	-	-
9	10	-	-
10	2	-	-
11	12	-	-
12	12	-	-

The above text presents the final results of the dry season fairy shrimp analysis conducted for the project. If you have any questions or need additional information please call.

Sincerely,



Greg Mason
Principal/Senior Biologist

ATTACHMENT 4
Dry Season Sampling Data Forms

U.S. Fish and Wildlife Service – Data Sheet for Dry Season Sample Analysis for Listed Large Branchiopods

Project Information

Project Name: _____ Quad: _____
USFWS Project Number: _____ Township: _____
County: _____ Range: _____
Lat: _____ Section: _____
Long: _____

Biologist Information

Name of Person(s) Who Conducted the Following Tasks and Permit Number(s):
Soil Collection: Erin Larosa
Soil Processing: Greg Mason 58862A-1
Soil Analysis/Cysts ID: Greg Mason 58862A-1
Soil Collection Date: 8/11/20

Pool/ Habitat/ Basin No.	Invertbrates Present (X)															Comments
	Insect Exo-Skeletons	Micro-Turbellaria Cysts	Cladocera Ephippia	Ostracods Live/Cysts/ Carapaces	Copepods Live/Cysts	Number of Large Branchiopod Cysts: *Branchinecta* sp.	*Lepidurus packardi*	*Streptocephalus wootoni*	*Linderiella occidentalis*	*Lynceus brachyurus*	*Cyzicus californicus*	Hydracarina Live	Nematoda	Collembola	Other Species	
1-1 1-2 1-3	✓															
1-4 1-5 1-6	✓															
1-7 1-8 1-9	✓															
1-10 1-11 1-12																
1-13 1-14 1-15																
1-16 1-17 1-18																
1-19 1-20 1-21																
1-22 1-23	✓															
1-24 1-25 1-26	✓															
1-27 1-28 1-29																
1-30 1-31 1-32	✓															
1-33 1-34 1-35																
1-36 1-37 1-38																

U.S. Fish and Wildlife Service – Data Sheet for Dry Season Sample Analysis for Listed Large Branchiopods

Project Information

Project Name: _____ Quad: _____
USFWS Project Number: _____ Township: _____
County: _____ Range: _____
Lat: _____ Section: _____
Long: _____

Biologist Information

Name of Person(s) Who Conducted the Following Tasks and Permit Number(s):
Soil Collection: Erin Lycett
Soil Processing: Greg Mason 85562A-1
Soil Analysis/Cysts ID: Greg Mason 85562A-1
Soil Collection Date: 6/11/21

Pool/ Habitat/ Basin No.	Invertbrates Present (X)															Comments
	Insect Exo-Skeletons	Micro-Turbellaria Cysts	Cladocera Ephippia	Ostracods Live/Cysts/ Carapaces	Copepods Live/Cysts	Number of Large Branchiopod Cysts: *Branchinecta* sp.	*Lepidurus packardi*	*Streptocephalus wootoni*	*Linderiella occidentalis*	*Lynceus brachyurus*	*Cyzicus californicus*	Hydracarina Live	Nematoda	Collembola	Other Species	
2-1, 2-2	✓															
3-1, 3-2, 3-3																
3-4, 3-5, 3-6																
3-7, 3-8, 3-9	✓ ✓															
3-10, 3-11, 3-12	✓															
3-13, 3-14, 3-15																
3-16, 3-17, 3-18	✓ ✓		✓													
3-19, 3-20	✓ ✓															
5-1, 5-2, 5-3	✓ ✓ ✓															
5-4	✓															
6-1, 6-2																
7-1, 7-2, 7-7	✓															
7-4, 7-5, 7-6	✓ ✓															
7-7, 7-8, 7-9	✓															

U.S. Fish and Wildlife Service – Data Sheet for Dry Season Sample Analysis for Listed Large Branchiopods

Project Information

Project Name: _____ Quad: _____
USFWS Project Number: _____ Township: _____
County: _____ Range: _____
Lat: _____ Section: _____
Long: _____

Biologist Information

Name of Person(s) Who Conducted the Following Tasks and Permit Number(s):
Soil Collection: Erin LaCoste
Soil Processing: Greg Mason #5562A-1
Soil Analysis/Cysts ID: Greg Mason #5562A-1
Soil Collection Date: 8/11/20

Pool/ Habitat/ Basin No.	Invertebrates Present (X)															Comments
	Insect Exo-Skeletons	Micro-Turbellaria Cysts	Cladocera Ephippia	Ostracods Live/Cysts/ Carapaces	Copepods Live/Cysts	Number of Large Branchiopod Cysts: *Branchinecta* sp.	*Lepidurus packardi*	*Streptocephalus wootoni*	*Linderiella occidentalis*	*Lynceus brachyurus*	*Cyzicus californicus*	Hydracarina Live	Nematoda	Collembola	Other Species	
7-10 7-11 7-12																
7-13 7-14 7-15																
8-1 8-2																
8-3 8-4 8-5	✓															
8-6 8-7 8-8	✓															
8-9 8-10																
9-1 9-2 9-3	✓															
9-4 9-5 9-6	✓															
9-7 9-8 9-9	✓			✓												
9-10																
10-1 10-2	✓															
11-1 11-2 11-3	✓															
11-4 11-5 11-6	✓															
11-7 11-8 11-9	✓															

U.S. Fish and Wildlife Service – Data Sheet for Dry Season Sample Analysis for Listed Large Branchiopods

Project Information

Project Name: _____ Quad: _____
USFWS Project Number: _____ Township: _____
County: _____ Range: _____
Lat: _____ Section: _____
Long: _____

Biologist Information

Name of Person(s) Who Conducted the Following Tasks and Permit Number(s):
Soil Collection: Erik Lacoste
Soil Processing: Greg Mason 58962A-1
Soil Analysis/Cysts ID: Greg Mason 58962A-1
Soil Collection Date: 6/11/20

Pool/ Habitat/ Basin No.	Invertebrates Present (X)															Other Species	Comments
	Insect Exo-Skeletons	Micro-Turbellaria Cysts	Cladocera Ephippia	Ostracods Live/Cysts/ Carapaces	Copepods Live/Cysts	Number of Large Branchiopod Cysts: *Branchinecta* sp.	*Lepidurus packardi*	*Streptocephalus wootoni*	*Linderiella occidentalis*	*Lynceus brachyurus*	*Cyzicus californicus*	Hydracarina Live	Nematoda	Collembola		
11-10 11-11 11-12	✓																
12-1 12-2 12-3	✓ ✓ ✓																
12-4 12-5 12-6	✓																
12-7 10-8 12-9	✓ ✓																
12-10 12-11 12-12	✓ ✓																

(4)

APPENDIX K
Focused Coastal California Gnatcatcher Survey Summary Report

BUSBY
Biological Services

August 14, 2020

Ms. Stacey Love
Recovery Permits Coordinator
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

RE: 2020 Coastal California Gnatcatcher Survey Summary Report for the Proposed CarMax Auto Superstore Project, City of Oceanside, San Diego County, California

Ms. Love:

This letter report summarizes the results of the focused, protocol-level, presence/absence surveys for the federally listed threatened coastal California gnatcatcher (*Polioptila californica californica*) conducted during the 2020 breeding season for the proposed CarMax Auto Superstore project (project). Busby Biological Services, Inc. (BBS) was contracted by EnviroApplications, Inc. to conduct these surveys on behalf of Centerpoint Integrated Solutions to determine the presence/absence of coastal California gnatcatcher within and adjacent to the proposed project area.

BACKGROUND INFORMATION

A brief summary of the proposed project and coastal California gnatcatcher are provided in this section.

Proposed Project Location and Description

The 10.54-acre proposed project area occurs within the U.S. Geological Survey (USGS) San Luis Rey 7.5-minute quadrangle, in the City of Oceanside, California (USGS 1968; Attachment A: Figures 1 through 3). The proposed project site is situated on vacant and undeveloped Assessor's Parcel Number (APN) 168-012-42 and APN 168-012-43 (Attachment A: Figures 2 and 3). It is bordered to the north by State Route 78; to east by Thunder Drive, the California Department of Motor Vehicles (DMV), and residential development; to the south by Buena Vista Creek and Brookdale Senior Living facility; and to the west by the Tri-City Crossroads Shopping Center (Attachment 1: Figure 3). Plaza Drive separates the two parcels in the northwest portion of the proposed project area. Elevations within the proposed project area range from approximately 177 to 220 feet above mean sea level.

The section of Buena Vista Creek on the southern border of the proposed project area is part of the Buena Vista Creek Mitigation Area and is designated as USFWS Coastal California Gnatcatcher Critical Habitat (USFWS 2019). The dominant vegetation communities and land cover types within the proposed project area include disturbed, ruderal, southern riparian forest, disturbed Diegan coastal sage scrub, developed, and ornamental. Other vegetation communities present within the proposed project area in smaller proportions include iceplant and open water (Attachment 1: Figure 3).

The City of Oceanside is one of seven cities participating in the North County Multiple Habitat Conservation Plan (MHCP; SANDAG 2003), which is part of the Natural Community Conservation Planning (NCCP) program. Although the City of Oceanside currently has a draft City of Oceanside Subarea Plan (SAP; City of Oceanside 2010), implementing agreements with California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) have not been signed; therefore, the City of Oceanside is currently considered a non-NCCP participant.

The proposed project consists of the construction of a CarMax pre-owned automobile dealership, sales building with an attached presentation area, service building/area, and non-public carwash with associated access driveways, parking lots, and landscaped areas. In addition, a retaining wall will be required along the southern boundary of the property because of the exiting grades in that area.

Coastal California Gnatcatcher Species Information

The coastal California gnatcatcher is a small, blue-gray, non-migratory songbird that is a federally listed threatened species and a CDFW species of special concern. It has also been a focal species of regional planning and conservation efforts under the NCCP program. One of three subspecies of the California gnatcatcher (*Polioptila californica*), the coastal California gnatcatcher occurs on coastal slopes and foothills in southern Ventura County, Los Angeles County, Orange County, southwestern San Bernardino County, western Riverside County, and San Diego County; and northwestern Baja California, Mexico (Atwood 1990).

This species typically occurs from sea level to approximately 2,500 feet above mean sea level within coastal sage scrub habitat dominated by California sagebrush (*Artemisia californica*; Atwood 1990). Other plant species important for nesting and foraging of this subspecies include California buckwheat (*Eriogonum fasciculatum*), white sage (*Salvia apiana*), black sage (*Salvia mellifera*), coyote brush (*Baccharis pilularis*), and broom baccharis (*Baccharis sarothroides*). Chamise (*Adenostoma fasciculatum*) dominated habitats may also support breeding pairs, especially where coastal sage scrub occurs nearby or forms a component of the habitat (Bontrager 1991). The coastal California gnatcatcher breeding season

extends from mid-February through the end of August, with peak nesting activity occurring from mid-March through mid-May (Mock et al. 1990).

Primary threats to the coastal California gnatcatcher include habitat loss, fragmentation, and adverse modification from urban and agricultural development; wildfires; invasive non-native plants; grazing; nest predation; and brood parasitism by brown-headed cowbirds (*Molothrus ater*; Mock et al. 1990).

METHODS

The methods used to conduct the habitat assessment and focused, protocol-level least Bell's vireo surveys are presented in this section.

Habitat Assessment Methods

A qualified biologist conducted a focused habitat assessment for coastal California gnatcatcher within the proposed project area and a 300-foot buffer of all proposed project features. The habitat assessment was conducted by assessing the vegetation communities, and parameters such as species composition, height, density, and disturbance type and amount, for their potential to support the coastal California gnatcatcher. Polygons of suitable coastal California gnatcatcher habitat were drawn by hand onto a high-resolution aerial field map, which were later screen-digitized in the office by a Geographic Information Systems (GIS) specialist using ArcGIS software.

Focused Survey Methods

Because the proposed project is located in the City of Oceanside, currently a non-NCCP participant, a total of six focused, protocol-level coastal California gnatcatcher survey rounds, spaced at least 1 week apart, were conducted by USFWS-permitted BBS biologists Darin Busby (TE-115373-4) and Charles Vettes (TE-20160B-2). All surveys were conducted in accordance with the current USFWS survey protocol for the species, titled *Coastal California Gnatcatcher* (Polioptila californica californica) *Presence/Absence Survey Guidelines* and dated February 28, 1997 (USFWS 1997). The survey area consists of all suitable habitat within the proposed project area and within a 300-foot survey buffer around the proposed project area.

The coastal California gnatcatcher surveys were conducted between 0600 and 1200 and avoided periods of adverse weather conditions (e.g., excessively hot or cold temperatures, high winds, steady rain, dense fog, other inclement weather conditions) that would impede detection of the coastal California gnatcatcher. Surveys were conducted by slowly walking throughout all suitable habitat within the survey area, visually searching with binoculars, and using auditory cues to detect the coastal California gnatcatcher. Various routes were utilized to conduct an unbiased survey of the suitable habitat within the survey area. Pre-recorded coastal

California gnatcatcher vocalization playbacks were only used to elicit initial calls from coastal California gnatcatcher and were not used frequently or to elicit further behaviors. Pre-recorded vocalizations were played for periods of 5 to 15 seconds and were generally repeated approximately every 100 feet within the surveyed habitat.

Sensitive species detections, including coastal California gnatcatcher detections, were recorded electronically using a hand-held Global Positioning System (GPS) device and by hand onto a high-resolution aerial image of the survey area. In addition, relevant information about the detections (e.g., age, sex, number of individuals detected) was noted when necessary. Other wildlife species observed directly or detected indirectly by sign (e.g., scat, tracks, calls, and other evidence) also were recorded.

RESULTS

The results of the habitat assessment and focused, protocol-level coastal California gnatcatcher surveys are presented in this section.

Habitat Assessment Results

BBS biologist Darin Busby identified a total of approximately 0.57 acre of potentially suitable coastal California gnatcatcher within the proposed project footprint and 300-foot survey buffer during the habitat assessment conducted on July 22, 2019 (Attachment 1: Figure 3). The potentially suitable coastal California gnatcatcher includes disturbed Diegan coastal sage scrub. The disturbed Diegan coastal sage scrub within the survey area provides low to moderate quality habitat for coastal California gnatcatcher. This habitat is characterized by having an open canopy with low to moderately-dense shrub cover that ranges in shrub height from approximately 1 to 4 feet and is dominated by California sagebrush, coastal goldenbush (*Isocoma menziessi*) and black sage (Attachment 1; Figure 3).

Focused Survey Results

BBS biologists Mr. Busby (TE-115373-4) and Mr. Vettes (TE-20160B-2) conducted six focused, protocol-level coastal California gnatcatcher surveys between May 7 and June 12, 2020. Surveys were conducted during appropriate weather conditions. No coastal California gnatcatchers were detected during any of the six survey rounds. Table 1 below provides a summary of survey dates, times, weather, conditions, and surveyors.

Table 1. Coastal California Gnatcatcher Survey Conditions

Survey Round	Date	Time	Weather				Surveyors
			Temp (°F)	Wind (mph)	Clouds (%)	Precip.	
1	5/07/20	0905-1005	64-72	0-3	0-35	0	Charles Vettes
2	5/14/20	0745-0845	64-65	0-3	100-100	0	Darin Busby
3	5/21/20	1015-1115	70-72	4-8	0-0	0	Darin Busby
4	5/28/20	0745-0845	65-67	0-1	100-50	0	Darin Busby
5	6/04/20	0745-0845	64-65	0-3	100-100	0	Darin Busby
6	6/12/20	0710-0810	62-65	1-4	100-40	0	Charles Vettes

A total of 37 wildlife species were detected during the focused surveys (Attachment 2). Although coastal California gnatcatcher was not detected during the focused, protocol-level surveys, an incidental coastal California gnatcatcher pair was observed in the southwest corner of the proposed project area by Mr. Busby during a wetland delineation on August 19, 2019. In addition, yellow warbler (*Setophaga petechia*), a CDFW species of special concern and Cooper's hawk (*Accipiter cooperii*) a CDFW watch list species were detected during surveys (Attachment 1; Figure 3). It should be noted that the locations of yellow warblers in Attachment 1: Figure 3 may reflect repeated detections of the same individuals from one survey to the next and are not intended to represent the quantity of individuals present.

SUMMARY

During the 2020 focused, protocol-level coastal California gnatcatcher surveys, no gnatcatcher individuals were detected within the survey area. Based on the data collected during the surveys, there are no coastal California gnatcatcher individuals or pairs located within the survey area. The observation of an incidental pair in 2019 suggests this parcel of land may serve as a corridor to the coastal California gnatcatcher and other migratory bird species, providing foraging but not breeding habitat for the coastal California gnatcatcher.

Please do not hesitate to contact Darin Busby at darin@busbybiological.com or 858.334.9508 if you have any questions.

Sincerely,

Darin Busby
Principal Biologist

ATTACHMENTS

Attachment 1: Figures
Attachment 2: Wildlife Species Detected within the Proposed Project Survey Area

PROJECT BIOLOGIST SIGNATURE PAGE

All biologists performing focused, protocol-level, coastal California gnatcatcher surveys for the proposed CarMax Auto Superstore project were permitted to survey for this species under Section10(a)(1)(A) of the Endangered Species Act (ESA). The undersigned project biologists certify this report to be a complete and accurate account of the findings and conclusions of surveys for coastal California gnatcatcher.

Darin Busby
Owner/Principal Biologist
Busby Biological Services, Inc.
ESA Permit Number TE-115373-4

Charles Vettes
Wildlife Biologist
Busby Biological Services, Inc.
ESA Permit Number TE-20160B-2

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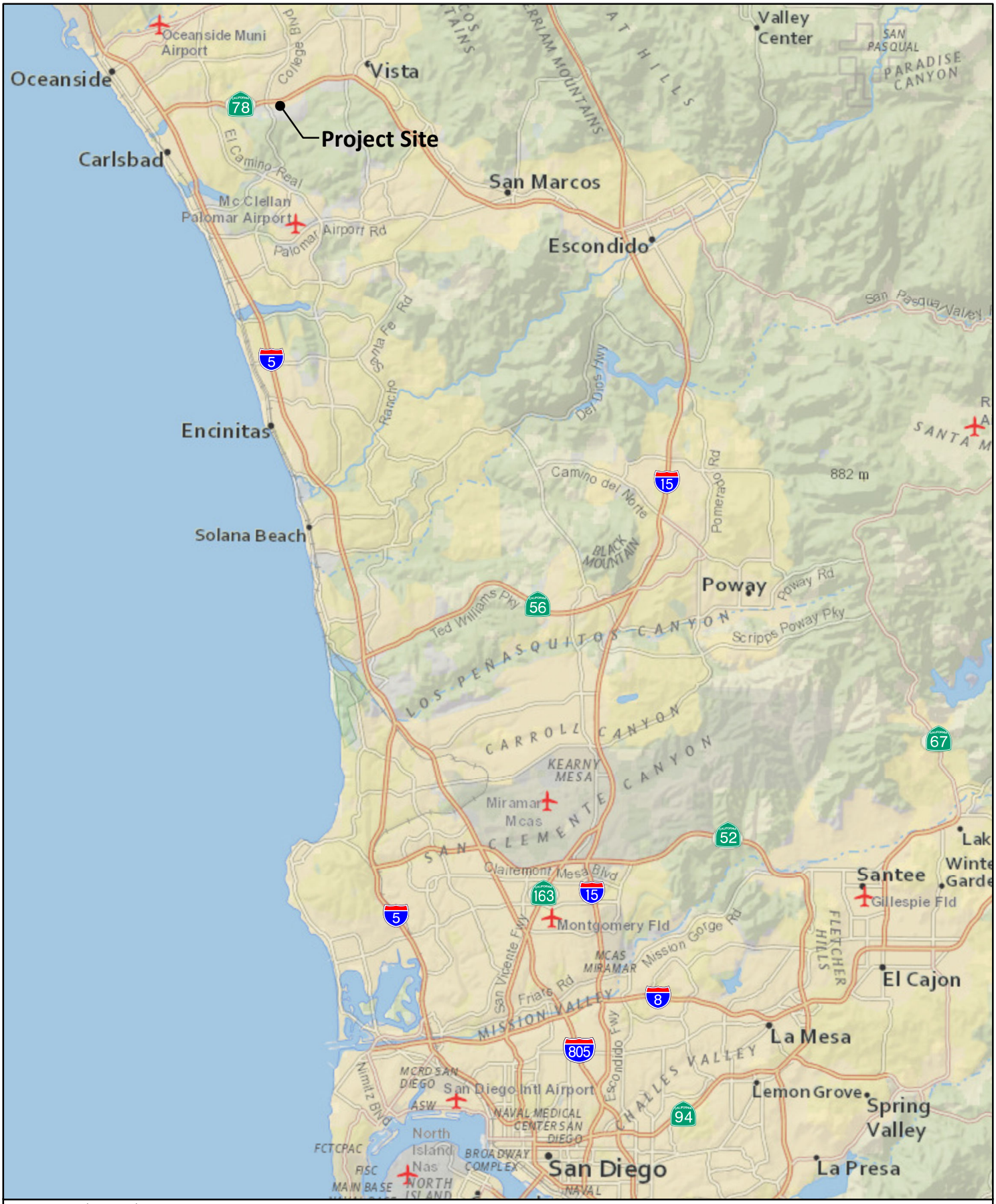
ATTACHMENT 1
Figures



Source: National Geographic, Esri

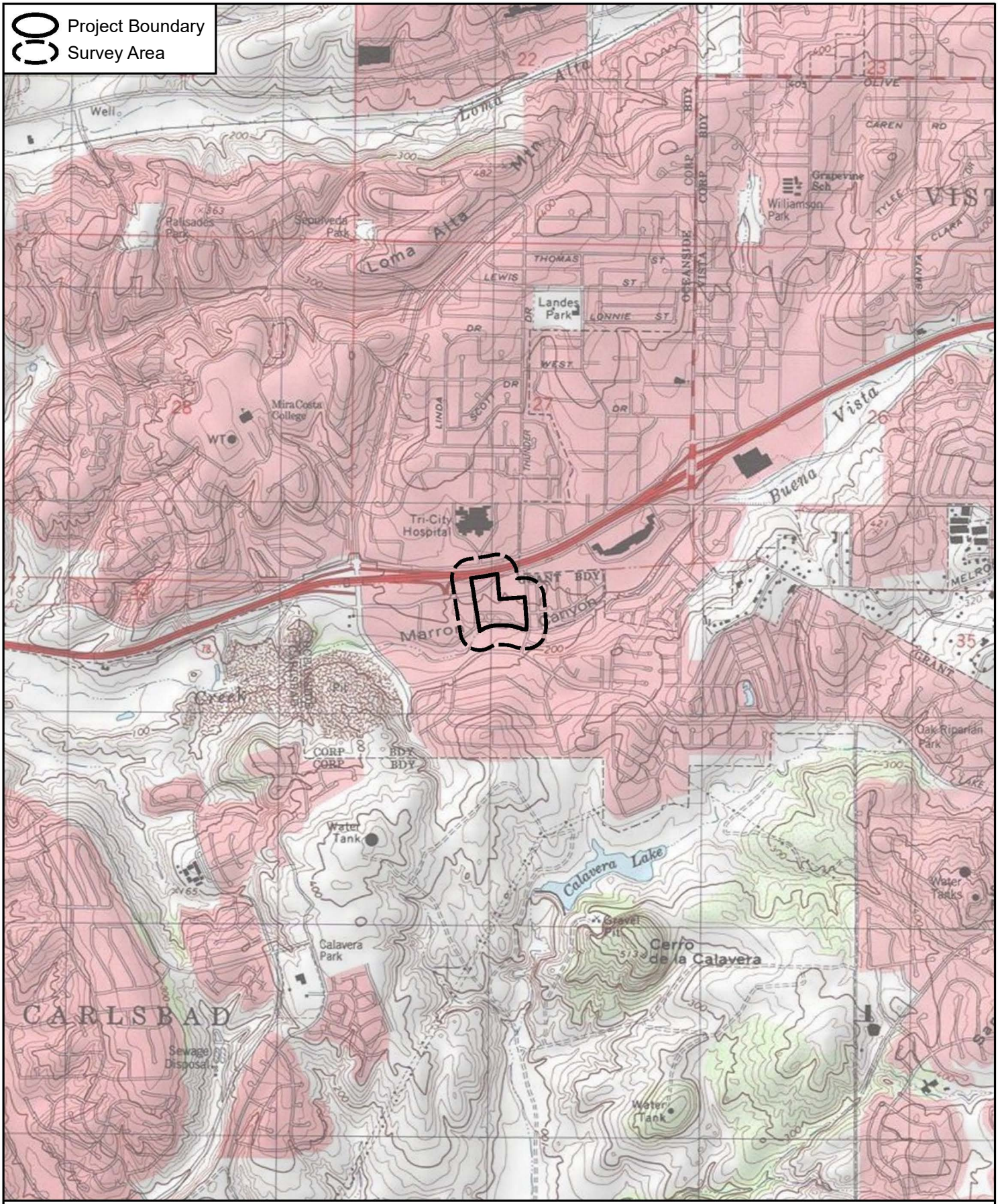
BUSBY Biological Services

N 0 2 4 Miles

Regional Location

CARMAX OCEANSIDE

Figure 1



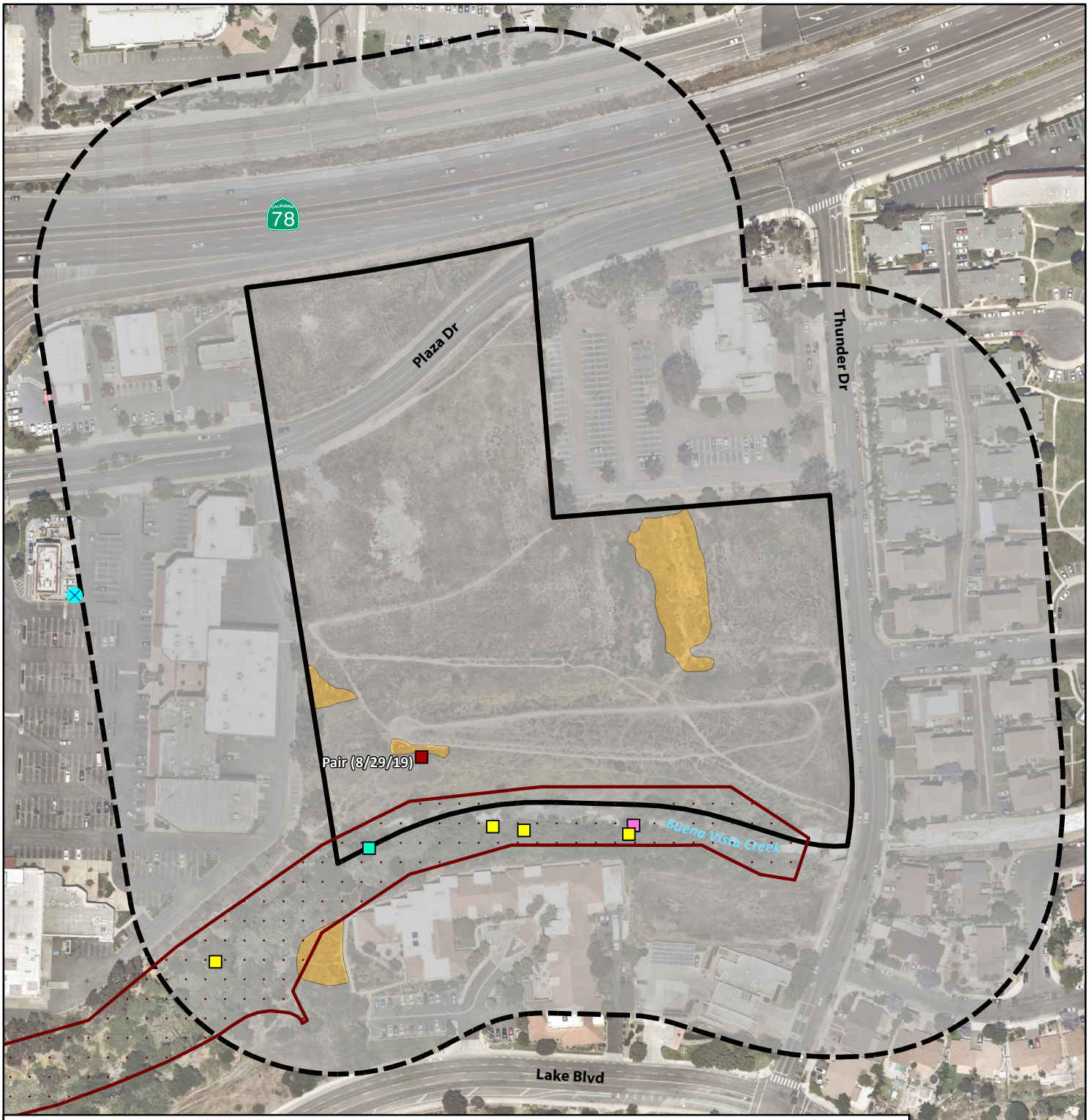
Source: USGS 7.5' Quadrangles (San Luis Rey)

BUSBY Biological Services

Project Vicinity - USGS Topo

CARMAX OCEANSIDE

Figure 2



Project Boundary
Survey Area
Buena Vista Creek Mitigation Area/
Coastal California Gnatcatcher Critical Habitat

CAGN Habitat

Disturbed Diegan Coastal Sage Scrub
Excluded Habitat

CAGN Survey Results

Coastal California Gnatcatcher (*Polioptila californica californica*)
Brown-headed Cowbird (*Molothrus ater*)
Cooper's Hawk (*Accipiter cooperii*)
Yellow Warbler (*Setophaga petechia*)

Source: Nearmap 2020

BUSBY Biological Services

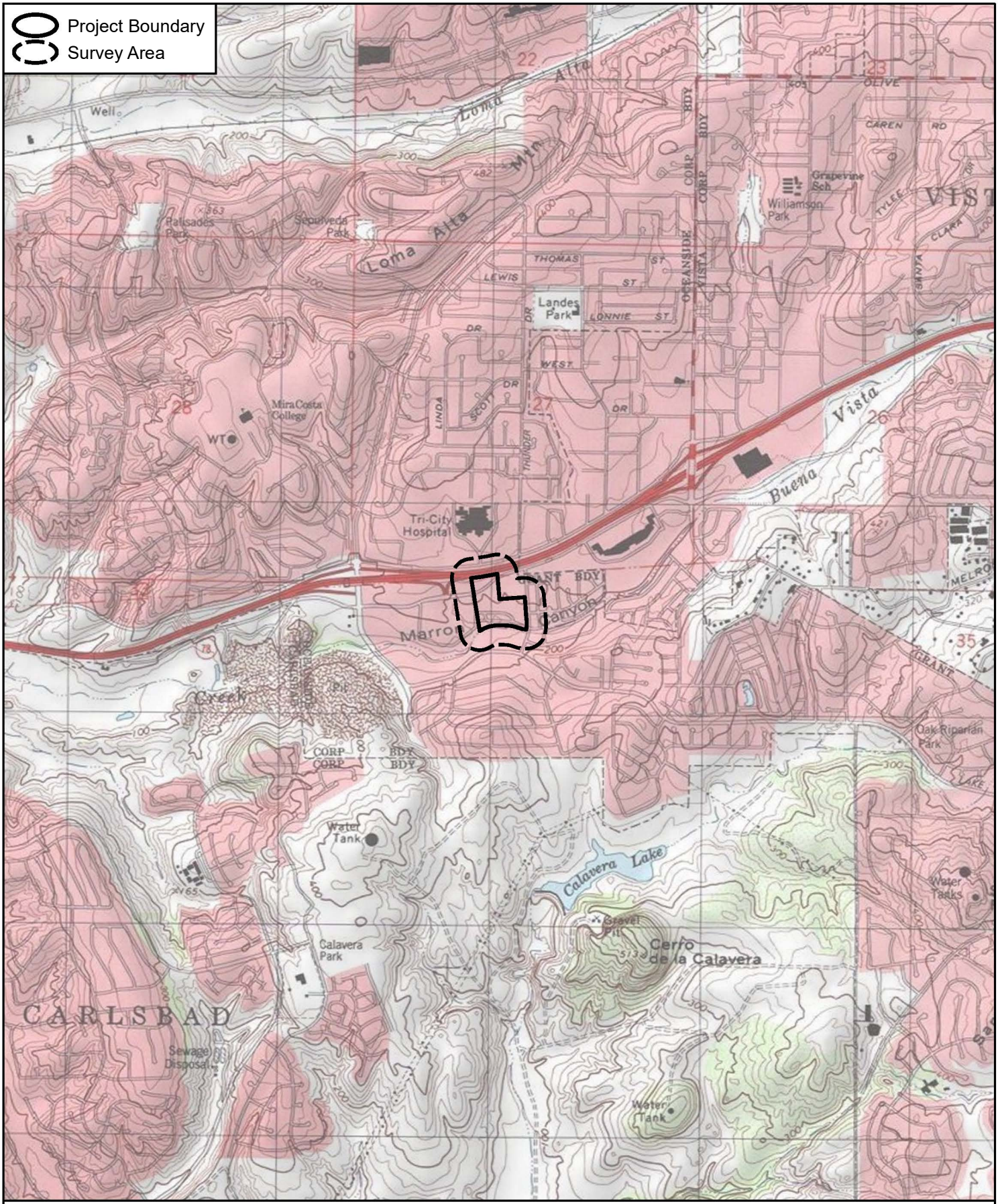
N

0 100 200 Feet

Coastal California Gnatcatcher Survey Results

CARMAX OCEANSIDE

Figure 3



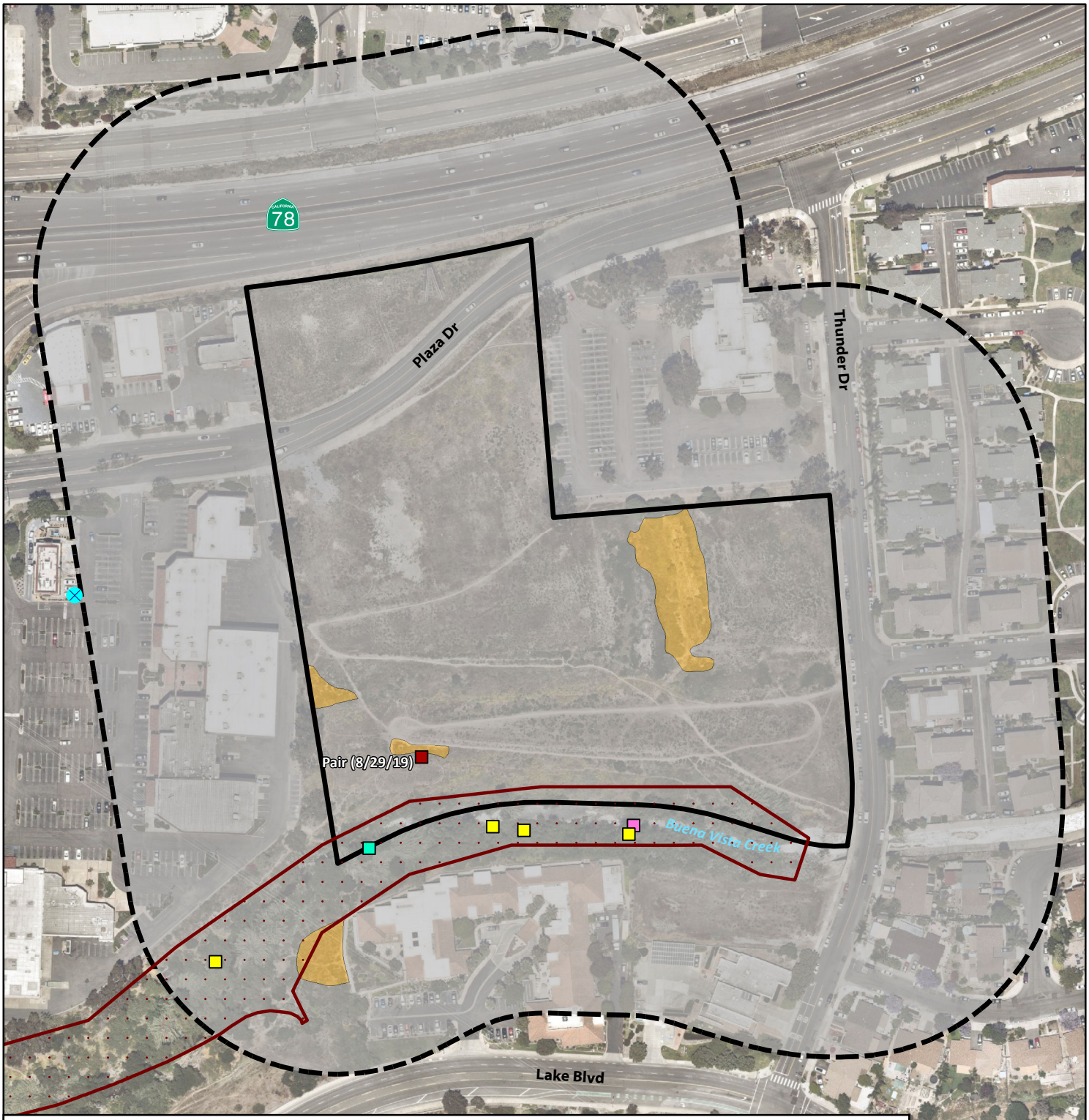
Source: USGS 7.5' Quadrangles (San Luis Rey)

BUSBY Biological Services

Project Vicinity - USGS Topo

CARMAX OCEANSIDE

Figure 2



Project Boundary
Survey Area
Buena Vista Creek Mitigation Area/
Coastal California Gnatcatcher Critical Habitat

CAGN Habitat

Disturbed Diegan Coastal Sage Scrub
Excluded Habitat

CAGN Survey Results

Coastal California Gnatcatcher (*Polioptila californica californica*)
Brown-headed Cowbird (*Molothrus ater*)
Cooper's Hawk (*Accipiter cooperii*)
Yellow Warbler (*Setophaga petechia*)

Source: Nearmap 2020

Coastal California Gnatcatcher Survey Results

CARMAX OCEANSIDE

BUSBY Biological Services

N

0 100 200 Feet

Figure 3

ATTACHMENT 2
Wildlife Species Observed within the Proposed Project Survey Area

ATTACHMENT 2
Wildlife Species Detected within the Proposed Project Survey Area

Scientific Name	Common Name
Invertebrates	
Junonia coenia	common buckeye
Birds	
*Accipiter cooperii**	Cooper's hawk
Buteo jamaicensis	red-tailed hawk
Anas platyrhynchos	mallard
Calypte anna	Anna's hummingbird
Calypte costae	Costa's hummingbird
Selasphorus sasin	Allen's hummingbird
Charadrius vociferus	killdeer
Columba livia	rock pigeon
Zenaida macroura	mourning dove
Fulica americana	American coot
Psaltriparus minimus	bushtit
Pheucticus melanocephalus	black-headed grosbeak
Aphelocoma californica	California scrub-Jay
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Haemorhous mexicanus	house finch
Spinus psaltria	lesser goldfinch
Petrochelidon pyrrhonota	cliff swallow
Stelgidopteryx serripennis	northern rough-winged swallow
Icterus cucullatus	hooded oriole
Molothrus ater	brown-headed cowbird
Mimus polyglottos	northern mockingbird
Geothlypis trichas	common yellowthroat
Vermivora celata	orange-crowned warbler
*Setophaga petechia**	yellow warbler
Melospiza melodia	song sparrow
Melozone crissalis	California towhee
*Polioptila californica californica**	coastal California gnatcatcher
Sturnus vulgaris	European starling
Thryomanes bewickii	Bewick's wren
Sialia mexicana	western bluebird
Empidonax difficilis	Pacific-slope flycatcher
Sayornis nigricans	black phoebe
Tyrannus vociferans	Cassin's kingbird
Dryobates nuttallii	Nuttall's woodpecker
Mammals	
Sylvilagus bachmani	brush rabbit

* Sensitive Species

APPENDIX L
Focused Least Bell's Vireo Survey Summary Report

BUSBY
Biological Services

August 14, 2020

Ms. Stacey Love
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

RE: 2020 Least Bell's Vireo Survey Summary Report for the Proposed CarMax Auto Superstore Project, City of Oceanside, San Diego County, California

Ms. Love:

This letter report summarizes the results of the focused, protocol-level, presence/absence surveys for the federally and state-listed endangered least Bell's vireo (*Vireo bellii pusillus*) conducted in 2020 for the proposed CarMax Auto Superstore project (project). Busby Biological Services, Inc. (BBS) was contracted by EnviroApplications, Inc. to conduct these surveys on behalf of Centerpoint Integrated Solutions to determine the presence/absence of least Bell's vireo within and adjacent to the proposed project area.

BACKGROUND INFORMATION

A brief summary of the proposed project and least Bell's vireo are provided in this section.

Proposed Project Location and Description

The proposed project consists of the construction of a CarMax pre-owned automobile dealership, sales building with an attached presentation area, service building/area, and non-public carwash with associated access driveways, parking lots, and landscaped areas. In addition, a retaining wall will be required along the southern boundary of the property because of the exiting grades in that area.

The 10.54-acre proposed project area occurs within the U.S. Geological Survey (USGS) San Luis Rey 7.5-minute quadrangle, in the City of Oceanside, California (USGS 1968; Attachment A: Figures 1 through 3). The proposed project site is situated on vacant and undeveloped Assessor's Parcel Number (APN) 168-012-42 and APN 168-012-43 (Attachment A: Figures 2 and 3). It is bordered to the north by State Route 78; to east by Thunder Drive, the California Department of Motor Vehicles (DMV), and residential development; to the south by Buena Vista Creek and Brookdale Senior Living facility; and to the west by the Tri-City Crossroads

Shopping Center (Attachment 1: Figure 3). Plaza Drive separates the two parcels in the northwest portion of the proposed project area. Elevations within the proposed project area range from approximately 177 to 220 feet above mean sea level.

The dominant vegetation communities and land cover types within the proposed project area include disturbed, ruderal, southern riparian forest, disturbed Diegan coastal sage scrub, developed and ornamental. Other vegetation communities present within the proposed project area in smaller proportions include iceplant and open water (Attachment 1: Figure 3). The section of Buena Vista Creek on the southern border of the proposed project area is part of the Buena Vista Creek Mitigation Area.

Least Bell's Vireo Species Information

The least Bell's vireo is a small, olive-gray colored, migratory songbird that is federally and state-listed as endangered. One of four subspecies of Bell's vireo, the least Bell's vireo is endemic to California and Baja California, Mexico. This highly migratory species arrives in California in mid-March and departs by late September to fly south to wintering grounds near the tip of Baja California, Mexico. This species formally bred in lowland riparian habitat ranging from coastal Southern California through the Sacramento and San Joaquin Valleys as far north as Redbluff, and other scattered locations east of the Sierra Nevada (U.S. Fish and Wildlife Service [USFWS] 1998; Grinnell and Miller 1986).

The least Bell's vireo is dependent upon riparian habitat during the breeding season and prefers willow-dominated woodland or scrub that typically exists along streams and rivers. Other habitat types used include *Baccharis* scrub, mixed oak/willow woodland, mesquite woodland, and elderberry scrub. Habitat characteristics that appear to be essential for vireo occupation include dense cover from 3 to 6 feet in height for nesting and foraging, and a stratified canopy providing both foraging habitat and song perches for territorial advertisement.

By the time least Bell's vireo was listed by the California Department of Fish and Wildlife (CDFW) in 1984, it had been extirpated from much of its former range and was restricted to eight counties south from Santa Barbara, with just 300 pairs statewide (Unitt 2004). Declines were caused by widespread clearing of riparian habitat combined with brood parasitism by brown-headed cowbirds (*Molothrus ater*), whose increase in California was as dramatic as the species' decline. Currently, with restriction of habitat destruction, extensive cowbird trapping, and protection from the federal and state Endangered Species Acts, populations have recovered in some areas of cismontane southern California. Populations are expanding into former ranges, with the northernmost sighting from Santa Clara County, California (Brown 1993, Kus 2002). San Diego County holds the largest breeding population of least Bell's vireo in the state, where it is a fairly common breeder in appropriate habitats, primarily in the coastal lowlands (Unitt 2004).

METHODS

The methods used to conduct the habitat assessment and focused, protocol-level least Bell's vireo surveys are presented in this section.

Habitat Assessment Methods

A qualified biologist conducted a focused habitat assessment for least Bell's vireo within the proposed project area and a 500-foot buffer of all proposed project features. The habitat assessment was conducted by assessing the vegetation communities, and parameters such as species composition, height, density, and disturbance type and amount, for their potential to support the least Bell's vireo. Polygons of suitable least Bell's vireo habitat were drawn by hand onto a high-resolution aerial field map, which were later screen-digitized in the office by a Geographic Information Systems (GIS) specialist using ArcGIS software.

Focused Survey Methods

Qualified BBS biologists conducted focused, protocol-level surveys for the least Bell's vireo in accordance with the current USFWS survey protocol, titled *Least Bell's Vireo Survey Guidelines* (USFWS 2001). Eight surveys were conducted at least 10 days apart during the protocol survey window of April 10 to July 31. All surveys were conducted between approximately dawn and 1100 and avoided periods of adverse weather conditions (e.g., excessively hot or cold temperatures, high winds, steady rain, dense fog, and other inclement weather conditions) that would impede detection of the least Bell's vireo. Surveyors slowly walked throughout the suitable habitat within the survey area and used visual and auditory cues to detect the least Bell's vireo. Various routes were utilized to conduct an unbiased survey of the potentially suitable habitat within the survey area, while taking care not to disturb sensitive habitat or potential nest areas. No more than approximately 3 linear kilometers (50 hectares) of suitable habitat was surveyed per day, per the protocol.

Sensitive species detections were recorded electronically using a hand-held Global Positioning Systems (GPS) device and/or by hand onto a high-resolution aerial image of the survey area, and relevant information (e.g., age, sex, number of individuals detected) was noted if least Bell's vireo were detected. In addition, numbers and locations of parasitic brown-headed cowbirds were recorded, if present, and other wildlife species observed directly or detected indirectly by sign, including scat, tracks, calls, and other evidence were recorded.

RESULTS

The results of the habitat assessment and focused, protocol-level least Bell's vireo surveys are presented in this section.

Habitat Assessment Results

BBS biologist Darin Busby identified a total of approximately 2.83 acres of potentially suitable least Bell's vireo habitat within the proposed project footprint and 500-foot survey buffer during the habitat assessment conducted on July 22, 2019 (Attachment 1: Figure 3). The potentially suitable least Bell's vireo habitat within the survey area is dominated by southern riparian forest within Buena Vista Creek (Attachment A: Figure 3). This vegetation community contains a moderately dense canopy, primarily ranging in height from 15 to 20 feet, and is dominated by native plant species such as narrow-leaf willow (*Salix exigua*), arroyo willow (*Salix lasiolepis*), mulefat (*Baccharis salicifolia*), cattail (*Typha* sp.), wild grape (*Vitis girdiana*), but also contains non-native plant species such as Brazilian pepper tree (*Schinus terebinthifolius*), giant reed (*Arundo donax*), and castor bean (*Ricinus communis*).

Focused Survey Results

BBS biologists Charles Vettes, Darin Busby, and Erik LaCoste conducted eight focused, protocol-level surveys between May 7 and July 29, 2020. Surveys were conducted during appropriate weather conditions. Dates and survey conditions during the focused surveys are provided in Table 1, below.

Table 1. Survey Conditions

Survey #	Date	Time		Weather				Surveyor
				Temp (°F)	Wind (mph)	Clouds (% cover)	Precipitation	
1	5/7/20	Start	0705	62	0-2	0	0	C. Vettes
		End	0905	68	1-3	15	0	
2	5/21/20	Start	0845	68	1-3	10	0	D. Busby
		End	1015	70	3-5	0	0	
3	6/4/20	Start	0615	62	0-1	100	0	D. Busby
		End	0745	64	0-1	100	0	
4	6/15/20	Start	0815	65	1-2	100	0	C. Vettes
		End	0930	66	2-4	100	0	
5	6/26/20	Start	0905	64	4-7	100	0	C. Vettes
		End	1005	66	1-3	100	0	
6	7/7/20	Start	0845	68	2-3	10	0	C. Vettes
		End	0945	71	2-4	0	0	
7	7/17/20	Start	0815	68	1-2	100	0	C. Vettes
		End	0915	70	1-2	100	0	
8	7/29/20	Start	0810	64	0-1	100	0	E. LaCoste
		End	0930	67	0-1	10	0	

No breeding least Bell's vireo were detected during the 2020 focused, protocol-level surveys. However, a single least Bell's vireo was detected during the eighth and final survey on July 29, 2020. The least Bell's vireo was detected within the 500-foot buffer area southwest of the proposed project area. The individual least Bell's vireo, which appeared to be an adult, was observed foraging for approximately 15

minutes. After the relatively short observation time, the individual least Bell's vireo disappeared downstream towards the west and was not detected again during the survey. Habitat downstream consists of southern riparian forest and is connected to similar habitat to that found in the survey area. It is likely that this individual least Bell's vireo was breeding outside the survey area and was only using the survey area as adjacent foraging habitat during this final survey. No other least Bell's vireos were detected at any other time during surveys.

A total of 39 bird species were detected during the focused least Bell's vireo surveys (Attachment 2). Two sensitive species – yellow warbler (*Dendroica petechia*), a CDFW species of special concern, and Cooper's hawk (*Accipiter cooperii*), a CDFW watch list species – were detected during these surveys (Attachment 1: Figure 3). It should be noted that the locations of yellow warblers in Attachment 1: Figure 3 may reflect repeated detections of the same individuals from one survey to the next and are not intended to represent the quantity of individuals present.

SUMMARY

A single least Bell's vireo was detected foraging within the survey area during the final survey conducted on July 29, 2020. No breeding least Bell's vireo were detected within the survey area during the focused, protocol-level surveys conducted for the species during the 2020 breeding season.

Please do not hesitate to contact Darin Busby at darin@busbybiological.com or 858.334.9508 if you have any questions.

Sincerely,

Darin Busby
Principal Biologist

ATTACHMENTS

Attachment 1: Figures
Attachment 2: Wildlife Species Detected within the Proposed Project Survey Area

REFERENCES

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U.S. Geological Survey (USGS)
1968a 7.5-minute San Luis Rey Topographic Quadrangle (Photorevised 1975)

PROJECT BIOLOGIST SIGNATURE PAGE

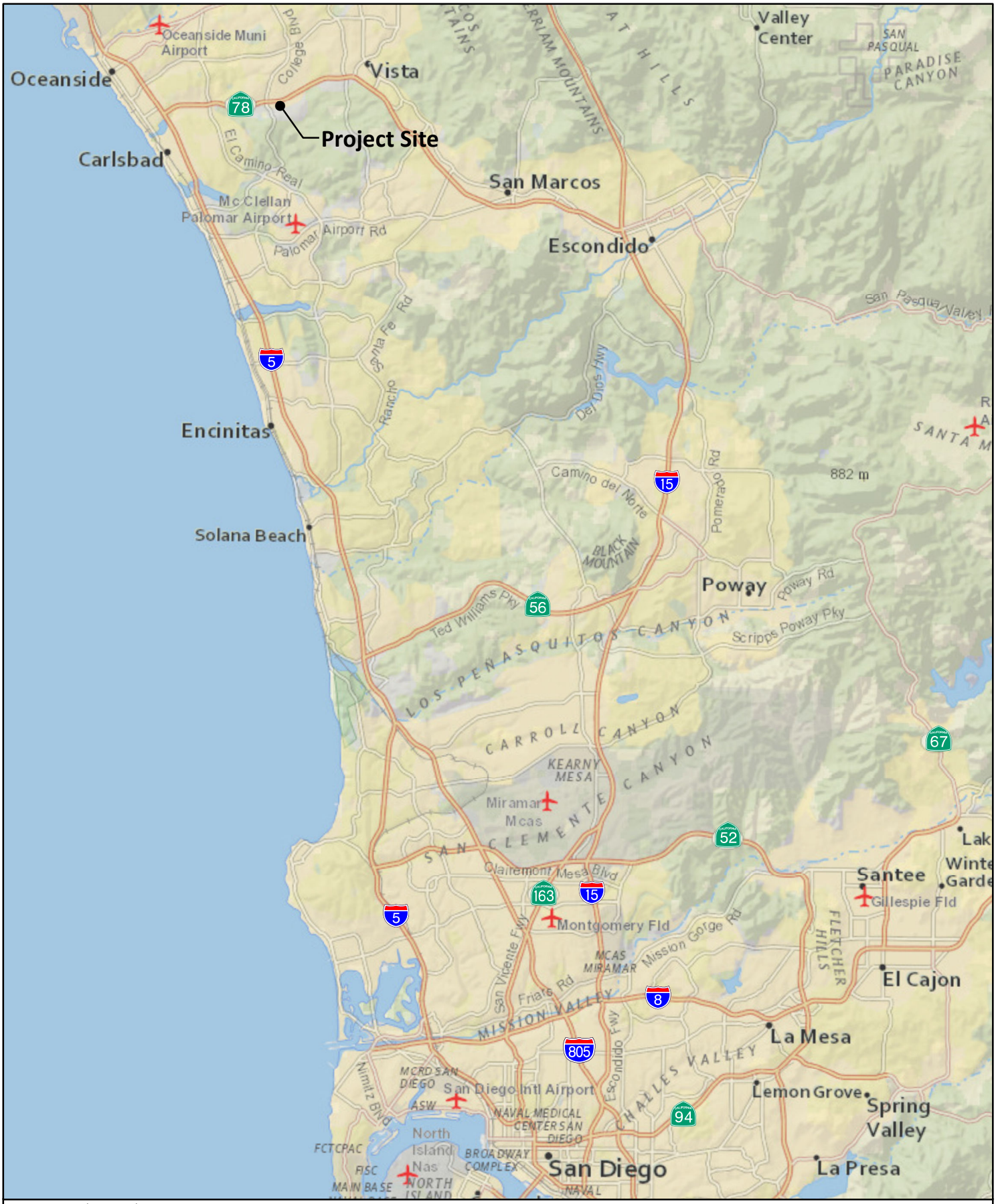
The project biologists performing focused, protocol-level, least Bell's vireo (*Vireo bellii pusillus*) surveys for the proposed CarMax Auto Superstore project were qualified to survey for this species. The undersigned project biologists certify this report to be a complete and accurate account of the findings and conclusions of surveys for least Bell's vireo conducted for the project during spring 2020.

Darin Busby
Principal Biologist / Owner
Busby Biological Services, Inc.

Erik LaCoste
Senior Biologist
Busby Biological Services, Inc.

Charles Vettes
Senior Biologist
Busby Biological Services, Inc.

ATTACHMENT 1
Figures



Source: National Geographic, Esri

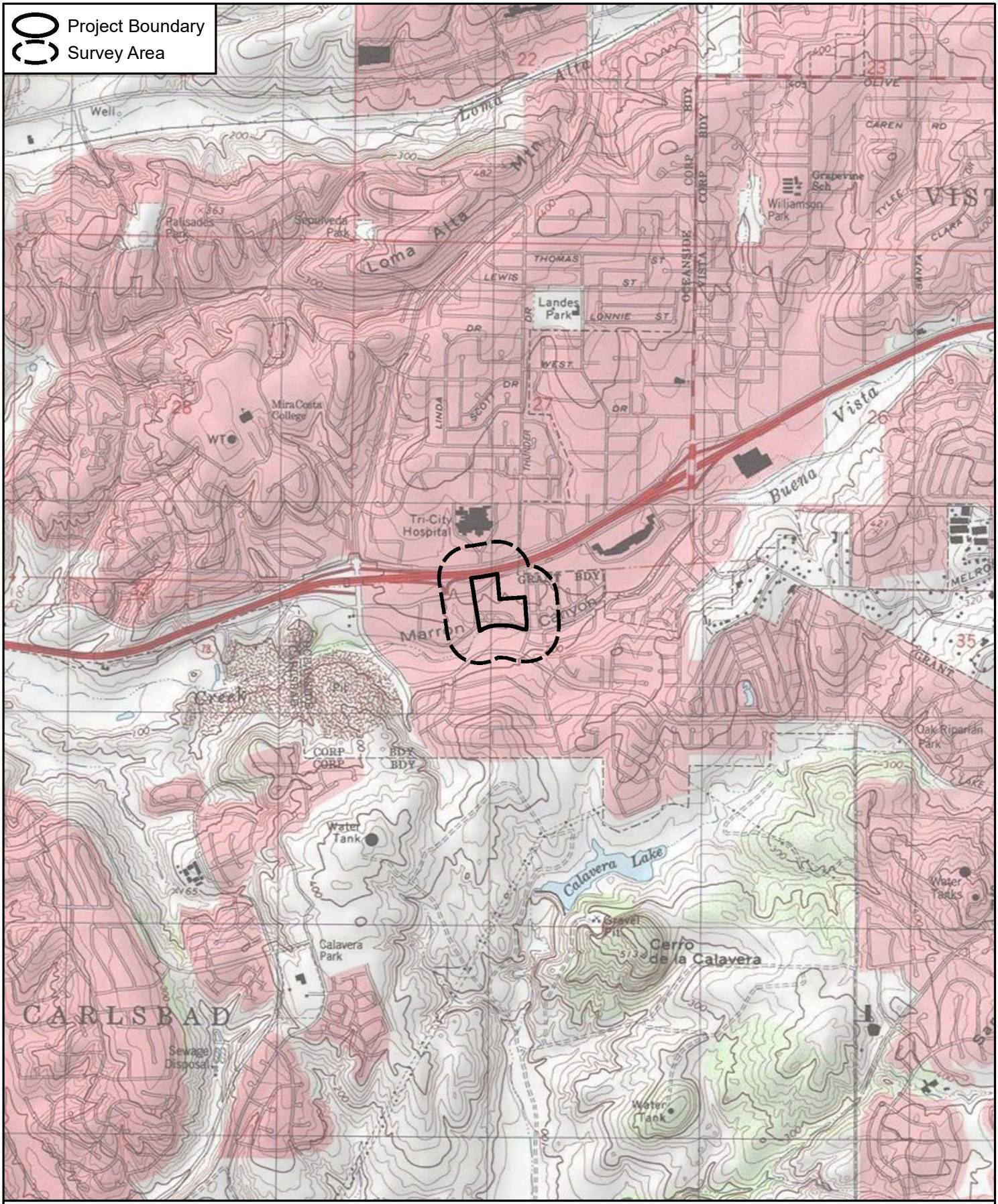
BUSBY Biological Services

N 0 2 4 Miles

Regional Location

CARMAX OCEANSIDE

Figure 1



Source: USGS 7.5' Quadrangles (San Luis Rey)

Project Vicinity - USGS Topo

CARMAX OCEANSIDE

Figure 2

BUSBY Biological Services

N

0 1,000 2,000 Feet

Project Boundary
Survey Area
Least Bell's Vireo Suitable Habitat

LBVI Survey Results

- Least Bell's Vireo (*Vireo bellii pusillus*)
- Brown-headed Cowbird (*Molothrus ater*)
- Cooper's Hawk (*Accipiter cooperii*)
- Yellow Warbler (*Setophaga petechia*)

Source: Nearmap 2020

BUSBY Biological Services

N

0 125 250 Feet

Least Bell's Vireo Survey Results

CARMAX OCEANSIDE

Figure 3

ATTACHMENT 2
Wildlife Species Detected within the Proposed Project Survey Area

ATTACHMENT 2
Wildlife Species Detected within the Proposed Project Survey Area

VERTEBRATES			
Order	**Family**	**Scientific Name**	**Common Name**
BIRDS			
Accipitriformes			
	Accipitridae	*Accipiter cooperii**	Cooper's Hawk
		Buteo jamaicensis	Red-tailed Hawk
Anseriformes			
	Anatidae	*Anas platyrhynchos*	Mallard
Apodiformes			
	Trochilidae	*Calypte anna*	Anna's Hummingbird
		Calypte costae	Costa's Hummingbird
		Selasphorus sasin	Allen's Hummingbird
Charadriiformes			
	Charadriidae	*Charadrius vociferus*	Killdeer
Columbiformes			
	Columbidae	*Columba livia*	Rock Pigeon
		Streptopelia decaocto	Eurasian Collared-Dove
		Zenaida macroura	Mourning Dove
Gruiformes			
	Rallidae	*Fulica americana*	American Coot
Passeriformes			
	Aegithalidae	*Psaltriparus minimus*	Bushtit
	Cardinalidae	*Pheucticus melanocephalus*	Black-headed Grosbeak
	Corvidae	*Aphelocoma californica*	California Scrub-Jay
	Corvidae	*Corvus brachyrhynchos*	American Crow
		Corvus corax	Common Raven
	Estrildidae	*Lonchura punctulata*	Scaly-breasted Munia
	Fringillidae	*Haemorhous mexicanus*	House Finch
		Spinus psaltria	Lesser Goldfinch
	Hirundinidae	*Stelgidopteryx serripennis*	Northern Rough-winged Swallow
	Icteridae	*Icterus cucullatus*	Hooded Oriole
		Molothrus ater	Brown-headed Cowbird
	Mimidae	*Mimus polyglottos*	Northern Mockingbird
	Parulidae	*Geothlypis trichas*	Common Yellowthroat
		Leiothlypis celata	Orange-crowned Warbler
		*Setophaga petechia**	Yellow Warbler
	Passerellidae	*Melospiza melodia*	Song Sparrow
		Melozone crissalis	California Towhee
	Sturnidae	*Sturnus vulgaris*	European Starling
	Sylviidae	*Chamaea fasciata*	Wrentit
	Troglodytidae	*Thryomanes bewickii*	Bewick's Wren
	Turdidae	*Sialia mexicana*	Western Bluebird
	Tyrannidae	*Empidonax difficilis*	Pacific-slope Flycatcher
		Sayornis nigricans	Black Phoebe
		Tyrannus verticalis	Western Kingbird
		Tyrannus vociferans	Cassin's Kingbird
	Vireonidae	*Vireo bellii pusillus**	Least Bell's Vireo
Pelecaniformes			
	Ardeidae	*Butorides virescens*	Green Heron
Piciformes			
	Picidae	*Dryobates nuttallii*	Nuttall's Woodpecker

*special status species

APPENDIX M
Jurisdictional Delineation Report

JURISDICTIONAL DELINEATION REPORT
PROPOSED CARMAX AUTO SUPERSTORE PROJECT
CITY OF OCEANSIDE, SAN DIEGO COUNTY, CALIFORNIA

Prepared for:

EnviroApplications, Inc.
2831 Camino del Rio South, Suite 214
San Diego, CA 92108
Contact: Megan Hill
619-291-3636

Prepared by:

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San Diego, California 92109
Contact: Melissa Busby
858-334-9507

September 27, 2019

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EXECUTIVE SUMMARY

This jurisdictional delineation report identifies the extent of U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) potentially jurisdictional resources that were observed and mapped during the focused jurisdictional delineation conducted for the proposed CarMax Auto Superstore Project in Oceanside, California, on August 29, 2019. The survey area is approximately 14.915 acres, which consists of the approximately 10.981-acre proposed project area and an approximately 3.935-acre, 50-foot survey buffer surrounding the proposed project area.

Potential USACE jurisdiction within the survey area totals approximately 0.700 acre, composed of approximately 0.646 acre of wetland waters of the U.S. (WoUS) and approximately 0.054 acre of non-wetland WoUS. The potential USACE wetland WoUS include the southern riparian forest along the majority of the portion Buena Vista Creek within the survey area, and the potential USACE non-wetland WoUS include open water within Buena Vista Creek at the eastern end of the survey area.

Potential RWQCB jurisdiction extends to all potential USACE WoUS within the survey area, which includes a total of approximately 0.700 acre, composed of approximately 0.646 acre of wetland waters of the State (WoS) and approximately 0.054 acre of non-wetland WoS. The potential RWQCB wetland WoS include the southern riparian forest along the majority of the portion of Buena Vista Creek within the survey area, and the potential RWQCB non-wetlands WoS include open water within Buena Vista Creek at the eastern end of the survey area.

Potential CDFW jurisdiction within the survey area totals approximately 1.508 acres, composed of approximately 1.386 acres of Riparian and approximately 0.122 acre of Streambed. Potential CDFW Riparian includes the southern riparian forest along the majority of the portion of Buena Vista Creek within the survey area, and potential CDFW Streambed includes open water, disturbed land, developed land, and iceplant within and adjacent to Buena Vista Creek that are outside the CDFW Riparian but between the lateral limits of the stream banks.

Potential USACE, RWQCB, and CDFW jurisdictional resources are regulated by federal and state governments under a no-net-loss policy, and all impacts are considered significant and should be avoided to the greatest extent possible. Potential impacts to USACE, RWQCB, and CDFW jurisdictional resources can be avoided through direct avoidance of jurisdictional resources, establishment of appropriate wetland buffers, and implementation of specific Best Management Practices. Unavoidable and authorized impacts may require mitigation through habitat creation, enhancement, or preservation as determined by a qualified restoration biologist in consultation with the regulatory agencies during the permitting process. Any impacts to USACE, RWQCB, and CDFW jurisdictional resources may require a Section 404 permit authorization from USACE, a 1602 Lake and Streambed Alteration Agreement from CDFW, and a 401 State Water Quality Certification from RWQCB.

1.0 INTRODUCTION

Busby Biological Services, Inc. (BBS) was contracted by EnviroApplications, Inc. on behalf of CarMax to conduct a jurisdictional delineation and prepare a jurisdictional delineation report for the proposed CarMax Auto Superstore (proposed project) in the City of Oceanside, San Diego County, California (Appendix A: Figures 1 through 3). The jurisdictional delineation was conducted on August 29, 2019, within an approximately 14.915-acre survey area, which consists of the approximately 10.981-acre proposed project area an approximately 3.935-acre, 50-foot survey buffer surrounding the proposed project area. The proposed project consists of the construction of a CarMax pre-owned automobile dealership, service building and non-public carwash with associated access driveways, parking lots, and landscaped areas. In addition, the proposed project will include a sales building with an attached presentation area, a service area, and a non-public carwash.

The proposed project occurs within the U.S. Geological Survey (USGS) San Luis Rey 7.5-minute quadrangle, in the City of Oceanside, California (USGS 2019; Appendix A: Figure 3). The proposed project site is situated on two vacant and undeveloped parcels, Assessor's Parcel Number (APN) 168-012-42 and APN 168-012-43 (Appendix A: Figures 2, 3, and 4). It is bordered to the north by State Route 78, to east by Thunder Drive and residential development, to the south by Buena Vista Creek and the City of Oceanside Fire Department (Station 4), and to the west by a commercial shopping center (*e.g.,* grocery store, restaurants, motel, other retail stores). Plaza Drive separates the two parcels in the northwest portion of the proposed project area, and the Oceanside Department of Motor Vehicles occupies the property northeast of the proposed project site.

Eight vegetation communities and land cover types were mapped within the survey area during the general biological resources survey conducted on July 22, 2019, including disturbed Diegan coastal sage scrub, southern riparian forest, open water, developed land, disturbed land, iceplant, ornamental, and ruderal (Appendix A: Figure 5). The majority of the survey area is dominated by disturbed land. Southern riparian forest within and adjacent to Buena Vista Creek and small scattered patches of disturbed Diegan coastal sage scrub in the southern half of the survey area are the only native vegetation communities that occur within the survey area.

The jurisdictional delineation was conducted within the survey area to identify and map existing waters of the U.S. (WoUS) and waters of the State (WoS) that are potentially subject to the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (CWA; 33 USC 1344); Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the CWA; and the California Department of Fish and Wildlife (CDFW) pursuant to Sections 1600 *et seq.* of the California Fish and Game Code (CFGC). The jurisdictional resource boundaries may be subject to verification by the regulatory agencies. No proposed project impacts or impact analysis is presented in this report; however, this report will also serve as a supplemental document to the Biological Technical Report (BTR), which will, among other things, evaluate potential project impacts to jurisdictional resources and determine potential permit requirements for the project.

2.0 REGULATORY CONTEXT

This section provides a summary of the federal, state, and local wetland regulations that are applicable to the proposed project.

2.1 Applicable Federal Regulations

The Rivers and Harbors Act of 1899 and the CWA of 1972 provide guidance for project activities within non-marine, Traditional Navigable Waters (TNWs) and/or WoUS. The discharge of any pollutant from a point source into TNWs is illegal unless a permit under the CWA's provisions is acquired. Permitting for projects that include both permanent and temporary dredging and filling in wetland and non-wetland waters of the U.S. is overseen by the USACE under Section 404 of the CWA. Projects can be permitted on an individual basis or be covered by one of several approved nationwide permits or regional general permits. In addition, RWQCB issues Water Quality Certifications under Section 401 of the CWA for project activities that fill or dredge within wetland and non-wetland WoUS and WoS, including isolated waters, such as vernal pools and other waters showing lack of connectivity to a TNW.

2.2 Applicable State Regulations

The CFGC, Sections 1600 through 1603, provides guidance for project activities within rivers, streams, lakes, riparian habitat, and other wetlands as well as vernal pools when California state threatened and/or endangered species are present. CFGC Section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following:

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
- Substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- Deposit debris, waste, or other materials that could pass into any river, stream, or lake.

CDFW can issue a Lake or Streambed Alteration (LSA) Agreement for projects that substantially adversely affect CDFW jurisdictional resources. If the activity will not substantially adversely affect any CDFW jurisdictional resources, the entity may commence the activity without a LSA Agreement.

The Porter-Cologne Water Quality Control Act provides guidance for project activities that may affect water quality in California. Pursuant to the Porter-Cologne Act, under Section 13000 et seq. of the California Water Code (CWC), the RWQCB issues Water Quality Certifications for project activities that fill or dredge within wetland and non-wetland WoUS and WoS, including isolated waters – such as vernal pools – and other waters showing lack of connectivity to a TNW.

3.0 METHODS AND SURVEY LIMITATIONS

BBS performed background research and conducted a jurisdictional delineation to identify all potentially jurisdictional USACE and RWQCB Wetland and Non-Wetland WoUS and WoS and CDFW Riparian and Streambed that may be impacted by the proposed project. The jurisdictional delineation was conducted within an approximately 14.915-acre survey area, which consists of the approximately 10.981-acre proposed project area and an approximately 3.935-acre, 50-foot survey buffer surrounding the proposed project area. The methods used for the background research and the initial field surveys are summarized below.

3.1 Project Background Research

Prior to conducting the jurisdictional delineation, BBS reviewed the draft City of Oceanside Subarea Plan (SAP; City 2010), the North County Multiple Habitat Conservation Plan (MHCP; San Diego Association of Governments [SANDAG] 2003), online current and historical aerial imagery (Google Earth 2019; Nationwide Environmental Title Research, LLC [NETR] 2019), U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps (USFWS 2019), U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey maps (USDA 2019), and the USGS San Luis Rey 7.5-minute topographic quadrangle map (USGS 2019). Information from these resources informed both the fieldwork and jurisdictional determination within the survey area.

3.2 Jurisdictional Delineation

The jurisdictional delineation and mapping of the survey area was conducted on foot to determine the location and extent of resources potentially under the jurisdiction of USACE, RWQCB, and CDFW. A hand-held, sub-meter Global Positioning System (GPS) device was used to record the locations of sample points and boundaries of potentially jurisdictional resources. Mapped wetland boundaries are considered to be a line across which the vegetation, soil, and hydrologic characteristics begin/cease to meet wetland criteria.

Vegetation communities and land cover types were classified following Holland (1986) as modified by Oberbauer *et al.* (2008), and mapped by hand onto aerial imagery with a 1 inch equals 100 feet scale, noting dominant plant species within these vegetation communities. These hand-drawn vegetation community and land cover type boundaries were provided to a Geographic Information Systems (GIS) Analyst and were digitized using GIS software.

Digital photographs of sample points and representative areas were taken during the survey. It should be noted that the results of the jurisdictional delineation and vegetation mapping reflect the existing conditions at the time of the survey, which naturally change over time. In addition, the jurisdictional resource boundaries may be subject to verification by the regulatory agencies.

3.2.1 U.S. Army Corps of Engineers Jurisdiction

Data was collected at upland and wetland sample points by assessing the vegetative, soil, and hydrologic characteristics within and immediately adjacent to areas that were determined to support potential USACE jurisdictional resources following the technical guidelines provided in the following manuals:

- USACE *Wetlands Delineation Manual* (USACE 1987)
- USACE *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0; USACE 2008)
- *USACE A Delineation Manual, A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2010)

USACE *Wetland Determination Data Forms – Arid West Region* (USACE 2008) were completed at appropriate upland and wetland sample points. Non-wetland WoUS were delineated based on the presence of ordinary high watermark (OHWM) indicators, and an OHWM data sheet was recorded where appropriate.

USACE Wetlands

Several parameters were considered to determine whether the sample point is within a USACE wetland. The following three wetland parameters typically must be satisfied to classify an area as a jurisdictional USACE wetland under normal circumstances: (1) a predominance of hydrophytic vegetation, (2) the presence of hydric soils, and (3) the presence of wetland hydrology. Details of the application of these techniques are described below. USACE Wetland Determination Data Forms are included as Appendix B to this report.

- **Hydrophytic Vegetation:** Hydrophytic vegetation is defined as "the community of macrophytes that occurs in areas where inundation and soil saturation is either permanent, or of sufficient frequency and duration to exert a controlling influence on the plant species present" (USACE 2008). For the purposes of this jurisdictional delineation, five levels of wetland indicator status were used to assess the presence of hydrophytic vegetation, based on the most current National Wetland Plant List (USACE 2016). Plant species were classified as:
    - obligate wetland plants (OBL), which area plants that almost always (estimated probability greater than 99 percent [%]) occur in wetlands but rarely are found in non-wetlands under natural conditions;
    - facultative wetland plants (FACW), which are plants that usually (estimated probability from 67% to 99%) occur in wetlands but are occasionally found elsewhere under natural conditions;
    - facultative plants (FAC), which are plants with a similar likelihood (estimated probability from 33% to 67%) of occurring in both wetlands and non-wetlands under natural conditions;

- facultative upland plants (FACU), which area plants that sometimes (estimated probability from 1% to 33%) occur in wetlands, but occur more often in non-wetlands under natural conditions; or
- obligate upland plants (UPL), which are plants that rarely (estimated probability <1%) occur in wetlands, but almost always occur in non-wetlands under natural conditions].
- A no indicator (NI) status designates that insufficient information was available to determine an indicator status.

Hydrophytic vegetation was determined to be present if any one of the following three indicator tests were satisfied:

- the Dominance Test (Indicator 1), where "more than 50% of the dominant plant species across all strata were rated OBL, FACW, or FAC";
- the Prevalence Test (Indicator 2), where there were indicators of hydric soils and wetland hydrology, and the prevalence index was 3.0 or less, which is a weighted-average wetland indicator status of all plant species by abundance (percent cover); and/or
- the Plant Morphological Adaptations Test (Indicator 3), where there were indicators of hydric soils and wetland hydrology present, and either the Dominance Test (Indicator 1) or Prevalence Test (Indicator 2) were satisfied after reconsideration of the indicator status of certain plant species that exhibited morphological adaptations for life in wetlands.

- **Hydric Soils:** Hydric soils are defined as "a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part" (USACE 2008). For the purposes of this jurisdictional delineation, the hydric soil indicators described in the USACE *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008) and *National Technical Committee for Hydric Soils (NTCHS) Field Indicators of Hydric Soils in the United States* (USDA 2016) were used to assess the presence of hydric soils. Soil test pits were dug to the depth needed to document the soil chroma index using the Munsell® Soil Color Charts (Munsell® Color 2000), as well as additional hydric soil indicators (*e.g.,* hydrogen sulfide, sandy redox, depleted matrix, redox dark surface, depleted dark surface) detailed in the *Arid West Supplement* (USACE 2008) and the *Field Indicators of Hydric Soils in the United States* (USDA 2016). The soil was determined to be hydric if one or more hydric soil indicators were present.

- **Wetland Hydrology:** Wetland hydrology is indicated by the presence of surficial or sub-surficial hydrologic characteristics long enough during the growing season to show that the presence of water has an overriding influence on the characteristics of vegetation and soils due to anaerobic and reducing conditions, respectively; thus, for an area to be defined as a wetland, periodic inundation or saturation of soils during the growing season must be determined to be present (USACE 2008). For the purposes of this delineation, the wetland hydrology indicators (*e.g.* inundation, watermarks, drift lines, sediment deposits, drainage patterns, saturation) described in the USACE *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008)

were used to assess the presence of wetland hydrology. Wetland hydrology was determined to be present if one or more primary indicators, or two or more secondary indicators were observed.

USACE Non-Wetland Waters of the U.S.

The USACE defines non-wetland WoUS as drainages, or portions thereof, which have strong hydrology indicators such as the presence of seasonal flows and an OHWM. An OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as [a] clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (USACE 1987). In general, non-wetland WoUS are delineated by the lateral and upstream/downstream extent of the OHWM of the particular drainage or depression. The method for identification of lateral limits for potential non-wetland WoUS are detailed in the USACE *A Delineation Manual, A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2010).

Areas delineated as non-wetland WoUS may lack hydrophytic vegetation or hydric soil characteristics. Hydrophytic vegetation may be absent for various reasons, such as the lack of sufficient water flow to support hydrophytic vegetation or the influence of frequent scouring resulting from rapid water flow. Hydric soil indicators may be missing for various reasons, such as the lack of sufficient water or the presence of steep topography that precludes ponding and prohibits the development of hydric soils.

3.2.2 Regional Water Quality Control Board Jurisdiction

RWQCB jurisdiction typically extends to all WoUS as considered jurisdictional by the USACE as well as to isolated waters and wetlands. Section 401 of the CWA gives the RWQCB the authority to regulate any proposed activities that may affect water quality.

3.2.3 California Department of Fish and Wildlife Jurisdiction

CDFW jurisdiction typically includes water features with a defined bed and bank and associated riparian vegetation. CDFW typically extends its jurisdictional limit to the top of a stream, the bank of a lake, or the outer edge of the riparian vegetation, whichever is wider. CDFW jurisdictional habitat allows for a wide variety of habitat types to be jurisdictional, including some that do not include wetland species (*e.g.,* oak woodland, alluvial fan sage scrub). In addition, CDFW asserts jurisdiction over vernal pools when California state threatened and/or endangered species are present.

4.0 RESULTS

Biologists Darin Busby and Brian Lohstroh conducted a focused jurisdictional delineation within the approximately 14.915-acre survey area on August 29, 2019. The following sections describe and the jurisdictional resources observed during the jurisdictional delineation.

4.1 Physical Characteristics of Survey Area

The majority of the proposed project area is relatively flat with a drop in elevation to the south towards Buena Vista Creek, with elevations ranging from approximately 220 to 180 feet above mean sea level (amsl). Buena Vista Creek occurs along the southern boundary of the proposed project area and runs from east to west, eventually connecting to Buena Vista Lagoon and the Pacific Ocean approximately 4 miles west of the survey area. The NWI classifies Buena Vista Creek as a freshwater forested/shrub wetland (USFWS 2019). Buena Vista Creek is one of six creeks located within the 210-square-mile Carlsbad Hydrologic Unit (HU), which is one of 11 HUs identified in San Diego County by the RWQCB.

4.1.1 Soils

The following two soil types occur within the survey area: (1) Las Flores loamy fine sand, 5 to 9% slopes, eroded and (2) Visalia sandy loam, 2 to 5% slopes (USDA 2019; Appendix A: Figure 4). Soils observed in the field within the soil test pits appeared to exhibit characteristics similar to those mapped within the proposed project area, with the exception of fill soils and riprap along some portions of Buena Vista Creek (USDA 2019).

Las Flores loamy fine sand, 5 to 9% slopes, eroded is the most common soil type within the survey area. Las Flores loamy fine sands are derived from weathered marine sandstone that consist of loamy fine sands with a sandy clay subsoil. This soil is moderately well-drained, has slow to medium runoff, and a slight to moderate erosion hazard. Las Flores soils are not listed as hydric soils in California (USDA 2019).

Visalia sandy loam, 2 to 5% slopes occurs in and adjacent to Buena Vista Creek, in the southern portion of the survey area (USDA 2019). Visalia sandy loams are derived from granitic parent material that developed on alluvial fans and flood plains. This soil has a topsoil rich in organic matter, is well-drained to moderately well-drained, has slow to medium runoff, is moderately permeable, and has a slight to moderate erosion hazard. Visalia sandy loams are listed as a hydric soil on the USDA Hydric Soils List (USDA 2019).

4.1.2 Vegetation Communities and Land Cover Types

The following eight vegetation communities and land cover types were mapped within the approximately 14.915-acre survey area during the general biological resources survey conducted on July 22, 2019: disturbed Diegan coastal sage scrub, southern riparian forest, open water, developed land, disturbed land, iceplant, ornamental, and ruderal (Appendix A: Figure 5; Table 1). The majority of the survey area is dominated by disturbed land. Southern riparian forest within and adjacent to Buena Vista Creek and

small scattered patches of disturbed Diegan coastal sage scrub in the southern half of the survey area are the only native vegetation communities that occur within the survey area.

Table 1. Vegetation Communities and Land Cover Types within Survey Area

Vegetation Community/ Land-Cover Type	Within Proposed Project Area (acres*)	Within Survey Buffer (acres*)	Total (acres*)
Developed	0.455	2.184	2.639
Disturbed Diegan Coastal Sage Scrub	0.448	0.003	0.451
Disturbed Habitat	8.109	0.542	8.650
Iceplant	0.454	--	0.454
Ornamental	0.138	0.302	0.440
Ruderal	0.841	--	0.841
Southern Riparian Forest	0.518	0.868	1.386
Open Water	0.018	0.035	0.054
TOTAL	**10.981****	**3.935****	**14.915****

*Acreages are approximate and rounded to the nearest thousandth of an acre.
**Total acreages represent the actual acreages without the rounding error.

4.2 Jurisdictional Delineation

The wetlands and riparian area within and adjacent to Buena Vista Creek in the southern portion of the survey area were the only jurisdictional resources identified within the survey area. Buena Vista Creek is an intermittent creek that occurs along the southern boundary of the proposed project area and runs from east to west, eventually connecting to Buena Vista Lagoon and the Pacific Ocean approximately 4 miles west of the survey area. A desktop review of historical aerial imagery of the survey area does not show any clear evidence of jurisdictional resources outside of Buena Vista Creek, which was later confirmed during the jurisdictional delineation (NETR 2019); therefore, data was collected only at Sample Points along Buena Vista Creek.

Buena Vista Creek receives moderate to high velocity water flows during wet times of the year, when groundwater and direct precipitation provide water for stream flow, and then receives either low velocity water flows from direct precipitation and urban runoff or no flows during dry times of the year when groundwater has dropped. Buena Vista Creek supported low velocity flows at the time of the jurisdictional delineation on August 29, 2019. Buena Vista Creek enters the proposed project area through a large box culvert in the southeastern corner of the survey area where it transitions from an open concrete channel upstream, east of Thunder Drive, to an earthen, riparian lined drainage within the proposed project area. Buena Vista Creek runs west to exit the proposed project area in the southwestern corner of the survey area where it continues as an earthen, riparian lined drainage offsite. The intermittent flow regime in Buena Vista Creek allows the portion of the drainage within the proposed project area to support mature southern riparian forest.

The following two sections describe the data that was collected at each Sample Point during the jurisdictional delineation on August 29, 2019, and the summary of jurisdictional resources that occur within the approximately 14.915-acre survey area.

4.2.1 Summary of Sample Points

A total of six Sample Points were investigated in or adjacent to locations representative of potentially jurisdictional areas along Buena Vista Creek in the southern portion of the survey area (Appendix A: Figures 4 and 5). Soil pits were excavated to depths of 16 to 18 inches at all six Sample Points. Data collected at these Sample Points were recorded on USACE *Wetland Determination Data Forms – Arid West Region Version 2.0* (USACE 2008; Appendix B). Photographs of each wetland Sample Point as well as other representative photographs of these potentially jurisdictional resources are included in Appendix C of this report.

To summarize, Sample Points 1, 3, and 5 were determined to be within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and potentially jurisdictional CDFW Riparian, while Sample Points 4 and 6 were determined to be just within the limits of a potentially jurisdictional CDFW Riparian. Sample Point 2 was determined to be within an upland and not within the limits of a potentially jurisdictional USACE, RWQCB, or CDFW resource. Sample Points were investigated only along the north bank of Buena Vista Creek because the southern bank is outside the project boundary and well beyond any proposed direct or indirect impacts. Because Sample Points were not investigated along the southern bank of Buena Vista Creek, the limits of jurisdictional areas along the southern bank of Buena Vista Creek were inferred based on data collected at Sample Points 1 through 6 along the northern bank of Buena Vista Creek. The following paragraphs summarize the data collected at each of the six Sample Points along the northern bank of Buena Vista Creek.

Sample Point 1 was determined to be within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and potentially jurisdictional CDFW Riparian. Sample Point 1 is within southern riparian forest, approximately 1 foot north of flowing water at the bottom of the bank along the northern edge of Buena Vista Creek. This Sample Point is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology. Dominant hydrophytic plant species occur witin the tree stratum, including arroyo willow (*Salix lasiolepis*; FACW) and mulefat (*Baccharis salicifolia*; FACW). Hydric soil indcators include a depleted martrix (F3) as evident by low soil chroma within the upper 16 inches. Riprap and possible fill soils were observed adjacent to Sample Point 1. Primary wetland hydrology indicators include saturation (A3) at a depth of 16 inches and inundation visible on aerial imagery (B7). Secondary wetland hydrology indicators include water marks (B1), sediment deposits (B2), drift deposits (B3), and drainage patterns (B10). USDA soil survey maps show this portion of the survey area containing Visalia sandy loam, 2 to 5% slopes (USDA 2019).

Sample Point 2 was determined to be outside the limits of a potentially jurisdictional area. Sample Point 2 is in disturbed habitat on an upland terrace approximately 3 feet north and outside of the riparian vegetation and the top of the creek bank, and

approximately 20 feet north of the wetland boundary adjacent to Sample Point 1. Sample Point 2 does not contain hydrophytic vegetation, hydric soils, and wetland hydrology. Sample Point 2 is dominated by upland vegetation, such as short-pod mustard (*Hirschfeldia incana*; NI), western ragweed (*Ambrosia psilostachya*; FACU), rattail fescue (*Vulpia myuros*; FACU), Italian thistle (*Carduus pycnocephalus*; FACU), and fennel (*Foeniculum vulgare*; NI). USDA soil survey maps show this portion of the survey area containing Las Flores loamy fine sand, 5 to 9% slopes, eroded (USDA 2019).

Sample Point 3 was determined to be within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and potentially jurisdictional CDFW Riparian. Sample Point 3 is within southern riparian forest approximately 6 inches north of flowing water at the bottom of the bank along the northern edge of Buena Vista Creek. This Sample Point is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology. Dominant hydrophytic plant species occur witin the tree and herb stratum, including polished willow (*Salix laevigata*; FACW), evening primrose (*Oenothera elata;* FACW), tall cyperus (*Cyperus eragrostis*; FACW), and celery (*Apium graveolens*; FACW). Hydric soil indicators include a depleted martrix (F3) as evident by low soil chroma within the upper 18 inches. Primary wetland hydrology indicators include a high water table (A2) at a depth of 12 inches, saturation (A3) at a depth of 8 inches, and inundation visible on aerial imagery (B7). Secondary wetland hydrology indicators include water marks (B1), sediment deposits (B2), drift deposits (B3), and drainage patterns (B10). USDA soil survey maps show this portion of the survey area containing Visalia sandy loam, 2 to 5% slopes (USDA 2019).

Sample Point 4 was determined to be outside the limits of a potentially jurisdictional USACE wetland WoUS and WoS but within the limits of a potentially jurisdictional CDFW Riparian. Sample Point 4 is on an upland terrace approximately 5 feet north of the wetland boundary adjacent to Sample Point 3 and 15 feet south of the top of the stream bank. Although Sample Point 4 occurs in CDFW Riparian as indicated on Figure 5 (Appendix A), Sample Point 4 occurs in a patch of ruderal land dominated by radish (*Raphanus sativus*; NI) beneath a canopy of southern riparian forest that is dominated by a cluster of Brazilian peppertree (*Schinus terebinthifolia*; FAC) and does not contain hydrophytic vegetation, hydric soils, and wetland hydrology. USDA soil survey maps show this portion of the survey area containing Visalia sandy loam, 2 to 5% slopes (USDA 2019).

Sample Point 5 was determined to be within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and potentially jurisdictional CDFW Riparian. Sample Point 5 is within southern riparian forest approximately 6 feet north of flowing water at the bottom of the bank along the northern edge of Buena Vista Creek and is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology. Dominant hydrophytic plant species occur within the tree and herb stratum, including arroyo willow (FACW), giant reed (*Arundo donax*; FACW), and Spanish false fleabane (*Pulicaria paludosa*; FAC). Hydric soil indicators include hydrogen sulfide (A4), depleted below a dark surface (A11), sandy gleyed matrix (S4), sandy redox (S5), and a depleted martrix (F3) as evident by low soil chroma and redox concentrations along pore linings within the upper 16 inches. Primary wetland hydrology indicators include a saturation

(A3) at a depth of 8 inches, inundation visible on aerial imagery (B7), hydrogen sulfide odor (C1), and oxidized rhizospheres along living roots (C3). Secondary wetland hydrology indicators include water marks (B1), sediment deposits (B2), drift deposits (B3), and drainage patterns (B10). In addition, saturation was observed at 16 inches below the surface. USDA soil survey maps show this portion of the survey area containing Visalia sandy loam, 2 to 5% slopes (USDA 2019).

Sample Point 6 was determined to be outside the limits of a potentially jurisdictional USACE wetland WoUS and WoS within the limits of a potentially jurisdictional CDFW Riparian. Sample Point 6 is on an upland terrace approximately 15 feet north of the wetland boundary adjacent to Sample Point 5 and 15 feet south of the top of the stream bank. Although Sample Point 6 occurs in CDFW Riparian as indicated on Figure 5 (Appendix A), this Sample Point occurs beneath a canopy of southern riparian forest with an understory of ruderal land dominated by iceplant (*Carpobrotus sp.*; NI), short-pod mustard (NI), Italian thistle (NI), and foxtail chess (*Bromus madritensis*; UPL) and surrounded by coyote brush (*Baccharis pilularis*; NI) and does not contain hydrophytic vegetation, hydric soils, and wetland hydrology. USDA soil survey maps show this portion of the survey area containing Visalia sandy loam, 2 to 5% slopes (USDA 2019).

4.2.2 Summary of Potentially Jurisdictional resources

The southern riparian forest along Buena Vista Creek is a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and potentially jurisdictional CDFW Riparian; the open water is a potentially jurisdictional USACE and RWQCB non-wetland WoUS and WoS and potentially jurisdictional CDFW Streambed; and a portion of the disturbed land, developed land, and iceplant adjacent to Buena Vista Creek is a potentially jurisdictional CDFW Streambed (Appendix A: Figure 5). Table 2 provides a breakdown of the potentially jurisdictional resources within the survey area, Figure 5 (Appendix A) shows the locations of these resources, and Appendix C provides representative photographs of the potentially jurisdictional resources and photographs of each Sample Point.

Table 2. Potentially Jurisdictional Resources within Survey Area

Regulatory Agency	Linear Feet	Acres*	Square Feet	Width Range (feet)
USACE/RWQCB				
Wetland WoUS/WoS	760	0.646	28,121	20 - 55
Non-Wetland WoUS/WoS	41	0.054	2,349	15 - 45
TOTAL	**801**	**0.700**	**30,470**	**15 - 55**
CDFW				
Riparian	760	1.386	60,371	70 - 105
Streambed	212	0.122	5,270	82 - 90
TOTAL	**972**	**1.508****	**65,640**	**70 - 105**

*Acreages are approximate and rounded to the nearest thousandth of an acre.
**Total acreages represent the actual acreages without the rounding error.

USACE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife; WoUS = Waters of the U.S.; WoS = Waters of the State

Potential USACE Jurisdiction

Potential USACE jurisdiction within the survey area totals approximately 0.700 acre, composed of approximately 0.646 acre of wetland WoUS and approximately 0.054 acre of non-wetland WoUS (Table 2; Attachment A: Figure 5). The potential USACE wetland WoUS include the southern riparian forest along the portion of Buena Vista Creek wihtin the survey area, and the potential USACE non-wetland WoUS include open water within Buena Vista Creek at the eastern end of the survey area (Attachment A: Figure 5).

Potential RWQCB Jurisdiction

There are no potentially jurisdictional isolated WoS within the survey area subject to exclusive RWQCB jurisdiction pursuant to the State Porter-Cologne Water Quality Control Act. Therefore, the RWQCB's potential jurisdiction extends to all potential USACE WoUS within the survey area, which includes a total of approximately 0.700 acre, composed of approximately 0.646 acre of wetland WoS and approximately 0.054 acre of non-wetland WoS (Table 2; Attachment A: Figure 5). The potential RWQCB wetland WoS include the southern riparian forest along the portion of Buena Vista Creek within the survey area, and the potential RWQCB non-wetland WoS include open water within Buena Vista Creek at the eastern end of the survey area (Attachment A: Figure 5).

Potential CDFW Jurisdiction

Potential CDFW jurisdiction within the survey area totals approximately 1.508 acres, composed of approximately 1.386 acres of Riparian and approximately 0.122 acre of Streambed (Table 2; Attachment A: Figure 5). Potential CDFW Riparian includes the southern riparian forest along the portion of Buena Vista Creek within the survey area, and potential CDFW Streambed includes open water, disturbed land, developed land, and iceplant within and adjacent to Buena Vista Creek that are outside the CDFW Riparian areas but between the lateral limits of the stream banks (Attachment A: Figure 5).

5.0 CONCLUSION AND RECOMMENDATIONS

This jurisdictional delineation report identifies the extent of potential USACE, RWQCB, and CDFW jurisdictional resources within the survey area using the current regulations, written policies, and guidance from these regulatory agencies. These jurisdictional boundaries may be subject to verification by the regulatory agencies. No proposed project impacts or impact analysis is presented in this report; however, this report will serve as a supplemental document to the BTR, which will, among other things, evaluate potential project impacts to jurisdictional resources and determine potential permit requirements for the project.

Potential USACE, RWQCB, and CDFW jurisdictional resources are regulated by the federal and state governments under a no-net-loss policy, and all impacts are considered significant and should be avoided to the greatest extent possible. Potential impacts to the functions and values and the chemical, physical, and biological integrity of USACE, RWQCB, and CDFW jurisdictional resources can be avoided through direct avoidance of jurisdictional resources, establishment of appropriate wetland buffers, and implementation of specific Best Management Practices. Unavoidable and authorized impacts may require mitigation through habitat creation, enhancement, and/or preservation as determined by a qualified restoration biologist in consultation with the regulatory agencies during the permitting process. Any impacts to USACE, RWQCB, and CDFW jurisdictional resources may require a Section 404 permit authorization from USACE, a 1602 LSA Agreement from CDFW, and a 401 State Water Quality Certification from RWQCB.

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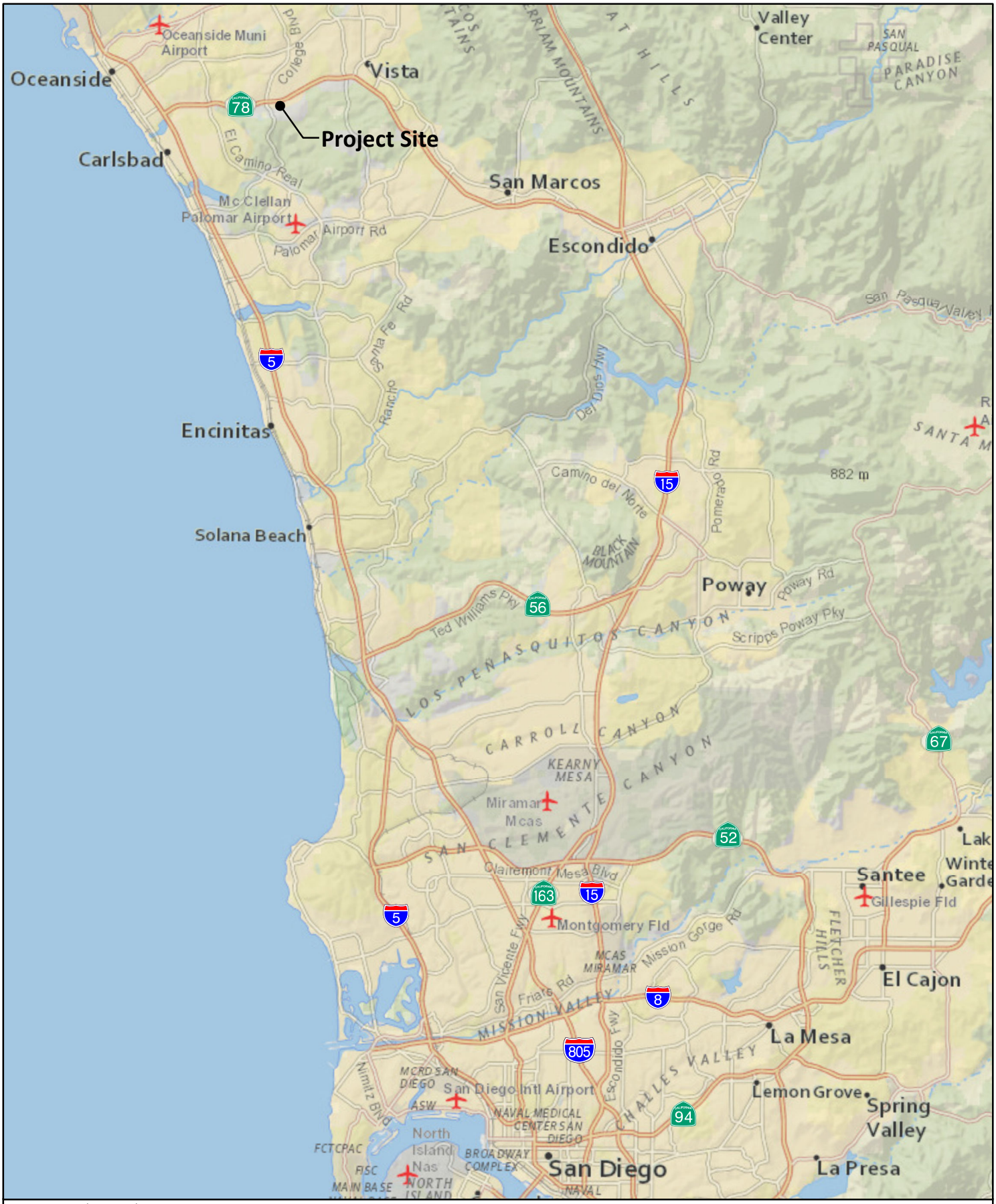
2019 San Luis Rey 7.5-minute topographic quadrangle.

APPENDIX A
Proposed Project Figures



Source: National Geographic, Esri

BUSBY Biological Services

N 0 2 4 Miles

Regional Location

CARMAX OCEANSIDE

Figure 1

Source: SANDAG & SanGIS 2017

BUSBY Biological Services

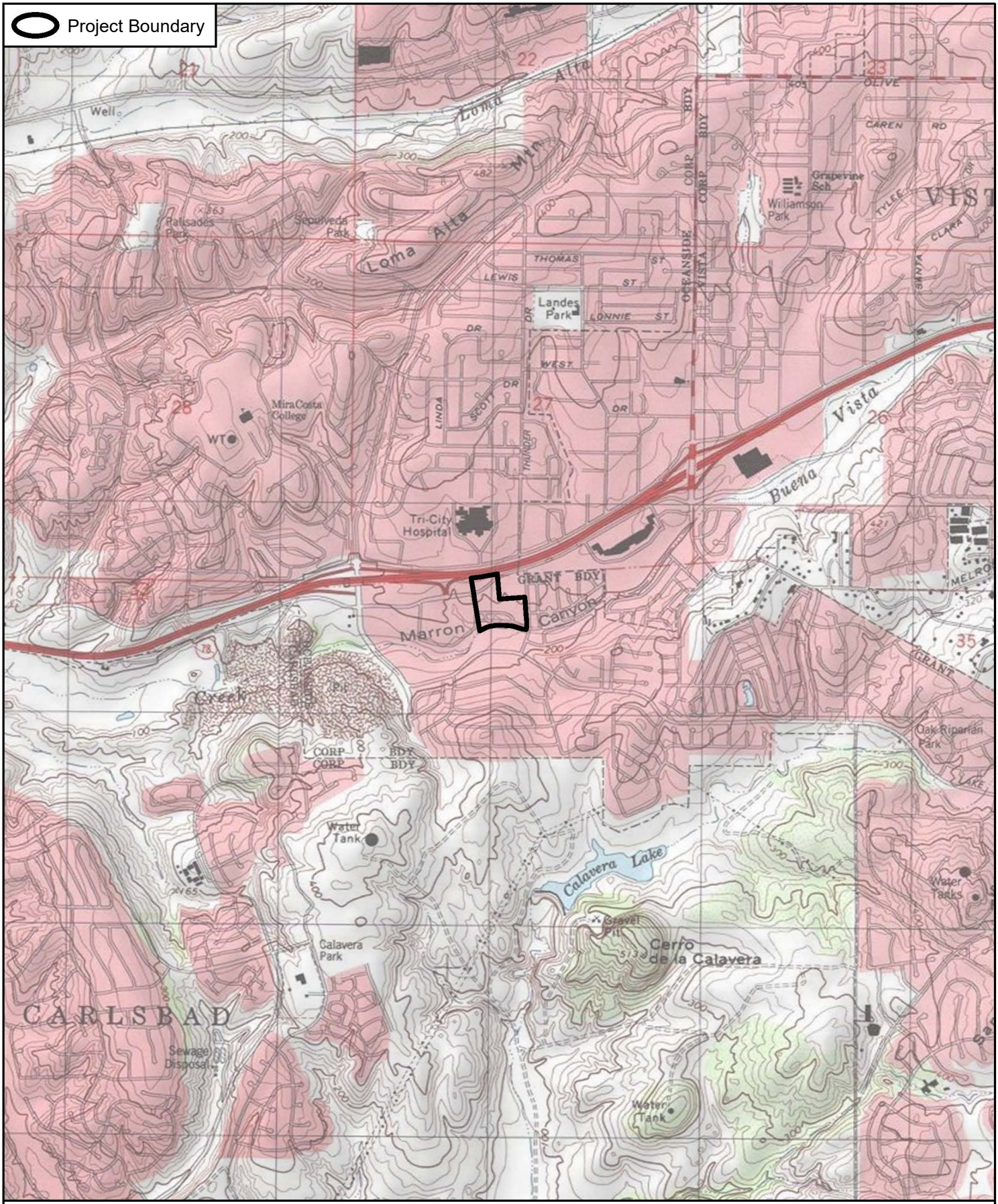
N

0 1,000 2,000 Feet

Project Vicinity - Aerial

CARMAX OCEANSIDE

Figure 2



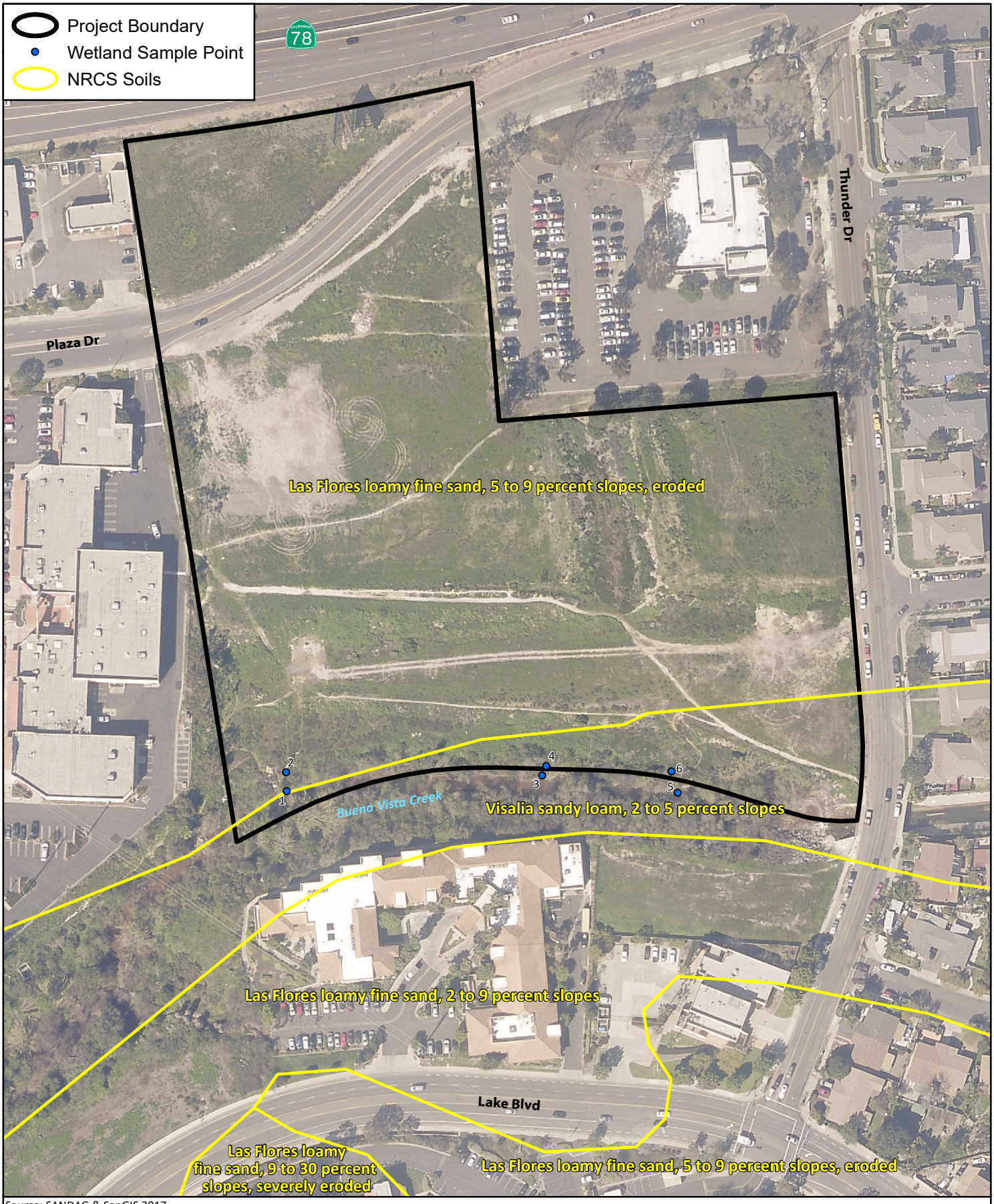
Source: USGS 7.5' Quadrangles (San Luis Rey)

BUSBY Biological Services

Project Vicinity - USGS Topo

CARMAX OCEANSIDE

Figure 3



Source: SANDAG & SanGIS 2017

BUSBY Biological Services

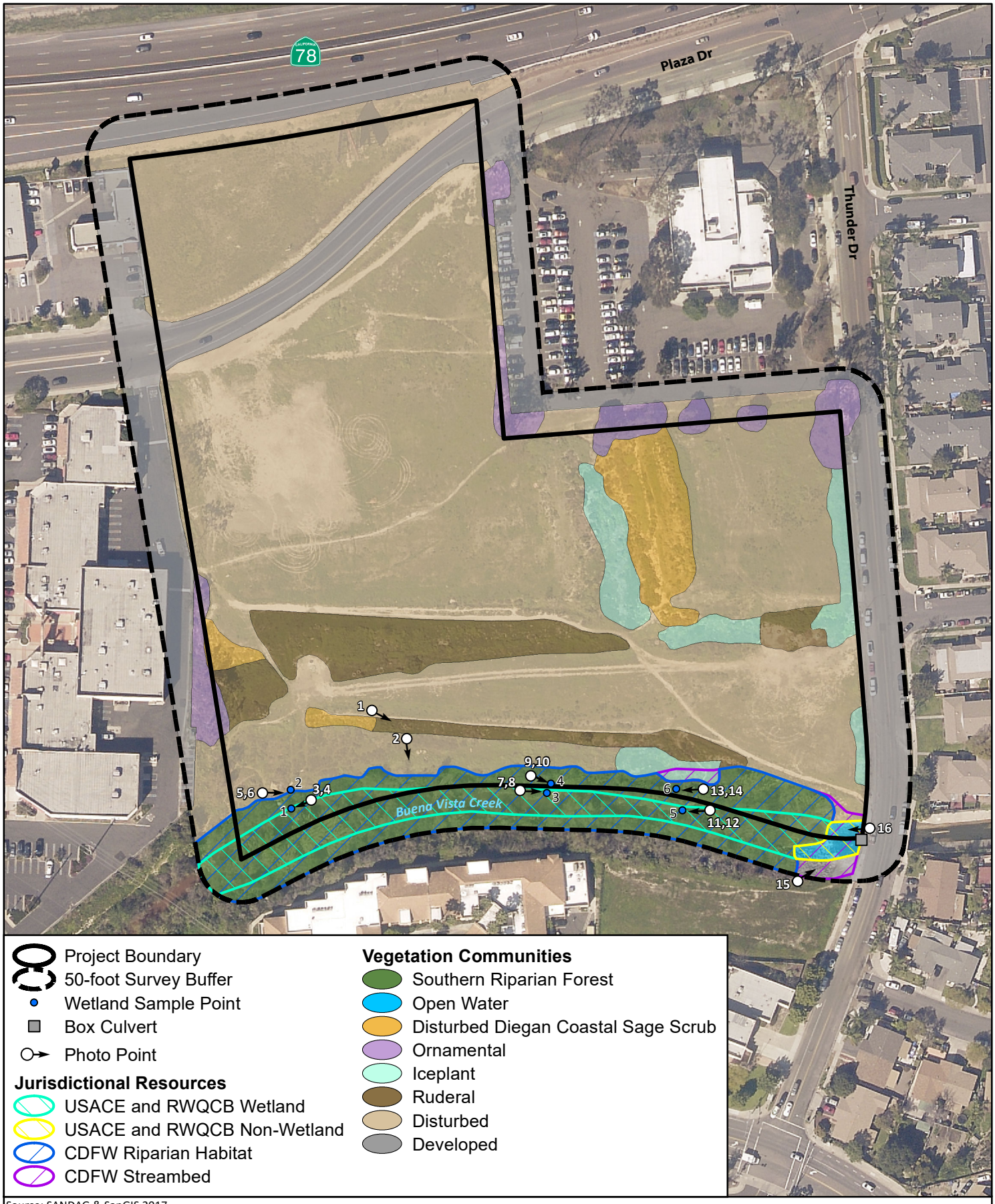
N

0 75 150 Feet

Soils

CARMAX OCEANSIDE

Figure 4



Source: SANDAG & SanGIS 2017

Jurisdictional Resources and Vegetation Communities

BUSBY Biological Services

CARMAX OCEANSIDE

Figure 5

APPENDIX B
USACE Wetland Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Proposed CarMax Auto Superstore City/County: Oceanside, San Diego Sampling Date: 8/29/19

Applicant/Owner: EnviroApplications, Inc. State: CA Sampling Point: 1

Investigator(s): Darin Busby, Brian Lohstroh Section, Township, Range: Township 11 South, Range 4 West

Landform (hillslope, terrace, etc.): Creek bank Local relief (concave, convex, none): Concave Slope (%): 45

Subregion (LRR): C - Mediterranean California Lat: 33.181161 Long: -117.290007 Datum: WGS84

Soil Map Unit Name: Visalia sandy loam, 2 to 5 percent slopes NWI classification: Wetland (PSS/FOCx)

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

Wetland sample point approximately 1 foot north of flowing water at bottom of bank along edge of Buena Vista Creek, an intermittent creek dominated by riparian vegetation and visibly inundated on aerial imagery

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15 X 15 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	90	Y	FACW
2. Baccharis salicifolia	10	N	FACW
3.			
4.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 X 5 ft.)			
1. Xanthium strumarium	8	Y	FAC
2. Ricinus communis	5	N	FACU
3.			
4.			
5.			
6.			
7.			
8.			
	13	= Total Cover	
Woody Vine Stratum (Plot size: 15 X 15 ft.)			
1. Parthenocissus quinquefolia	10	Y	FACU
2.			
	10	= Total Cover	

% Bare Ground in Herb Stratum 87 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	8	x 3 =	24
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	123 (A)		284 (B)

Prevalence Index = B/A = 2.3

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Sample point located below riparian canopy at bottom of bank along edge of Buena Vista Creek.

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/1	100					Clayey fine	Clayey fine sand
4-16	10YR 4/1	50	Gleyed2 4/10 G	50	D	M	Clayey fine	Clayey fine sand

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Soil Map Unit is on NRCS hydric soils list. Sample point located at bottom of bank along edge of Buena Vista Creek. Creek bank contains a mix of rip-rap and soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✓ Water Marks (B1) (**Riverine**)
- ✓ Sediment Deposits (B2) (**Riverine**)
- ✓ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 16

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Buena Vista Creek is an intermittent creek that is visibly inundated on aerial imagery.

Remarks:

Sample point located approximately 1 foot north of flowing water at bottom of bank along edge of Buena Vista Creek.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Proposed CarMax Auto Superstore City/County: Oceanside, San Diego Sampling Date: 8/29/19

Applicant/Owner: EnviroApplications, Inc. State: CA Sampling Point: 2

Investigator(s): Darin Busby, Brian Lohstroh Section, Township, Range: Township 11 South, Range 4 West

Landform (hillslope, terrace, etc.): Upland terrace Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): C - Mediterranean California Lat: 33.181221 Long: -117.290010 Datum: WGS84

Soil Map Unit Name: Las Flores loamy fine sand, 5 to 9 percent slopes, eroded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Upland sample point on upland terrace approximately 3 feet north/outside of riparian edge/top of creek bank and 20 feet north of wetland boundary.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 X 5 ft.)			
1. Hirschfeldia incana	20	Y	NI
2. Ambrosia psilostachya	20	Y	FACU
3. Vulpia myuros	20	Y	FACU
4. Carduus pycnocephalus	10	Y	NI
5. Foeniculum vulgare	10	Y	NI
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	40 (A)		160 (B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/3	100					Fine sand	Fine sandy clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Proposed CarMax Auto Superstore City/County: Oceanside, San Diego Sampling Date: 8/29/19

Applicant/Owner: EnviroApplications, Inc. State: CA Sampling Point: 3

Investigator(s): Darin Busby, Brian Lohstroh Section, Township, Range: Township 11 South, Range 4 West

Landform (hillslope, terrace, etc.): Creek bank Local relief (concave, convex, none): Concave Slope (%): 45

Subregion (LRR): C - Mediterranean California Lat: 33.181218 Long: -117.289031 Datum: WGS84

Soil Map Unit Name: Visalia sandy loam, 2 to 5 percent slopes NWI classification: Wetland (PSS/FOCx)

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Wetland sample point approximately 6 inches north of flowing water at bottom of bank along edge of Buena Vista Creek, an intermittent creek dominated by riparian vegetation and visibly inundated on aerial imagery

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15 X 15 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata	25	Y	FACW
2. Schinus terebinthifolia	25	Y	FAC
3.			
4.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: 5 X 5 ft.)			
1. Oenothera elata	20	Y	FACW
2. Xanthium strumarium	10	Y	FAC
3. Cyperus eragrostis	10	Y	FACW
4. Apium graveolens	10	Y	FACW
5. 'Melilotus albus	10	Y	NI
6.			
7.			
8.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 86% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	65	x 2 =	130
FAC species	35	x 3 =	70
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Sample point located below riparian canopy at bottom of bank along edge of Buena Vista Creek.

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 4/2	100					Silty sand	
14-18	Gley2 4/5 BG	100					Sandy cla	Sandy clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Soil Map Unit is on NRCS hydric soils list. Sample point located at bottom of bank along edge of Buena Vista Creek. Creek bank contains a mix of rip-rap and soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✓ Water Marks (B1) (**Riverine**)
- ✓ Sediment Deposits (B2) (**Riverine**)
- ✓ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No ___ Depth (inches): 12

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 8

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Buena Vista Creek is an intermittent creek that is visibly inundated on aerial imagery.

Remarks:

Sample point located approximately 6 inches north of flowing water at bottom of bank along edge of Buena Vista Creek.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Proposed CarMax Auto Superstore City/County: Oceanside, San Diego Sampling Date: 8/29/19

Applicant/Owner: EnviroApplications, Inc. State: CA Sampling Point: 4

Investigator(s): Darin Busby, Brian Lohstroh Section, Township, Range: Township 11 South, Range 4 West

Landform (hillslope, terrace, etc.): Upland terrace Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR): C - Mediterranean California Lat: 33.181249 Long: -117.289015 Datum: WGS84

Soil Map Unit Name: Visalia sandy loam, 2 to 5 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Upland sample point on upland terrace approximately 5 feet north of wetland boundary and 15 feet south of top of creek bank.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15 X 15 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Schinus terebinthifolia	25	Y	FAC
2.			
3.			
4.			
	25 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 X 5 ft.)			
1. Raphanus sativus	90	Y	NI
2. Hirschfeldia incana	20	N	NI
3. Datura wrightii	5	N	UPL
4. Stipa miliacea	1	N	NI
5. Tropaeolum majus	1	N	UPL
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	6	x 5 =	30
Column Totals:	31 (A)		105 (B)

Prevalence Index = B/A = 3.4

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/2	100					Clayey lo	Clayey loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Upland sample point contains soil map unit that occurs on the NRCS hydric soils list because soil units are mapped on a broad scale and do not always indicate the actual soils in the field.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Proposed CarMax Auto Superstore City/County: Oceanside, San Diego Sampling Date: 8/29/19

Applicant/Owner: EnviroApplications, Inc. State: CA Sampling Point: 5

Investigator(s): Darin Busby, Brian Lohstroh Section, Township, Range: Township 11 South, Range 4 West

Landform (hillslope, terrace, etc.): Creek bank Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR): C - Mediterranean California Lat: 33.181167 Long: -117.288512 Datum: WGS84

Soil Map Unit Name: Visalia sandy loam, 2 to 5 percent slopes NWI classification: Wetland (PSS/FOCx)

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

Sample point approximately 6 feet north of flowing water at bottom of bank along edge of Buena Vista Creek, an intermittent creek dominated by riparian vegetation and visibly inundated on aerial imagery.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 X 20 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	50	Y	FACW
2. Arundo donax	50	Y	FACW
3. Washingtonia robusta	10	N	FACW
4. Ficus carica	5	N	FACU
	115	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: 10 X 10 ft.)			
1. Pulicaria paludosa	30	Y	FAC
2. Xanthium strumarium	10	N	FAC
3. Apium graveolens	10	N	FACW
4. Erigeron canadensis	10	N	FACU
5.			
6.			
7.			
8.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: 10 X 10 ft.)			
1. Parthenocissus quinquefolia	15	Y	NI
2.			
	15	= Total Cover	

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	120	x 2 =	240
FAC species	40	x 3 =	120
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	175 (A)		420 (B)

Prevalence Index = B/A = 2.4

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Sample point located on low terrace below riparian canopy at bottom of bank along edge of Buena Vista Creek.

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/1	90	10YR 5/8	10	C	PL	Clayey lo	Clayey loam
4-12	Gley2 3/10 B	90	10YR 5/6	10	C	PL	Loamy sa	Loamy sand
12-16	10YR 5/1	100					Clayey lo	Clayey loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ✓ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ✓ Sandy Gleyed Matrix (S4)
- ✓ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Sample point located along low terrace at bottom of bank along edge of Buena Vista Creek.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ✓ Hydrogen Sulfide Odor (C1)
- ✓ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✓ Water Marks (B1) (**Riverine**)
- ✓ Sediment Deposits (B2) (**Riverine**)
- ✓ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 8

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Buena Vista Creek is an intermittent creek that is visibly inundated on aerial imagery.

Remarks:

Sample point located along low terrace approximately 6 feet north of flowing water at bottom of bank along edge of Buena Vista Creek.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Proposed CarMax Auto Superstore City/County: Oceanside, San Diego Sampling Date: 8/29/19

Applicant/Owner: EnviroApplications, Inc. State: CA Sampling Point: 6

Investigator(s): Darin Busby, Brian Lohstroh Section, Township, Range: Township 11 South, Range 4 West

Landform (hillslope, terrace, etc.): Upland terrace Local relief (concave, convex, none): None Slope (%): 10

Subregion (LRR): C - Mediterranean California Lat: 33.181236 Long: -117.288537 Datum: WGS84

Soil Map Unit Name: Visalia sandy loam, 2 to 5 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Upland sample point on upland terrace approximately 15 feet north of wetland boundary and 20 feet south of top of creek bank.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 X 10 ft.)			
1. Baccharis pilularis	20	Y	NI
2.			
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: 5 X 5 ft.)			
1. Carpobrotus sp.	20	Y	NI
2. Hirschfeldia incana	10	Y	NI
3. Carduus pycnocephalus	10	Y	NI
4. Bromus madritensis	10	Y	UPL
5. Erigeron canadensis	5	N	FACU
6. Ricinus communis	5	N	FACU
7.			
8.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	10	x 4 =	40
UPL species	10	x 5 =	50
Column Totals:	20 (A)		90 (B)

Prevalence Index = B/A = 4.5

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	100					Clayey loa	Clayey loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Upland sample point contains soil map unit that occurs on the NRCS hydric soils list because soil units are mapped on a broad scale and do not always indicate the actual soils in the field.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX C
Proposed Project Area Photographs

Photograph 1. Overview of southern riparian forest in Buena Visa Creek, a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology. Disturbed and ruderal habitat dominate the north side of the creek (Facing east; July 22, 2019).

Photograph 2. Overview of southern riparian forest in Buena Visa Creek, a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology (Facing south; July 22, 2019).

Photograph 3. Wetland Sample Point 1 is within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is within southern riparian forest that is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology (Facing west; August 29, 2019).

Photograph 4. Wetland Sample Point 1 is within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is within southern riparian forest that is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology (Facing west; August 29, 2019).

Photograph 5. Upland Sample Point 2 is outside but immediately adjacent to the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is dominated by upland vegetation and soils, and contains no hydrology (Facing east; August 29, 2019).

Photograph 6. Upland Sample Point 2 is outside but immediately adjacent to the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is dominated by upland vegetation and soils, and contains no hydrology (Facing east; August 29, 2019).

Photograph 7. Wetland Sample Point 3 is within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is within southern riparian forest that is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology (Facing east; August 29, 2019).

Photograph 8. Wetland Sample Point 3 is within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is within southern riparian forest that is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology (Facing east; August 29, 2019).

Photograph 9. Upland Sample Point 4 is outside but immediately adjacent to the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS, but within the limits of CDFW Riparian (Facing east; August 29, 2019).

Photograph 10. Upland Sample Point 4 is outside but immediately adjacent to the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS, but within the limits of CDFW Riparian (Facing east; August 29, 2019).

Photograph 11. Wetland Sample Point 5 is within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is within southern riparian forest that is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology (Facing west; August 29, 2019).

Photograph 12. Wetland Sample Point 5 is within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is within southern riparian forest that is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology (Facing west; August 29, 2019).

Photograph 13. Upland Sample Point 6 is outside but immediately adjacent to the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS, but within the limits of CDFW Riparian (Facing west; August 29, 2019).

Photograph 14. Upland Sample Point 6 is outside but immediately adjacent to the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS, but within the limits of CDFW Riparian (Facing west; August 29, 2019).

Photograph 15. Overview of eastern/upstream portion of survey area where Buena Vista Creek flows through box culverts beneath Thunder Drive into open water, within the limits of potentially jurisdictional USACE and RWQCB non-wetland WoUS and WoS, and CDFW Streambed (Facing northeast west; July 22, 2019).

Photograph 16. Overview of open water and southern riparian forest in southeastern corner of the survey area, within the limits of potentially jurisdictional USACE and RWQCB wetland and non-wetland WoUS and WoS, and CDFW Riparian and Streambed (Facing west; July 22, 2019).

APPENDIX E
Biological Resources and Constraints Report

BUSBY
Biological Services

August 8, 2019

Ms. Megan Hill
Project Environmental Scientist
EnviroApplications, Inc.
2831 Camino del Rio South, Suite 214
San Diego, CA 92108

Re: Biological Constraints for the Proposed CarMax Auto Superstore on Assessor's Parcel Numbers 168-012-42 and 168-012-43 in the City of Oceanside, California

Ms. Hill:

Busby Biological Services, Inc. (BBS) was contracted by EnviroApplications, Inc. on behalf of CarMax to conduct a general biological resources survey and prepare a biological constraints report for the proposed CarMax Auto Superstore (proposed project) in the City of Oceanside, San Diego County, California (Attachment 1: Figures 1 through 3). The general biological resources survey was conducted on July 22, 2019, within an approximately 14.914-acre survey area, which consists of the 10.524-acre property and a 4.390-acre, 50-foot survey buffer surrounding the property.

The purpose of this biological constraints report is to provide a brief discussion of the applicable local, state, and federal biological regulations relevant to the proposed project; provide a brief discussion of the existing biological conditions, potential and known sensitive biological resources, and potential wetlands within the survey area; and provide a discussion of the potential biological constraints associated with the proposed project.

EXECUTIVE SUMMARY

The general biological resources survey conducted within the approximately 14.914-acre survey area consisted of vegetation mapping, general sensitive species habitat assessments, and a jurisdictional resources assessment.

The survey area contains seven vegetation communities and land cover types, including disturbed Diegan coastal sage scrub, southern riparian forest, developed land, disturbed land, iceplant, ornamental, and ruderal. It is anticipated that proposed impacts to disturbed Diegan coastal sage scrub can be mitigated at a 2:1 ratio, proposed impacts to southern riparian forest can be mitigated at a 3:1 ratio,

and a Habitat Development Fee may be required for impacts to disturbed land, iceplant, ornamental, and ruderal.

One sensitive plant species, San Diego sagewort (*Artemisia palmeri*), was observed during the general biological resources survey. Several other sensitive plant species were not observed but have a low to moderate potential to occur within the survey area based on site-specific conditions and known species ranges and habitat requirements. Therefore, focused sensitive plant surveys during the appropriate blooming period(s) within the survey area would likely be required to determine if the proposed project has the potential to impact any sensitive plant species.

No sensitive wildlife species were detected during the general biological resources survey; however, the survey area has a potential to support several sensitive species, including San Diego fairyshrimp (*Branchinecta sandiegonensis*), vernal pool fairy shrimp (*Branchinecta lynchi*), least Bell's vireo (*Vireo bellii pusillus*), and coastal California gnatcatcher (*Polioptila californica californica*). Therefore, focused surveys for these species may be required to determine if they occur within the survey area and to determine if the proposed project has the potential to impact any of these sensitive wildlife species. In addition, raptors and Migratory Bird Treaty Act (MBTA)-covered species have a potential to nest within or adjacent to the survey area during the breeding season (January 15 to August 31). Direct and indirect impacts to these species can be avoided by scheduling work outside the breeding season or conducting pre-construction nesting bird survey during the breeding, and implementing avoidance, minimization, and mitigation measures if any nesting raptors or MBTA-covered birds occur within and/or immediately adjacent to the proposed project site.

The southern portion of the survey area along Buena Vista Creek contains potential jurisdictional resources under the jurisdiction of U.S. Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWQCB), and/or the City of Oceanside. A focused wetland delineation may be required by the regulatory agencies to provide data to support the jurisdictional limits and to ensure the proposed project includes a required 100-foot buffer zone from all jurisdictional resources.

Based on the general biological resources survey conducted for the proposed project and based on our understanding of the draft Oceanside SAP, BBS does not anticipate that sensitive biological resources would prevent the proposed project from being permitted. However, BBS anticipates that the regulatory agencies will request additional focused biological surveys to document presence/absence of sensitive species as well as a Biological Technical Report that analyses the potential project impacts and proposes avoidance, minimization, and mitigation measures.

1.0 INTRODUCTION

The proposed project consists of the construction of a CarMax pre-owned automobile dealership, service building and non-public carwash with associated access driveways, parking lots, and landscaped areas. In addition, the proposed project will include a sales building with an attached presentation area, a service area, and a non-public carwash.

The proposed project occurs within the U.S. Geological Survey (USGS) San Luis Rey 7.5-minute quadrangle, in the City of Oceanside, California (USGS 2019; Attachment 1: Figure 3). The proposed project site is situated on vacant and undeveloped Assessor's Parcel Number (APN) 168-012-42 and APN 168-012-43 (Attachment 1: Figures 2, 3, and 4). It is bordered to the north by State Route 78, to east by Thunder Drive and residential development, to the south by Buena Vista Creek and residential development, and to the west by a commercial shopping center (e.g., grocery store, restaurants, motel, other retail stores). Plaza Drive separates the two parcels in the northwest portion of the proposed project area, and the Oceanside Department of Motor Vehicles occupies the property northeast of the proposed project site.

In general, the proposed project area is relatively flat with a drop in elevation to the south towards Buena Vista Creek, with elevations ranging from approximately 220 to 180 feet above mean sea level (amsl).

2.0 METHODS

Prior to conducting the general biological resources survey, BBS reviewed the City of Oceanside Subarea Plan (Oceanside SAP; City 2010), the North County Multiple Habitat Conservation Plan (MHCP; San Diego Association of Governments [SANDAG] 2003), aerial imagery, U.S. Fish and Wildlife Service (USFWS) critical habitat maps (USFWS 2019), and the CDFW California Natural Diversity Database (CNDDB; CDFW 2019a).

The general biological resources survey, which included vegetation mapping, general sensitive species habitat assessments, and a jurisdictional resources assessment, was conducted on foot to document the existing biological resources and assess the potential for sensitive biological resources to occur within and immediately adjacent to the proposed project site. Vegetation communities and land cover types were classified following Holland (1986) as modified by Oberbauer et al. (2008), and mapped by hand onto aerial imagery with a 1 inch equals 100 feet scale, noting dominant plant species within these vegetation communities. The survey area was generally assessed for jurisdictional resources, such as Wetland and Non-Wetland Waters of the U.S. and State (including potential wetlands and vernal pools), that are regulated by USACE, CDFW, RWQCB, and/or the City of Oceanside. In addition, habitats within an appropriate buffer of the proposed project area were assessed to determine the potential for these areas to support sensitive

plant and wildlife species. A 50-foot buffer was used for sensitive plant species; a 300-foot buffer was used for coastal California gnatcatcher; and a 500-foot buffer was used for least Bell's vireo, southwestern willow flycatcher (*Empidonax traillii extimus*), and raptors.

Digital photographs of representative areas were taken during the survey. The hand-drawn vegetation community and land cover type boundaries were provided to a Geographic Information Systems (GIS) Analyst and were digitized in the office using GIS software.

Plant and wildlife species observed directly and/or detected indirectly through sign (e.g., scat, tracks, burrows, vocalization) within the survey area were noted and are included as Attachments 2 and 3, respectively. However, these species lists do not provide a comprehensive list of all species that occur within or utilize the survey area, because the survey conducted was a general survey that does not account for all potentially occurring rare species, nocturnal species, secretive species, or seasonal species.

3.0 APPLICABLE REGULATIONS

This section provides a summary of the federal, state, and local regulations that are applicable to the proposed project.

3.1 Federal Regulations

The federal Endangered Species Act (ESA), which is administered by USFWS, provides the legal framework for the listing of species that are threatened and/or endangered with extinction as well as for the protection of listed species (i.e., threatened or endangered species) and their habitats. Projects activities that jeopardize threatened or endangered species and the habitats upon which they rely are considered 'take' under the ESA. The ESA defines 'take' as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct."

All migratory bird species that are native to the U.S. or its territories are protected under the federal MBTA, as amended under the Migratory Bird Treaty Reform Act of 2004. The MBTA prohibits the killing or transport of native migratory birds or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. No permit is issued under the MBTA, and the MBTA does not mandate specific protection measures. However, typical pre-construction requirements include nesting bird surveys during the avian breeding season and avoidance measures if nesting birds are discovered within or adjacent to a project. In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests.

The Rivers and Harbors Act of 1899 and the Clean Water Act (CWA) provide guidance for project activities within non-marine navigable waters and/or waters of the U.S. The discharge of any pollutant from a point source into navigable waters is illegal unless a permit under the CWA's provisions is acquired. Permitting for projects that include both permanent and temporary dredging and filling in wetlands and waters of the U.S. is overseen by the USACE under Section 404 of the CWA. Projects can be permitted on an individual basis or covered by one of several approved nationwide permits or regional general permits. In addition, RWQCB issues Water Quality Certifications under Section 401 of the CWA for project activities that fill or dredge within Wetland and Non-Wetland Waters of the U.S. and State, including isolated waters such as vernal pools and other waters showing lack of connectivity to a Traditional Navigable Waters (TNW).

3.2 State of California Regulations

The California Endangered Species Act (CESA) is similar to the federal ESA in that it provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. CESA is administered by CDFW and allows "take" of listed plant and wildlife species either by concurring with a federal Incidental Take Permit under the Fish and Game Code (CFGC) Section 2080.1 or, for species that are state-listed but not federally listed, issuing an Incidental Take Permit under CFGC Section 2081 if specific criteria are met. The Oceanside SAP is considered an Incidental Take Permit pursuant to CFGC Section 2081.

The Native Plant Protection Act (NPPA), under CFGC Sections 1900 through 1913, regulates collection, transport, and commerce in plants that are listed as rare or endangered.

The California Environmental Quality Act (CEQA) requires an environmental review for projects with potentially adverse impacts on the environment. Adverse environmental impacts are typically mitigated in accordance with existing state laws and regulations.

The CFGC provides protection for several types of sensitive biological resources. CDFC Section 3503 and 3513 protects avian species, their nests, and their eggs from being "taken" unless authorized by CDFW through implementation of appropriate avoidance, minimization, and/or mitigation measures. CFGC Sections 1600 through 1603 regulate project activities within rivers, streams, lakes, wetlands, and riparian habitat. CDFW can issue a Lake or Streambed Alteration (LSA) Agreement for projects affecting these jurisdictional resources. If the activity will not substantially adversely affect any CDFW jurisdictional resources, the entity may commence the activity without a LSA Agreement.

The Porter-Cologne Water Quality Control Act regulates water quality for project activities in California. Pursuant to the Porter-Cologne Act, under Section 13000 et

seq. of the California Water Code (CWC), the RWQCB issues Water Quality Certifications for project activities that fill or dredge within Wetland and Non-Wetland Waters of the U.S. and State, including isolated waters – such as vernal pools – and other waters showing lack of connectivity to a TNW.

CDFW's Natural Community Conservation Planning (NCCP) program is a combined effort by the State of California and both public and private partners to take an ecosystem approach to protecting and preserving biological diversity. CDFW and USFWS provide support, direction, and guidance to local agencies to develop an NCCP that identifies economic activity that is compatible with the longterm, regional protection of plants, wildlife, and their habitats. The applicable NCCP for the proposed project – the Oceanside SAP within the MHCP – is discussed in Local Regulations, below.

3.3 Local Regulations

The North County MHCP (SANDAG 2003) is a comprehensive conservation planning process that was developed to create, manage, and monitor an ecosystem preserve in northwestern San Diego County. It is one of three subregional plans that will contribute to a regional preserve system in San Diego County. The MHCP is intended to conserve not only habitat that is already in public ownership but also other areas that will offer protection to rare, threatened, and endangered plants and wildlife. The MHCP encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. Each of these cities has its own SAP that identifies city-specific regulations and policies pertaining to the sensitive resources found within that jurisdiction.

The draft Oceanside SAP (City of Oceanside 2010) has not been adopted by City Council and implementing agreements with CDFW and USFWS have not been signed; therefore, incidental take permits currently cannot be issued under the Oceanside SAP. However, the draft Oceanside SAP provides guidance for project proponents to determine potential impacts to biological resources that may result from implementation of a proposed project and to develop appropriate avoidance, minimization, and mitigation measures to reduce proposed project impacts to below a level of significance. Until the Oceanside ' is officially adopted, proposed projects within the City of Oceanside will need to comply with other state and federal regulations, and project proponents will have to coordinate with CDFW and/or USFWS to obtain incidental take permits for their projects.

4.0 RESULTS

BBS Biologist Darin Busby conducted a general biological resources survey of the survey area (i.e., the proposed project site and 50-foot survey buffer) on July 22, 2019, between the hours of 1000 and 1245. Weather conditions during the survey included temperatures ranging from 73 to 82 degrees Fahrenheit, wind speeds

ranging from 0 to 4 miles per hour, cloud cover ranging from 10 to 100 percent, and no precipitation.

The following sections (1) describe the general botanical and zoological resources and the sensitive biological resources observed and/or detected within the survey area during the general biological resources survey and (2) provide an assessment of the potential for additional sensitive biological resources to occur within and immediately adjacent to the proposed project site**.**

4.1 Botanical Resources

A total of 52 plant species were observed within the survey area (Attachment 3). Of these 52 plant species observed, 27 (52 percent) of these species are considered non-native and/or naturalized into the area, and 25 (48 percent) of these species are considered native. One of the 52 plant species, San Diego sagewort (*Artemisia palmeri*), found adjacent to and south of the survey area is considered sensitive. A list of plant species observed within the survey area is included as Attachment 2.

BBS mapped the vegetation communities and land cover types on the proposed project site and within a 50-foot buffer of the proposed project site. BBS documented seven vegetation communities and land cover types within the survey area – disturbed Diegan coastal sage scrub, southern riparian forest, developed land, disturbed land, iceplant, ornamental, and ruderal (Attachment 1: Figure 4). The seven vegetation communities and land cover types are summarized in Table 1, and briefly described in the following paragraphs.

Table 1. Vegetation Communities and Land Cover Types within the Survey area

Vegetation Community/ Land Cover Type	SAP Habitat Group	Within Parcels (acres)	Within 50-foot Survey Buffer (acres)	Total (acres)
Disturbed Diegan Coastal Sage Scrub	C	0.447	0.003	0.451
Southern Riparian Forest	A	0.565	0.864	1.429
Developed Land	-	0.049	2.632	2.681
Disturbed Land	F	8.042	0.587	8.629
Iceplant	F	0.448	--	0.448
Ornamental	F	0.136	0.304	0.440
Ruderal	F	0.837	--	0.837
TOTAL		**10.524**	**4.390**	**14.914**

Disturbed Diegan Coastal Sage Scrub (Oberbauer Code 32510, Updated Holland Code 32500)

Diegan coastal sage scrub is a vegetation community that consists mainly of low, soft-woody sub-shrubs (approximately 3 feet high) that are most actively growing in winter and early spring. Many taxa within this community are facultatively drought-deciduous. Stem- and leaf-succulents are also often present but are usually not conspicuously dominant species. Dominant shrub species in this vegetation type vary, depending on local site factors and levels of disturbance. Diegan coastal sage scrub is typically found on dry sites, such as steep, south-facing slopes or clay-rich soils ranging from coastal Los Angeles County into northern Baja California, Mexico.

Disturbed Diegan coastal sage scrub is similar to Diegan coastal sage scrub, described above, but it was classified as disturbed where mechanical or natural disturbance has reduced the overall cover of the community resulting in large areas colonized by herbaceous weedy species and/or bare ground. Some disturbance types include clearing, grading, scraping, off-road vehicle damage, or illegal trash disposal.

Approximately 0.451 acre of disturbed Diegan coastal sage scrub occurs within three small patches within the survey area, including approximately 0.447 acre on the southern parcel and approximately 0.003 acre in the 50-foot survey buffer (Attachment 1: Figure 4). The disturbed Diegan coastal sage scrub is moderately dense with shrub heights primarily ranging from 1 to 4 feet, and is dominated by native plant species such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), but also contains a high proportion of non-native plant species, such as crown daisy (*Glebionis coronaria*), black mustard (*Brassica nigra*), short-pod mustard (*Hirschfeldia incana*), sweet fennel (*Foeniculum vulgare*), Russian thistle (*Salsola tragus*), and chess (*Bromus* spp.). Some areas of disturbed Diegan coastal sage scrub have been altered by mechanical disturbance.

Southern Riparian Forest

Southern riparian forest is composed of winter-deciduous, broad-leaved tree species that require water near the soil surface and is most often found along stream courses. Typically this community contains a dense canopy of trees located within moist canyons and drainage bottoms and is dominated by species such as willow (*Salix* spp.), cottonwood (*Populus* sp.), and western sycamore (*Platanus racemosa*). Associated understory species can include species such as mulefat (*Baccharis salicifolia*), stinging nettle (*Urtica dioica* ssp. *holosericea*), and wild grape (*Vitis girdiana*).

Approximately 1.429 acres of southern riparian forest occur along Buena Vista Creek within the survey area, including approximately 0.565 acre within the

southern parcel boundary and approximately 0.864 acre in the 50-foot survey buffer (Attachment 1: Figure 4). This vegetation community contains a moderately dense canopy, primarily ranging in height from 15 to 20 feet, and is dominated by native plant species such as narrow-leaf willow (*Salix exigua*), arroyo willow (*Salix lasiolepis*), mulefat, cattail (*Typha* sp.), wild grape, but also contains non-native plant species such as Brazilian pepper tree (*Schinus terebinthifolius*), giant reed (*Arundo donax*), and castor bean (*Ricinus communis*).

Developed Land (No Tier; Oberbauer Code 12000, No Holland Code)

Developed land has been constructed upon or otherwise physically altered to the extent that native vegetation is no longer supported. Developed land contains permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation.

A total of approximately 2.681 acres of developed land occur within the survey area, including approximately 0.049 acre within the southern parcel boundary and approximately 2.632 acres within the 50-foot survey buffer (Attachment 1: Figure 4). Within the survey area, developed land occurs as sidewalks, roadways, parking lots, and commercial buildings.

Disturbed Land (Oberbauer Code 11300, No Holland Code)

Disturbed land includes areas that retain a soil substrate but have been physically disturbed by previous human activity. These areas are no longer recognizable as a native or naturalized vegetation community. Vegetation, if present, is typically composed of predominately non-native species introduced and established through human action. These areas are not typically artificially irrigated but receive water from precipitation and runoff. Examples of disturbed land include areas that have been graded, cleared for fuel management purposes, graded construction pads, staging areas, off-road vehicle trails, and old home sites.

A total of approximately 8.629 acres of disturbed land occur throughout the survey area, with approximately 8.042 acres within the two parcel boundaries and approximately 0.587 acre in the 50-foot survey buffer (Attachment 1: Figure 4). These areas are within or adjacent to areas that appear to be altered by regular human mechanical disturbance activities, such as grading or brush management. The disturbed land is dominated by bare ground and non-native plant species such as black mustard, tocalote (*Centaurea melitensis*), spotted spurge (*Chamaesyce maculata*), bur-clover (*Medicago polymorpha*), and chess, but also contains scattered native plant species, such as spreading goldenbush (*Isocoma menziesii* var. *menziesii*), tarweed (*Deinandra fasciculata*), coyote brush (*Baccharis pilularis*), and dove weed (*Croton setigerus*).

Iceplant (No Oberbauer Code, No Holland Code)

Iceplant is not a vegetation community described by Holland (1986) or Oberbauer et al. (2008). However, it was used for the vegetation mapping for the proposed project to indicate areas that are dominated by iceplant (*Carpobrotus* sps.), which has been introduced and established through human action. Areas mapped as iceplant are no longer recognizable as a native or naturalized vegetation community. These areas are not typically artificially irrigated but receive water from precipitation and runoff.

A total of approximately 0.448 acre of iceplant occurs within five small patches in the survey area, all of which occurs on the southeastern parcel boundaries (Attachment 1: Figure 4). In addition to non-native iceplant, this land-cover type contains non-native grasses, such as wild oat (*Avena fatua*) and chess.

Ornamental (No Oberbauer Code, No Holland Code)

Ornamental vegetation is not recognized by Holland (1986) or Oberbauer et al. (2008). It typically consists of non-native landscape and/or garden plantings that have been planted in association with buildings, roads, or other development. San Diego County supports more than 250 different types of ornamental trees and numerous other shrubs and herbs that decorate urban areas.

A total of approximately 0.440 acre of ornamental vegetation occurs in small scattered patches along the perimeter of the survey area, including approximately 0.136 acre within the parcel boundaries and approximately 0.304 acre within the 50-foot survey buffer (Attachment 1: Figure 4). Ornamental vegetation is composed of various non-native plant species used for landscaping, such as Brazilian pepper tree, red gum (*Eucalyptus camaldulensis*), natal plum (*Carissa macrocarpa*), and Mexican fan palm (*Washingtonia robusta*).

Ruderal (No Oberbauer Code, No Holland Code)

Ruderal areas are not recognized by Holland (1986) or Oberbauer et al. (2008). They are typically dominated by non-native, weedy species and are no longer recognizable as a native or naturalized vegetation community. These areas are not typically artificially irrigated but receive water from precipitation and runoff. The species composition in ruderal areas can be similar to the species composition in disturbed areas; however, ruderal areas do no typically receive the frequent mechanical disturbance that occurs in disturbed areas.

A total of approximately 0.837 acre of ruderal vegetation occurs within four small patches in the survey area, all of which occurs within the southern parcel boundaries (Attachment 1: Figure 4). These areas are dominated by non-native plant species, such as black mustard, short-pod mustard, tocalote, wild oat, and

chess, but also contain scattered native plant species, such as spreading goldenbush, tarweed, and coyote brush.

4.2 Zoological Resources

A total of 17 wildlife species were detected within the survey area during the general biological resources survey conducted on July 22, 2019. Representative species detected are typical of the habitats present within and adjacent to the survey area and included cabbage white butterfly (*Pieris rapae*), western fence lizard (*Sceloporus occidentalis*), Anna's hummingbird (*Calypte anna*), western scrub-jay (*Aphelocoma californica*), spotted towhee (*Pipilo maculatus*), house finch (*Carpodacus mexicanus frontalis*), and California ground squirrel (*Spermophilus beecheyi*). A list of wildlife species detected within the survey area is included as Attachment 3.

4.3 Sensitive Biological Resources

Sensitive biological resources include sensitive vegetation communities, sensitive plant and wildlife species, jurisdictional resources, critical habitat, and wildlife movement corridors and nursery sites. Assessments for the potential occurrence of sensitive biological resources are based upon known ranges, habitat preferences for the species, historical species occurrence records from the CNDDB (CDFW 2019), and species occurrence records from the vicinity of the proposed project from other databases (County of San Diego 2019, CNPS 2019). No focused sensitive species surveys were conducted for the proposed project. The following sections provide definitions for each of these sensitive biological resources and describe the sensitive biological resources that are known to occur or have a potential to occur within and/or adjacent to the proposed project.

Sensitive Vegetation Communities

Sensitive vegetation communities are vegetation assemblages, associations, or subassociations that have cumulative losses throughout the region, have relatively limited distribution, support or potentially support sensitive species, or have particular value to other wildlife. Typically, sensitive vegetation communities are considered sensitive whether or not they have been disturbed. Sensitive vegetation communities are regulated by various local, state, and federal resource agencies.

The sensitive vegetation communities that occur within the survey area include disturbed Diegan coastal sage scrub and southern riparian forest.

Sensitive Plant Species

For purposes of this report, sensitive plant species include those that are (1) listed as threatened or endangered or proposed for listing by federal or state agencies; (2) California Rare Plant Ranks (CRPR) List 1 or List 2 (CNPS 2019); or

(3) considered rare, endangered, or threatened by CDFW (CDFW 2019b) or other local conservation organizations or specialists. Noteworthy plant species are considered to be those that are CRPR List 3 or List 4 (CNPS 2019).

Although a focused sensitive plant survey was not conducted on-site, approximately 44 individual San Diego sagewort, a CRPR List 4.2 sensitive plant, was found adjacent to the survey area, on the stream bank just south of Buena Vista Creek.

In addition, a literature review and database search resulted in a list of 22 sensitive plant species that have historically occurred within 3 miles of the survey area. The majority of these sensitive plants species are not expected to occur within the survey area, because of habitat specific requirements or because the survey area is outside their known range. However, several other sensitive plant species, including a few on the database list, were not observed during the general biological resources survey but have a low to moderate potential to occur within the survey area based on site-specific conditions and known species ranges and habitat requirements. Examples of potentially occurring sensitive plant species include, but are not limited to, thread-leaved brodiaea (*Brodiaea filifolia*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), San Diego marsh-elder (*Iva hayesiana*), narrow tarplant (*Holocarpha virgata* ssp. *elongate*), spiny rush (*Juncus acutus*), and small-flowered morning glory (*Convolvulus simulans*).

Sensitive Wildlife Species

For purposes of this report, sensitive wildlife species include those that are (1) listed as threatened or endangered or proposed for listing by USFWS or CDFW; (2) designated as “fully protected” by CDFW, (3) considered “species of special concern” by CDFW, and/or (4) considered “taxa to watch” by CDFW (CDFW 2019c). Species that are covered by the federal MBTA were also considered.

Although no sensitive wildlife species were detected during the general biological resources survey, the literature review and database search resulted in a list of 26 sensitive wildlife species that have historically occurred within 3 miles of the survey area or have potential to occur within the survey area based site specific conditions and known species ranges and habitat requirements (CDFW 2019a).

The San Diego fairy shrimp, a federally listed endangered species, and vernal pool fairy shrimp, a federally listed threatened species, have a moderate potential to occur within the survey area. These species occur within a variety of areas that seasonally inundate during the wet season, including vernal pools, road ruts, tire tracks, ditches, detention basins, other depressions, when they hatch from resting eggs to adult form. The proposed project site is relatively flat and contains several depressions with clay soils or topography that has a potential to inundate for extended periods during the wet season and provide habitat for mature fairy shrimp.

The least Bell's vireo, a federally and state-listed endangered species has a moderate potential to nest and forage within Buena Vista Creek along the southern perimeter of survey area. This migrant species that arrives in California in mid-March and departs by late September is dependent upon riparian habitat during the breeding season and prefers willow-dominated woodland or scrub that typically exists along streams and rivers.

A small portion of the southern survey area contains disturbed Diegan coastal sage scrub, a vegetation community that is known to support the coastal California gnatcatcher, a federally listed threatened species and CDFW species of special concern, that is restricted to coastal sage scrub from coastal southern California to the southern tip of Baja California, Mexico. The disturbed Diegan coastal sage within the survey area is composed of three small patches that are low in quality, total less than a half an acre, and are surrounded by disturbed land and dense commercial and residential development. However, moderately suitable habitat for the species exists to the southwest of the property and critical habitat for the coastal California gnatcatcher has been designated within the Buena Vista Creek Mitigation Area, located along the southern boundary of the survey area (Attachment 1: Figure 4). Therefore, the species has a low potential to nest and forage within the southern portion of the survey are but has a moderate potential to nest and forage adjacent to the survey area.

Raptors and MBTA-covered species have a low to moderate potential to nest within or adjacent to the survey area during the breeding season (January 15 to August 31).

Jurisdictional Resources

Jurisdictional resources are considered sensitive biological resources and are regulated by the USACE, CDFW, RWQCB, and/or the City of Oceanside pursuant to federal, state, and local regulations, described below.

USACE regulates the discharge of dredged and/or fill material, both temporary and permanent, into Wetland and Non-Wetland Waters of the U.S., pursuant to Section 404 of the CWA. USACE Non-Wetland Waters of the U.S. are delineated by the lateral and upstream/downstream extent of the ordinary high watermark (OHWM). USACE Wetland Waters of the U.S. are areas that contain wetland hydrology, hydric soils, and hydrophytic vegetation. Swales and erosional features (e.g., gullies; small washes characterized by low volume, infrequent, and short duration flow) are generally not considered Waters of the U.S. because they are not tributaries or they do not have a significant nexus to downstream TNWs.

RWQCB regulates wastewater discharge, dredged and/or fill material, or other alterations of Wetland and Non-Wetland Waters of the State, including isolated waters such as vernal pools and other waters showing lack of connectivity to a

TNW, pursuant to Section 401 of the CWA and Section 13000 et. seq. of the CWC under the Porter-Cologne Water Quality Control Act.

CDFW regulates activities that would substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake, pursuant to CFGC Section 1600 et. seq. CDFW typically extends its jurisdictional limit to the top of a stream, the bank of a lake, or the outer edge of the riparian vegetation, whichever is wider. CDFW Streambeds include watercourses having a surface or subsurface flow that supports riparian vegetation. In addition, CDFW asserts jurisdiction over vernal pools when California state threatened and/or endangered species are present.

The Oceanside SAP provides guidance for avoidance, minimization, and mitigation measures for potential impacts to wetlands. Proposed projects that have potential wetland impacts would be required to show that these impacts were avoided to the maximum extent feasible and that unavoidable impacts were minimized and mitigated to achieve a no net loss not only of wetland acreage but of the functions and values of the impacted system. In addition, at a minimum, a 100-foot buffer of wetland habitats (i.e., a 50-foot biological buffer plus a 50-foot planning buffer) must be established for projects that are proposed within or adjacent to wetland areas.

A general assessment of potential jurisdictional resources was conducted for the proposed project. Potential jurisdictional resources occur within and/or immediately adjacent to Buena Vista Creek, including potential wetland and non-wetland waters of the U.S. as regulated by USACE, potential wetland and non-wetland waters of the State as regulated by RWQCB, and potential riparian and streambed as regulated by CDFW (Attachment 1: Figure 4). The proposed project is not anticipated to support isolated waters, such as vernal pools, because of the heavily disturbed nature of the site.

Critical Habitat

Under the ESA, USFWS designates certain areas as “critical habitat” if they determine that these geographic areas are essential for the conservation and/or recovery of a federally listed threatened or endangered species, whether or not the species currently occupies the area. Critical habitat areas often require special management and protection to assure they will remain suitable for the federally listed species for which they have been designated. While federally listed species are protected by the ESA whether or not they are in an area that is designated as critical habitat, projects proposed within or adjacent to critical habitat must demonstrate that implementation of the project would not destroy or significantly impact the functions and values of the critical habitat.

Critical habitat for the coastal California gnatcatcher has been designated within the Buena Vista Creek Mitigation Area, located along the southern boundary of the survey area (Attachment 1: Figure 4).

Wildlife Movement Corridors

Wildlife movement corridors are essential to maintain populations of healthy and genetically diverse plant and wildlife species. Wildlife corridors are considered sensitive by local, state, and federal resource and conservation agencies, because these corridors allow wildlife to move between adjoining open space areas that are becoming increasingly isolated as open space becomes fragmented from urbanization, rugged terrain, and/or changes in vegetation (Beier and Loe 1992).

Wildlife corridors can be classified as either regional corridors or local corridors. Regional corridors are defined as those linking two or more large areas of natural open space, and local corridors are defined as those allowing resident animals to access critical resources (e.g., food, cover, water) in a smaller area that might otherwise be isolated by some form of urban development (e.g., roads, housing tracts).

The proposed project is dominated by disturbed and ruderal land that completely surrounded by commercial and residential development with the exception of the narrow riparian corridor along the southern boundary. Despite being surrounded by urban development, noise, and lighting, the riparian corridor provides a vital swath of undeveloped open space that appears to provide limited yet sufficient connectivity to be considered part of both a local and regional wildlife corridor. The proposed project site, however, is outside of the Wildlife Corridor Planning Zone (WCPZ).

5.0 PROPOSED PROJECT BIOLOGICAL CONSTRAINTS

BBS conducted the background research and general biological resources survey to identify potential constraints for the proposed project.

As stated previously, the draft Oceanside SAP has not been adopted by City Council and implementing agreements with CDFW and USFWS have not been signed; therefore, incidental take permits currently cannot be issued under the Oceanside SAP. Thus, the draft Oceanside SAP may be used to provide guidance to determine potential impacts to biological resources that may result from implementation of a proposed project and to develop appropriate avoidance, minimization, and mitigation measures to reduce proposed project impacts to below a level of significance. However, until the Oceanside SAP is officially adopted, proposed projects within the City of Oceanside will need to comply with other state and federal regulations, and project proponents will have to coordinate with CDFW and/or USFWS to obtain incidental take permits for their projects.

Based on the draft Oceanside SAP (City of Oceanside 2010), the proposed project is located outside the WCPZ and in an Off-site Mitigation Zone. The portion of Buena Vista Creek that runs along the southern portion of the proposed project is part of the Buena Vista Creek Mitigation Area, a hard line preserve (City of

Oceanside 2010; Attachment 1: Figure 4).

Potential proposed project constraints are discussed by resource, below.

5.1 Sensitive Vegetation Communities

Sensitive vegetation communities that occur within the survey area include disturbed Diegan coastal sage scrub and southern riparian forest.

The proposed project is located in an Off-site Mitigation Zone (City of Oceanside 2010). According to the draft Oceanside SAP, natural vegetation within an off-site mitigation zone may be removed as long as all impacts are mitigated at an appropriate mitigation area within the City of Oceanside. However, as an enrolled jurisdiction whose SAP has not yet been approved, the City of Oceanside is only allowed a loss of up to 5 percent of its coastal sage scrub habitat. The City of Oceanside has already reached its 5 percent limit; therefore, the City of Oceanside would need to coordinate with the County of San Diego (County) to obtain permission to use a portion of the County's take allowance for coastal sage scrub impacts, unless the Oceanside SAP is approved prior to approval of the proposed project.

According to the draft Oceanside SAP, mitigation for impacts within the Off-site Mitigation Zone is required either within the WCPZ or a Pre-approved Mitigation Area (PAMA). Alternatively, conservation and management of on-site vegetation immediately adjacent to an identified preserve may be used for on-site mitigation, if accompanied by a preserve boundary adjustment which is found to be justifiable and biologically superior to mitigation within the WCPZ or a PAMA. All mitigation sites must be designated as preserve, be protected by conservation easements, have a permanent responsible party clearly designated, and be managed in perpetuity for their biological resources and value.

The following recommended mitigation ratios/fees will be subject to final approval by the resource agencies:

- 3:1 ratio for impacts to southern riparian forest (Habitat Group A);
- 2:1 ratio for impacts to disturbed Diegan coastal sage scrub (Habitat Group C); and
- a Habitat Development Fee may be required for impacts to disturbed land, iceplant, ornamental, and ruderal (Habitat Group F).

5.2 Sensitive Plant Species

No focused sensitive plant surveys were conducted for the proposed project; however, San Diego sagewort, a CRPR List 4.2 sensitive plant, was found adjacent to the survey area, on the stream bank just south of Buena Vista Creek. In addition, several other sensitive plant species, with examples listed in Section 4.3, have a low to moderate potential to occur within the survey area based on site-specific

conditions and known species ranges and habitat requirements. Therefore, focused sensitive plant surveys during the appropriate blooming period(s) within the survey area would likely be required to determine if the proposed project has the potential to impact any sensitive plant species.

If sensitive plant species occur within or immediately adjacent to the proposed project footprint, appropriate avoidance, minimization, and/or mitigation measures based on the number and sensitivity of plant species present would likely be required to reduce impacts to below a level of significance.

5.3 Sensitive Wildlife Species

No focused wildlife surveys were conducted for the proposed project, and no sensitive wildlife species were detected during the general biological resources survey. However, several sensitive wildlife species have a potential to occur within the survey area, as discussed below.

San Diego fairy shrimp and vernal pool fairy shrimp have a moderate potential to occur in several depressions that occur throughout the survey area. Therefore, focused fairy shrimp surveys may be required to determine if these species occur within the survey area and to determine if the proposed project has the potential to impact these species.

Least Bell's vireo has a moderate potential to nest and forage within the southern riparian forest in Buena Vista Creek, along the southern perimeter of the survey area. Therefore, focused least Bell's vireo surveys may be required to determine if the species utilizes the habitat within Buena Vista Creek. While no direct impacts to the southern riparian forest or to the least Bell's vireo are anticipated, any proposed project activities within 500 feet of occupied least Bell's vireo habitat must be analyzed for the potential to indirectly impact the species.

The coastal California gnatcatcher has a low potential to nest and forage within the southern portion of the survey area but has a moderate potential to nest and forage adjacent to the survey area. Therefore, focused coastal California gnatcatcher surveys may be required to determine if the species utilizes the property and Diegan coastal sage scrub within 300 feet of the property to analyzed the proposed project's potential to directly and indirectly impact the species.

MBTA-covered species have a potential to nest within or adjacent to the survey area during the breeding season (January 15 to August 31). Therefore, proposed project construction should occur outside of the breeding season to avoid impacts to MBTA-covered species. If project construction cannot be entirely constructed outside of the breeding season, then a pre-construction nesting bird survey may be required, and additional avoidance, minimization, and mitigation measures may be required if MBTA-covered birds and/or their nests occur within and/or immediately adjacent to the proposed project site.

If other sensitive wildlife species are determined to occur within or adjacent to the proposed project site, appropriate avoidance, minimization, and/or mitigation measures based on the location and species present would likely be required to reduce impacts to below a level of significance.

5.4 Jurisdictional Resources

A focused wetland delineation was not conducted for the proposed project; however, the estimated limits of jurisdiction were estimated during the general biological resources survey based on the presence of wetland hydrology and hydrophytic vegetation along Buena Vista Creek in the southern portion of the survey area. A focused wetland delineation may be required by the regulatory agencies to provide data to support the jurisdictional limits.

The proposed project should be designed to avoid impacts to the jurisdictional resources located within and adjacent to the survey area, and the proposed project should include the appropriate 100-foot buffer zone, as required in the draft Oceanside SAP. If impacts to the jurisdictional resources can be completely avoided, no USACE, RWQCB, CDFW, or City of Oceanside permits are anticipated for the proposed project.

5.5 Critical Habitat

Critical habitat for the coastal California gnatcatcher has been designated within the Buena Vista Creek Mitigation Area, which occurs along the southern boundary of the survey area (Attachment 1: Figure 4). Therefore, focused coastal California gnatcatcher surveys may be required to determine if the species utilizes the property and Diegan coastal sage scrub within 300 feet of the property to analyzed the proposed project's potential to directly and indirectly impact the species.

5.6 Wildlife Movement Corridors and Nursery Sites

The proposed project is not located in the WCPZ; however, Buena Vista Creek along the southern boundary of the survey area provides a vital swath of undeveloped open space that appears to provide limited yet sufficient connectivity to be considered part of both a local and regional wildlife corridor. With the implementation of the other avoidance, minimization, and mitigation measures required for the sensitive resources above, specifically with the inclusion of the 100-foot wetland buffer, the functions and values of this wildlife corridor would be maintained. As such, no additional avoidance, minimization, and/or mitigation measures are anticipated.

6.0 Conclusion

Based on the general biological resources survey conducted for the proposed project and based on our understanding of the draft Oceanside SAP, BBS does not

anticipate that sensitive biological resources would prevent the proposed project from being permitted. However, BBS anticipates that the regulatory agencies will request additional biological surveys to document presence/absence of sensitive species as well as a Biological Technical Report that analyses the potential project impacts and proposes avoidance, minimization, and mitigation measures.

If you have any questions about the information provided in this report, please do not hesitate to contact me at darin@busbybiological.com or 858.334.9508

Sincerely,

Darin Busby
Principal Biologist

ATTACHMENTS

Attachment 1: Figures
Attachment 2: Plant Species Detected
Attachment 3: Wildlife Species Detected

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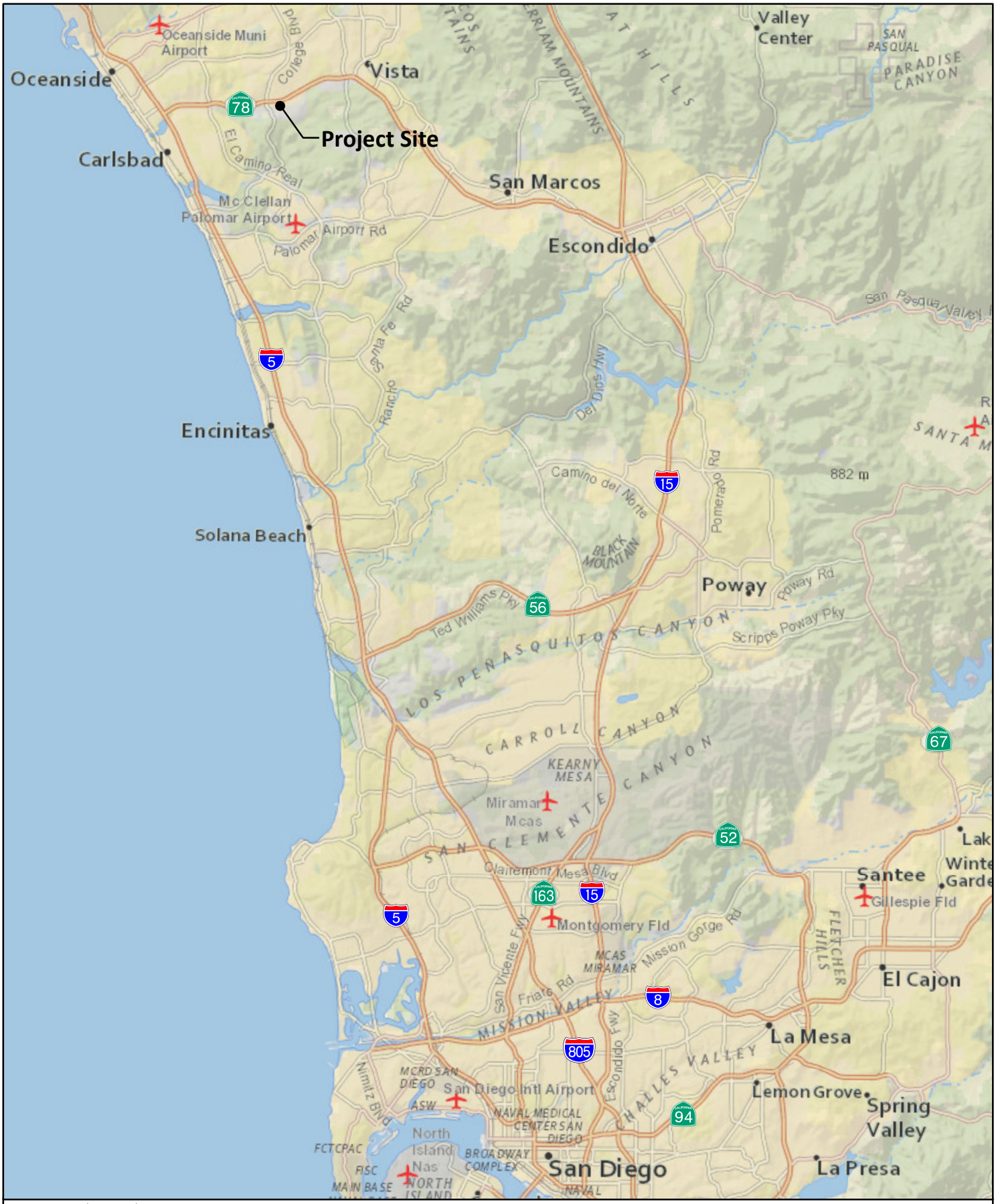
ATTACHMENT 1 – Figures



Source: National Geographic, Esri

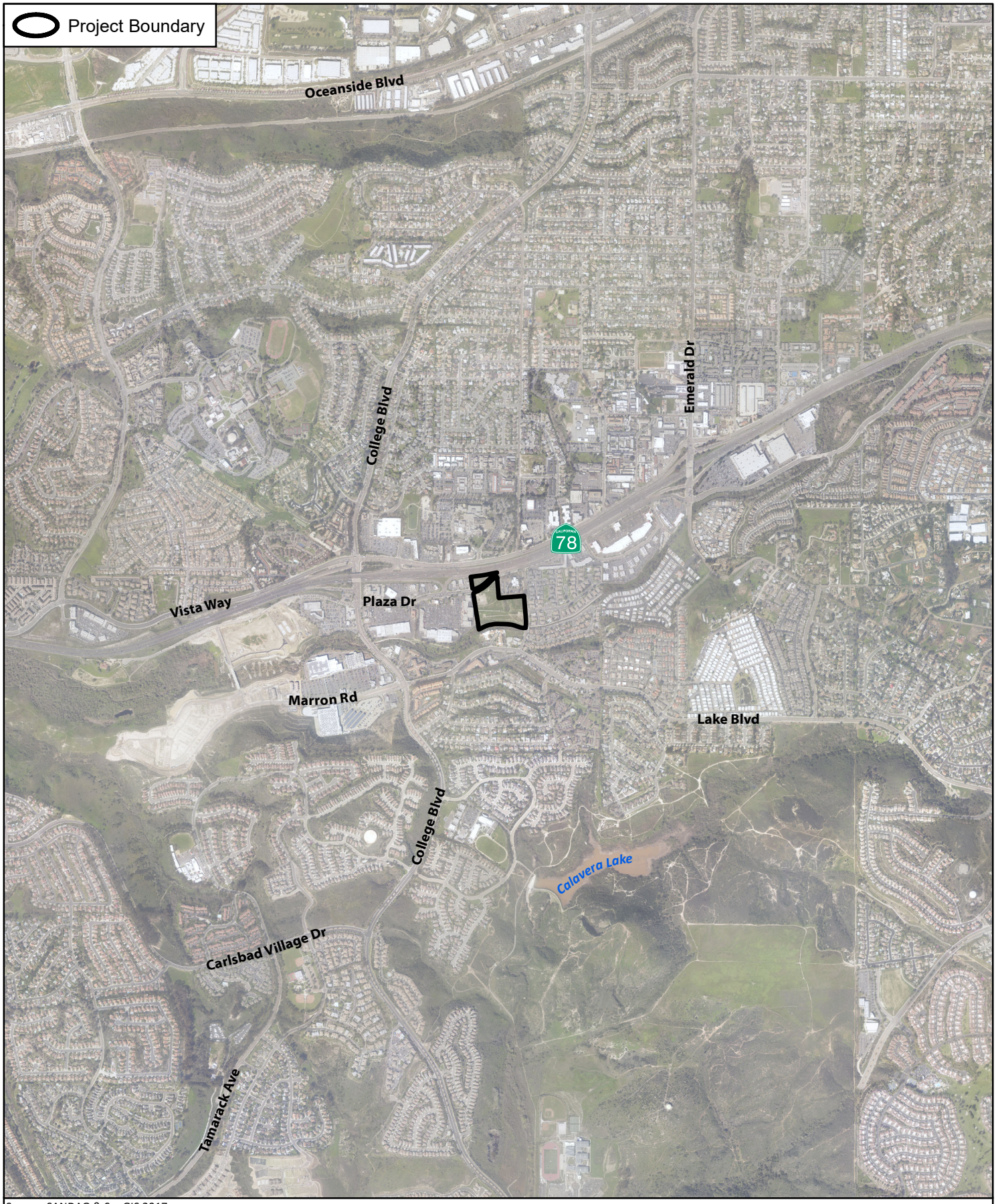
BUSBY Biological Services

N 0 2 4 Miles

Regional Location

CARMAX OCEANSIDE

Figure 1



Source: SANDAG & SanGIS 2017

BUSBY Biological Services

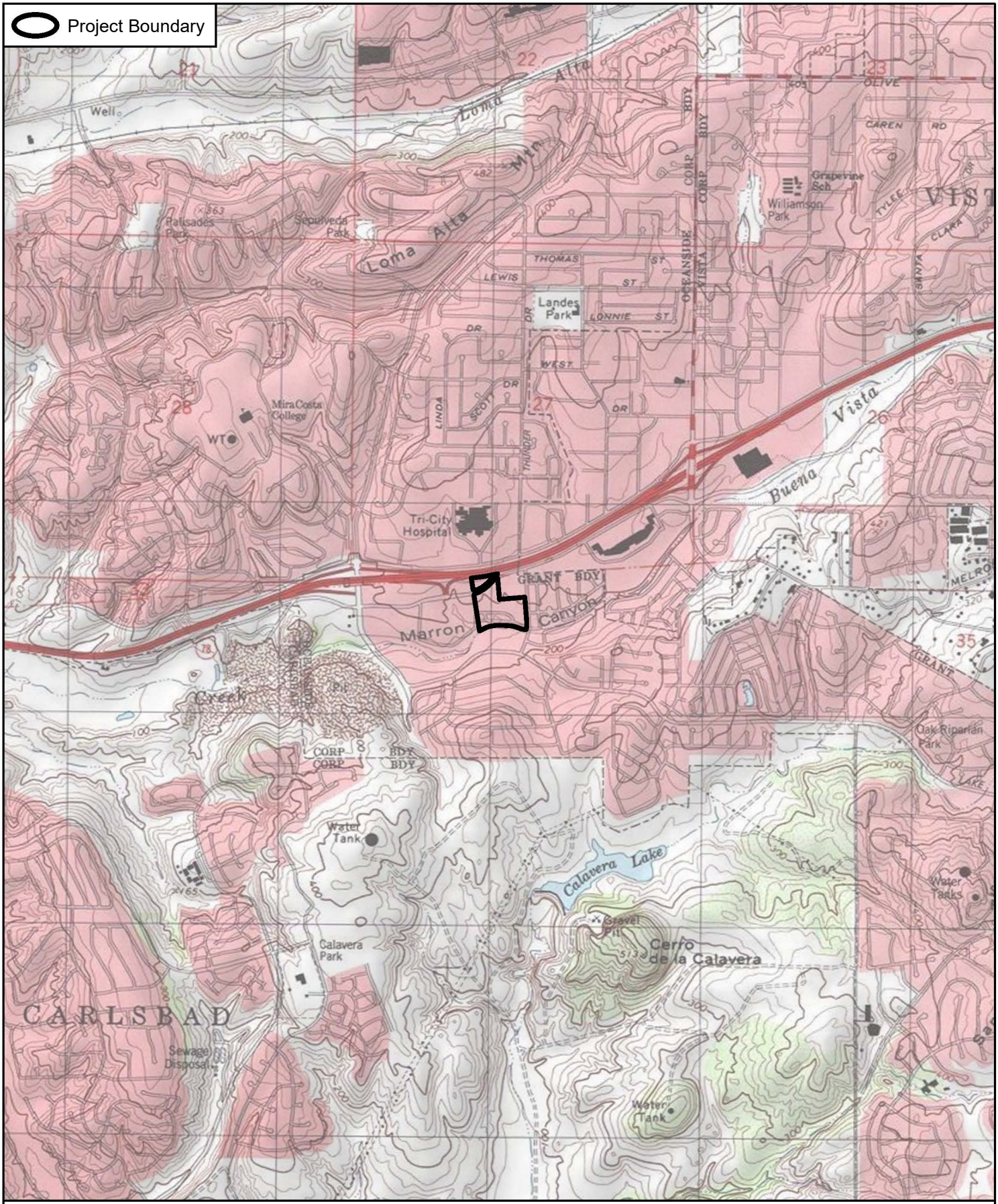
N

0 1,000 2,000 Feet

Project Vicinity - Aerial

CARMAX OCEANSIDE

Figure 2



Source: USGS 7.5' Quadrangles (San Luis Rey)

Project Vicinity - USGS Topo

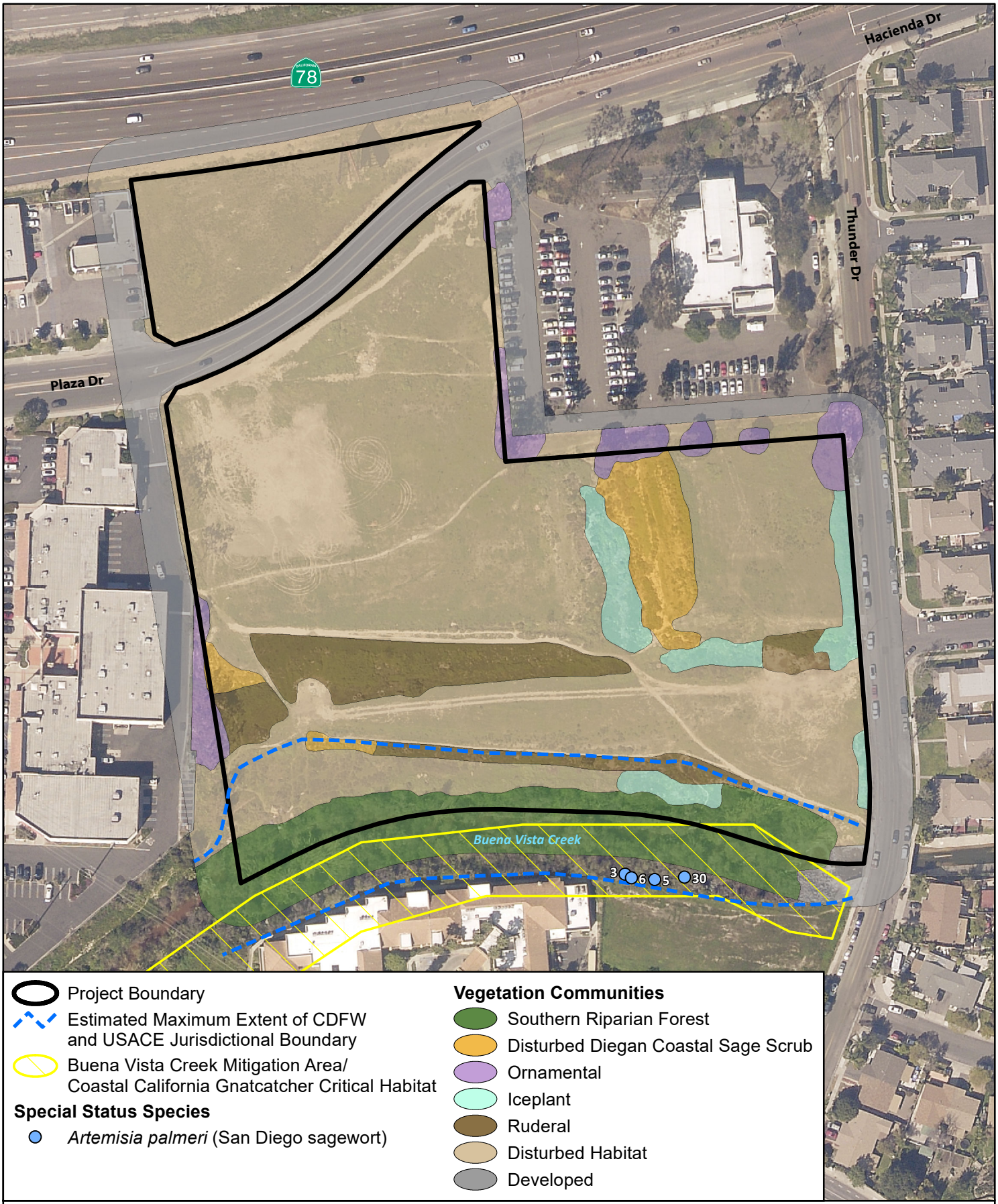
CARMAX OCEANSIDE

Figure 3

BUSBY Biological Services

N

0 1,000 2,000 Feet



Project Boundary

Estimated Maximum Extent of CDFW and USACE Jurisdictional Boundary

Buena Vista Creek Mitigation Area/ Coastal California Gnatcatcher Critical Habitat

Special Status Species

Artemisia palmeri (San Diego sagewort)

Vegetation Communities

Southern Riparian Forest

Disturbed Diegan Coastal Sage Scrub

Ornamental

Iceplant

Ruderal

Disturbed Habitat

Developed

Source: SANDAG & SanGIS 2017

BUSBY Biological Services

N

0 75 150 Feet

Biological Resources

CARMAX OCEANSIDE

Figure 4

ATTACHMENT 2 – Plant Species Detected

ATTACHMENT 3
Plant Species Observed

FAMILY	SCIENTIFIC NAME	COMMON NAME	VEGETATION COMMUNITY/LAND COVER TYPE
Aizoaceae	**Carpobrotus* sp.	Iceplant	DCSS-D, ICE
Anacardiaceae	**Schinus terebinthifolius*	Brazilian Pepper Tree	SRF, ORN
Apiaceae	**Foeniculum vulgare*	Sweet Fennel	DCSS-D, DIST, RUD
Apocynaceae	**Carissa macrocarpa*	Natal Plum	ORN
Arecacea	**Washingtonia robusta*	Mexican Fan Palm	ORN
Asteraceae	*Ambrosia psilostachya*	Western Ragweed	DIST, RUD
	Artemisia californica	Coastal Sagebrush	DCSS-D, RUD
	Artemisia douglasiana	Douglas Mugwort	SRF
	Artemisia palmeri	San Diego Sagewort	SRF
	Baccharis pilularis	Coyote Brush	DCSS-D, DIST, RUD, ICE
	Baccharis salicifolia ssp. salicifolia	Mulefat	SRF
	**Centaurea melitensis*	Tocalote	DCSS-D, DIST, RUD
	Deinandra fasciculata	Tarweed	DCSS-D, DIST, RUD
	Erigeron canadensis	Horseweed	DIST
	**Glebionis coronaria*	Crown Daisy	DCSS-D, DIST, RUD
	Heterotheca grandiflora	Telegraph Weed	DCSS-D, DIST
	Isocoma menziesii var. *menziesii*	Spreading Goldenbush	DCSS-D, DIST, RUD, ICE
	**Lactuca serriola*	Prickly Lettuce	DIST
	Xanthium strumarium	Cocklebur	SRF
Brassicaceae	**Brassica nigra*	Black Mustard	DCSS-D, DIST, RUD
	**Hirschfeldia incana*	Short-Pod Mustard	DCSS-D, DIST, RUD
	**Lobularia maritima*	Sweet Alyssum	SRF
	**Raphanus sativus*	Wild Radish	SRF, RUD
Chenopodiaceae	**Salsola tragus*	Russian Thistle	DCSS-D, DIST, RUD
Euphorbiaceae	**Chamaesyce maculata*	Spotted Spurge	DIST, RUD
	Croton setigerus	Dove Weed	DIST
	**Ricinus communis*	Castor Bean	SRF
Fabaceae	*Acmispon glaber* var. *glaber*	Deerweed	DCSS-D, DIST
	**Medicago polymorpha*	Bur-clover	DIST, RUD
	**Parkinsonia aculeata*	Mexican Palo Verde	DIST
Fagaceae	*Quercus agrifolia*	Coast Live Oak	SRF
Geraniaceae	**Erodium cicutarium*	Red-Stem Filaree/Storksbill	DIST
Lamiaceae	*Marrubium vulgare*	Horehound	DIST
	Salvia mellifera	Black Sage	DCSS-D
Linaceae	**Lythrum hyssopifolia*	Hyssop loosestrife	DIST
Malvaceae	*Malva parviflora*	Cheeseweed	RUD
Myrtaceae	**Eucalyptus camaldulensis*	Red Gum	DIST, ORN
Onagraceae	*Oenothera elata*	Marsh Evening Primrose	SRF
Plantaginaceae	*Plantago erecta*	California Plaintain	DIST
Platanacea	*Platanus racemosa*	California Sycamore	ORN
Poaceae	**Arundo donax*	Giant Reed	SRF
	**Avena fatua*	Wild Oat	DCSS-D, DIST, RUD, ICE

FAMILY	SCIENTIFIC NAME	COMMON NAME	VEGETATION COMMUNITY/LAND COVER TYPE
	**Bromus hordeaceus*	Soft Chess	DIST, RUD
	**Bromus madritensis* ssp. *rubens*	Foxtail Chess	DIST, RUD, ICE
Polygonaceae	*Eriogonum fasciculatum* var. *fasciculatum*	Coast California Buckwheat	DCSS-D, DIST, RUD
	**Rumex crispus*	Curly Dock	SRF, DIST
Salicaceae	*Salix exigua*	Narrow-leaf Willow	SRF
	Salix lasiolepis	Arroyo Willow	SRF
Solanaceae	**Nicotiana glauca*	Tree Tobacco	DIST, SRF
Tropaeolaceae	**Tropaeolum majus*	Garden Nasturtium	SRF
Typhaceae	*Typha* sp.	Cattail	SRF
Vitaceae	Vitis girdiana	Wild Grape	SRF

* = Non-native species

Vegetation Community/Land Cover Type:

DCSS-D = disturbed Diegan coastal sage scrub
DIST = disturbed land
ICE = ice plant
ORN = ornamental
RUD = ruderal
SRF = southern riparian fores

ATTACHMENT 3 – Wildlife Species Detected

ATTACHMENT 4
Wildlife Species Detected

SCIENTIFIC NAME	COMMON NAME	METHOD OF IDENTIFICATION
INVERTEBRATES		
Class: Insecta	**Insects**	
Order: Lepidoptera	**Butterflies**	
Pieris rapae	Cabbage White	O
Pontia protodice	Checkered White	O
VERTEBRATES		
Class: Sauropsida	**Reptiles**	
Sceloporus occidentalis	Western Fence Lizard	O
Class: Aves	**Birds**	
Order Anseriformes	**Ducks, Geese, and Swans**	
Anas platyrhynchos	Mallard	O
Order Columbiformes	**Pigeons and Doves**	
Zenaida macroura	Mourning Dove	O
Order Apodiformes	**Swifts and Hummingbirds**	
Calypte anna	Anna's Hummingbird	O, V
Order Passeriformes	**Perching Birds**	
Sayornis nigricans	Black Phoebe	O
Tyrannus verticalis	Western Kingbird	O
Empidonax difficilis	Pacific-Slope Flycatcher	V
Aphelocoma californica	Western Scrub-Jay	O, V
Corvus brachyrhynchos	American Crow	O, V
Pipilo maculatus	Spotted Towhee	O, V
Melospiza melodia	Song Sparrow	V
Carpodacus mexicanus	House Finch	O, V
Carduelis psaltria	Lesser Goldfinch	O, V
Class: Mammalia	**Mammals**	
Order Rodentia	**Rodents**	
Otospermophilus beecheyi	California Ground Squirrel	O
Order Carnivora	**Carnivores**	
Canis lupus familiaris	Domestic Dog	S

Method of Identification:
O = observed
V = vocalization
S = scat

APPENDIX F
Jurisdictional Delineation

JURISDICTIONAL DELINEATION REPORT
PROPOSED CARMAX AUTO SUPERSTORE PROJECT
CITY OF OCEANSIDE, SAN DIEGO COUNTY, CALIFORNIA

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September 27, 2019

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EXECUTIVE SUMMARY

This jurisdictional delineation report identifies the extent of U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) potentially jurisdictional resources that were observed and mapped during the focused jurisdictional delineation conducted for the proposed CarMax Auto Superstore Project in Oceanside, California, on August 29, 2019. The survey area is approximately 14.915 acres, which consists of the approximately 10.981-acre proposed project area and an approximately 3.935-acre, 50-foot survey buffer surrounding the proposed project area.

Potential USACE jurisdiction within the survey area totals approximately 0.700 acre, composed of approximately 0.646 acre of wetland waters of the U.S. (WoUS) and approximately 0.054 acre of non-wetland WoUS. The potential USACE wetland WoUS include the southern riparian forest along the majority of the portion Buena Vista Creek within the survey area, and the potential USACE non-wetland WoUS include open water within Buena Vista Creek at the eastern end of the survey area.

Potential RWQCB jurisdiction extends to all potential USACE WoUS within the survey area, which includes a total of approximately 0.700 acre, composed of approximately 0.646 acre of wetland waters of the State (WoS) and approximately 0.054 acre of non-wetland WoS. The potential RWQCB wetland WoS include the southern riparian forest along the majority of the portion of Buena Vista Creek within the survey area, and the potential RWQCB non-wetlands WoS include open water within Buena Vista Creek at the eastern end of the survey area.

Potential CDFW jurisdiction within the survey area totals approximately 1.508 acres, composed of approximately 1.386 acres of Riparian and approximately 0.122 acre of Streambed. Potential CDFW Riparian includes the southern riparian forest along the majority of the portion of Buena Vista Creek within the survey area, and potential CDFW Streambed includes open water, disturbed land, developed land, and iceplant within and adjacent to Buena Vista Creek that are outside the CDFW Riparian but between the lateral limits of the stream banks.

Potential USACE, RWQCB, and CDFW jurisdictional resources are regulated by federal and state governments under a no-net-loss policy, and all impacts are considered significant and should be avoided to the greatest extent possible. Potential impacts to USACE, RWQCB, and CDFW jurisdictional resources can be avoided through direct avoidance of jurisdictional resources, establishment of appropriate wetland buffers, and implementation of specific Best Management Practices. Unavoidable and authorized impacts may require mitigation through habitat creation, enhancement, or preservation as determined by a qualified restoration biologist in consultation with the regulatory agencies during the permitting process. Any impacts to USACE, RWQCB, and CDFW jurisdictional resources may require a Section 404 permit authorization from USACE, a 1602 Lake and Streambed Alteration Agreement from CDFW, and a 401 State Water Quality Certification from RWQCB.

1.0 INTRODUCTION

Busby Biological Services, Inc. (BBS) was contracted by EnviroApplications, Inc. on behalf of CarMax to conduct a jurisdictional delineation and prepare a jurisdictional delineation report for the proposed CarMax Auto Superstore (proposed project) in the City of Oceanside, San Diego County, California (Appendix A: Figures 1 through 3). The jurisdictional delineation was conducted on August 29, 2019, within an approximately 14.915-acre survey area, which consists of the approximately 10.981-acre proposed project area an approximately 3.935-acre, 50-foot survey buffer surrounding the proposed project area. The proposed project consists of the construction of a CarMax pre-owned automobile dealership, service building and non-public carwash with associated access driveways, parking lots, and landscaped areas. In addition, the proposed project will include a sales building with an attached presentation area, a service area, and a non-public carwash.

The proposed project occurs within the U.S. Geological Survey (USGS) San Luis Rey 7.5-minute quadrangle, in the City of Oceanside, California (USGS 2019; Appendix A: Figure 3). The proposed project site is situated on two vacant and undeveloped parcels, Assessor's Parcel Number (APN) 168-012-42 and APN 168-012-43 (Appendix A: Figures 2, 3, and 4). It is bordered to the north by State Route 78, to east by Thunder Drive and residential development, to the south by Buena Vista Creek and the City of Oceanside Fire Department (Station 4), and to the west by a commercial shopping center (*e.g.,* grocery store, restaurants, motel, other retail stores). Plaza Drive separates the two parcels in the northwest portion of the proposed project area, and the Oceanside Department of Motor Vehicles occupies the property northeast of the proposed project site.

Eight vegetation communities and land cover types were mapped within the survey area during the general biological resources survey conducted on July 22, 2019, including disturbed Diegan coastal sage scrub, southern riparian forest, open water, developed land, disturbed land, iceplant, ornamental, and ruderal (Appendix A: Figure 5). The majority of the survey area is dominated by disturbed land. Southern riparian forest within and adjacent to Buena Vista Creek and small scattered patches of disturbed Diegan coastal sage scrub in the southern half of the survey area are the only native vegetation communities that occur within the survey area.

The jurisdictional delineation was conducted within the survey area to identify and map existing waters of the U.S. (WoUS) and waters of the State (WoS) that are potentially subject to the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (CWA; 33 USC 1344); Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the CWA; and the California Department of Fish and Wildlife (CDFW) pursuant to Sections 1600 *et seq.* of the California Fish and Game Code (CFGC). The jurisdictional resource boundaries may be subject to verification by the regulatory agencies. No proposed project impacts or impact analysis is presented in this report; however, this report will also serve as a supplemental document to the Biological Technical Report (BTR), which will, among other things, evaluate potential project impacts to jurisdictional resources and determine potential permit requirements for the project.

2.0 REGULATORY CONTEXT

This section provides a summary of the federal, state, and local wetland regulations that are applicable to the proposed project.

2.1 Applicable Federal Regulations

The Rivers and Harbors Act of 1899 and the CWA of 1972 provide guidance for project activities within non-marine, Traditional Navigable Waters (TNWs) and/or WoUS. The discharge of any pollutant from a point source into TNWs is illegal unless a permit under the CWA's provisions is acquired. Permitting for projects that include both permanent and temporary dredging and filling in wetland and non-wetland waters of the U.S. is overseen by the USACE under Section 404 of the CWA. Projects can be permitted on an individual basis or be covered by one of several approved nationwide permits or regional general permits. In addition, RWQCB issues Water Quality Certifications under Section 401 of the CWA for project activities that fill or dredge within wetland and non-wetland WoUS and WoS, including isolated waters, such as vernal pools and other waters showing lack of connectivity to a TNW.

2.2 Applicable State Regulations

The CFGC, Sections 1600 through 1603, provides guidance for project activities within rivers, streams, lakes, riparian habitat, and other wetlands as well as vernal pools when California state threatened and/or endangered species are present. CFGC Section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following:

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
- Substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- Deposit debris, waste, or other materials that could pass into any river, stream, or lake.

CDFW can issue a Lake or Streambed Alteration (LSA) Agreement for projects that substantially adversely affect CDFW jurisdictional resources. If the activity will not substantially adversely affect any CDFW jurisdictional resources, the entity may commence the activity without a LSA Agreement.

The Porter-Cologne Water Quality Control Act provides guidance for project activities that may affect water quality in California. Pursuant to the Porter-Cologne Act, under Section 13000 et seq. of the California Water Code (CWC), the RWQCB issues Water Quality Certifications for project activities that fill or dredge within wetland and non-wetland WoUS and WoS, including isolated waters – such as vernal pools – and other waters showing lack of connectivity to a TNW.

3.0 METHODS AND SURVEY LIMITATIONS

BBS performed background research and conducted a jurisdictional delineation to identify all potentially jurisdictional USACE and RWQCB Wetland and Non-Wetland WoUS and WoS and CDFW Riparian and Streambed that may be impacted by the proposed project. The jurisdictional delineation was conducted within an approximately 14.915-acre survey area, which consists of the approximately 10.981-acre proposed project area and an approximately 3.935-acre, 50-foot survey buffer surrounding the proposed project area. The methods used for the background research and the initial field surveys are summarized below.

3.1 Project Background Research

Prior to conducting the jurisdictional delineation, BBS reviewed the draft City of Oceanside Subarea Plan (SAP; City 2010), the North County Multiple Habitat Conservation Plan (MHCP; San Diego Association of Governments [SANDAG] 2003), online current and historical aerial imagery (Google Earth 2019; Nationwide Environmental Title Research, LLC [NETR] 2019), U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps (USFWS 2019), U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey maps (USDA 2019), and the USGS San Luis Rey 7.5-minute topographic quadrangle map (USGS 2019). Information from these resources informed both the fieldwork and jurisdictional determination within the survey area.

3.2 Jurisdictional Delineation

The jurisdictional delineation and mapping of the survey area was conducted on foot to determine the location and extent of resources potentially under the jurisdiction of USACE, RWQCB, and CDFW. A hand-held, sub-meter Global Positioning System (GPS) device was used to record the locations of sample points and boundaries of potentially jurisdictional resources. Mapped wetland boundaries are considered to be a line across which the vegetation, soil, and hydrologic characteristics begin/cease to meet wetland criteria.

Vegetation communities and land cover types were classified following Holland (1986) as modified by Oberbauer *et al.* (2008), and mapped by hand onto aerial imagery with a 1 inch equals 100 feet scale, noting dominant plant species within these vegetation communities. These hand-drawn vegetation community and land cover type boundaries were provided to a Geographic Information Systems (GIS) Analyst and were digitized using GIS software.

Digital photographs of sample points and representative areas were taken during the survey. It should be noted that the results of the jurisdictional delineation and vegetation mapping reflect the existing conditions at the time of the survey, which naturally change over time. In addition, the jurisdictional resource boundaries may be subject to verification by the regulatory agencies.

3.2.1 U.S. Army Corps of Engineers Jurisdiction

Data was collected at upland and wetland sample points by assessing the vegetative, soil, and hydrologic characteristics within and immediately adjacent to areas that were determined to support potential USACE jurisdictional resources following the technical guidelines provided in the following manuals:

- USACE *Wetlands Delineation Manual* (USACE 1987)
- USACE *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0; USACE 2008)
- *USACE A Delineation Manual, A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2010)

USACE *Wetland Determination Data Forms – Arid West Region* (USACE 2008) were completed at appropriate upland and wetland sample points. Non-wetland WoUS were delineated based on the presence of ordinary high watermark (OHWM) indicators, and an OHWM data sheet was recorded where appropriate.

USACE Wetlands

Several parameters were considered to determine whether the sample point is within a USACE wetland. The following three wetland parameters typically must be satisfied to classify an area as a jurisdictional USACE wetland under normal circumstances: (1) a predominance of hydrophytic vegetation, (2) the presence of hydric soils, and (3) the presence of wetland hydrology. Details of the application of these techniques are described below. USACE Wetland Determination Data Forms are included as Appendix B to this report.

- **Hydrophytic Vegetation:** Hydrophytic vegetation is defined as "the community of macrophytes that occurs in areas where inundation and soil saturation is either permanent, or of sufficient frequency and duration to exert a controlling influence on the plant species present" (USACE 2008). For the purposes of this jurisdictional delineation, five levels of wetland indicator status were used to assess the presence of hydrophytic vegetation, based on the most current National Wetland Plant List (USACE 2016). Plant species were classified as:
    - obligate wetland plants (OBL), which area plants that almost always (estimated probability greater than 99 percent [%]) occur in wetlands but rarely are found in non-wetlands under natural conditions;
    - facultative wetland plants (FACW), which are plants that usually (estimated probability from 67% to 99%) occur in wetlands but are occasionally found elsewhere under natural conditions;
    - facultative plants (FAC), which are plants with a similar likelihood (estimated probability from 33% to 67%) of occurring in both wetlands and non-wetlands under natural conditions;

- facultative upland plants (FACU), which area plants that sometimes (estimated probability from 1% to 33%) occur in wetlands, but occur more often in non-wetlands under natural conditions; or
- obligate upland plants (UPL), which are plants that rarely (estimated probability <1%) occur in wetlands, but almost always occur in non-wetlands under natural conditions].
- A no indicator (NI) status designates that insufficient information was available to determine an indicator status.

Hydrophytic vegetation was determined to be present if any one of the following three indicator tests were satisfied:

- the Dominance Test (Indicator 1), where "more than 50% of the dominant plant species across all strata were rated OBL, FACW, or FAC";
- the Prevalence Test (Indicator 2), where there were indicators of hydric soils and wetland hydrology, and the prevalence index was 3.0 or less, which is a weighted-average wetland indicator status of all plant species by abundance (percent cover); and/or
- the Plant Morphological Adaptations Test (Indicator 3), where there were indicators of hydric soils and wetland hydrology present, and either the Dominance Test (Indicator 1) or Prevalence Test (Indicator 2) were satisfied after reconsideration of the indicator status of certain plant species that exhibited morphological adaptations for life in wetlands.

- **Hydric Soils:** Hydric soils are defined as "a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part" (USACE 2008). For the purposes of this jurisdictional delineation, the hydric soil indicators described in the USACE *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008) and *National Technical Committee for Hydric Soils (NTCHS) Field Indicators of Hydric Soils in the United States* (USDA 2016) were used to assess the presence of hydric soils. Soil test pits were dug to the depth needed to document the soil chroma index using the Munsell® Soil Color Charts (Munsell® Color 2000), as well as additional hydric soil indicators (*e.g.,* hydrogen sulfide, sandy redox, depleted matrix, redox dark surface, depleted dark surface) detailed in the *Arid West Supplement* (USACE 2008) and the *Field Indicators of Hydric Soils in the United States* (USDA 2016). The soil was determined to be hydric if one or more hydric soil indicators were present.

- **Wetland Hydrology:** Wetland hydrology is indicated by the presence of surficial or sub-surficial hydrologic characteristics long enough during the growing season to show that the presence of water has an overriding influence on the characteristics of vegetation and soils due to anaerobic and reducing conditions, respectively; thus, for an area to be defined as a wetland, periodic inundation or saturation of soils during the growing season must be determined to be present (USACE 2008). For the purposes of this delineation, the wetland hydrology indicators (*e.g.* inundation, watermarks, drift lines, sediment deposits, drainage patterns, saturation) described in the USACE *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008)

were used to assess the presence of wetland hydrology. Wetland hydrology was determined to be present if one or more primary indicators, or two or more secondary indicators were observed.

USACE Non-Wetland Waters of the U.S.

The USACE defines non-wetland WoUS as drainages, or portions thereof, which have strong hydrology indicators such as the presence of seasonal flows and an OHWM. An OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as [a] clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (USACE 1987). In general, non-wetland WoUS are delineated by the lateral and upstream/downstream extent of the OHWM of the particular drainage or depression. The method for identification of lateral limits for potential non-wetland WoUS are detailed in the USACE *A Delineation Manual, A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2010).

Areas delineated as non-wetland WoUS may lack hydrophytic vegetation or hydric soil characteristics. Hydrophytic vegetation may be absent for various reasons, such as the lack of sufficient water flow to support hydrophytic vegetation or the influence of frequent scouring resulting from rapid water flow. Hydric soil indicators may be missing for various reasons, such as the lack of sufficient water or the presence of steep topography that precludes ponding and prohibits the development of hydric soils.

3.2.2 Regional Water Quality Control Board Jurisdiction

RWQCB jurisdiction typically extends to all WoUS as considered jurisdictional by the USACE as well as to isolated waters and wetlands. Section 401 of the CWA gives the RWQCB the authority to regulate any proposed activities that may affect water quality.

3.2.3 California Department of Fish and Wildlife Jurisdiction

CDFW jurisdiction typically includes water features with a defined bed and bank and associated riparian vegetation. CDFW typically extends its jurisdictional limit to the top of a stream, the bank of a lake, or the outer edge of the riparian vegetation, whichever is wider. CDFW jurisdictional habitat allows for a wide variety of habitat types to be jurisdictional, including some that do not include wetland species (*e.g.,* oak woodland, alluvial fan sage scrub). In addition, CDFW asserts jurisdiction over vernal pools when California state threatened and/or endangered species are present.

4.0 RESULTS

Biologists Darin Busby and Brian Lohstroh conducted a focused jurisdictional delineation within the approximately 14.915-acre survey area on August 29, 2019. The following sections describe and the jurisdictional resources observed during the jurisdictional delineation.

4.1 Physical Characteristics of Survey Area

The majority of the proposed project area is relatively flat with a drop in elevation to the south towards Buena Vista Creek, with elevations ranging from approximately 220 to 180 feet above mean sea level (amsl). Buena Vista Creek occurs along the southern boundary of the proposed project area and runs from east to west, eventually connecting to Buena Vista Lagoon and the Pacific Ocean approximately 4 miles west of the survey area. The NWI classifies Buena Vista Creek as a freshwater forested/shrub wetland (USFWS 2019). Buena Vista Creek is one of six creeks located within the 210-square-mile Carlsbad Hydrologic Unit (HU), which is one of 11 HUs identified in San Diego County by the RWQCB.

4.1.1 Soils

The following two soil types occur within the survey area: (1) Las Flores loamy fine sand, 5 to 9% slopes, eroded and (2) Visalia sandy loam, 2 to 5% slopes (USDA 2019; Appendix A: Figure 4). Soils observed in the field within the soil test pits appeared to exhibit characteristics similar to those mapped within the proposed project area, with the exception of fill soils and riprap along some portions of Buena Vista Creek (USDA 2019).

Las Flores loamy fine sand, 5 to 9% slopes, eroded is the most common soil type within the survey area. Las Flores loamy fine sands are derived from weathered marine sandstone that consist of loamy fine sands with a sandy clay subsoil. This soil is moderately well-drained, has slow to medium runoff, and a slight to moderate erosion hazard. Las Flores soils are not listed as hydric soils in California (USDA 2019).

Visalia sandy loam, 2 to 5% slopes occurs in and adjacent to Buena Vista Creek, in the southern portion of the survey area (USDA 2019). Visalia sandy loams are derived from granitic parent material that developed on alluvial fans and flood plains. This soil has a topsoil rich in organic matter, is well-drained to moderately well-drained, has slow to medium runoff, is moderately permeable, and has a slight to moderate erosion hazard. Visalia sandy loams are listed as a hydric soil on the USDA Hydric Soils List (USDA 2019).

4.1.2 Vegetation Communities and Land Cover Types

The following eight vegetation communities and land cover types were mapped within the approximately 14.915-acre survey area during the general biological resources survey conducted on July 22, 2019: disturbed Diegan coastal sage scrub, southern riparian forest, open water, developed land, disturbed land, iceplant, ornamental, and ruderal (Appendix A: Figure 5; Table 1). The majority of the survey area is dominated by disturbed land. Southern riparian forest within and adjacent to Buena Vista Creek and

small scattered patches of disturbed Diegan coastal sage scrub in the southern half of the survey area are the only native vegetation communities that occur within the survey area.

Table 1. Vegetation Communities and Land Cover Types within Survey Area

Vegetation Community/ Land-Cover Type	Within Proposed Project Area (acres*)	Within Survey Buffer (acres*)	Total (acres*)
Developed	0.455	2.184	2.639
Disturbed Diegan Coastal Sage Scrub	0.448	0.003	0.451
Disturbed Habitat	8.109	0.542	8.650
Iceplant	0.454	--	0.454
Ornamental	0.138	0.302	0.440
Ruderal	0.841	--	0.841
Southern Riparian Forest	0.518	0.868	1.386
Open Water	0.018	0.035	0.054
TOTAL	**10.981****	**3.935****	**14.915****

*Acreages are approximate and rounded to the nearest thousandth of an acre.
**Total acreages represent the actual acreages without the rounding error.

4.2 Jurisdictional Delineation

The wetlands and riparian area within and adjacent to Buena Vista Creek in the southern portion of the survey area were the only jurisdictional resources identified within the survey area. Buena Vista Creek is an intermittent creek that occurs along the southern boundary of the proposed project area and runs from east to west, eventually connecting to Buena Vista Lagoon and the Pacific Ocean approximately 4 miles west of the survey area. A desktop review of historical aerial imagery of the survey area does not show any clear evidence of jurisdictional resources outside of Buena Vista Creek, which was later confirmed during the jurisdictional delineation (NETR 2019); therefore, data was collected only at Sample Points along Buena Vista Creek.

Buena Vista Creek receives moderate to high velocity water flows during wet times of the year, when groundwater and direct precipitation provide water for stream flow, and then receives either low velocity water flows from direct precipitation and urban runoff or no flows during dry times of the year when groundwater has dropped. Buena Vista Creek supported low velocity flows at the time of the jurisdictional delineation on August 29, 2019. Buena Vista Creek enters the proposed project area through a large box culvert in the southeastern corner of the survey area where it transitions from an open concrete channel upstream, east of Thunder Drive, to an earthen, riparian lined drainage within the proposed project area. Buena Vista Creek runs west to exit the proposed project area in the southwestern corner of the survey area where it continues as an earthen, riparian lined drainage offsite. The intermittent flow regime in Buena Vista Creek allows the portion of the drainage within the proposed project area to support mature southern riparian forest.

The following two sections describe the data that was collected at each Sample Point during the jurisdictional delineation on August 29, 2019, and the summary of jurisdictional resources that occur within the approximately 14.915-acre survey area.

4.2.1 Summary of Sample Points

A total of six Sample Points were investigated in or adjacent to locations representative of potentially jurisdictional areas along Buena Vista Creek in the southern portion of the survey area (Appendix A: Figures 4 and 5). Soil pits were excavated to depths of 16 to 18 inches at all six Sample Points. Data collected at these Sample Points were recorded on USACE *Wetland Determination Data Forms – Arid West Region Version 2.0* (USACE 2008; Appendix B). Photographs of each wetland Sample Point as well as other representative photographs of these potentially jurisdictional resources are included in Appendix C of this report.

To summarize, Sample Points 1, 3, and 5 were determined to be within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and potentially jurisdictional CDFW Riparian, while Sample Points 4 and 6 were determined to be just within the limits of a potentially jurisdictional CDFW Riparian. Sample Point 2 was determined to be within an upland and not within the limits of a potentially jurisdictional USACE, RWQCB, or CDFW resource. Sample Points were investigated only along the north bank of Buena Vista Creek because the southern bank is outside the project boundary and well beyond any proposed direct or indirect impacts. Because Sample Points were not investigated along the southern bank of Buena Vista Creek, the limits of jurisdictional areas along the southern bank of Buena Vista Creek were inferred based on data collected at Sample Points 1 through 6 along the northern bank of Buena Vista Creek. The following paragraphs summarize the data collected at each of the six Sample Points along the northern bank of Buena Vista Creek.

Sample Point 1 was determined to be within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and potentially jurisdictional CDFW Riparian. Sample Point 1 is within southern riparian forest, approximately 1 foot north of flowing water at the bottom of the bank along the northern edge of Buena Vista Creek. This Sample Point is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology. Dominant hydrophytic plant species occur witin the tree stratum, including arroyo willow (*Salix lasiolepis*; FACW) and mulefat (*Baccharis salicifolia*; FACW). Hydric soil indcators include a depleted martrix (F3) as evident by low soil chroma within the upper 16 inches. Riprap and possible fill soils were observed adjacent to Sample Point 1. Primary wetland hydrology indicators include saturation (A3) at a depth of 16 inches and inundation visible on aerial imagery (B7). Secondary wetland hydrology indicators include water marks (B1), sediment deposits (B2), drift deposits (B3), and drainage patterns (B10). USDA soil survey maps show this portion of the survey area containing Visalia sandy loam, 2 to 5% slopes (USDA 2019).

Sample Point 2 was determined to be outside the limits of a potentially jurisdictional area. Sample Point 2 is in disturbed habitat on an upland terrace approximately 3 feet north and outside of the riparian vegetation and the top of the creek bank, and

approximately 20 feet north of the wetland boundary adjacent to Sample Point 1. Sample Point 2 does not contain hydrophytic vegetation, hydric soils, and wetland hydrology. Sample Point 2 is dominated by upland vegetation, such as short-pod mustard (*Hirschfeldia incana*; NI), western ragweed (*Ambrosia psilostachya*; FACU), rattail fescue (*Vulpia myuros*; FACU), Italian thistle (*Carduus pycnocephalus*; FACU), and fennel (*Foeniculum vulgare*; NI). USDA soil survey maps show this portion of the survey area containing Las Flores loamy fine sand, 5 to 9% slopes, eroded (USDA 2019).

Sample Point 3 was determined to be within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and potentially jurisdictional CDFW Riparian. Sample Point 3 is within southern riparian forest approximately 6 inches north of flowing water at the bottom of the bank along the northern edge of Buena Vista Creek. This Sample Point is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology. Dominant hydrophytic plant species occur witin the tree and herb stratum, including polished willow (*Salix laevigata*; FACW), evening primrose (*Oenothera elata;* FACW), tall cyperus (*Cyperus eragrostis*; FACW), and celery (*Apium graveolens*; FACW). Hydric soil indicators include a depleted martrix (F3) as evident by low soil chroma within the upper 18 inches. Primary wetland hydrology indicators include a high water table (A2) at a depth of 12 inches, saturation (A3) at a depth of 8 inches, and inundation visible on aerial imagery (B7). Secondary wetland hydrology indicators include water marks (B1), sediment deposits (B2), drift deposits (B3), and drainage patterns (B10). USDA soil survey maps show this portion of the survey area containing Visalia sandy loam, 2 to 5% slopes (USDA 2019).

Sample Point 4 was determined to be outside the limits of a potentially jurisdictional USACE wetland WoUS and WoS but within the limits of a potentially jurisdictional CDFW Riparian. Sample Point 4 is on an upland terrace approximately 5 feet north of the wetland boundary adjacent to Sample Point 3 and 15 feet south of the top of the stream bank. Although Sample Point 4 occurs in CDFW Riparian as indicated on Figure 5 (Appendix A), Sample Point 4 occurs in a patch of ruderal land dominated by radish (*Raphanus sativus*; NI) beneath a canopy of southern riparian forest that is dominated by a cluster of Brazilian peppertree (*Schinus terebinthifolia*; FAC) and does not contain hydrophytic vegetation, hydric soils, and wetland hydrology. USDA soil survey maps show this portion of the survey area containing Visalia sandy loam, 2 to 5% slopes (USDA 2019).

Sample Point 5 was determined to be within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and potentially jurisdictional CDFW Riparian. Sample Point 5 is within southern riparian forest approximately 6 feet north of flowing water at the bottom of the bank along the northern edge of Buena Vista Creek and is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology. Dominant hydrophytic plant species occur within the tree and herb stratum, including arroyo willow (FACW), giant reed (*Arundo donax*; FACW), and Spanish false fleabane (*Pulicaria paludosa*; FAC). Hydric soil indicators include hydrogen sulfide (A4), depleted below a dark surface (A11), sandy gleyed matrix (S4), sandy redox (S5), and a depleted martrix (F3) as evident by low soil chroma and redox concentrations along pore linings within the upper 16 inches. Primary wetland hydrology indicators include a saturation

(A3) at a depth of 8 inches, inundation visible on aerial imagery (B7), hydrogen sulfide odor (C1), and oxidized rhizospheres along living roots (C3). Secondary wetland hydrology indicators include water marks (B1), sediment deposits (B2), drift deposits (B3), and drainage patterns (B10). In addition, saturation was observed at 16 inches below the surface. USDA soil survey maps show this portion of the survey area containing Visalia sandy loam, 2 to 5% slopes (USDA 2019).

Sample Point 6 was determined to be outside the limits of a potentially jurisdictional USACE wetland WoUS and WoS within the limits of a potentially jurisdictional CDFW Riparian. Sample Point 6 is on an upland terrace approximately 15 feet north of the wetland boundary adjacent to Sample Point 5 and 15 feet south of the top of the stream bank. Although Sample Point 6 occurs in CDFW Riparian as indicated on Figure 5 (Appendix A), this Sample Point occurs beneath a canopy of southern riparian forest with an understory of ruderal land dominated by iceplant (*Carpobrotus sp.*; NI), short-pod mustard (NI), Italian thistle (NI), and foxtail chess (*Bromus madritensis*; UPL) and surrounded by coyote brush (*Baccharis pilularis*; NI) and does not contain hydrophytic vegetation, hydric soils, and wetland hydrology. USDA soil survey maps show this portion of the survey area containing Visalia sandy loam, 2 to 5% slopes (USDA 2019).

4.2.2 Summary of Potentially Jurisdictional resources

The southern riparian forest along Buena Vista Creek is a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and potentially jurisdictional CDFW Riparian; the open water is a potentially jurisdictional USACE and RWQCB non-wetland WoUS and WoS and potentially jurisdictional CDFW Streambed; and a portion of the disturbed land, developed land, and iceplant adjacent to Buena Vista Creek is a potentially jurisdictional CDFW Streambed (Appendix A: Figure 5). Table 2 provides a breakdown of the potentially jurisdictional resources within the survey area, Figure 5 (Appendix A) shows the locations of these resources, and Appendix C provides representative photographs of the potentially jurisdictional resources and photographs of each Sample Point.

Table 2. Potentially Jurisdictional Resources within Survey Area

Regulatory Agency	Linear Feet	Acres*	Square Feet	Width Range (feet)
USACE/RWQCB				
Wetland WoUS/WoS	760	0.646	28,121	20 - 55
Non-Wetland WoUS/WoS	41	0.054	2,349	15 - 45
TOTAL	**801**	**0.700**	**30,470**	**15 - 55**
CDFW				
Riparian	760	1.386	60,371	70 - 105
Streambed	212	0.122	5,270	82 - 90
TOTAL	**972**	**1.508****	**65,640**	**70 - 105**

*Acreages are approximate and rounded to the nearest thousandth of an acre.
**Total acreages represent the actual acreages without the rounding error.

USACE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife; WoUS = Waters of the U.S.; WoS = Waters of the State

Potential USACE Jurisdiction

Potential USACE jurisdiction within the survey area totals approximately 0.700 acre, composed of approximately 0.646 acre of wetland WoUS and approximately 0.054 acre of non-wetland WoUS (Table 2; Attachment A: Figure 5). The potential USACE wetland WoUS include the southern riparian forest along the portion of Buena Vista Creek wihtin the survey area, and the potential USACE non-wetland WoUS include open water within Buena Vista Creek at the eastern end of the survey area (Attachment A: Figure 5).

Potential RWQCB Jurisdiction

There are no potentially jurisdictional isolated WoS within the survey area subject to exclusive RWQCB jurisdiction pursuant to the State Porter-Cologne Water Quality Control Act. Therefore, the RWQCB's potential jurisdiction extends to all potential USACE WoUS within the survey area, which includes a total of approximately 0.700 acre, composed of approximately 0.646 acre of wetland WoS and approximately 0.054 acre of non-wetland WoS (Table 2; Attachment A: Figure 5). The potential RWQCB wetland WoS include the southern riparian forest along the portion of Buena Vista Creek within the survey area, and the potential RWQCB non-wetland WoS include open water within Buena Vista Creek at the eastern end of the survey area (Attachment A: Figure 5).

Potential CDFW Jurisdiction

Potential CDFW jurisdiction within the survey area totals approximately 1.508 acres, composed of approximately 1.386 acres of Riparian and approximately 0.122 acre of Streambed (Table 2; Attachment A: Figure 5). Potential CDFW Riparian includes the southern riparian forest along the portion of Buena Vista Creek within the survey area, and potential CDFW Streambed includes open water, disturbed land, developed land, and iceplant within and adjacent to Buena Vista Creek that are outside the CDFW Riparian areas but between the lateral limits of the stream banks (Attachment A: Figure 5).

5.0 CONCLUSION AND RECOMMENDATIONS

This jurisdictional delineation report identifies the extent of potential USACE, RWQCB, and CDFW jurisdictional resources within the survey area using the current regulations, written policies, and guidance from these regulatory agencies. These jurisdictional boundaries may be subject to verification by the regulatory agencies. No proposed project impacts or impact analysis is presented in this report; however, this report will serve as a supplemental document to the BTR, which will, among other things, evaluate potential project impacts to jurisdictional resources and determine potential permit requirements for the project.

Potential USACE, RWQCB, and CDFW jurisdictional resources are regulated by the federal and state governments under a no-net-loss policy, and all impacts are considered significant and should be avoided to the greatest extent possible. Potential impacts to the functions and values and the chemical, physical, and biological integrity of USACE, RWQCB, and CDFW jurisdictional resources can be avoided through direct avoidance of jurisdictional resources, establishment of appropriate wetland buffers, and implementation of specific Best Management Practices. Unavoidable and authorized impacts may require mitigation through habitat creation, enhancement, and/or preservation as determined by a qualified restoration biologist in consultation with the regulatory agencies during the permitting process. Any impacts to USACE, RWQCB, and CDFW jurisdictional resources may require a Section 404 permit authorization from USACE, a 1602 LSA Agreement from CDFW, and a 401 State Water Quality Certification from RWQCB.

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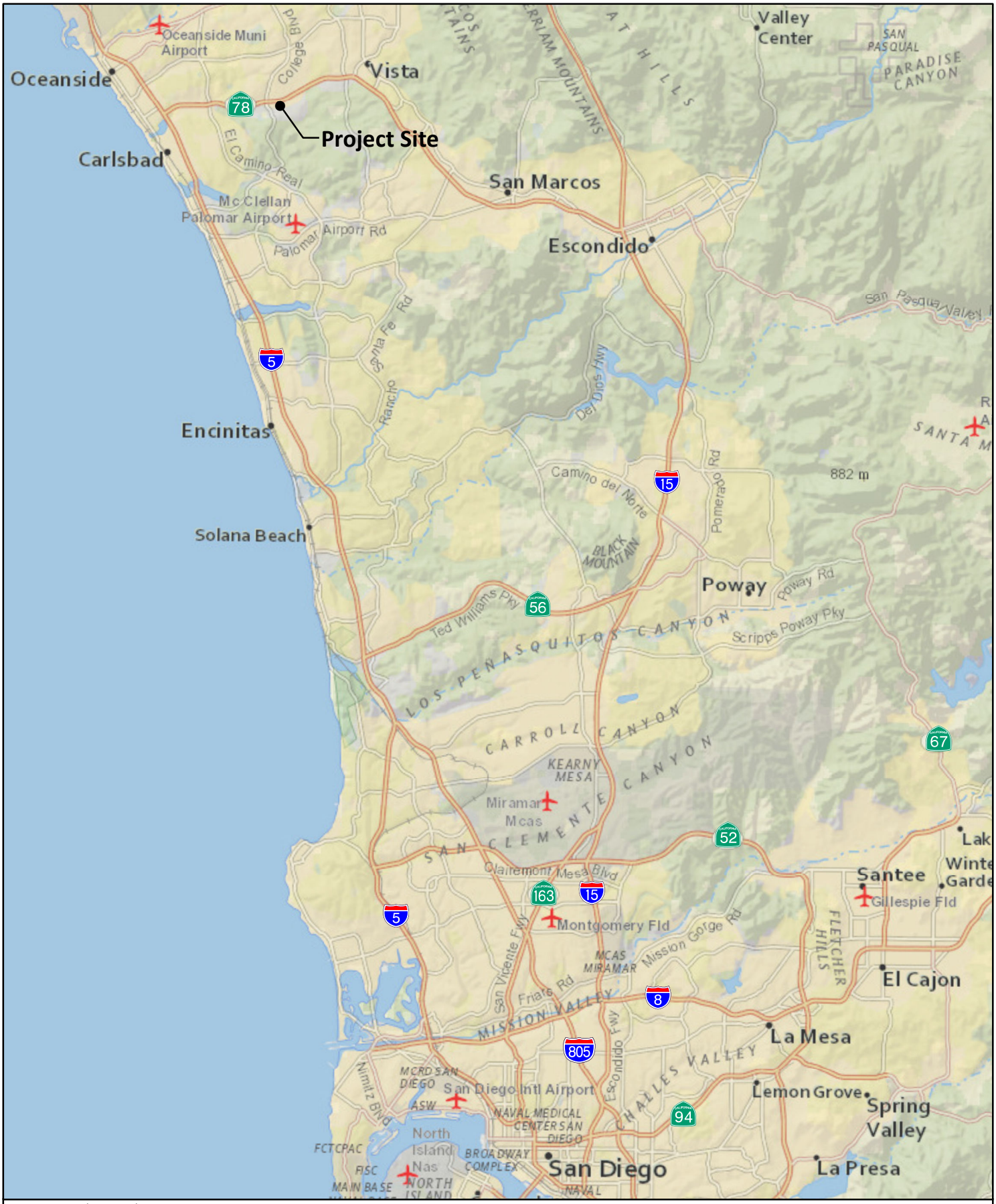
APPENDIX A
Proposed Project Figures



Source: National Geographic, Esri

BUSBY Biological Services

N 0 2 4 Miles

Regional Location

CARMAX OCEANSIDE

Figure 1

Source: SANDAG & SanGIS 2017

BUSBY Biological Services

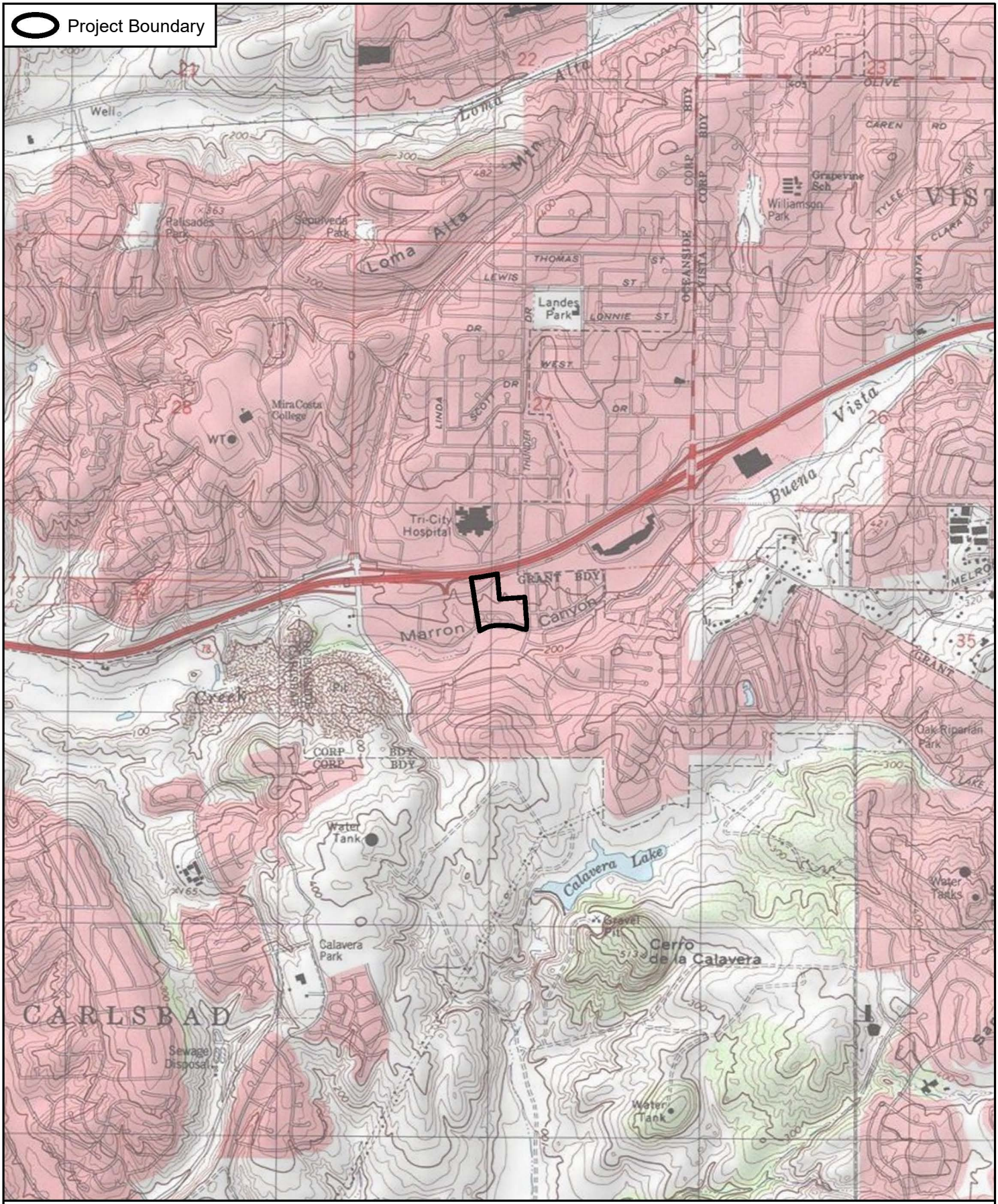
N

0 1,000 2,000 Feet

Project Vicinity - Aerial

CARMAX OCEANSIDE

Figure 2



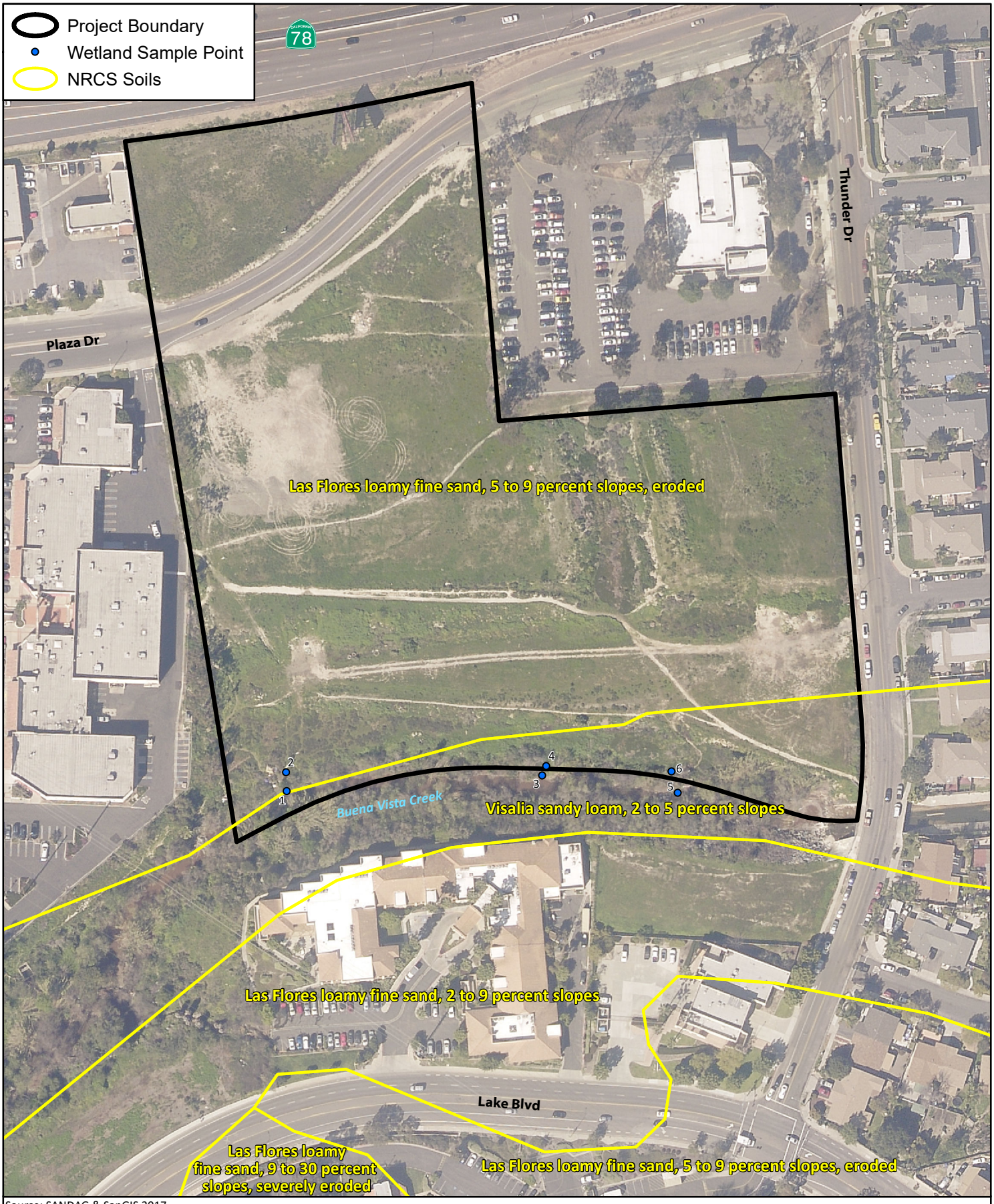
Source: USGS 7.5' Quadrangles (San Luis Rey)

BUSBY Biological Services

Project Vicinity - USGS Topo

CARMAX OCEANSIDE

Figure 3



Source: SANDAG & SanGIS 2017

BUSBY Biological Services

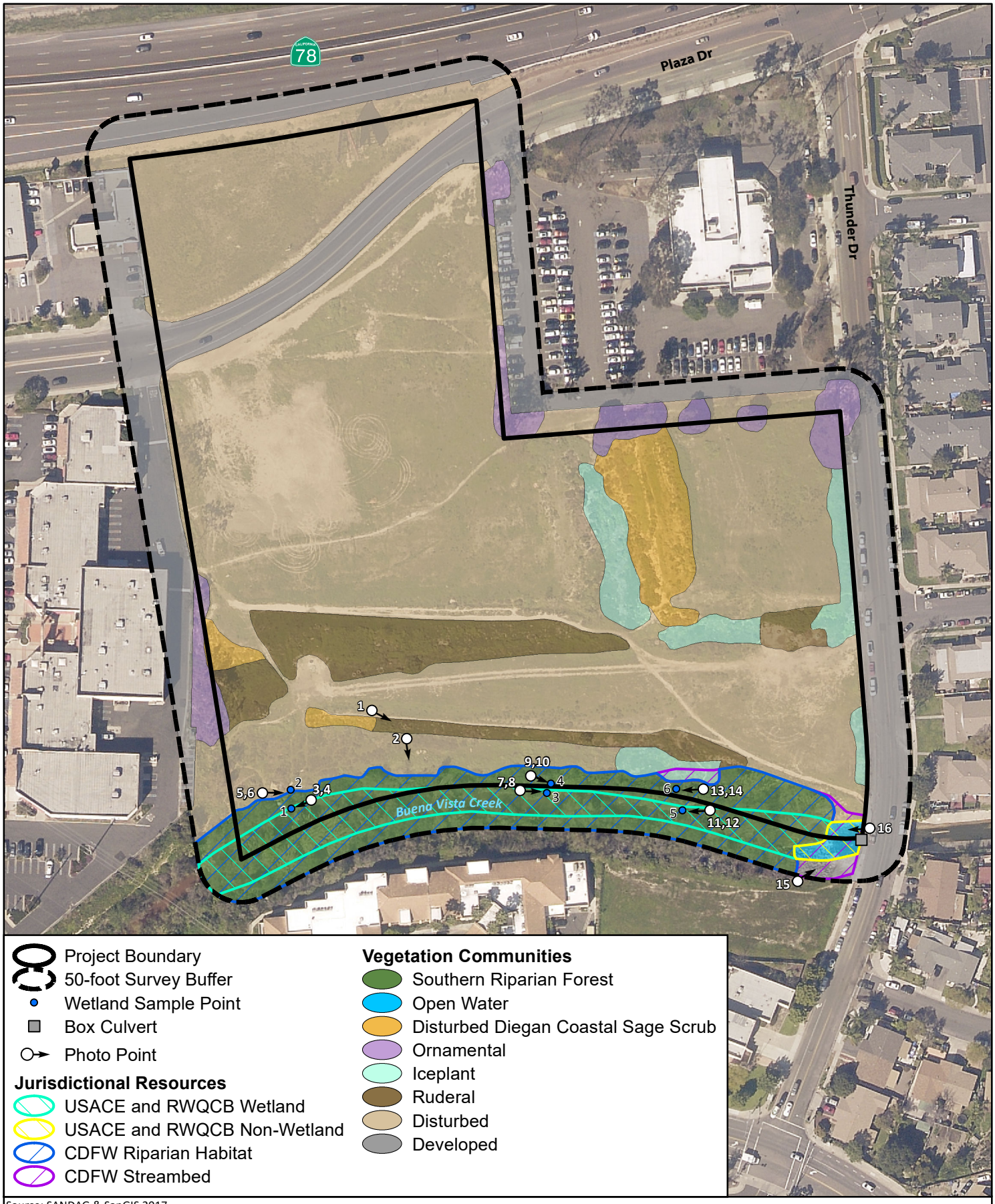
N

0 75 150 Feet

Soils

CARMAX OCEANSIDE

Figure 4



Source: SANDAG & SanGIS 2017

Jurisdictional Resources and Vegetation Communities

BUSBY Biological Services

CARMAX OCEANSIDE

Figure 5

APPENDIX B
USACE Wetland Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Proposed CarMax Auto Superstore City/County: Oceanside, San Diego Sampling Date: 8/29/19

Applicant/Owner: EnviroApplications, Inc. State: CA Sampling Point: 1

Investigator(s): Darin Busby, Brian Lohstroh Section, Township, Range: Township 11 South, Range 4 West

Landform (hillslope, terrace, etc.): Creek bank Local relief (concave, convex, none): Concave Slope (%): 45

Subregion (LRR): C - Mediterranean California Lat: 33.181161 Long: -117.290007 Datum: WGS84

Soil Map Unit Name: Visalia sandy loam, 2 to 5 percent slopes NWI classification: Wetland (PSS/FOCx)

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

Wetland sample point approximately 1 foot north of flowing water at bottom of bank along edge of Buena Vista Creek, an intermittent creek dominated by riparian vegetation and visibly inundated on aerial imagery

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15 X 15 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	90	Y	FACW
2. Baccharis salicifolia	10	N	FACW
3.			
4.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 X 5 ft.)			
1. Xanthium strumarium	8	Y	FAC
2. Ricinus communis	5	N	FACU
3.			
4.			
5.			
6.			
7.			
8.			
	13	= Total Cover	
Woody Vine Stratum (Plot size: 15 X 15 ft.)			
1. Parthenocissus quinquefolia	10	Y	FACU
2.			
	10	= Total Cover	

% Bare Ground in Herb Stratum 87 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	8	x 3 =	24
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	123 (A)		284 (B)

Prevalence Index = B/A = 2.3

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Sample point located below riparian canopy at bottom of bank along edge of Buena Vista Creek.

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/1	100					Clayey fine	Clayey fine sand
4-16	10YR 4/1	50	Gleyed2 4/10 G	50	D	M	Clayey fine	Clayey fine sand

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Soil Map Unit is on NRCS hydric soils list. Sample point located at bottom of bank along edge of Buena Vista Creek. Creek bank contains a mix of rip-rap and soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✓ Water Marks (B1) (**Riverine**)
- ✓ Sediment Deposits (B2) (**Riverine**)
- ✓ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 16

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Buena Vista Creek is an intermittent creek that is visibly inundated on aerial imagery.

Remarks:

Sample point located approximately 1 foot north of flowing water at bottom of bank along edge of Buena Vista Creek.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Proposed CarMax Auto Superstore City/County: Oceanside, San Diego Sampling Date: 8/29/19

Applicant/Owner: EnviroApplications, Inc. State: CA Sampling Point: 2

Investigator(s): Darin Busby, Brian Lohstroh Section, Township, Range: Township 11 South, Range 4 West

Landform (hillslope, terrace, etc.): Upland terrace Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): C - Mediterranean California Lat: 33.181221 Long: -117.290010 Datum: WGS84

Soil Map Unit Name: Las Flores loamy fine sand, 5 to 9 percent slopes, eroded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Upland sample point on upland terrace approximately 3 feet north/outside of riparian edge/top of creek bank and 20 feet north of wetland boundary.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 X 5 ft.)			
1. Hirschfeldia incana	20	Y	NI
2. Ambrosia psilostachya	20	Y	FACU
3. Vulpia myuros	20	Y	FACU
4. Carduus pycnocephalus	10	Y	NI
5. Foeniculum vulgare	10	Y	NI
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	40 (A)		160 (B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/3	100					Fine sand	Fine sandy clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Proposed CarMax Auto Superstore City/County: Oceanside, San Diego Sampling Date: 8/29/19

Applicant/Owner: EnviroApplications, Inc. State: CA Sampling Point: 3

Investigator(s): Darin Busby, Brian Lohstroh Section, Township, Range: Township 11 South, Range 4 West

Landform (hillslope, terrace, etc.): Creek bank Local relief (concave, convex, none): Concave Slope (%): 45

Subregion (LRR): C - Mediterranean California Lat: 33.181218 Long: -117.289031 Datum: WGS84

Soil Map Unit Name: Visalia sandy loam, 2 to 5 percent slopes NWI classification: Wetland (PSS/FOCx)

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Wetland sample point approximately 6 inches north of flowing water at bottom of bank along edge of Buena Vista Creek, an intermittent creek dominated by riparian vegetation and visibly inundated on aerial imagery

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15 X 15 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata	25	Y	FACW
2. Schinus terebinthifolia	25	Y	FAC
3.			
4.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: 5 X 5 ft.)			
1. Oenothera elata	20	Y	FACW
2. Xanthium strumarium	10	Y	FAC
3. Cyperus eragrostis	10	Y	FACW
4. Apium graveolens	10	Y	FACW
5. 'Melilotus albus	10	Y	NI
6.			
7.			
8.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 86% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	65	x 2 =	130
FAC species	35	x 3 =	70
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Sample point located below riparian canopy at bottom of bank along edge of Buena Vista Creek.

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 4/2	100					Silty sand	
14-18	Gley2 4/5 BG	100					Sandy cla	Sandy clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Soil Map Unit is on NRCS hydric soils list. Sample point located at bottom of bank along edge of Buena Vista Creek. Creek bank contains a mix of rip-rap and soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✓ Water Marks (B1) (**Riverine**)
- ✓ Sediment Deposits (B2) (**Riverine**)
- ✓ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No ___ Depth (inches): 12

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 8

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Buena Vista Creek is an intermittent creek that is visibly inundated on aerial imagery.

Remarks:

Sample point located approximately 6 inches north of flowing water at bottom of bank along edge of Buena Vista Creek.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Proposed CarMax Auto Superstore City/County: Oceanside, San Diego Sampling Date: 8/29/19

Applicant/Owner: EnviroApplications, Inc. State: CA Sampling Point: 4

Investigator(s): Darin Busby, Brian Lohstroh Section, Township, Range: Township 11 South, Range 4 West

Landform (hillslope, terrace, etc.): Upland terrace Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR): C - Mediterranean California Lat: 33.181249 Long: -117.289015 Datum: WGS84

Soil Map Unit Name: Visalia sandy loam, 2 to 5 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Upland sample point on upland terrace approximately 5 feet north of wetland boundary and 15 feet south of top of creek bank.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15 X 15 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Schinus terebinthifolia	25	Y	FAC
2.			
3.			
4.			
	25 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 X 5 ft.)			
1. Raphanus sativus	90	Y	NI
2. Hirschfeldia incana	20	N	NI
3. Datura wrightii	5	N	UPL
4. Stipa miliacea	1	N	NI
5. Tropaeolum majus	1	N	UPL
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	6	x 5 =	30
Column Totals:	31 (A)		105 (B)

Prevalence Index = B/A = 3.4

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/2	100					Clayey lo	Clayey loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Upland sample point contains soil map unit that occurs on the NRCS hydric soils list because soil units are mapped on a broad scale and do not always indicate the actual soils in the field.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Proposed CarMax Auto Superstore City/County: Oceanside, San Diego Sampling Date: 8/29/19

Applicant/Owner: EnviroApplications, Inc. State: CA Sampling Point: 5

Investigator(s): Darin Busby, Brian Lohstroh Section, Township, Range: Township 11 South, Range 4 West

Landform (hillslope, terrace, etc.): Creek bank Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR): C - Mediterranean California Lat: 33.181167 Long: -117.288512 Datum: WGS84

Soil Map Unit Name: Visalia sandy loam, 2 to 5 percent slopes NWI classification: Wetland (PSS/FOCx)

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

Sample point approximately 6 feet north of flowing water at bottom of bank along edge of Buena Vista Creek, an intermittent creek dominated by riparian vegetation and visibly inundated on aerial imagery.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 X 20 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	50	Y	FACW
2. Arundo donax	50	Y	FACW
3. Washingtonia robusta	10	N	FACW
4. Ficus carica	5	N	FACU
	115	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: 10 X 10 ft.)			
1. Pulicaria paludosa	30	Y	FAC
2. Xanthium strumarium	10	N	FAC
3. Apium graveolens	10	N	FACW
4. Erigeron canadensis	10	N	FACU
5.			
6.			
7.			
8.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: 10 X 10 ft.)			
1. Parthenocissus quinquefolia	15	Y	NI
2.			
	15	= Total Cover	

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	120	x 2 =	240
FAC species	40	x 3 =	120
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	175 (A)		420 (B)

Prevalence Index = B/A = 2.4

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Sample point located on low terrace below riparian canopy at bottom of bank along edge of Buena Vista Creek.

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/1	90	10YR 5/8	10	C	PL	Clayey lo	Clayey loam
4-12	Gley2 3/10 B	90	10YR 5/6	10	C	PL	Loamy sa	Loamy sand
12-16	10YR 5/1	100					Clayey lo	Clayey loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ✓ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ✓ Sandy Gleyed Matrix (S4)
- ✓ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Sample point located along low terrace at bottom of bank along edge of Buena Vista Creek.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ✓ Hydrogen Sulfide Odor (C1)
- ✓ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✓ Water Marks (B1) (**Riverine**)
- ✓ Sediment Deposits (B2) (**Riverine**)
- ✓ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 8

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Buena Vista Creek is an intermittent creek that is visibly inundated on aerial imagery.

Remarks:

Sample point located along low terrace approximately 6 feet north of flowing water at bottom of bank along edge of Buena Vista Creek.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Proposed CarMax Auto Superstore City/County: Oceanside, San Diego Sampling Date: 8/29/19

Applicant/Owner: EnviroApplications, Inc. State: CA Sampling Point: 6

Investigator(s): Darin Busby, Brian Lohstroh Section, Township, Range: Township 11 South, Range 4 West

Landform (hillslope, terrace, etc.): Upland terrace Local relief (concave, convex, none): None Slope (%): 10

Subregion (LRR): C - Mediterranean California Lat: 33.181236 Long: -117.288537 Datum: WGS84

Soil Map Unit Name: Visalia sandy loam, 2 to 5 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Upland sample point on upland terrace approximately 15 feet north of wetland boundary and 20 feet south of top of creek bank.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 X 10 ft.)			
1. Baccharis pilularis	20	Y	NI
2.			
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: 5 X 5 ft.)			
1. Carpobrotus sp.	20	Y	NI
2. Hirschfeldia incana	10	Y	NI
3. Carduus pycnocephalus	10	Y	NI
4. Bromus madritensis	10	Y	UPL
5. Erigeron canadensis	5	N	FACU
6. Ricinus communis	5	N	FACU
7.			
8.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	10	x 4 =	40
UPL species	10	x 5 =	50
Column Totals:	20 (A)		90 (B)

Prevalence Index = B/A = 4.5

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	100					Clayey loa	Clayey loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Upland sample point contains soil map unit that occurs on the NRCS hydric soils list because soil units are mapped on a broad scale and do not always indicate the actual soils in the field.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX C
Proposed Project Area Photographs

Photograph 1. Overview of southern riparian forest in Buena Visa Creek, a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology. Disturbed and ruderal habitat dominate the north side of the creek (Facing east; July 22, 2019).

Photograph 2. Overview of southern riparian forest in Buena Visa Creek, a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology (Facing south; July 22, 2019).

Photograph 3. Wetland Sample Point 1 is within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is within southern riparian forest that is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology (Facing west; August 29, 2019).

Photograph 4. Wetland Sample Point 1 is within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is within southern riparian forest that is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology (Facing west; August 29, 2019).

Photograph 5. Upland Sample Point 2 is outside but immediately adjacent to the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is dominated by upland vegetation and soils, and contains no hydrology (Facing east; August 29, 2019).

Photograph 6. Upland Sample Point 2 is outside but immediately adjacent to the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is dominated by upland vegetation and soils, and contains no hydrology (Facing east; August 29, 2019).

Photograph 7. Wetland Sample Point 3 is within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is within southern riparian forest that is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology (Facing east; August 29, 2019).

Photograph 8. Wetland Sample Point 3 is within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is within southern riparian forest that is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology (Facing east; August 29, 2019).

Photograph 9. Upland Sample Point 4 is outside but immediately adjacent to the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS, but within the limits of CDFW Riparian (Facing east; August 29, 2019).

Photograph 10. Upland Sample Point 4 is outside but immediately adjacent to the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS, but within the limits of CDFW Riparian (Facing east; August 29, 2019).

Photograph 11. Wetland Sample Point 5 is within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is within southern riparian forest that is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology (Facing west; August 29, 2019).

Photograph 12. Wetland Sample Point 5 is within the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS and CDFW Riparian, as it is within southern riparian forest that is dominated by hydrophytic vegetation, hydric soils, and wetland hydrology (Facing west; August 29, 2019).

Photograph 13. Upland Sample Point 6 is outside but immediately adjacent to the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS, but within the limits of CDFW Riparian (Facing west; August 29, 2019).

Photograph 14. Upland Sample Point 6 is outside but immediately adjacent to the limits of a potentially jurisdictional USACE and RWQCB wetland WoUS and WoS, but within the limits of CDFW Riparian (Facing west; August 29, 2019).

Photograph 15. Overview of eastern/upstream portion of survey area where Buena Vista Creek flows through box culverts beneath Thunder Drive into open water, within the limits of potentially jurisdictional USACE and RWQCB non-wetland WoUS and WoS, and CDFW Streambed (Facing northeast west; July 22, 2019).

Photograph 16. Overview of open water and southern riparian forest in southeastern corner of the survey area, within the limits of potentially jurisdictional USACE and RWQCB wetland and non-wetland WoUS and WoS, and CDFW Riparian and Streambed (Facing west; July 22, 2019).

APPENDIX G
Archaeological Survey Report

ASM affiliates
Archaeology • History • Ethnography • Architectural History

August 9, 2019

Megan Hill
EnviroApplications, Inc.
2831 Camino del Rio South, Suite 214
San Diego, CA 92108

Re: Archaeological Survey Report for the Carmax Project, Oceanside, California

Dear Ms. Hill:

This report presents the results of a cultural resources study previously conducted by ASM Affiliates, Inc. (ASM) in 2018 for the parcel currently proposed for the Carmax Project (Project). The Project area is located in the City of Oceanside, San Diego County, California. This study was performed in accordance with the California Environmental Quality Act (CEQA) to determine the presence or absence of potentially significant cultural resources within the Project area. The City of Oceanside is the lead agency for the Project. This cultural resources study is a review of all relevant site records and reports on file with the South Coastal Information Center (SCIC) of the California Historical Resources Information System (CHRIS) at San Diego State University within a one-mile (mi.) search radius, a pedestrian survey of the Project area by a qualified archaeologist and a review of the Sacred Lands File held by the Native American Heritage Commission (NAHC). This report includes the results of the study, as well as a brief prehistoric and historic background summary for the area, and conclusions and cultural resource management recommendations.

Project Location

The Project area consists of approximately 11 acres in Assessor Parcel Numbers (APN) 168-01-242 and 168-01-243 within the City Oceanside, California. The Project area is shown on the San Luis Rey USGS 7.5' Quad, within Township 11 South Range 4 West, unsectioned Agua Hedionda Land Grant (Figures 1 and 2). The Project proposes to grade the parcels for future development.

Cultural Setting

Prehistory

Archaeological fieldwork along the southern California coast has documented a diverse range of human occupation extending from the early Holocene into the Ethnohistoric period (Erlandson and Colten 1991; Jones 1992; Moratto 1984). A variety of different regional chronologies, often with overlapping terminology, have been used in coastal southern California, and they vary from region to region (Moratto 1984). Today, the prehistory of San Diego County is generally divided into three major temporal periods: Paleo-Indian, Archaic, and Late Prehistoric. These time periods are characterized by patterns in material culture that are thought to represent distinct regional trends in the economic and social organization of prehistoric groups. In addition, particular scholars referring to specific areas utilize a number of cultural terms synonymously with these temporal labels: San Dieguito for Paleo-Indian, La Jolla for Archaic, and San Luis Rey for Late

Prehistoric (Meighan 1959; Moriarty 1966; Rogers 1939, 1945; True 1966, Wallace 1978; Warren 1964).

Paleo-Indian Period

The antiquity of human occupation in the New World has been the subject of considerable debate over the last few decades. The most widely accepted model currently is that humans first entered the western hemisphere between 12,000 and 15,000 years B.P. While there is no firm evidence of human occupation in coastal southern California prior to 12,000 B.P., dates as early as 23,000 B.P. and even 48,000 B.P. have been reported (Bada et al. 1974; Carter 1980; Rogers 1974). The amino acid racemization technique used to date these sites has been largely discredited, however, by more recent accelerator radiocarbon dating of early human remains along the California coast (Taylor et al. 1985). Despite intense interest and a long history of research, no widely accepted evidence of human occupation in North America prior to 15,000 B.P. has emerged.

As in most of North America, the earliest recognized period of California prehistory is termed Paleo-Indian. In southern California, this period is usually considered to date from at least 10,000 B.P. until 8500 to 7200 B.P. (Moratto 1984; Warren et al. 2008), and is represented by what is known as the San Dieguito complex (Rogers 1966). Within the local classificatory system, San Dieguito assemblages are composed almost entirely of flaked stone tools, including scrapers, choppers, and large projectile points (Warren 1987; Warren et al. 2008).

Archaic Period

The Archaic period (also referred to as the Early Milling period) extends back at least 7,200 years, possibly to as early as 9000 B.P. (Moratto 1984; Rogers 1966; Warren et al. 2008). Archaic subsistence is generally considered to have differed from Paleo-Indian subsistence in two major ways. First, gathering activities were emphasized over hunting, with shellfish and seed collecting having a high importance. Second, milling technology, frequently employing portable ground stone slabs, was developed. In reality, the implications of this transition are poorly understood from both an economic and a cultural standpoint (see Warren et al. 2008 for an excellent review).

Early Archaic occupations in San Diego County are most apparent along the coast and the major drainage systems that extend inland from the coastal plains (Moratto 1984). Coastal Archaic sites are characterized by cobble tools, basin metates, manos, discoidals, a small number of “Pinto” and “Elko” series dart points, and flexed burials. Together, these elements typify what is termed the La Jolla complex in San Diego County, which appears as the early coastal manifestation of a more diversified way of life.

Late Prehistoric Period

Assemblages derived from Late Prehistoric sites in San Diego County differ in many ways from those in the Archaic tradition. The occurrence of small, pressure-flaked projectile points, the replacement of flexed inhumations with cremations, the introduction of ceramics, and an emphasis on inland plant food collection, processing, and storage (especially acorns) are cultural patterns that were well established by the second millennium A.D. The centralized and seasonally permanent residential patterns that had begun to emerge during the Archaic period became well established in most areas. Inland semisedentary villages appeared along major watercourses in the foothills and in montane valleys where seasonal exploitation of acorns and piñon nuts was

common, resulting in milling stations on bedrock outcrops. Mortars for acorn processing increased in frequency relative to seed-grinding basins.

Ethnohistoric Period

In ethnohistoric times, two main cultural groups occupied San Diego County: the Uto-Aztecan-speaking Luiseño in the north and the Kumeyaay, Ipai/Tipai or Diegueño in the south. Traditionally, Luiseño territory encompassed an area from roughly Batiquitos Lagoon on the coast, east to Lake Henshaw, north into Riverside County, and west through San Juan Capistrano to the coast (Bean and Shipek 1978; Kroeber 1925; Rivers 1993). The region inhabited by various groups of the Kumeyaay was much larger and probably extended from Batiquitos lagoon eastward into the Imperial Valley and southward through much of northern Baja California (Almstedt 1982; Gifford 1931; Hedges 1975; Luomala 1978; Shipek 1982; Spier 1923).

The term Luiseño is derived from association with the San Luis Rey Mission, on the San Luis Rey River. The Luiseño people had a fairly rigid social structure and a moderately high population density (Bean and Shipek 1978). Maximum population estimates at Spanish contact range from 5,000 (Kroeber 1925) to 10,000 (White 1963). With a territory extending for almost 4,000 km², maximum population density estimates range from 1.25 to 2.5 persons per km² (3.3 to 6.7 persons per mi.2). White (1963) estimated that the Luiseño included approximately 50 villages of 200 individuals each, while Oxendine (1983), using Portolá expedition observations, indicated that village size was closer to 60. Recent research with mission records suggests that village size varied significantly in the eighteenth century, with larger villages such as Topome along the Santa Margarita River consisting of multiple clans (Johnson and Crawford 1999).

The Luiseño were divided into several autonomous lineages or kin groups based on patrilineal descent groups and a patrilocal residential pattern. Each Luiseño lineage was based around an autonomous village that held collective ownership over a well-defined territory for hunting and gathering, and violations of trespass were punished (Bean and Shipek 1978). Village territories may have ranged from as small as 10 km² near the coast along major drainages such as the San Luis Rey River (Oxendine 1983:45) to as large as 100 km² elsewhere (White 1963). A variety of shorter-term residential camps (such as for acorn gathering) and specialized localities occurred within each village territory (Oxendine 1983; White 1963). There are varied estimates for the length of the annual stay at the main village, and True et al. (1974) have even suggested a seasonal pattern with two permanent base camps, one in a major valley and another in the mountain region. Leadership included hereditary chiefs and council members who had specialized knowledge and authority over specific religious, economic, and warfare issues. Leaders conducted elaborate ceremonies; ritual and ceremonial specialists maintained ceremonial knowledge in secrecy and passed on the knowledge to only one heir (White 1963; Winterrowd and Shipek 1986). These leaders and specialists made use of fenced-in ceremonial structures, located in the village center.

Economic activities took place on the community and extended household levels, and varied significantly between coastal and inland areas (Bean and Shipek 1978:552). Community-wide efforts included fire management for game drives, and systematic use of fire to facilitate grasslands and increase yields of key plants and animals. Such burning was regularly mentioned in early Spanish accounts (Bean and Lawton 1976; Blackburn and Anderson 1993). Acorns, gathered in upland areas, have been considered the most important food source. Seeds from grasses, manzanita, sage, sunflowers, lemonade berry, chia, and other plants were also used, along with

various wild greens and fruits. Deer, antelope, small game, and birds were exploited. Coastal marine animals utilized as food included sea mammals, fish, crustaceans, and mollusks. Near-shore fishing was done from light balsa reed or dugout canoes. Some accounts indicate that coastal communities exploited local shellfish in the winter (Sparkman 1908; White 1963), and during times of stress the interior Luiseño traveled to the coast to obtain shellfish, fish, and even some land mammals (White 1963). Bean and Shipek (1978) noted that most inland groups also had fishing and gathering locations on the coast that they visited annually when the tides were low or when the inland resources were scarce, typically from January through March.

Rigid gender division of labor did not exist, but women generally collected plant resources and men hunted (Bean and Shipek 1978). Houses were dispersed throughout villages. Lowland village houses were conical structures covered with tule bundles, and other structures included sweathouses, ceremonial enclosures, ramadas, and acorn granaries. Domestic implements included wooden utensils, baskets, ceramic cooking and storage vessels, and milling tools. Hunting implements included bow and arrow, curved throwing sticks, nets, and snares. Nets and hooks made of shell and bone were used for fishing.

Historic Period

The Hispanic era in California's history includes the Spanish Colonial (1769-1821) and Mexican Republic (1821-1846) periods. This era witnessed the transition from a society dominated by religious and military institutions consisting of missions and presidios to a civilian population residing on large ranchos or in pueblos (Chapman 1925).

On July 20, 1769, Father Juan Crespí arrived in the San Luis Rey River Valley with the Portolá expedition to Monterey. His report back to his superiors declaring it an ideal location for a mission led to the eventual founding of Mission San Luis Rey de Francia (Pourade 1961:115). The mission was formally dedicated on June 13, 1798. Named for King Louis IX of France, this mission became known as the "King of Missions" due to its size and success. At its height, San Luis Rey became one of the most populous and successful of the missions. In 1824, it had an Indian neophyte population of 3,000 and the extensive mission lands supported 1,500 horses, 2,800 sheep, and 22,000 cattle (Pourade 1961:139).

The effects of missionization and the introduction of Old World diseases, greatly reduced the Native American population of southern California. Inland Luiseño groups were not heavily affected by Spanish influence until 1816, when an outpost of the mission was established 32 km further inland at Pala (Sparkman 1908). Most villagers, however, continued to maintain many of their aboriginal customs and simply adopted the agricultural and animal husbandry practices learned from Spaniards.

Mexico won independence from Spain in 1821, and with it the process of dismantling of the mission system began to unfold. The 1833 Secularization Act passed by the Mexican Congress ordered half of all mission lands to be transferred to the Indians, and the other half to remain in trust and managed by an appointed administrator. These orders were never implemented due to several factors that conspired to prevent the Indians from regaining their patrimony. By 1835, the missions, including Mission San Luis Rey, were secularized.

The subsequent American period (1846 to present) witnessed the development of San Diego County in various ways. This time period includes the rather rapid dominance over Californio culture by Anglo-Victorian (Yankee) culture and the rise of urban centers and rural communities. A Frontier period from 1850 to 1870 saw the region's transformation from a feudal-like society to an aggressive capitalistic economy in which American entrepreneurs gained control of most large ranchos and transformed San Diego into a merchant-dominated market town. Between 1870 and 1930, urban development established the cities of San Diego, National City, Coronado, El Cajon, Escondido, La Mesa, Oceanside, and Chula Vista, while a rural society based on family-owned farms organized by rural school district communities also developed, especially in the northern region of the county. The Army and Navy took an increased interest in the San Diego harbor between 1900 and 1940. The Army established coastal defense fortifications at Fort Rosecrans on Point Loma, and the Navy developed major facilities in the bay (Fredericks 1979; Van Wormer and Roth 1985). The 1920s brought a land boom (Robinson 1942) that stimulated development throughout the city and county, particularly in the Point Loma, Pacific Beach, and Mission Beach areas. Development stalled during the depression years of the 1930s, but World War II ushered in a period of growth based on expanding defense industries.

City of Oceanside

In the late 1860s and 1870s, settlers began to arrive in the San Luis Rey Valley. These settlers, who came from eastern states and a wide variety of European countries, raised dairy cattle, sheep and horses, grew barley and alfalfa, and maintained bee colonies. A small townsite began to grow adjacent to the San Luis Rey mission. In 1880, the California Southern Railroad was formed to construct a rail line between San Diego and San Bernardino. By 1882, they had constructed 211 mi. of track from National City to Fallbrook Junction, just north of Oceanside, and inland through Temecula Canyon and Colton and San Bernardino. The history of the City of Oceanside began in earnest in 1881 when Andrew Jackson Meyers, a store keeper in San Luis Rey, was granted a 160-acre homestead grant just south of Rancho Santa Margarita in what is now the City of Oceanside. Cave Johnson Couts Jr. surveyed and mapped out a town site, which was to become known as Oceanside (Flanigan et al. 1992:2-4; Hawthorne 2000:31-33).

Lots in the newly platted town sold quickly. By 1886, Oceanside had a population of 350 and by July 3, 1888, when Oceanside was incorporated, the population had grown to approximately 1,000. By then Oceanside was a boomtown with a growing population. It boasted several impressive buildings including the South Pacific Hotel near Third and Pacific and the Bank of Oceanside on the corner of Second and Hill, an orchestra, opera house and a variety of businesses. A wharf company was founded in 1887 and a wharf was constructed in 1888 at the foot of Wisconsin. Oceanside also had a two-story school with three teachers, and several newspapers including the Oceanside Blade and Oceanside Headlight. South Oceanside was founded by J. Chauncey Hayes and a second school was built there. The first Oceanside wharf was destroyed by a storm during the winter of 1890 and 1891. The second pier, constructed at the location of the present pier, was the first of five piers constructed at that location in the City's history (Hawthorne 2000:31-38).

The railroad, which had played a key role in the founding of Oceanside, continued to play an important role in the future development of the City. The inland route that had opened in 1882 was prone to flooding, and by 1888, California Southern had built a coastal rail line north of Oceanside to Santa Ana and Fullerton, thereby linking San Diego directly to Los Angeles. Trains ferried thousands of prospective buyers to Oceanside in the boom years of the 1880s and its location on

the main line between San Diego and Los Angeles continued to be key in the development of the town.

Oceanside's boom was short-lived, however. Like the rest of San Diego County, Oceanside experienced an unexpected bust as the real estate market, which had been fueled by land speculators who drove land prices up from $10 an acre to over $100, suddenly collapsed. Land prices plummeted and the trainloads of speculators that had arrived daily in Oceanside disappeared. Between 1888 and 1920, the City had a net population increase of only 164 people (Wiersma and Taschner 1981).

The 1920s brought a renaissance for Oceanside, as local businessmen guided by the Chamber of Commerce organized to attract new residents and businesses to the City. The city infrastructure was also improved, including the roads, sewers, and water supply. In 1923, most of the major city streets were paved. Access to Oceanside was improved by a number of important road projects including a road linking Oceanside to northern Imperial County. It was thought that this would attract visitors from the desert during the summer months. The City also embarked on an aggressive advertising campaign extolling the virtues of Oceanside. As a result of the planning, advertising and public improvements, the City of Oceanside prospered during the 1920s and the population grew from 1,164 in 1920 to 3,508 in 1930. The jewels in Oceanside's commercial development were the construction of the 650-seat Palomar Theater, completed in 1924, and the 1,224-ft. long pier, the longest pier on the West Coast, which opened in July 1927 (Wiersma and Taschner 1981).

Oceanside suffered economic decline during the depression years, but its population continued to grow reaching 4,650 by 1940. A new fire and police station, designed by innovative architect Irving Gill, were constructed in 1930, followed in 1934 by a new Mission Revival-style City Hall, also designed by Gill. Oceanside High School was renovated by award-winning school architect Theodore Kistner in 1934 with funds provided by the Works Progress Administration. While the Chamber of Commerce continued to advertise Oceanside as a city "Where Life Is Worth Living," the high unemployment rates throughout the country curtailed vacation travel and the economy of Oceanside suffered (Flanigan et al. 1992:2-11).

In February 1942, the government purchased the entire 125,000-acre Rancho Santa Margarita for $4.15 million. The founding of Camp Pendleton just north of Oceanside, the largest Marine Corps Base in the nation, created a boom for the Oceanside economy and was the catalyst that transformed a small town into a modern city. Demand for housing and services within Oceanside also increased dramatically and the population of the city grew to 12,888 by 1950. Houses and apartment buildings were constructed in large numbers to accommodate the ever-expanding population. When the war years were over, tourism again became a key component in the economy of the city. When the old steel pier was damaged by a storm in 1943, the loss to the tourist industry was thought to be so severe that the people of Oceanside passed a $200,000 bond issue to construct the longest pier (1,900 ft.) on the West Coast (Hawthorne 2000:137).

The economic growth of Oceanside over time has depended to a great extent on the presence of Camp Pendleton. The outbreak of the Korean War in the early 1950s ensured the growth of Camp Pendleton, which was known as "The Gateway to Korea." The population of Oceanside doubled during the decade to 25,000 as military families settled in the city, increasing demand for services.

In the first five years of the 1950s, Oceanside annexed 34 additional areas. The school population also grew rapidly. In the early 1960s, a bond issue was passed for the construction of Mira Costa College, a two-year college serving Oceanside and the surrounding areas. Oceanside experienced another boom in the 1960s and 1970s during the Vietnam War.

As Oceanside expanded to a total of 40.7 square mi. and a population over 100,000 in the late 1980s, much of the development was taking place in suburban areas of the City and the downtown area experienced a decline. In 1985, the City of Oceanside began a redevelopment program. The aim of redevelopment has been to revitalize the downtown area, eliminate urban blight, promote development, create jobs, increase the tax base and develop a positive environment to attract both residents and visitors to the downtown (Flanigan et al. 1992:2-13). The redevelopment program has succeeded in revitalizing the downtown area. A new transit center was constructed in 1983, the pier, beachfront and parks were refurbished, and a new Civic Center was completed in the late 1980s. In recent years the economy of Oceanside has diversified to include biotech and medtech industries, ensuring continued growth and prosperity.

Regulatory Environment

California Environmental Quality Act

CEQA requires that all private and public activities not specifically exempted be evaluated for their potential for environmental damage, including effects to historical resources. Historical resources are recognized as part of the environment under CEQA. The act defines historical resources as "any object, building, structure, site, area, or place that is historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (Division I, Public Resources Code, Section 5021.1[b]).

Lead agencies have a responsibility to evaluate historical resources against the California Register of Historical Resources (CRHR) criteria prior to making a finding as to a proposed project's potential for impacts to historical resources. Mitigation of adverse impacts is required if the proposed project will cause substantial adverse change to a historical resource. Substantial adverse change includes demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired. While demolition and destruction are fairly obvious significant impacts, it is more difficult to assess when change, alteration, or relocation crosses the threshold of substantial adverse change. The CEQA Guidelines provide that a project that demolishes or alters those physical characteristics of a historical resource that convey its historical significance (i.e., its character-defining features) is considered to materially impair the resource's significance. The CRHR is used in the consideration of historical resources relative to significance for purposes of CEQA. The CRHR includes resources listed in, or formally determined eligible for listing in, the NRHP and some California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts), or that have been identified in a local historical resources inventory, may be eligible for listing in the CRHR and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise.

Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852), which consist of the following:

A. it is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
B. it is associated with the lives of persons important to local, California, or national history; or
C. it embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values; or
D. it has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Oceanside Historical Site

Ordinance No. 82-14, § 1, 9-8-82 of the City of Oceanside's Municipal Code established the criteria for which a property is eligible as an Oceanside Historical Site:

a) It exemplifies or reflects special elements of the city's cultural, social, economic, political, aesthetic, engineering, or architectural history; or
b) It is identified with persons or events significant in local, state, or national history; or
c) It embodies distinctive characteristics of a style, type, period, or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship; or
d) It is representative of the notable work of a builder, designer, or architect; or
e) It is found by the council to have significant characteristics which should come under the protection of this chapter.

Study Methods

Methods used to assess the presence or absence of cultural resources within the Project area included a search of existing records and an intensive field survey. The records search was received from the SCIC on March 20, 2018 (Appendix A). The search included the Project area and a radius of 1 mi. around it. A records search of the Sacred Lands File held by the NAHC was requested on January 9, 2018 (Appendix B). Historic aerial photographs and maps, provided by historicaerials.com, of the Project area were also examined.

The field survey was conducted on January 12, 2018 by ASM Associate Archaeologist Joel Lennen, M.A. Field methods consisted of a pedestrian survey of the Project area by the archaeologist in transects spaced at 10-m intervals. The Project area was photographed, and all visible soils were examined for cultural resources.

Study Results

SCIC Records Search Results

Seventy-five cultural resource studies have previously addressed the 1-mi. record search radius surrounding the Project area. Of these reports, none were recorded within the Project area, although two were broad regional studies. Descriptions of the cultural resource studies that included areas within the records search radius are provided in Table 1.

Table 1. Previous Cultural Resources Reports Addressing the Project Area and One-Mile Records Search Radius

Report No.	Authors	Date	Title	Relation to APE
SD-00291	Carrico, Richard and Lesley McCoy	1977	Archaeological Investigations of the Master Plan 300 Acres Project Oceanside, California.	Outside
SD-00359	Carrico, Richard	1975	Archaeological Survey of the TMI Project	Outside
SD-00369	Carrico, Richard	1974	Archaeological Survey of the Tri-City Hospital Project Job # 3034	Outside
SD-00574	Carrillo, Charles and Charles Bull	1979	McMillin North Pointe: Archaeological Studies of SDM-W-2133, Oceanside, California	Outside
SD-00675	Gallegos, Dennis and Richard Carrico	1984	Cultural Resource Survey and Assessment and Archaeological Testing of Site SDI-9967 (W-3492) for South Coast Asphalt Products Company Carlsbad, California	Outside
SD-00902	Chace, Paul G.	1981	An Archaeological and Paleontological Survey of the Denman Property in the City of Vista, California	Outside
SD-00917	Flower, Douglas M., Darcy Ike, and Linda Roth	1977	Extended Initial Study of Miracosta Estates Oceanside, California	Outside
SD-01016	Gallegos, Dennis and Andrew Pigniolo	1987	Cultural Resource Survey of the Mar Vista OV1 Trunk Sewer Line, Vista, California	Outside
SD-01033	Gallegos, Dennis and Richard Carrico	1985	Cultural Resource Survey and Assessment for Epoch/Pacific Capital Project Oceanside, California	Outside
SD-01082	Flower, Douglas, Darcy Ike, Linda Roth, and Susan Sapone Varner	1979	Archaeological Investigation of the Mira Costa Estates Project, Oceanside, California W-1256A, B, C, & D W-1257.	Outside
SD-01089	Franklin, Randy L. and Richard L. Carrico	1979	An Archaeological Survey for the Proposed Calvin Leung Mobile Home Park, Oceanside, California.	Outside
SD-01154	Laylander, Don	1988	An Archaeological Survey Report for a Widening of State Route 78 (I-5 to East of College Boulevard) Oceanside, California.	Outside
SD-01194	Hector, Susan and McMillan Davis	1989	Cultural Resources Survey of the Hacienda Drive Commercial Centers Vista, California	Outside
SD-01336	Pigniolo, Andrew and Dennis Gallegos	1986	Cultural Resource Survey of the St. Croix Villas Project, Oceanside, California.	Outside
SD-01643	Wlodarski, Robert J. and Gwen R. Romani	1981	An Evaluation of the Impacts upon Cultural Resources Located on 95 Acres, Buena Vista Creek, City of Carlsbad, County of San Diego, California	Outside
SD-01664	Wade, Sue A.	1985	Archaeological Mitigation of SDI-9898, Del Oro Hills Oceanside, California	Outside
SD-01672	Walker, Carol J. and Charles S. Bull	1980	An Archaeological Test Investigation of Seven Cultural Resources for Leisure Village Oceanside	Outside
SD-02443	Gallegos, Dennis and Danielle Huey	1991	Testing and Data Recovery for Late Period Occupation Sites CA-SDI-635 and CA-SDI-636 - Calavera Heights	Outside
SD-02598	Wade, Sue	1992	Archaeological Evaluations at Calavera Hills SDI-5416, Archaeological Testing at SDI-12470, and SDI-12471. Carlsbad	Outside
SD-04111	Larry Seeman	1982	Draft Environmental Impact Report Revised Parks and Recreation Element, Carlsbad, California	Regional Study
SD-04124	Richard Carrico	1977	Fairbanks Ranch, San Diego County	Outside
SD-04229	Bull, Charles	1977	An Archaeological Reconnaissance of the Lake Calvera Hills Plan Area	Outside

Report No.	Authors	Date	Title	Relation to APE
SD-04308	WESTEC Services, Inc. and R.L. Franklin	1979	An Archaeological Survey for the Proposed Calvin Lueng Mobile Home Park, Oceanside, CA	Outside
SD-04359	Gallegos, Dennis	1991	Cultural Resource Testing Program for SDI-635 Calaveras Heights Village, Carlsbad, CA	Outside
SD-04360	ERC	1991	Testing and Data Recovery for Late Period Occupation Sites CA-SDI-635 and CA-SDI-636 Calavera Heights, Carlsbad, CA	Outside
SD-04361	Gallegos, Dennis and Danielle Huey	1991	Cultural Resources Testing Program for SDI-4922, SDI-4923, SDI-4925, SDI-11941, SDI-11942, SDI-11943, and SDI-12125, Calavera Lake, Carlsbad, CA	Outside
SD-04833	Caltrans	1982	Final Report for an Archaeological Test Excavation at Site CA-SDI-9473, Carlsbad, CA	Outside
SD-04835	Corum, Joyce	1982	Summary Report for an Archaeological Test Excavation at Site CA-SDI-9473, Oceanside, CA. 11-SD-78 P.M. O.O/3.1	Outside
SD-05403	Gallegos, Dennis	2000	Historic Property Survey Report Rancho Del Oro/SR 78 Interchange Volume 1 of 2 Oceanside, California	Outside
SD-05404	Kyle, Carolyn, Roxana Phillips, and Dennis Gallegos	2002	Cultural Resources Survey for the Proposed State Route 78/Rancho Del Oro Interchange Project-City of Oceanside, California	Outside
SD-05845	Laylander, Don	1988	Historic Property Survey Report For a Widening of State Route 78	Intersects
SD-06112	Drover, Christopher	1978	Archaeological Reconnaissance of Approximately 185+/- Acres in Oceanside, CA Appendix "D" and "E"	Outside
SD-06195	Robbins-Wade, Mary and Timothy G Gross	1989	Cultural Resources Inventory: College Fair, Oceanside, California	Outside
SD-06803	Pigniolo, Andrew	1986	Cultural Resource Survey of the St. Croix Villas Project, Oceanside	Outside
SD-07412	Giletti, Andrew	2002	Emerald Ridge-Archaeology	Outside
SD-07466	Erce	1991	Cultural Resource Testing Programs for SDI-4922, 1923, 1925, 4927, 11941, 11942, 11943, 12125 Calavera Lake, Carlsbad, CA	Outside
SD-07858	Robbins-Wade, Mary	1989	Cultural Resources Inventory: College Fair Oceanside, CA	Outside
SD-08484	Rosen, Martin D.	2003	Final Historic Property Survey Report	Outside
SD-08746	Advance Planning and Research and Associates	1979	An Archaeological Report Submitted to City of Oceanside, California, Broadmoor-Oceanside Subdivision Phase II Archaeological Report for Archaeological Site TMI-4 Oceanside, California	Outside
SD-08747	FIR	1977	Extended Initial Archaeological Study of Miracosta Estates Oceanside, California	Outside
SD-08748	Harley, Geoff	1983	An Archaeological Survey of the Tri-City Plaza Shopping Center Property	Outside
SD-08754	Hanna, David C.	1981	Addendum to the Cultural Resource Survey Report for Carlsbad Highlands City of Carlsbad, San Diego County, California	Outside
SD-08965	Mc Lean, Deborah K. B.	2003	Archaeological Survey Report West Vista Way Widening, City of Vista, San Diego County, California	Outside
SD-09003	Rosen, Martin D.	2004	Positive Historic Property Survey Report	Outside
SD-09103	Wlodarski, Robert J.	2004	A Phase 1 Archaeological Study for a Proposed Affordable Housing Project Located between College Blvd., Lake Blvd., Plaza Drive and Thunder Dr. City of Oceanside, County of San Diego, California	Outside
SD-09134	Gallegos, Dennis, Andrew Pigniolo,	1990	Cultural Resource Testing Program for SDI-635 and SDI-636 Calaveras Heights Village Carlsbad, California	Outside

Report No.	Authors	Date	Title	Relation to APE
	and Patricia Mitchell			
SD-09571	Guerrero, Monica C and Dennis R. Gallegos	2003	City of Carlsbad Water and Sewer Master Plans Cultural Resource Background Study City Of Carlsbad, California	Outside
SD-09654	Kyle,Carolyn	2005	Cultural Resource Constraint Analysis for the Lake Calavera Trails Project City of Carlsbad, California	Outside
SD-09745	Robbins-Wade, Mary and Andrew Giletti	2005	Del Oro Heights Tentative Map-Archaeology (Affinis Job No. 2073)	Outside
SD-09994	Murray, Matt and Robbins-Wade, Mary	2006	Via Centre Office Park Archaeological Survey (Job No. 2088)	Outside
SD-10062	Eckhardt, William	1975	Archaeological Survey for TMI Oceanside Property	Outside
SD-10551	Arrington, Cindy	2006	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California	Outside
SD-11228	Marben-Laird Associates	1987	Historic Resource Survey, A Project of the City of Vista, California	Outside
SD-11524	Rosenberg, Seth A., Adriane Dorrler, and Brian F. Smith	2007	A Cultural Resources Evaluation for the Vista and Buena Sanitation District 2007 Sewer Master Plan Update	Outside
SD-11778	Robbins-Wade, Mary	2008	"Panhandle" Property Archaeological Survey	Outside
SD-11786	Robbins-Wade, Mary	2008	Cultural Resources Study, Former South Coast Material Quarry Amended Reclamation Plan, Oceanside, San Diego County, California	Outside
SD-11928	Ni Ghabhlain, Sinead	2005	Historic Resources Inventory and Evaluation Report for the Lake Calavera Remedial Improvements Project, Carlsbad, California	Outside
SD-12084	Collett, Russell and Dayle Cheever	2001	Significance Assessment of Three Cultural Resource Sites within the College Boulevard Reach B Alternative 1 and Reach C Alignments City of Carlsbad, California	Outside
SD-12412	Clowery-Moreno, Sara and Brian F. Smith	2008	A Phase I Archaeological Assessment of the College Boulevard Widening Project	Outside
SD-12872	Rosen, Martin D.	2003	Rancho Del Oro Drive/ State Route 78 Interchange, San Diego County, California	Outside
SD-13844	Robbins-Wade, Mary and G. Timothy Gross	1989	Cultural Resources Inventory: College Fair Oceanside, California	Outside
SD-13972	Robbins-Wade, Mary	2002	Emerald Ridge	Outside
SD-14039	Ni Ghabhlain, Sinead, Mark Becker, Adam Giacinto, and Tony Quach	2012	A Cultural and Historical Resources Survey and Evaluation for the Quarry Creek Project EIR, City of Carlsbad, California	Outside
SD-14069	Ni Ghabhlain, Sinead	2011	Cultural and Historical Resource Study for the City of Oceanside General Plan- Circulation Element Update Program Environmental Impact Report (PEIR)	Regional Study
SD-14157	Robbins-Wade, Mary and Andrew Giletti	2013	Archaeological Monitoring for the Former South Coast Material Quarry Amended Reclamation Plan, Carlsbad, San Diego County, California	Outside
SD-14564	Baksh, Michael	1996	Cultural Resource Survey for the Proposed College Boulevard Widening Project In Oceanside, California	Outside
SD-14701	Kyle, Carolyn E.	2005	Cultural Resource Constraint Analysis for the Lake Calavera Trails Project City of Carlsbad, California	Outside

Report No.	Authors	Date	Title	Relation to APE
SD-14800	Stropes, Tracy A.	2014	A Phase I Archaeological Assessment Update for the College Boulevard Widening Project City of Oceanside	Outside
SD-15503	Susan M. Hector and Joshua A. Tansey	2015	Archaeological Survey for the SDG&E Quarry Creek Overhead Conversion, San Diego County, California (SDG&E ETS #29953)	Outside
SD-15898	Mary Robbins-Wide	2015	Belle Mente Charter School Archaeological Monitoring	Outside
SD-16174	Roger D. Mason	2015	Cultural Resources Survey Report for the Art/Music Storage Buildings and Theatre/Dance Building Project Mira Costa College Oceanside, San Diego County	Outside
SD-16406	Davis, Shannon	2014	Visual Effects Assessment on the Marron-Hayes Adobes Historic District for the Quarry Creek Master Plan Environmental Impact Report, Carlsbad, California	Outside
SD-16407	Ni Ghabhlain, Sinead	2014	A Cultural and Historical Resources Survey and Evaluation for the Quarry Creek Project, City of Carlsbad, California	Outside
SD-16484	Perez, Don C.	2014	Cultural Resources Survey Mira Costa College / Ensite #18547 (270195) 2 Barnard Drive, Oceanside, San Diego County, California 92058 NW1/4 SE1/4 S28 T11S R4W, EBI Project No. 61142765	Outside
SD-16609	Wills, Carrie D.	2015	Cultural Resources Records Search and Site Visit Results for Cellco Partnership and their Controlled Affiliates doing Business as Verizon Wireless Candidate 'Marvin-SD', 3851 Sherbourne Drive, Oceanside, San Diego County, California	Outside

The records search identified 26 cultural resources that were previously recorded within the 1-mi. record search radius (Table 2). Of these resources, none were recorded within the Project area.

A search of the historic addresses on file at the SCIC identified six previously recorded historic addresses within the 1-mi. record search radius (see Table 2).

Table 2. Previously Recorded Cultural Resources within the Project Area and One-Mile Records Search Radius

Designation		Site Type	Recorder & Date	Relation to APE
Primary Number	Trinomial			
P-37-	CA-SDI-			
000632	000632	Shell scatter	Wallace 1958	Outside
000633	000633	Bedrock milling	Wallace 1958	Outside
000634	000634	Tool, and flake scatter	Wallace 1958	Outside
000636	000636	Tool, flake, shell, and pottery scatter	Wallace 1958 Polan 1977	Outside
005433	005433	Isolate pottery sherd	Hatley 1977	Outside
005437	005437	Isolate flake	Hatley 1977	Outside
005439	005439	Shell scatter	Hatley 1977	Outside
005601	005601	Tool, flake, and shell scatter	Graham 1977 & Giacinto 2011	Outside
005651	005651	Tool, flake, and shell scatter	Edwards 1977, Romani 1981, Hector 1983, & Giacinto 2011	Outside
005793	005793	Historic trail	Hatley 1978	Outside

006841	006841	Flake and shell scatter	Fink 1978	Outside
009917	009917	In-situ hearth with shell scatter	Thesken 1984	Outside
009967	009967	Tool, flake, and shell scatter. Historic debris also present	Gallegos 1984, & Giletti 2011	Outside
011941	011941	Bedrock milling with tool, and flake scatter	Huey 1990	Outside
012471	012471	Shell scatter	Hanna 1991	Outside
025143	--	Historic residence	Marvin 2003	Outside
025144	--	Historic residence	Marvin 2003	Outside
025145	--	Historic residence	Marvin 2003	Outside
025146	--	Historic residence	Marvin 2003	Outside
025147	--	Historic residence	Marvin 2003	Outside
025148	--	Historic commercial building	Marvin 2003	Outside
027329	017863	Shell scatter	Giletti 2006	Outside
027330	017864	Flake and shell scatter	Giletti 2006	Outside
030251	--	Historic dam	Ni Ghablain 2005	Outside
032876	020776	Tool, flake, and shell scatter	James 2011	Outside
032877	020777	Tool and shell scatter	James 2011	Outside

NAHC Records Search Results

A record search of the Sacred Lands File held by the NAHC was requested on January 9, 2018. On January 10, 2018 the NAHC responded the record search had negative results. The NAHC provided a list of 35 tribal entities and individuals to contact for additional information. The City of Oceanside should contact the listed tribal entities and individuals directly during their AB-52 consultation. All correspondence pertaining to the NAHC is included in Appendix B.

Archival Research

Historic aerial photographs and maps of the Project area were examined from historicaerials.com. The 1938 historic aerial photograph shows the Project area is largely undeveloped and Buena Vista Creek is present along the southern boundary of the Project area. A road running north-south bisects the western portion of the Project area. To the west of the road, the ground has been cleared, possibly for agricultural uses. The 1946 historic aerial photograph only shows the northern edge of the Project area. The road along the western side of the Project area is still present and the portion of the Project area that is visible does not appear to be in use. The 1947 and 1953 historic aerial photographs also show the roadway, and no other development within the Project area. The 1964 historic aerial photograph also shows the roadway and an additional road running east-west at the southern end of the Project area, immediately north of the creek. The 1967 and 1980 aerial photograph shows several roadways and grading across the Project area. The 1990 aerial photograph shows the Project area and the surrounding area in the same condition as it is currently.

The 1893, 1897, 1901, 1907, 1911, 1920, 1925, 1931, 1939, and 1947 USGS Topographic maps of the Project area show a roadway possibly bisecting the Project area running east-west. However, they also show Buena Vista Creek farther south that its current alignment, and it is possible that these maps are not accurate within the vicinity of the Project area. Starting in 1907 the maps also show a building that is possibly within the Project area. The 1949 USGS Topographic map shows a road bisecting the Project area running north-south, also shown on the 1938 and later aerial photographs. It also shows Buena Vista Creek in its current alignment. No changes are visible on

the 1955, 1961, 1966, 1969, and 1971 USGS Topographic Maps. The 1978 USGS Topographic map shows the current alignment of Thunder Drive, although Plaza Drive dead ends within the Project area. It also shows the development and highways adjacent to the Project area. The 2000 USGS Topographic Map shows the current alignment of the streets adjacent to the Project area, as well as an additional road present within the Project area running east-west along the southern boundary of the Project area.

Survey Conditions and Results

ASM Associate Archaeologist Joel Lennen, M.A., surveyed the Project area on January 12, 2018. The weather was mostly sunny with temperatures that varied from 63-65 degrees. The vegetation consisted mostly of non-native short grasses and buckwheat, with an increase in flora density and diversity (e.g. eucalyptus trees, tall grasses, succulents) along the creek on the southern boundary of the Project area (Figures 3 - 5). There was 90 percent ground surface visibility in the central portion of the Project area, and approximately 40 percent ground surface visibility in the southern and northern portions. A moderate amount of imported gravel and modern refuse (e.g. plastic bottles, glass, food containers, etc.) was noted to be scattered throughout the parcel wherever the ground surface was exposed. The refuse was denser along the creek where there was also a temporary shelter (i.e. pitched tent using tarps and ropes). The southern third of the Project area has been impacted by grading that created three terraces that ascend northwards from the creek. Two footpaths largely devoid of vegetation ran along the bottom two terraces, oriented east-to-west. No historic or prehistoric cultural resources were noted during the survey.

The Project area was resurveyed by ASM Associate Archaeologist Douglas Drake, M.A., on Monday, July 29, 2019. The Project area was found to be in the same general condition as described at the time of the previous survey. No historic or prehistoric cultural resources were noted during the resurvey of the Project area.

Conclusions and Cultural Resource Management Recommendations

Twenty-six cultural resources were recorded within the one-mile record search radius around the Project area. No cultural resources have been previously recorded within the Project area. The previous pedestrian archaeological survey (January 2018) and resurvey (July 2019) of the Project area were negative and no cultural resources have been identified within the Project area. The record search of the Sacred Lands File held by the NAHC had negative results. Based on these data, there is a low potential for impacts to historical resources associated with the implementation of the proposed Carmax Project, as none have been identified within the Project area.

Construction monitoring by a qualified archaeologist and Native American monitor is recommended during the initial ground disturbance within the Project area due to the Project's proximity to Buena Vista Creek and the potential for buried cultural resources within the alluvial deposits along the creek. In the event that any previously undetected cultural resources are encountered during monitoring, evaluation of their significance may be required for CEQA compliance. The monitor should temporarily halt work in the immediate area and contact you to discuss the appropriate steps to be taken to determine the potential significance of the discovery, in coordination with the City of Oceanside. A qualified archaeologist may be required to evaluate the discovery, determine the appropriate avoidance or other mitigation measures, and determine if

additional archaeological work is needed. Should you have any questions regarding this study, please do not hesitate to contact me.

Respectfully submitted,

Stephen Harvey, M.A., RPA
Senior Archaeologist

Attachments:

Figure 1.	Project vicinity map.
Figure 2.	Project location, shown on the USGS 7.5' topographic San Luis Rey quad map.
Figure 3.	Project area, shown on an aerial photograph.
Figure 4.	Photograph of the Project area south of Plaza Drive, facing south west.
Figure 5.	Photograph of the Project area north of Plaza Drive, facing north east.
Appendix A.	SCIC Record Search Confirmation
Appendix B.	NAHC Correspondence

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Figure 1. Project vicinity map.

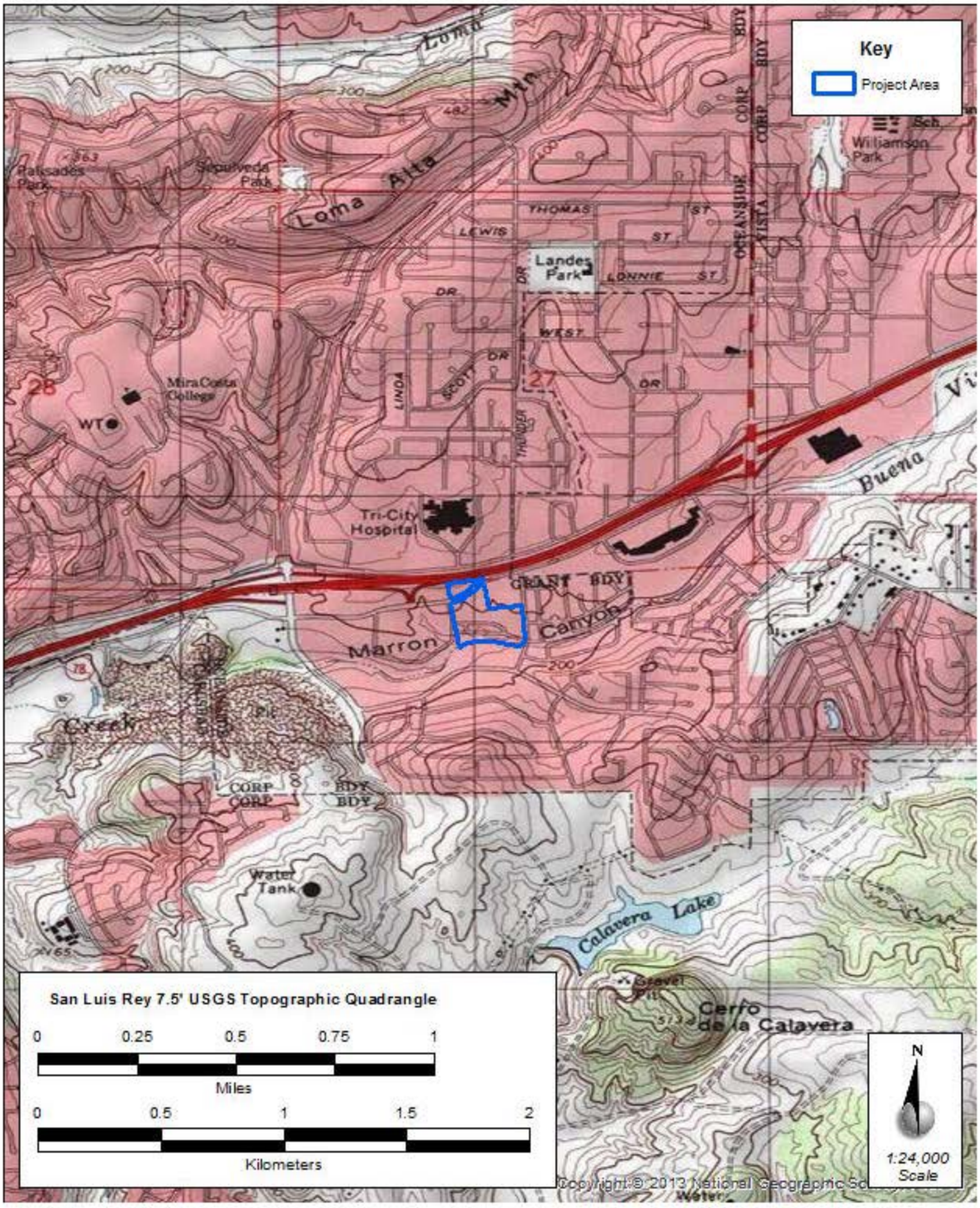

Figure 2. Project location, shown on the USGS 7.5' topographic San Luis Rey quad map.

Figure 3. Project area, shown on an aerial photograph.

Figure 4. Photograph of the Project area south of Plaza Drive, facing south west.

Figure 5. Photograph of the Project area north of Plaza Drive, facing north east.

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Appendix A
SCIC Record Search Confirmation

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South Coastal Information Center
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-5320
Office: (619) 594-5682
www.scic.org
nick@scic.org

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM RECORDS SEARCH

Company: ASM Affiliates

Company Representative: Mark Becker

Date Processed: 1/31/2018 Sent: 3/21/2018

Project Identification: 29370

Search Radius: 1 mile

Historical Resources: YES

Trinomial and Primary site maps have been reviewed. All sites within the project boundaries and the specified radius of the project area have been plotted. Copies of the site record forms have been included for all recorded sites.

Previous Survey Report Boundaries: YES

Project boundary maps have been reviewed. National Archaeological Database (NADB) citations for reports within the project boundaries and within the specified radius of the project area have been included.

Historic Addresses: YES

A map and database of historic properties (formerly Geofinder) has been included.

Historic Maps: YES

The historic maps on file at the South Coastal Information Center have been reviewed, and copies have been included.

Summary of SHRC Approved CHRIS IC Records Search Elements	
RSID:	0
RUSH:	no
Hours:	1
Spatial Features:	101
Address-Mapped Shapes:	yes
Digital Database Records:	2
Quads:	1
Aerial Photos:	0
PDFs:	Yes
PDF Pages:	126

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Appendix B
NAHC Correspondence

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ASM affiliates
Archaeology • History • Ethnography • Architectural History

January 9, 2018

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst
Native American Heritage Commission
1550 Harbor Blvd. Suite 100
West Sacramento, CA
Via Email: Gayle.Totton@NAHC.CA.GOV

Re: Sacred Land Search Request for the Plaza Drive Project, Oceanside, San Diego County, California

Dear Dr. Totton,

ASM Affiliates, Inc. (ASM) is conducting a cultural resource survey for the Plaza Drive Project (Project), in Oceanside, San Diego County, California. The Project is located on the San Luis Rey USGS 7.5' Quad, within the, Township 11 South, Range 4 West, unsectioned Agua Hedionda Land Grant (Figure 1). City of Oceanside is the lead agency for the Project. This study is being undertaken in compliance with the California Environmental Quality Act. The Project proposes grading the approximately 11-acre project area for future development.

A records search for the project area was conducted by the South Coastal Information Center. I am writing to inquire if you have registered any Tribal Cultural Resources, traditional cultural properties, or areas of heritage sensitivity within this proposed project area? Please submit your response to me at our Carlsbad office, listed below. Feel free to call, write, or e-mail if you have any questions. We appreciate any information you can provide on this project.

Sincerely,

Shelby G. Castells

Shelby Gunderman Castells, M.A., RPA
ASM Affiliates, Inc.
Director

Figure 1. Map of the Project area shown on the USGS 7.5' Topographic Map.

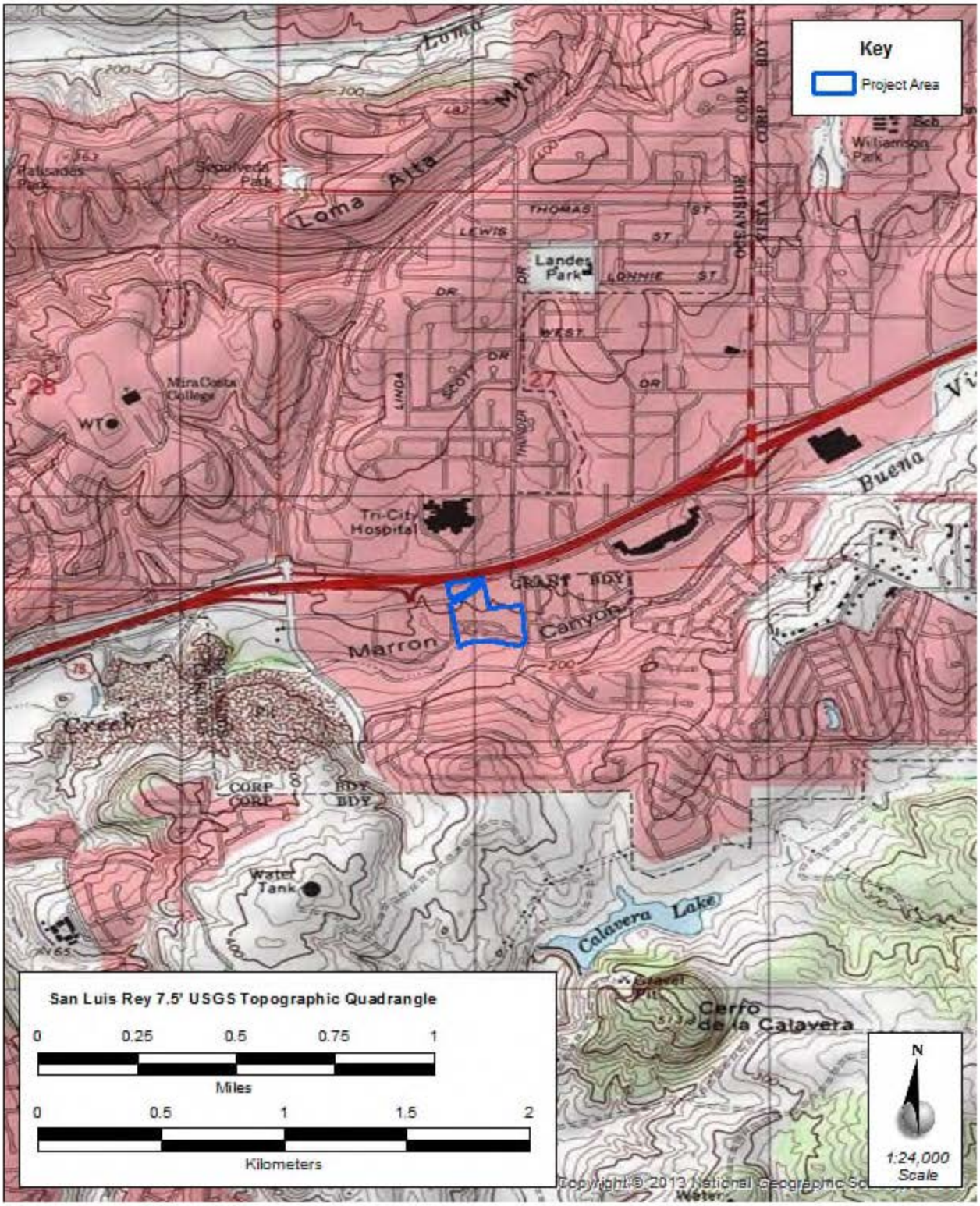

Figure 1. Map of the Project area shown on the USGS 7.5’ Topographic Map.

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710

January 10, 2018

Shelby Castells
ASM Affiliates

Sent by E-mail: scastells@asmaffiliates.com

RE: Proposed Plaza Drive Project, City of Oceanside; San Luis Rey USGS Quadrangle, San Diego County, California

Dear Ms. Castells:

A record search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE.

Attached is a list of tribes culturally affiliated to the project area. I suggest you contact all of the listed Tribes. If they cannot supply information, they might recommend others with specific knowledge. The list should provide a starting place to locate areas of potential adverse impact within the APE. By contacting all those on the list, your organization will be better able to respond to claims of failure to consult. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact via email: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton, M.A., PhD.
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APPENDIX H
Geotechnical Evaluation

GEOTECHNICAL EVALUATION

CenterPoint Integrated Solutions, LLC
Proposed "CarMax" Commercial Development
Plaza Drive and Hacienda Drive
City of Oceanside, County of San Diego, California

September 6, 2019

EEI Project CIS-72940.4

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GEOTECHNICAL EVALUATION

Prepared for:

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Subject Property Location:

Plaza Drive & Hacienda Drive
Oceanside, San Diego County, California

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Appendix A.2 - NorCal Engineering (2007) Boring Logs
Appendix B.1 - Laboratory Test Data
Appendix B.2 - NorCal Engineering (2007) Laboratory Test Data
Appendix C - Earthwork and Grading Guidelines

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1.0 INTRODUCTION

1.1 Purpose

The purpose of this Geotechnical Evaluation is to provide preliminary geotechnical information to CenterPoint Integrated Solutions, LLC ("Client") regarding the subject property in the City of Oceanside, San Diego County, California. The information gathered in this evaluation is intended to provide the Client with an understanding of the physical conditions of site-specific subsurface soils, groundwater, and the regional geologic setting which could affect the cost or design of the proposed development at the property (**Figure 1** -Site Vicinity Map, **Figure 2**-Aerial Site Map).

This Geotechnical Evaluation has been conducted in general accordance with accepted geotechnical engineering principles and in general conformance with the approved proposal and cost estimate for the project by EEI, dated December 19, 2018.

EEI conducted onsite field exploration on July 12, 29, 30, and 31, 2019 that included eleven (11) CPT soundings which were advanced within the property to evaluate liquefaction potential of onsite soils, and the excavation of twenty-one (21) exploratory trenches within the subject property in order to collect soil samples and characterize the subsurface soils. This Geotechnical Evaluation has been prepared for the sole use of CenterPoint Integrated Solutions, LLC. Other parties, without the express written consent of EEI and CenterPoint Integrated Solutions, LLC should not rely upon this Geotechnical Evaluation.

1.2 Project Description

Based on conceptual information provided by the Client (CarMax, 2019), we understand that the current proposed development will consist of a new CarMax sales building (5,005 ft^2), service building (4,309 ft^2), presentation building (1,197 ft^2), carwash (936 ft^2), paved parking and drive areas, associated landscaping, and other improvements. No grading plans have been provided to us at this time, but grading is expected to consist of cut-and-fill of no greater than 5-feet, exclusive of remedial grading.

No foundation plans were provided to us at this time. However; based on the preliminary information furnished by the client, wall and column foundation loads on the order of 4 kips per lineal foot and 120 kips, respectively are considered.

1.3 Scope of Services

The scope of our services included:

- A review of readily available data pertinent to the subject property, including published and unpublished geotechnical/geologic reports/maps, and soils data for the area (**References**).

- Conducting a geotechnical reconnaissance of the subject property and nearby vicinity.

- Coordination with Underground Service Alert (USA) to identify the presence of underground utilities for clearance of proposed boring locations.

- Subsurface exploration including the advancement of eleven (11) CPT soundings placed across the property to depths of 19 to 38 feet below ground surface (bgs). Excavation, logging, and sampling of twenty-one (21) exploratory trenches in readily accessible areas of the subject property to depths of approximately 7 feet to 15.5 feet bgs. The approximate locations of each of our CPT soundings and exploratory trenches are presented on **Figure 3** (Geotechnical Map).

- An evaluation of seismicity and geologic hazards including an evaluation of faulting and liquefaction potential.

- Completion of laboratory testing of representative earth materials encountered onsite to ascertain their pertinent soils engineering properties (**Appendix B.1**).

- The preparation of this report which presents our preliminary geotechnical findings, conclusions, and recommendations.

2.0 BACKGROUND

2.1 Subject Property Description

Based on the information provided by the Client, our previous work on the subject property, and a review of the Google Earth™ online aerial photography resources, the overall property consists of an approximately 10.4-acre parcel that is located in the City of Oceanside, San Diego County, California. The property is bounded by the State Route 78 freeway on the north; Thunder Drive on the east; commercial developments on the west; and Buena Vista Creek to the south. The northern part of the property is bisected by Plaza Drive, which becomes Hacienda Drive at the very northeastern corner of the property. The surface slopes gently towards Buena Vista Creek along the southern boundary. The elevation varies from a high of approximately 214 feet above mean sea level (msl) in the northern part of the property, to 180 feet above msl in the southern part of the property. A north-south trending channel cuts across the central part of the property.

The subject property is mostly undeveloped. A billboard is located in the northern part of the property, off of Plaza Drive, and a sewer easement transects the very eastern part of the property from north to south.

The center of the subject property is approximately situated at 33.1821° north latitude and 117.2890° west longitude (Google Earth™, 2016).

2.2 Previous Geotechnical Review

Historic aerial photographs show that the subject site and surroundings were undeveloped until the mid-1960s when light grading occurred along the northern part of the property, related to the expansion of Highway 78. Further grading occurred due to development of the residential properties to the east in the 1970s, and the commercial developments to the northeast and the west in the 1990s. A prior geotechnical evaluation report was prepared by NorCal Engineering for proposed developments on the subject site (NorCal Engineering, 2007). The following is a brief summary of the NorCal Engineering report and its general finding.

NorCal Engineering (hereafter referred to as NorCal) performed a preliminary geotechnical engineering study in 2007. Their study consisted of drilling nine borings across the property to depths of 10 to 50 feet bgs. In their borings, NorCal encountered 1 to 4 feet of fill consisting of silty sand and sandy clay overlying alluvium consisting of clayey sand and sandy clay. Bedrock was encountered at depths greater than 18 feet bgs and consisted of siltstone and sandstone. They did not encounter groundwater during their subsurface exploration. NorCal's lab testing indicated that the subsurface fill and alluvial soils were low to moderately expansive; negligibly corrosive to metal and concrete; corrosive to ferrous metals; and an R-Value of 25. Norcal concluded that the project was feasible from a geotechnical standpoint and provided grading and foundation recommendations. Development never occurred, and the subject site remains undeveloped. The locations of NorCal's borings are shown on **Figure 3**. NorCal's boring logs and lab tests can be found in **Appendix A** and **Appendix B**, respectively.

2.3 Topography

The center of the subject property is approximately situated at 33.1821° north latitude and 117.2890° west longitude (Google Earth®, 2019). The subject property is located in the 7.5-minute San Luis Rey Topographic Quadrangle (USGS, 2019). The property is relatively flat, with a gentle southward slope towards Buena Vista Creek. The elevation varies from a high of 214 feet above mean sea level (msl) in the northern part of the property, to 180 feet above msl in the southern part of the property.
A north-south trending channel cuts across the central part of the property.

3.0 FIELD EXPLORATION, SUBSURFACE CONDITIONS AND LABORATORY TESTING

3.1 Field Exploration

Field work for our Geotechnical Evaluation was conducted on July 12, 29, 30, and 31, 2019. A total of twenty-one (21) exploratory trenches and eleven (11) CPT soundings were advanced at the subject property in readily accessible areas.

CPT soundings were advanced to depths of 19 and 38 feet bgs. Trench depths ranged from approximately 7 to 15.5 feet bgs and were logged under the supervision of a Registered Professional Engineer and Certified Engineering Geologist at EEI. . The trenches were excavated using a Bobcat E50 excavator that reached depths of up to 15.5 feet bgs. The bucket on the excavator was 2 feet in width. Representative bulk samples were also collected for appropriate laboratory testing. The locations of CPT soundings and trenches can be seen on **Figure 3**. CPT soundings and trench logs can be found in **Appendix A.**

3.2 Laboratory Testing

Selected samples obtained from our borings were tested to evaluate pertinent soil classification and engineering properties and enable development of geotechnical conclusions and recommendations. The laboratory tests consisted of:

- Moisture Content and Dry Density
- Grain size Analysis
- Atterberg Limits
- Expansion Index

- Maximum Density and Optimum Moisture
- Direct Shear
- R-Value
- Corrosion

The results of the laboratory tests from this report, and brief explanations of test procedures, are presented in **Appendix B.**

4.0 GEOLOGIC SETTING AND SUBSURFACE CONDITIONS

4.1 Geologic Setting

Regionally, the subject property lies within the Peninsular Ranges Geomorphic Province of southern California. This province consists of a series of ranges separated by northwest trending valleys; sub parallel to branches of the San Andreas Fault (CGS, 2002). The Peninsular Ranges geomorphic province, one of the largest geomorphic units in western North America, extends from the Transverse Ranges geomorphic province and the Los Angeles Basin, south to Baja California. It is bound on the west by the Pacific Ocean, on the south by the Gulf of California and on the east by the Colorado Desert Province. The Peninsular Ranges are essentially a series of northwest-southeast oriented fault blocks (CGS, 2002). Major fault zones and subordinate fault zones found in the Peninsular Ranges Province typically trend in a northwest-southeast direction. Regional geologic maps of the subject property and vicinity (Kennedy & Tan, 2007) indicate the property is underlain by late Pleistocene to Holocene Young Alluvial Flood Plain deposits (map symbol Qya). These deposits consist of poorly sorted sands, gravels, silts and clay that were deposited by the San Luis Rey river.

4.2 Subsurface Conditions

The subsurface materials encountered during our subsurface investigation consisted of artificial fill, Quaternary-aged alluvium, and Eocene-aged Santiago Formation. A brief description of the subsurface conditions is provided in following sections.

Detailed descriptions of the subsurface conditions are provided on the trench logs and CPT Soundings presented in **Appendix A.**

Artificial Fill – The surface of the subject site is covered by artificial fill. The fill consists of silty to sandy clay, clayey sand, and clayey silt that was grayish to reddish-brown mottled, damp to slightly moist, and medium stiff to stiff at the time of our subsurface exploration. Brick fragments and other detritus are common in the fill. The fill varies in depth across the property from 2 to 12 feet, being shallowest in the northern part of the property along Plaza/Hacienda Dr. and increasing in thickness towards the southern part of the property. The thickest fill deposits occur along the north-south trending channel in the central part of the property, where mounds of fill were placed on either side of the channel. Contours of approximate fill thickness are presented in **Figure 4**.

Quaternary Alluvial Flood Plain Deposits – Quaternary-aged older alluvium was encountered in all of the trenches except T-19 and T-20 underlying the fill. The alluvium consists of sandy clay that was light grayish brown mottled, slightly moist, and medium stiff to hard at the time of our subsurface exploration. Caliche stringers are common and the alluvium also contains traces of fine-grained sand.

The thickness of the alluvium varies from one to at least 11.5 feet, with the thickest sections of alluvium being located in the central parts of the subject property.

Eocene Santiago Formation – Eocene-aged Santiago Formation was encountered in trenches T-1, T-2, T-3, T-4, T-5, T-7, T-12, T-16, T-17, T-18, T-19, T-20, and T-21 underlying the fill and alluvium. The Santiago Formation consists of clayey sandstone that was light yellowish-brown to light grayish-brown mottled, slightly moist to moist, and soft to hard at the time of our subsurface exploration. The sandstone was massive and friable. It was encountered at depths varying from 3 to 11 feet bgs.

4.3 Groundwater

Groundwater was not encountered in any of our trenches at the time of our subsurface exploration to the maximum explored depth of 15.5 feet bgs. Additionally; groundwater was not encountered in NorCal borings to the maximum depth of their exploration of 50 feet at the time of their subsurface investigation (2007). It should be noted that fluctuations in groundwater may result from variations in the ground surface topography, subsurface stratification, precipitation, irrigation and other factors that may not be currently evident. In general, groundwater is often expected to follow the direction of surface topography. Based on topography, local groundwater flow is expected to be in a westerly direction.

5.0 GEOLOGIC HAZARDS

5.1 California Building Code Seismic Design Parameters

EEI utilized seismic design criteria provided in the CBC (2016) and ASCE 7-10. Final selection of the appropriate seismic design coefficients should be made by the structural consultant based on the local laws and ordinances, expected building response, and desired level of conservatism. The site coefficients and adjusted maximum considered earthquake spectral response accelerations in accordance with the 2016 California Building Code are presented in **Table 1**.

TABLE 1
2016 CBC Seismic Design Parameters

Parameter	Value
Site Coordinats	Latitude 33.1821° Longitude -117.2890°
Site Classification	D
Short Period Site Coefficient: $\mathbf{F_a}$	1.077
1-Second Period Site Coefficient: $\mathbf{F_v}$	1.589
Mapped Spectral Acceleration Value at Short Period: $\mathbf{S_s}$	1.058g
Mapped Spectral Acceleration Value at 1-Second Period: $\mathbf{S_1}$	0.411g
Adjusted Maximum Considered Earthquake (MCE_R) Spectral Response Acceleration at Short Period: $\mathbf{S_{MS}}$	1.139g

TABLE 1 2016 CBC Seismic Design Parameters	
Parameter	**Value**
Adjusted Maximum Considered Earthquake (MCE_R) Spectral Response Acceleration at 1-Second Period: $\mathbf{S_{M1}}$	0.653g
Design Spectral Response Acceleration at Short Periods: $\mathbf{S_{DS}}$	0.759g
Design Spectral Response Acceleration at 1-Second Period: $\mathbf{S_{D1}}$	0.435g
Seismic Design Category: **SDC**	D
Peak Ground Acceleration adjusted for Site Class Effects: $\mathbf{PGA_M}$	0.441g

5.2 Faulting and Surface Rupture

The subject property is located within an area of California known to contain a number of active and potentially active faults. There are no known active faults crossing the property (Jennings and Bryant, 2010) and the property is not within a State of California Earthquake Fault Zone (Hart and Bryant, 1997; CDMG, 2000). The closest known active fault is the Newport-Inglewood Fault Zone, located offshore approximately 8.34 miles west of the property (USGS, 2008). Therefore, the potential for surface rupture at the property is considered low. Three of the closest faults along with their distance from the property and Maximum Magnitude are shown in **Table 2.**

TABLE 2 Nearby Active Faults		
Fault	**Distance in Miles (Kilometers)[1]**	**Maximum Magnitude[1]**
Newport-Inglewood (Offshore)	8.34 (13.42)	7.5
Rose Canyon	8.38 (13.49)	6.9
Elsinore	19.58 (31.51)	7.8

1. USGS Online Fault Search (2008)

5.3 Landslides and Slope Stability

The subject property and surrounding areas are generally relatively flat. As a result, we consider the potential for landslides or slope instabilities to occur at the property to be negligible.

5.4 Liquefaction Potential and Lateral Spreading

Liquefaction occurs when loose, saturated, generally cohesionless fine sands and non-plastic silts are subjected to strong ground shaking. The soils lose shear strength and become liquid; potentially resulting in large total and differential ground surface settlements as well as possible lateral spreading during an earthquake. Seismically induced settlement can occur in response to liquefaction of saturated loose granular soils, as well as the reorientation of soil particles during strong shaking of loose, unsaturated sands.

Due to the lack of shallow groundwater at the subject site, and the presence of firm bedrock at depths of 3 to 11 feet bgs, the probability of liquefaction, seismically induced settlement, and lateral spreading at the subject site is considered to be low.

5.5 Tsunamis, Flooding and Seiches

The subject property is not located within a Tsunami Evacuation Area; therefore, damage due to tsunamis is considered low.

EEI reviewed the Federal Emergency Management Agency (FEMA, 2012) Flood Insurance Rate Map (FIRM) panel 06073C0766G to determine if the subject property was located within an area designated as a Flood Hazard Zone. The southern part of the property along Buena Vista Creek is located in a special flood hazard area (**Figure 3**). The rest of the property is located in Zone X, which is an area that is outside of the 0.2% annual chance flood zone.

Seiches are periodic oscillations in large bodies of water such as lakes, harbors, bays, or reservoirs. The subject property is not located immediately adjacent to any lakes or confined bodies of water; therefore, the potential for a seiche to affect the site is considered low.

5.6 Expansive Soil

Generally site soils possess moderate expansive characteristics. However; localized areas of highly expansive soils are also present at the site. Expansive soil influence is considered to pose the greatest potential risk to the proposed improvements and, as such, should be given careful consideration by the project architect and structural engineer. Following recommendations in this report are to minimize the possible adverse effect of the expansive soil activity on the proposed improvements.

6.0 CONCLUSIONS

Based on our field exploration, laboratory testing and engineering and geologic analysis, it is our opinion that the subject property is suitable for the proposed development project from a geotechnical engineering and geologic viewpoint. However, there are existing geotechnical conditions associated with the property that will warrant mitigation and/or consideration during planning stages.

If site plans and/or the proposed building locations are revised, additional field studies may be warranted to address proposed site-specific conditions. The main geotechnical conclusions for the project are presented in the following text.

- A total of eleven (11) CPT Soundings were advanced within the subject property during this evaluation to depths of 19 to 38 feet bgs, and twenty-one (21) exploratory trenches were excavated to maximum depths of 7 to 15.5 feet bgs. The property is underlain by artificial fill, Quaternary-aged alluvial deposits, and Eocene-aged Capistrano Formation bedrock.

- Artificial fill varies in thickness from 2 to 12 feet, with the thickest portions being located in the southern/central portion of the subject site. The fill consists of grayish-brown silty to sandy clay, clayey sand, and clayey silt that was damp to slightly moist and medium stiff to stiff at the time of our subsurface exploration.

- The alluvium underlies the fill and overlies bedrock. It was encountered in all of the trenches except T-19 and T-20. The thickness of the alluvium varied from one to greater than 11 feet, with the thickest sections being in the southern part of the subject site. The alluvium consists of clayey sand to sandy clay that was light grayish brown mottled, slightly moist, and medium dense/medium stiff to hard at the time of our subsurface exploration

- The Capistrano Formation bedrock underlies the alluvium and was encountered in trenches T-1, T-2, T-3, T-4, T-5, T-7, T-12, T-16, T-17, T-18, T-19, T-20, and T-21. The Santiago Formation consists of clayey sandstone that was light yellowish-brown to light grayish-brown mottled, slightly moist to moist, and soft to hard at the time of our subsurface exploration.

- Onsite soils appear to be suitable for use as structural fill provided they are moisture conditioned (as needed), meet EEI's recommendations for size (**Section 7.4**), and are properly compacted.

- Groundwater was not encountered in any of our exploratory trenches to the maximum explored depth of 15.5 feet bgs during this evaluation. Additionally; groundwater was not encountered in NorCal borings to the maximum depth of their exploration of 50 feet at the time of their subsurface investigation (2007).

- Standard heavy-duty grading equipment is anticipated to excavate the onsite fill and natural deposits.

- The subject property is located within an area of southern California recognized as having a number of active and potentially-active faults located nearby. Our review indicates that there are no known active faults mapped as crossing the property and the property is not located within an Earthquake Fault Zone.

- Based on EEI's evaluation, Earth materials underlying the subject property are not considered to be susceptible to liquefaction, seismically induced settlement, and lateral spreading.

- Generally site soils possess moderate expansive characteristics. However; localized areas of highly expansive soils are also present at the site.

- The existing fill and upper portions of alluvial deposits are variable in density and are considered potentially compressible. As such, they are considered unsuitable for the support of the proposed improvements. Therefore, these materials should be removed to the contact with firm underlying deposits and replaced as properly compacted fill. Removal depth of unsuitable fill and upper alluvial deposits will vary across the site and generally increases towards the southern end of the property. **Figure 4** shows the approximate depths of removals.

- Based on our analysis we judge that a "Conventional Shallow Foundation System" or a "Mat Foundation System" founded on the properly placed fill blanket could provide the most reasonable foundation system for the proposed building.

7.0 RECOMMENDATIONS

The recommendations presented herein should be incorporated into the planning and design phases of development. Guidelines for site preparation, earthwork, and onsite improvements are provided in the following sections.

7.1 General

Grading should conform to the guidelines presented in the 2016 California Building Code (CBC, 2016), as well as the requirements of the City of Oceanside. Additionally, general Earthwork and Grading Guidelines are provided herein as **Appendix C**.

During earthwork operations, removals and reprocessing of unsuitable fill and alluvial materials, as well as general grading procedures of the contractor should be observed and the fill placed should be tested by representatives of the geotechnical engineer, EEI. If any unusual or unexpected conditions are exposed in the field, they should be reviewed by the geotechnical engineer and if warranted, modified and/or additional recommendations are offered.

The recommendations presented herein have been completed using the preliminary information provided to us regarding site development. EEI should be provided with grading and foundation plans once they are available so that we can determine if the recommendations provided in this report remain applicable.

7.2 Site Preparation and Grading

Debris and other deleterious material, such as organic soils, tree rootballs and/or environmentally impacted earth materials (if any) should be removed from the subject property prior to the start of grading. The existing uncontrolled fill and soft alluvium deposits should over-excavated to the contact with firm underlying deposits. Areas to receive fill should be properly scarified and/or benched in accordance with current industry standards of practice and guidelines specified in the CBC (2016) and the requirements of the local jurisdiction.

Abandoned trenches should be properly backfilled and tested. If unanticipated subsurface improvements (utility lines, septic systems, wells, utilities, etc.) are encountered during earthwork construction, the Geotechnical Engineer should be informed and appropriate remedial recommendations would then be provided.

7.3 Earthwork

Prior to the start of grading operations, utility lines within the project area, if any, should be Located and marked in the field so they can be rerouted or protected during the site Development. All debris and perishable material should be removed from the site.

The area of site preparation should extend at least five feet beyond any proposed improvements (e.g., building foot print, appurtenant structures, sidewalks, walkways, pavement areas, etc.). Any existing fill soil and perishable material should be excavated to contact with the firm underlying alluvial/bedrock deposits. A minimum of 12 feet of removal and recompaction should be anticipated.

To minimize the effect of differential settlement on the proposed improvements; foundation systems of the proposed improvements should be supported on a minimum five (5) foot thick of properly compacted fill blanket.

Temporary construction slopes, sheeting and bracing should be provided by the contractor, as necessary, to protect workers in the excavation. Where excavations undermine existing improvements, temporary structural support should be provided to reduce risk of damage resulting from undercutting. Permanent cut and fill slopes should not be constructed steeper than 2:1.

Where fill is to be placed, the upper 6 to 8 inches of surface exposed by the excavation should be scarified, moisture-conditioned to 2 percent to 4 percent over optimum moisture content, and compacted to minimum 90 percent relative compaction[1]. The fill soil should then be placed in layers less than 8 inches in loose thickness and moisture conditioned to 2 to 4 percent over optimum moisture content, and compacted to minimum 90 percent relative compaction. If localized areas of relatively loose soil prevent proper compaction, over-excavation and re-compaction will be necessary.

The on-site soils are generally suitable for use as compacted fill and backfill. Import fill soils (if planned), should conform to the specifications presented in this report.

7.4 Fill Material and Placement

Where fill is to be placed, the upper 6 to 8-inches of surface exposed by the excavation should be scarified, moisture-conditioned to 2 percent to 4 percent over optimum moisture content, and compacted to minimum 90 percent relative compaction. The fill soil should then be placed in layers less than 8 inches in loose thickness and moisture conditioned to 2 to 4 percent over optimum moisture content, and compacted to minimum 90 percent relative compaction. If localized areas of relatively loose soil prevent proper compaction, over-excavation and re-compaction will be necessary.

Fill material should be free of organic matter (less than 2 percent organics by weight) and other deleterious material. Fill material should not contain rocks greater than 6-inches in maximum dimension. The on-site soils are generally suitable for use as compacted fill.

7.4.1 Import Fill and Select Backfill Material

The import fill and select backfill material should be free of perishable material and should meet the following criteria:

a.	Maximum particle size	1 inch
b.	Maximum Liquid Limit (LL)	5%
c.	Maximum Plasticity Index (PI)	0%
d.	Maximum percentage passing No. 200 sieve	20%
e.	Minimum sand equivalent	30
f.	Maximum Expansive Index (EI) (ASTM D-2849)	20

[1] Relative compaction refers to the in-place dry density of soil expressed as a percentage of the maximum dry density of the same material, as determined by the ASTM (D1557) test method. Optimum moisture content corresponding to the maximum dry density, as determined by the ASTM (D1557) test method.

The earthwork contractor should ensure that all proposed fill materials are approved by the Geotechnical Engineer prior to use. Representative soil samples should be made available for testing at least ten working days prior to import to allow for laboratory tests.

7.5 Temporary Site Excavations

Based on the results of our subsurface exploration, we anticipate that excavations can generally be accomplished by conventional heavy duty earth moving equipment in good working condition. Excavations in the onsite materials could generate oversize materials. Oversize materials should be placed in accordance with **Section 7.4** and the Earthwork and Grading Guidelines.

Temporary excavations within the onsite materials (considered to be a Type C soil per OSHA guidelines) should be stable at 1.5H: 1V inclinations for short durations during construction, and where cuts do not exceed 15 feet in height. Some sloughing of surface soils should be anticipated. Temporary excavations 4 feet deep or less can be made vertically. The faces of temporary slopes should be inspected daily by the contractor's Competent Person before personnel are allowed to enter the excavation. Any zones of potential instability, sloughing or raveling should be brought to the attention of the Engineer and corrective action implemented before personnel begin working in the excavation.

Excavated soils should not be stockpiled behind temporary excavations within a distance equal to the depth of the excavation. EEI should be notified if other surcharge loads are anticipated so that lateral load criteria can be developed for the specific situation. If temporary slopes are to be maintained during the rainy season, berms are recommended along the tops of slopes to prevent runoff water from entering the excavation and eroding the slope faces.

7.6 Yielding Subgrade Conditions

The soils encountered at the subject property can exhibit "pumping" or yielding if they become saturated. This can often occur in response to periods of significant precipitation, such as during the winter rainy season. If this occurs and in order to help stabilize the yielding subgrade soils within the bottom of the removal areas, the contractor can consider the placement of stabilization fabric or geo-grid over the yielding areas, depending on the relative severity.

Mirafi 600X (or approved equivalent) stabilization fabric may be used for areas with low to moderate yielding conditions. Geo-grid such as Tensar TX-5 may be used for areas with moderate to severe yielding conditions. Uniform sized, ¾- to 2-inch crushed rock should be placed over the stabilization fabric or geo-grid. A 12-inch thick section of crushed rock will typically be necessary to stabilize yielding ground. A filter fabric should be placed over the crushed rock to prevent migration of fines into the rock and subsequent settlement of the overlying fill. Fill soils, which should be placed and compacted in accordance with the recommendations presented herein, should then be placed over the filter fabric until design finish grades are reached. The crushed rock and stabilization fabric or geo-grid should extend at least 5 feet laterally beyond the limits of the yielding areas.

These operations should be performed under the observation and testing of a representative of the project Geotechnical Engineer in order to evaluate the effectiveness of these measures and to provide additional recommendations for mitigation, as necessary.

7.7 Shrinkage and Bulking

Several factors will impact earthwork balancing on the subject property, including shrinkage, bulking, subsidence, trench spoils from utilities and footing excavations, and final pavement section thickness as well as the accuracy of topography. Shrinkage, bulking and subsidence are primarily dependent upon the degree of compactive effort achieved during construction. Shrinkage, bulking and subsidence should be considered by the project civil engineer relative to final site balancing. It is recommended that the site development be planned to include an area that could be raised or lowered to accommodate final site balancing.

8.0 FOUNDATION RECOMMENDATIONS

8.1 General

In the foundation recommendations provided herein are based on the proposed development information provided by the Client. EEI should be provided with grading and foundation plans once they are available so that we can determine if the recommendations provided in this report remain applicable. Recommendations by the project's design-structural engineer or architect may exceed the following minimum recommendations. However; if analyses by the structural engineer result in less critical details than are provided herein as minimums, the minimums presented herein should be adopted.

8.2 Preliminary Foundation Design

Provided the subject property is graded in conformance with the intent of our recommendations presented herein, California Building Code (CBC, 2016) and local grading ordinances, as well as general Earthwork and Grading Guidelines provided as **Appendix C;** the proposed commercial development can be supported on a “Conventional Shallow Foundation System” or a “Mat Foundation System” founded on the properly placed fill blanket which could provide the most reasonable foundation system for the proposed building.

The following are the recommended design parameters for foundation systems for each alternative.

8.2.2 Shallow Conventional Foundations

Foundation support for the proposed development could be derived by utilizing a conventional, shallow continuous and isolated spread foundation system embedded within the newly placed properly compacted blanket fill soils in accordance with the following criteria:

- Minimum depth measured from lowest adjacent grade ..... 2 feet
- Minimum footing width ..... 1.5 feet
- Allowable bearing capacity (pounds per square foot), (FS $\geq$ 3)
  a. Sustained loads ..... 2,000 psf
  b. Total loads (1/3 allowable increase for wind and seismic) ..... 2,650 psf
- Resistance to lateral loads
  a. Passive soils resistance (pounds per cubic foot) ..... 200 psf
  b. Coefficient of sliding friction 0.35

Footings can be designed to resist lateral loads by using a combination of sliding friction and passive resistance. The coefficient of friction should be applied to dead load forces only; and Passive resistance should be reduced by one third. For foundations with no sliding friction at the base (foundations resisting uplift loads), 100% of passive resistance could be utilizes. The upper one foot of passive resistance should be neglected where the soil is not confined by the slabs or pavement.

For the properly constructed foundations in accordance with the foregoing criteria, total static post-construction settlement from the anticipated structural loads is estimated to be on the order of 1 inch. Differential settlement on the order of ½ of total settlement should be anticipated between the similarly loaded adjacent footings.

8.2.3 Mat Foundation

As an alternative, a "Mat Foundation System" founded within the proposed properly compacted fill blanket could be utilized as the foundation system. Allowable design parameters for the mat foundations are as follows:

- Minimum embedment depth from lowest adjacent grade ..... 2 feet
- Modulus of Subgrade Reaction ..... 120 pci
  (**This value is based on a unit square-foot area and must be adjusted for large mats)**
- Allowable bearing capacity (pounds per square foot), (FS $\geq$ 3)
  c. Sustained loads ..... 1,500 psf
  d. Total loads (1/3 allowable increase for wind and seismic) ..... 2,050 psf
- Resistance to lateral loads
  c. Passive soils resistance (pounds per cubic foot) ..... 200 psf
  d. Coefficient of sliding friction 0.35

Lateral resistance for the mat foundation may be calculated by using a combination of sliding friction and passive resistance. The coefficient of friction should be applied to dead load forces only. Passive resistance should be reduced by one-third and the upper one-foot of passive resistance should be neglected where the soil is not confined by the slabs or pavement.

For the properly constructed foundations in accordance with the foregoing criteria, total static post-construction settlement from the anticipated structural loads is estimated to be on the order of one-inch. Differential settlement on the order of 1/2 of total settlement should be anticipated.

8.3 Deep Foundations (Cast-In-Drilled-Hole Piles)

Support for light poles, fences, and other similar features could utilize deep foundations deriving their support from underlying properly compacted fill and firm alluvium and bedrock deposits.

The load carrying capacity of drilled, cast-in-place piles will be developed through skin friction acting over the surface area of the piles in underlying firm materials. An allowable skin friction of 250 pound per square foot (psf) for gravity loads may be assumed. The allowable vertical

compression capacities may be increased by 33 percent to accommodate temporary loads such as from wind or seismic forces. The allowable vertical pile capacities are based on the supporting capacities of the underlying soils. The structural capacity of the piles should be checked. For sustained tension loads, 50 percent of the compression capacities should be used. Piles should be spaced at least three diameters apart. The vertical load carrying capacities within the upper 5 foot of piles should be ignored where the soil is not confined by the slabs or pavement. It is estimated that settlement of the proposed piles will be less than ½ inch.

Lateral loads can be resisted by an allowable passive resistance (equivalent fluid pressure) of 200 psf (with a maximum value of 2,000 psf). The upper 5 foot of passive resistance should be neglected where the soil is not confined by the slabs or pavement.

Design of isolated, Cast-in-Drilled-Hole piles could utilize CBC-2016, Section 1807A-3 design method.

For Piles located adjacent to or on slope the vertical and lateral capacities of the pile within the 15 foot horizontal distance to descending slope face should be ignored.

8.3.1 Installation

For the friction piles, care must be taken to ream the pile excavation within the bearing zone in order to clean the excavation side walls of any smear resulting from the drilling operation.

The bottom of the excavation should be reasonably free of loose or sloughed materials. In our opinion, drilled, cast-in-place (CIDH) piles at the site can generally be constructed by drilling uncased holes with conventional bucket auger drilling equipment.

However; localized sloughing and/or caving could not be ruled out. Difficulties related to drilling in caving soils may be encountered during the construction of CIDH piles at the site. Proper quality and construction control during CIDH pile installation is critical.

General guidelines for CIDH pile construction are provided in Federal Highway Administration (1998) and Caltrans Standard Specifications (2006) and should be followed.

During concrete placement, concrete should not be allowed to free-fall more than 5 feet. Additionally, concrete should be placed so that it does not strike the walls of the excavation, which should increase sloughing and would tend to segregate the aggregate in the concrete.

8.4 Footing Setbacks

Footings adjacent to unlined drainage swales or underground utilities (if any) should be deepened to a minimum of 6-inches below the invert of the adjacent unlined swale or utilities. This distance is measured from the footing face at the bearing elevation. Footings for structures adjacent to retaining walls should be deepened so as to extend below a 1:1 projection from the heel of the wall. Alternatively, walls may be designed to accommodate structural loads from buildings or appurtenances.

8.5 Interior Slabs-on-Grade

The subgrade beneath the slab-on-grade floors should be compacted by rolling with a smooth-wheeled rubber tired, or vibratory roller to produce a uniformly dense, non-yielding surface. The project Structural Engineer should design the interior concrete slab-on-grade floor. For the preliminary design of the slab, project structural engineer could utilize acceptable design methods by California Building Code (CBC) such as Wire Reinforcement Institute (WRI) design method. On a preliminary basis, for WRI method a minimum of site soil Plasticity Index (PI) and site soil Expansion Index (EI) of 25 percent and 75 respectively should be utilized. However; as a minimum it is recommended that a 5-inch thick slab, reinforced with No. 4 bars located at 12-inches on center, both ways, be constructed. A layer of free draining, clean ¾-inch crushed rock, at least 6-inches thick should be placed below the slab.

In addition, the soil subgrade in the upper three feet should be thoroughly pre-saturated to 30 percent above optimum moisture content.

A moisture vapor retarder/barrier should be placed beneath slabs where moisture sensitive floor coverings will be installed. Typically, plastic is used as a vapor retardant. If plastic is used, a minimum 15-mil is recommended. The plastic should comply with ASTM E1745. Plastic installation should comply with ASTM E1643.

Current construction practice typically includes placement of a 2-inch thick sand cushion between the bottom of the concrete slab and the moisture vapor retarder/barrier. This cushion can provide some protection to the vapor retarder/barrier during construction, and may assist in reducing the potential for edge curling in the slab during curing. However, the sand layer also provides a source of moisture vapor to the underside of the slab that can increase the time required to reduce moisture vapor emissions to limits acceptable for the type of floor covering placed on top of the slab. The slab can be placed directly on the vapor retarder/barrier. The floor covering manufacturer should be contacted to determine the volume of moisture vapor allowable and any treatment needed to reduce moisture vapor emissions to acceptable limits for the particular type of floor covering installed. The project team should determine the appropriate treatment for the specific application.

8.6 Exterior Slabs-on-Grade (Hardscape)

It is recommended that a minimum 5-inch thick slab reinforced with No.4 bars located at 18-inches on center, both ways, be constructed. At the exterior edges of the flatwork, a thickened edge is recommended. The thickened edges should be a minimum of 8-inches deep and 6-inches wide and reinforced with two No.4 bars at top and bottom.

Slabs should be provided with weakened plane joints. Joints should be placed in accordance with the American Concrete Institute (ACI) guidelines. Proper control joints should be provided to reduce the potential for damage resulting from shrinkage. Subgrade materials should not be allowed to desiccate between grading and the construction of the concrete slabs. The floor slab subgrade should be thoroughly and uniformly moistened prior to placing concrete.

All dedicated exterior flatwork should conform to standards provided by the governing agency including section composition, supporting material thickness and any requirements for reinforcing steel. Concrete mix proportions and construction techniques, including the addition of water and improper curing, can adversely affect the finished quality of the concrete and result in cracking and spalling of the slab. We

recommend that all placement and curing be performed in accordance with procedures outlined by the American Concrete Institute and/or Portland Cement Association. Special consideration should be given to concrete placed and cured during hot or cold weather conditions.

8.7 Conventional Retaining Walls

8.7.1 Foundations

The recommendations provided in the foundation section of this report are also applicable to conventional retaining walls.

8.7.2 Lateral Earth Pressures

The active earth pressure for the design of unrestrained earth retaining structures with level backfills can be taken as equivalent to the pressure of a fluid weighing 40 pcf. The at-rest earth pressure for the design of restrained earth retaining structures (such as basement walls or re-entrant corners) with level backfills can be taken as equivalent to the pressure of a fluid weighing 60 pcf. The above values assume a granular and drained backfill condition. If expansive soils are used to backfill the proposed walls, increased active and at-rest earth pressures will need to be utilized for retaining wall design, and can be provided upon request. An additional 20 pcf should be added to these values for walls with a 2:1 H: V sloping backfill.

An increase in earth pressure equivalent to an additional 2 feet of retained soil can be used to account for surcharge loads from light traffic. The above values do not include a factor of safety. Appropriate factors of safety should be incorporated into the design. If any other surcharge loads are anticipated, EEI should be contacted for the necessary increase in soil pressure.

8.7.3 Retaining Wall Drainage

Retaining walls should be designed to resist hydrostatic pressures or be provided with a backdrain to reduce the accumulation of hydrostatic pressures. Backdrains may consist of a 2-foot wide zone of ¾-inch crushed rock. The backdrain should be separated from the adjacent soils using a non-woven filter fabric, such as Mirafi 140N or equivalent. Weep holes should be provided or a perforated pipe (Schedule 40 PVC) should be installed at the base of the backdrain and sloped to discharge to a suitable storm drain facility. As an alternative, a geocomposite drainage system such as Miradrain 6000 or equivalent placed behind the wall and connected to a suitable storm drain facility can be used. The project architect should provide waterproofing specifications and details.

8.7.4 Seismic Earth Pressure

If required, the seismic earth pressures can be taken as equivalent to the pressure of a fluid weighing 13 pounds per cubic foot (pcf) for flexible walls and 25 pcf for restrained walls. These values are for level backfill conditions and do not include a factor of safety. Appropriate factors of safety should be incorporated into the design. This pressure is in addition to the un-factored static pressures. The allowable passive pressure and bearing capacity can be increased by ⅓ in determining the stability of the wall.

8.7.5 Backfill

All backfill soils should be compacted to at least 90 percent relative compaction. Backfill soils should consist of granular, free-draining material having an expansion index of 50 or less determined in accordance with ASTM D4829. Expansive or clayey soil should not be used for backfill material. Additionally, fill within 3 feet from the back of the wall should not contain rocks greater than 3-inches in any dimension. The wall should not be backfilled until it has reached an adequate strength.

8.8 Corrosivity

Three samples of the onsite soils were tested to provide a preliminary indication of the corrosion potential of the onsite soils. The test results are presented in **Appendix B.1**. A brief discussion of the corrosion test results is provided in the following section.

- The samples tested have soluble sulfate concentrations varying from 0.016 to 0.081 percent, which indicates that the samples have a negligible corrosion potential relative to concrete.
- The samples tested have chloride concentrations varying from 0.033 to 0.058 percent, which indicates that the samples have a negligible chloride corrosion potential relative to metal.
- The samples tested have a minimum resistivity of 290 ohm-cm, which indicates the samples are extremely corrosive to ferrous metals.
- The samples tested have pH varying from 7.2 to 8.6, which indicates that the samples are slightly to moderately alkaline.

Additional testing should be performed after grading to evaluate the as-graded corrosion potential of the onsite soils. We are not corrosion engineers. A corrosion consultant should be retained to provide corrosion control recommendations if deemed necessary.

8.9 Concrete

Laboratory testing of the site soils indicted the presence of low levels of sulfate content. However; it is recommended the concrete should utilize at least type II cement with maximum 0.5 water/cement ratio in accordance with California building Code (CBC) Standard 1904.3.1. Concrete mix design, materials, placement, curing, and finishing should be in conformance with the standard specifications for public works construction “Green book”, and American Concrete Institute (ACI) specifications.

9.0 PRELIMINARY PAVEMENT DESIGN RECOMMENDATIONS

Deleterious material, excessively wet or dry pockets, concentrated zones of oversized rock fragments, and any other unsuitable yielding materials encountered during grading should be removed. Once compacted fill and/or native soils are brought to the proposed pavement subgrade elevations, the subgrade should be proof-rolled in order to check for a uniform firm and unyielding surface. Representatives of the project Geotechnical Engineer should observe all grading and fill placement.

The upper 12-inches of pavement subgrade soils should be scarified; moisture conditioned to at least optimum moisture content and compacted to at least 95 percent of the laboratory standard (ASTM D1557). If loose or yielding materials are encountered during subgrade preparation, evaluation should be performed by EEI. Aggregate base materials should be properly prepared (i.e., processed and moisture conditioned) and compacted to at least 95 percent of the maximum dry density as determined by ASTM D1557. Aggregate base materials should conform to Caltrans specifications for Class 2 aggregate base. All pavement section changes should be properly transitioned. Although not anticipated, if adverse conditions are encountered during the preparation of subgrade materials, special construction methods may need to be employed. A representative of the project Geotechnical Engineer should be present for the preparation of subgrade and aggregate base.

Laboratory test results indicated range of R-Values of 13 to 32. Based on these R-Values; CBR Values of 4 to 5 was estimated. For design purposes we have assumed a CBR value of 4. This assumed CBR value should be verified by testing of soils exposed at subgrade after grading has been completed, and pavement thickness modified if necessary.

The corresponding Modulus of Subgrade Reaction (K-Value) was estimated at 120 pounds per square inch per inch (psi/in) based on ACI 330R-08. Asphaltic Concrete Pavement design was calculated in accordance with the AASHTO design methods for heavy and light traffic of 75,000 ESAL's and 7,500 ESAL's, respectively. Rigid pavement sections were evaluated in general accordance with ACI 330R-08, based on average daily truck traffic of 10 for car and truck traffic and 700 for loading docks and trash truck pads.

TABLE 3
Preliminary Pavement Design Recommendations

Traffic Level	Pavement Surface	Aggregate Base Material [1]
7,500 ESAL - 75,000 ESAL	3.5-inches Asphalt Concrete	6.0-inches
Concrete Pavement - Cars and Trucks	5.5-inches Portland Cement Concrete [2.3]	4.0-inches
Concrete Pavement Loading Docks and Trash Truck Pads	7.5-inches Portland Cement Concrete [2,3]	4.0-inches

(1) Caltrans Class 2 aggregate base
(2) Reinforcement and control joints placed in accordance with the structural engineer's requirements
(3) Assumes Concrete Modulus of Rupture=600 psi

10.0 DEVELOPMENT RECOMMENDATIONS

10.1 Landscape Maintenance and Planting

Water is known to decrease the physical strength of earth materials, significantly reducing stability by high moisture conditions. Surface drainage away from foundations and graded slopes should be maintained. Only the volume and frequency of irrigation necessary to sustain plant life should be applied.

Consideration should be given to selecting lightweight, deep rooted types of landscape vegetation which require low irrigation that are capable of surviving the local climate. From a soils engineering viewpoint, "leaching" of the onsite soils is not recommended for establishing landscaping. If landscape soils are processed for the addition of amendments, the processed soils should be re-compacted to at least 90 percent relative compaction (based on ASTM D1557).

10.2 Site Drainage

Positive site drainage should be maintained at all times. Drainage should not flow uncontrolled over slopes. Runoff should be channeled away from slopes and structures and not allowed to pond and/or seep uncontrolled into the ground. Pad drainage should be directed toward an acceptable outlet. Consideration should be given to eliminating open bottom planters directly adjacent to proposed structures for a minimum distance of 10 feet. As an alternative, closed-bottom type planters could be utilized, with a properly designed drain outlet placed in the bottom of the planter.

Final surface grades around structures should be designed to collect and direct surface water away from structures and toward appropriate drainage facilities. The ground around the structure should be graded so that surface water flows rapidly away from the structure without ponding. In general, we recommend that the ground adjacent to the structure slope away at a gradient of at least 2 percent. Densely vegetated areas where runoff can be impaired should have a minimum gradient of at least 5 percent within the first 5 feet from the structure. Roof gutters with downspouts that discharge directly into a closed drainage system are recommended on structures. Drainage patterns established at the time of fine grading should be maintained throughout the life of the proposed structures.

10.3 Additional Site Improvements

Recommendations for additional grading can be provided upon request. If in the future, additional property improvements are planned for the subject property, recommendations concerning the design and construction of improvements would be provided upon request.

10.4 Utility Trench Backfill

Fill around the pipe should be placed in accordance with details shown on the drawings and should be placed in layers not to exceed 8-inches loose (unless otherwise approved by the geotechnical engineer) and compacted to at least 90 percent of the maximum dry density as determined in accordance with ASTM D1557 (Modified Proctor). The geotechnical engineer should approve all backfill material.

Select material should be used when called for on the drawings, or when recommended by the geotechnical engineer. Care should be taken during backfill and compaction operations to maintain alignment and prevent damage to the joints. The backfill should be kept free from oversized material, chunks of highly plastic clay, or other unsuitable or deleterious material. Backfill soils should be non-expansive, non-corrosive, and compatible with native earth materials. Backfill materials and testing should be in accordance with the CBC (2016), and the requirements of the local governing jurisdiction.

Pipe backfill areas should be graded and maintained in such a condition that erosion or saturation will not damage the pipe bedding or backfill. Flooding trench backfill is not recommended. Heavy equipment should not be operated over any pipe until it has been properly backfilled with a minimum of 2 to 3 feet of cover. The utility trench should be systematically backfilled to allow maximum time for natural settlement. Backfill should not occur over porous, wet, or spongy subgrade surfaces. Should these conditions exist, the areas should be removed, replaced and recompacted.

11.0 PLAN REVIEW

Once detailed grading and foundation plans are available, they should be submitted to EEI for review and comment, to reduce the potential for discrepancies between plans and recommendations presented herein. If conditions found differ substantially from those stated; appropriate recommendations will be provided. Additional field studies may be warranted.

12.0 LIMITATIONS

This Geotechnical Evaluation has been conducted in accordance with generally accepted geotechnical engineering principles and practices. Findings provided herein have been derived in accordance with current standards of practice, and no warranty is expressed or implied. Standards of practice are subject to change with time. This report has been prepared for the sole use of CenterPoint Integrated Solutions, LLC (Client), within a reasonable time from its authorization.

Subject property conditions, land use (both onsite and offsite), or other factors may change as a result of manmade influences, and additional work may be required with the passage of time. This Geotechnical Evaluation should not be relied upon by other parties without the express written consent of EEI and the Client; therefore, any use or reliance upon this Geotechnical Evaluation by a party other than the Client should be solely at the risk of such third party and without legal recourse against EEI, its employees, officers, or directors, regardless of whether the action in which recovery of damages is brought or based upon contract, tort, statue, or otherwise. The Client has the responsibility to see that all parties to the project, including the designer, contractor, subcontractor, and building official, etc. are aware of this report in its complete form. This report contains information that may be used in the preparation of contract specifications; however, the report is not designed as a specification document, and may not contain sufficient information for use without additional assessment. EEI assumes no responsibility or liability for work or testing performed by others. In addition, this report may be subject to review by the controlling authorities.

13.0 REFERENCES

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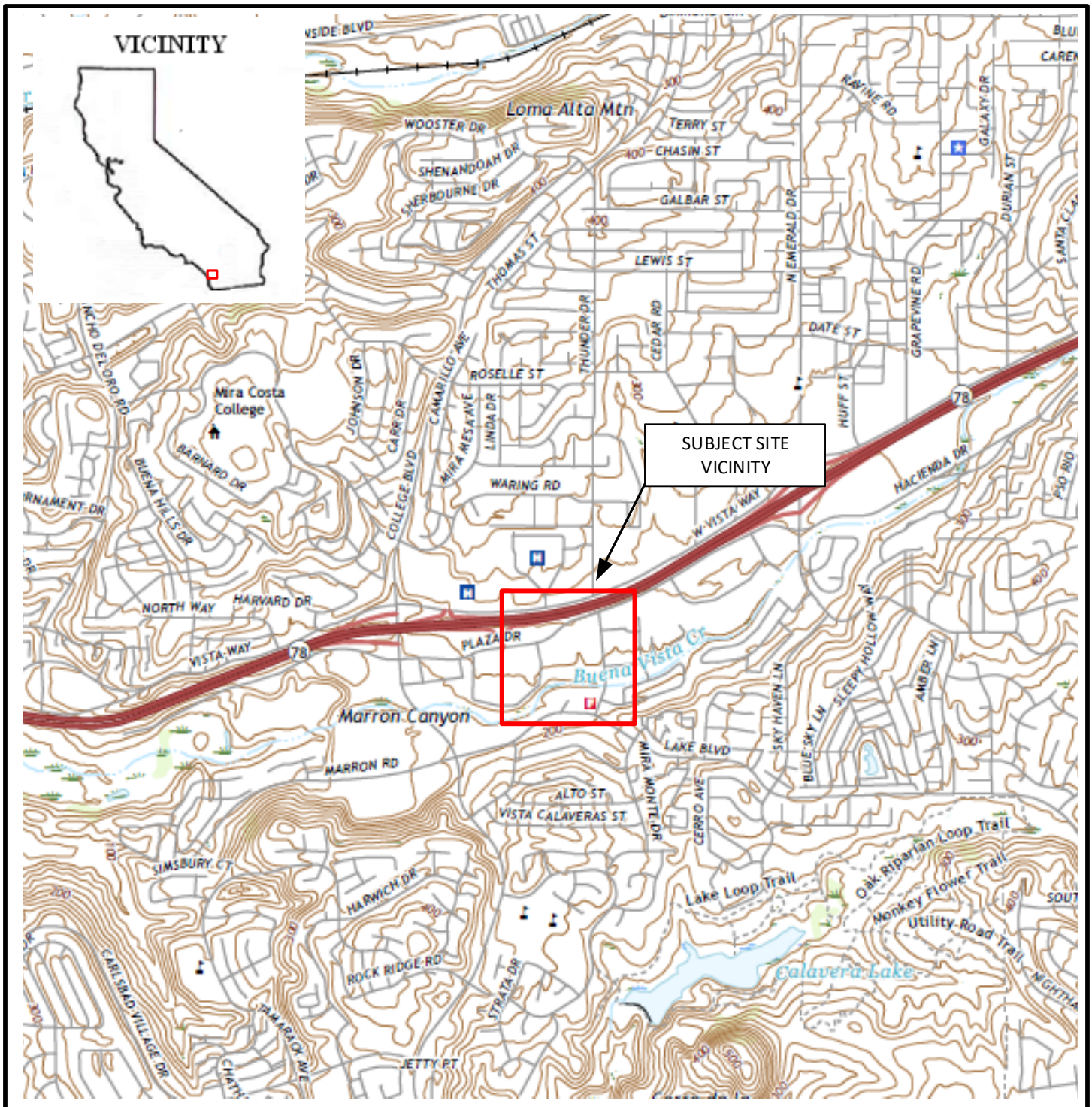
FIGURES



LEGEND

N

Scale: 1" = 1800'

0 900 FT 1800 FT 3600 FT

Note: All Locations Are Approximate

SITE VICINITY MAP

Centerpoint Integrated Solutions, LLC

Carmax Retail Development

South of Plaza and Hacienda Drive and West of Thunder Drive

Oceanside, California

EEI Project CIS-72940.4

Created July 2019

EEI Engineering Solutions

FIGURE 1

Source: USGS, San Luis Rey, California 7.5-minute quadrangle, 2018

LEGEND

N

Scale: 1" = 500'

0 250 FT 500 FT 1000 FT

Note: All Locations Are Approximate

AERIAL SITE MAP

Centerpoint Integrated Solutions, LLC

Carmax Retail Development

South of Plaza and Hacienda Drive and West of Thunder Drive

Oceanside, California

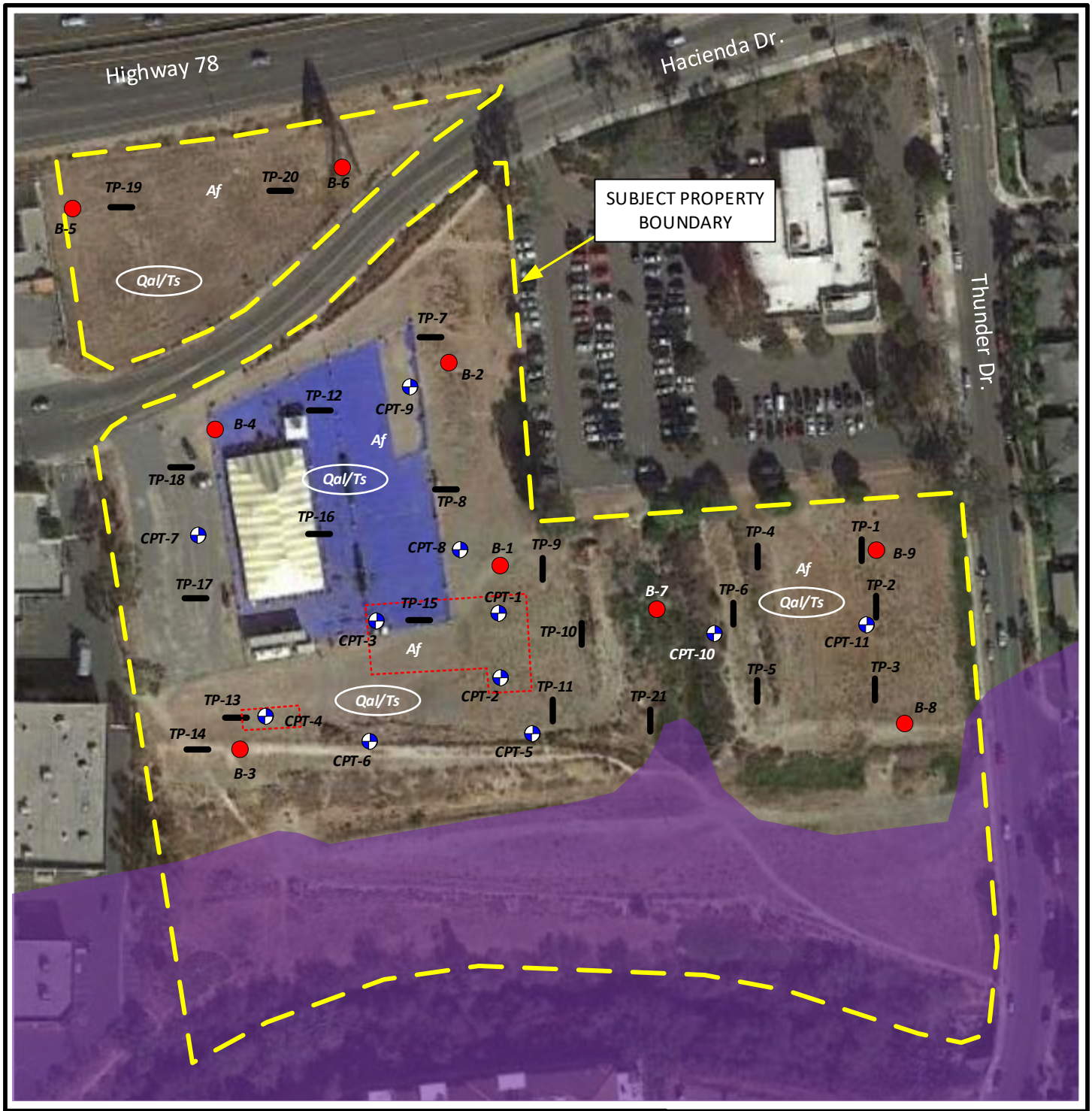
EEI Project CIS-72940.4

Created July 2019

EEI Engineering Solutions

FIGURE 2

Source: Google Earth, Image Date: 8/13/17



LEGEND

CPT-1	*Approximate Location of Exploratory CPTs*
TP-1	*Approximate Location of Exploratory Trenches*
B-1	*Approximate Location of NorCal Engineering's Exploratory Borings (2007)*
Af	*Artificial Fill*
Qal	*Quaternary-age Alluvium; circled where buried*
Ts	*Eocene-age Santiago Formation bedrock; circled where buried*
	Proposed CarMax building and carwash
	FEMA 2% Annual Flood Zone and Waterway

Scale: 1" = 140'

0 70 FT 140 FT 280 FT

Note: All Locations Are Approximate

FIELD EXPLORATION MAP

Centerpoint Integrated Solutions, LLC

Carmax Retail Development

South of Plaza and Hacienda Drive and West of Thunder Drive

Oceanside, California

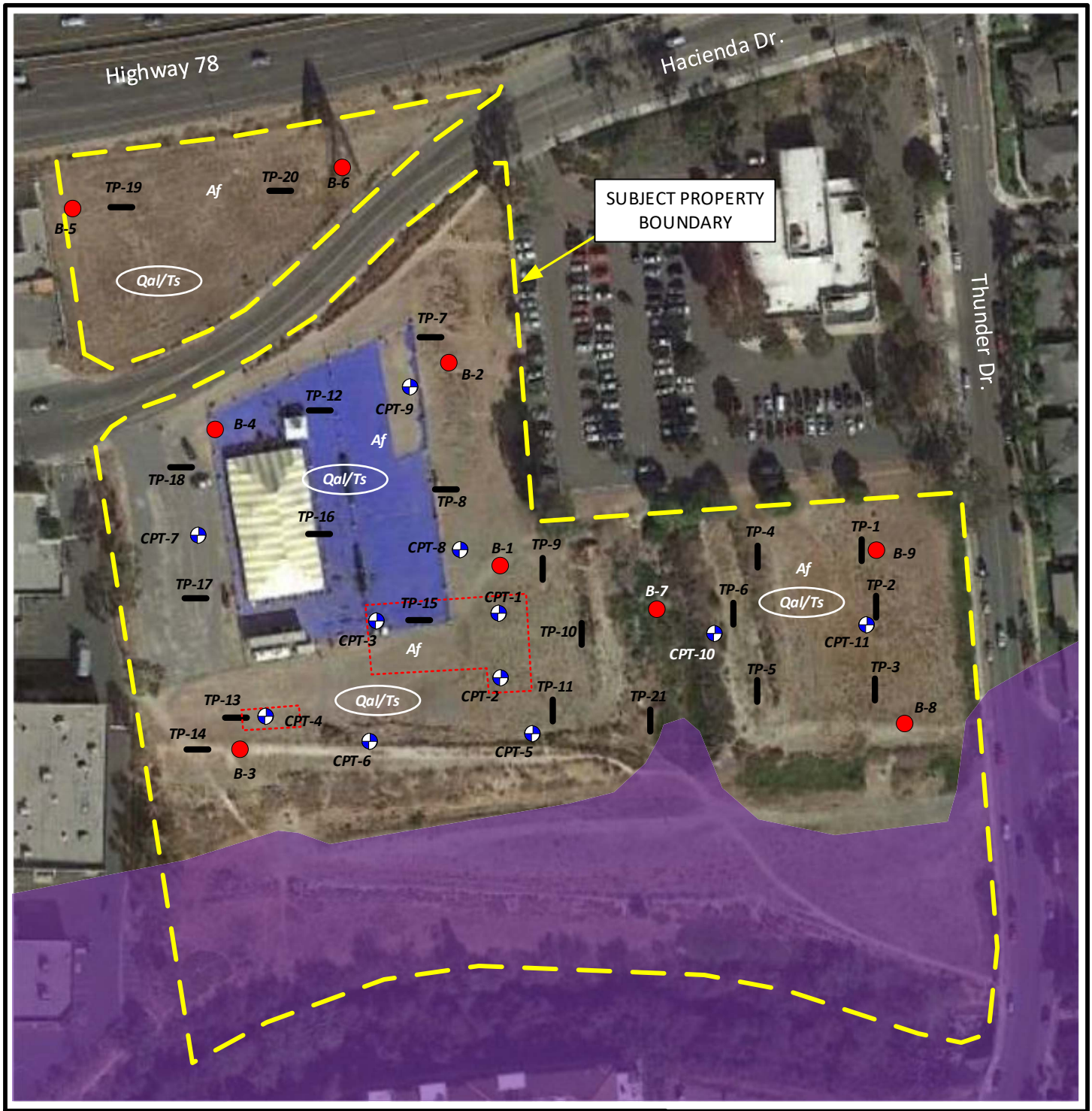
EEI Project CIS-72940.4

Created July 2019

EEI Engineering Solutions

FIGURE 3

Source: Google Earth, Image Date: 12/7/17; Preliminary Site Plan, CarMax, Oceanside, CA, Sheet No. SP-05 dated 6/4/19



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B-1	*Approximate Location of NorCal Engineering's Exploratory Borings (2007)*
Af	*Artificial Fill*
Qal	*Quaternary-age Alluvium; circled where buried*
Ts	*Eocene-age Santiago Formation bedrock; circled where buried*
	Proposed CarMax building and carwash
	FEMA 2% Annual Flood Zone and Waterway

Scale: 1" = 140'

0 70 FT 140 FT 280 FT

Note: All Locations Are Approximate

FIELD EXPLORATION MAP

Centerpoint Integrated Solutions, LLC

Carmax Retail Development

South of Plaza and Hacienda Drive and West of Thunder Drive

Oceanside, California

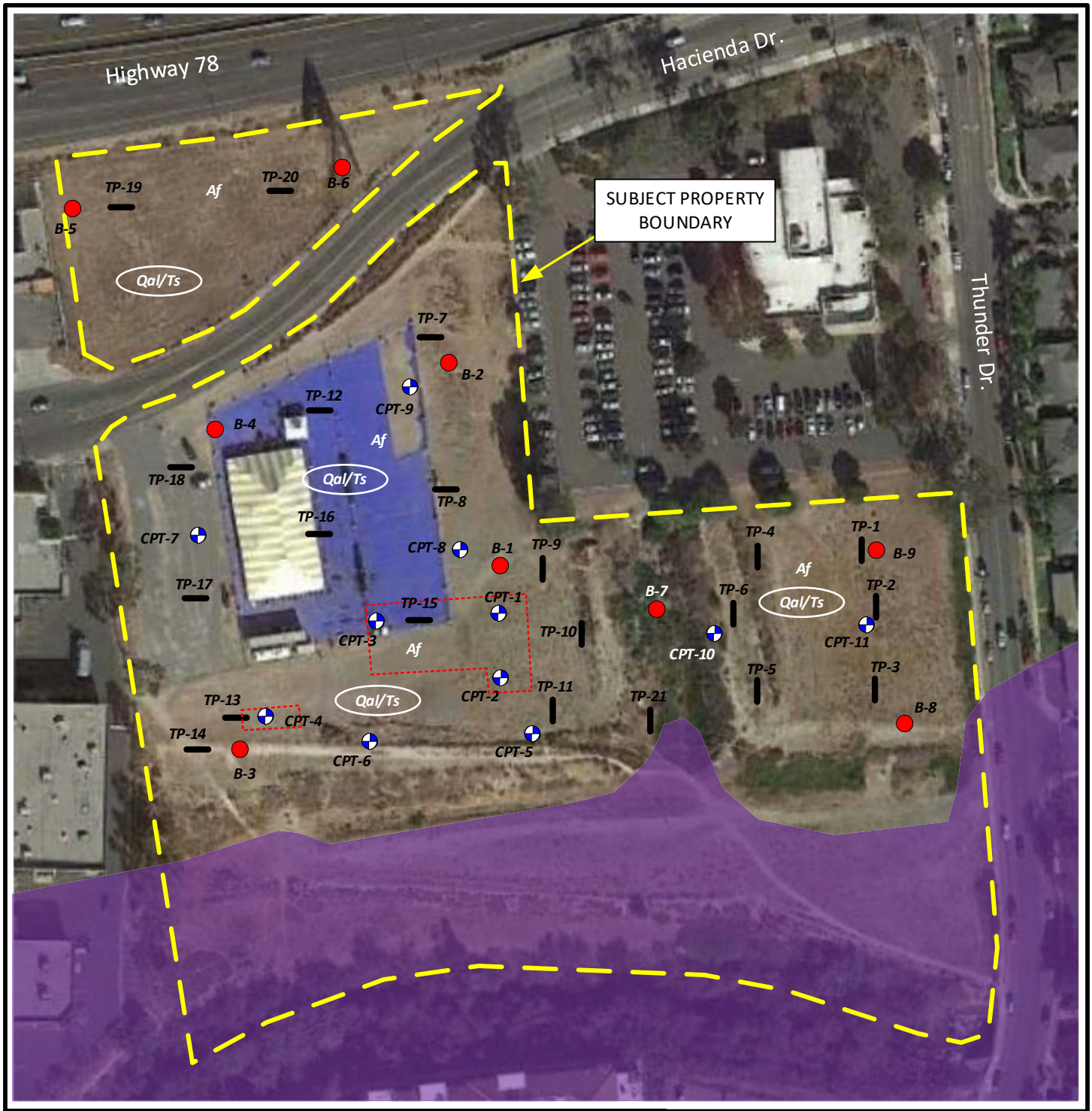
EEI Project CIS-72940.4

Created July 2019

EEI Engineering Solutions

FIGURE 3

Source: Google Earth, Image Date: 12/7/17; Preliminary Site Plan, CarMax, Oceanside, CA, Sheet No. SP-05 dated 6/4/19



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TP-1	*Approximate Location of Exploratory Trenches*
B-1	*Approximate Location of NorCal Engineering's Exploratory Borings (2007)*
Af	*Artificial Fill*
Qal	*Quaternary-age Alluvium; circled where buried*
Ts	*Eocene-age Santiago Formation bedrock; circled where buried*
	Proposed CarMax building and carwash
	FEMA 2% Annual Flood Zone and Waterway

Scale: 1" = 140'

0 70 FT 140 FT 280 FT

Note: All Locations Are Approximate

FIELD EXPLORATION MAP

Centerpoint Integrated Solutions, LLC

Carmax Retail Development

South of Plaza and Hacienda Drive and West of Thunder Drive

Oceanside, California

EEI Project CIS-72940.4

Created July 2019

EEI Engineering Solutions

FIGURE 3

Source: Google Earth, Image Date: 12/7/17; Preliminary Site Plan, CarMax, Oceanside, CA, Sheet No. SP-05 dated 6/4/19

LEGEND

4' — *Contour Line showing depth to suitable material below grade*

Proposed CarMax building and carwash

Scale: 1" = 140'

N

0 70 FT 140 FT 280 FT

Note: All Locations Are Approximate

APPROXIMATE DEPTH OF COMPETENT MATERIAL BELOW EXISTING GRADE ELEVATION

Centerpoint Integrated Solutions, LLC

Carmax Retail Development

South of Plaza and Hacienda Drive and West of Thunder Drive, Oceanside, California

EEI Project CIS-72940.4

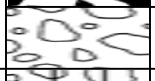
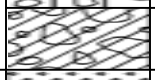
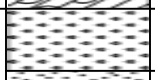
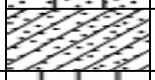
EEI Engineering Solutions

FIGURE 4

Source: Google Earth, Image Date: 12/7/17; Preliminary Site Plan, CarMax, Oceanside, CA, Sheet No. SP-05 dated 6/4/19

APPENDIX A
SOIL CLASSIFICATION CHART, TRENCH LOGS, AND CPT

UNIFIED SOIL CLASSIFICATION (ASTM D-2487-98)

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL- SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SEIVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL-SAND- CLAY MIXTURES
MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS,GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION REATINED ON NO. 4 SEIVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY-SANDS, SAND – SILT MIXTURES
				SC	CLAYEY SANDS, SAND – CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS

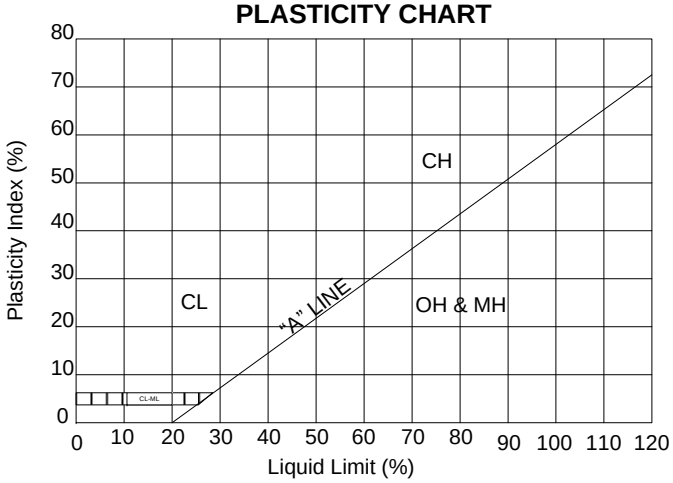
SAMPLER TYPES

- SPT
- Modified California (2.5" I.D.)
- Bulk
- Rock Core
- Shelby Tube
- Water Level

OTHER TESTS

ATT – Atterberg Limit (Plasticity Index)
CD – Consolidated Drained Triaxial
CON – Consolidation
COR – Corrosivity)
DS – Direct Shear
EI – Expansion Index
MAX – Maximum Density
RV – R-Value
SA – Sieve Analysis
-#200 - Percent Passing #200 Sieve
TV – Torvane Shear
UU – Unconsolidated Undrained Triaxial

PLASTICITY CHART

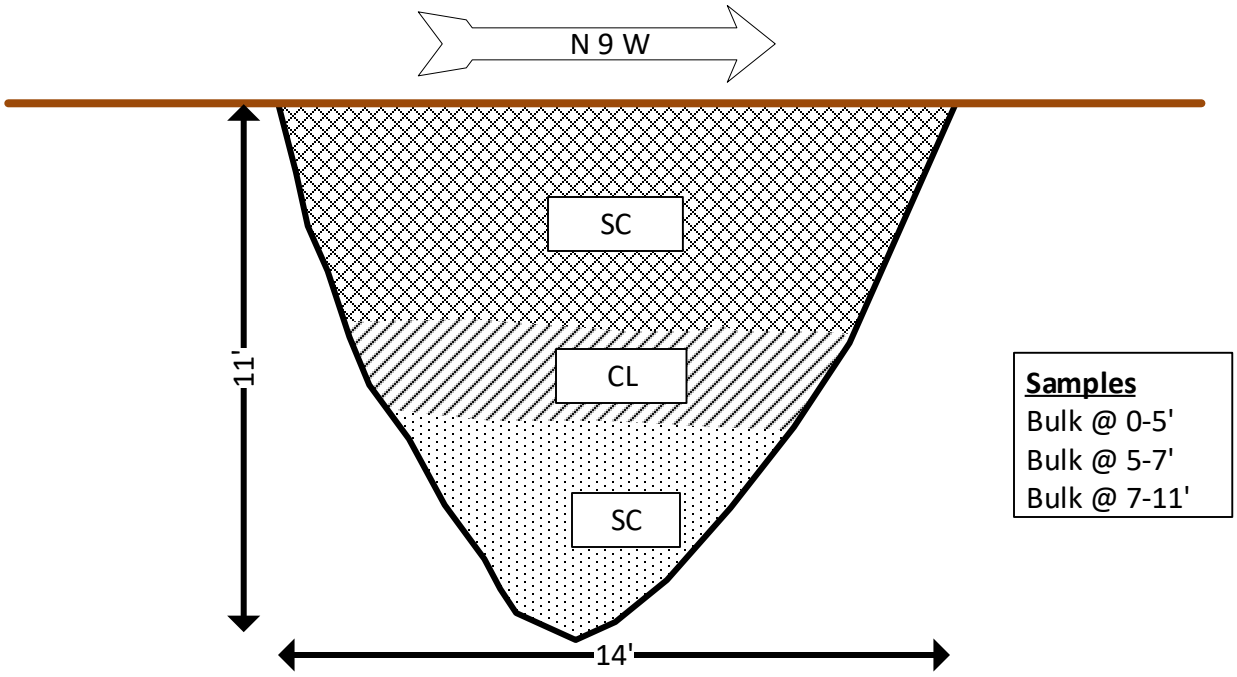


PENETRATION RESISTANCE
(Recorded As Blows/Foot)

SAND & GRAVEL		SILT & CLAY		
Relative Density	Blows/Foot* N_{60}	Consistency	Blows/Foot* N_{60}	Strength**(KSF)
Very Loose	0-4	Very Soft	0 - 2	0 – 0.5
Loose	4-10	Soft	2 - 4	0.5 – 1.0
Medium Dense	10-30	Medium Stiff	4 - 8	1.0 – 2.0
Dense	30-50	Stiff	8 - 15	2.0 – 4.0
Very Dense	Over 50	Very Stiff	15 - 30	4.0 – 8.0
		Hard	Over 30	Over 8.0

* Number of blows of 140LB hammer falling 30 inches to drive a 2 inch O.D. (1-3/8 inch I.D.) split barrel sampler the last 12 inches of an 18-inch drive (ASTM-1586 Standard Penetration Test)

** Undrained shear strength in kips/sq. ft. As determined by laboratory testing or approximated by the standard penetration test, pocket penetrometer, torvane, or visual observation



Samples
Bulk @ 0-5'
Bulk @ 5-7'
Bulk @ 7-11'

Geologic Description:

0' ARTIFICIAL FILL

@ 0 - 5' Clayey SAND (SC) – grayish to reddish-brown mottled, dry to slightly moist, medium dense, faint lifts, abundant roots, oxidation mottled, fine to medium-grained sand, gravel sized sandstone and brick fragments, low to medium plasticity.

5' OLDER ALLUVIUM

@ 5' - 7' Sandy CLAY (CL) – light grayish-brown mottled, slightly moist, stiff to hard, caliche "blobs" and stringers, minor roots, pinhole porosity, very fine to fine-grained sand, low to medium plasticity, horizontal contact with underlying bedrock.

7' SANTIAGO FORMATION

@ 7' - 11' Clayey SANDSTONE, light yellowish to grayish-brown mottled, moist, loose, massive, fine-grained sand, friable, moderately well indurated.

Total Trench Depth = 11'
No Groundwater; Trench Backfilled

Trench Excavated on July 29, 2019

LEGEND

Approximate Trench Limits

Ground Surface

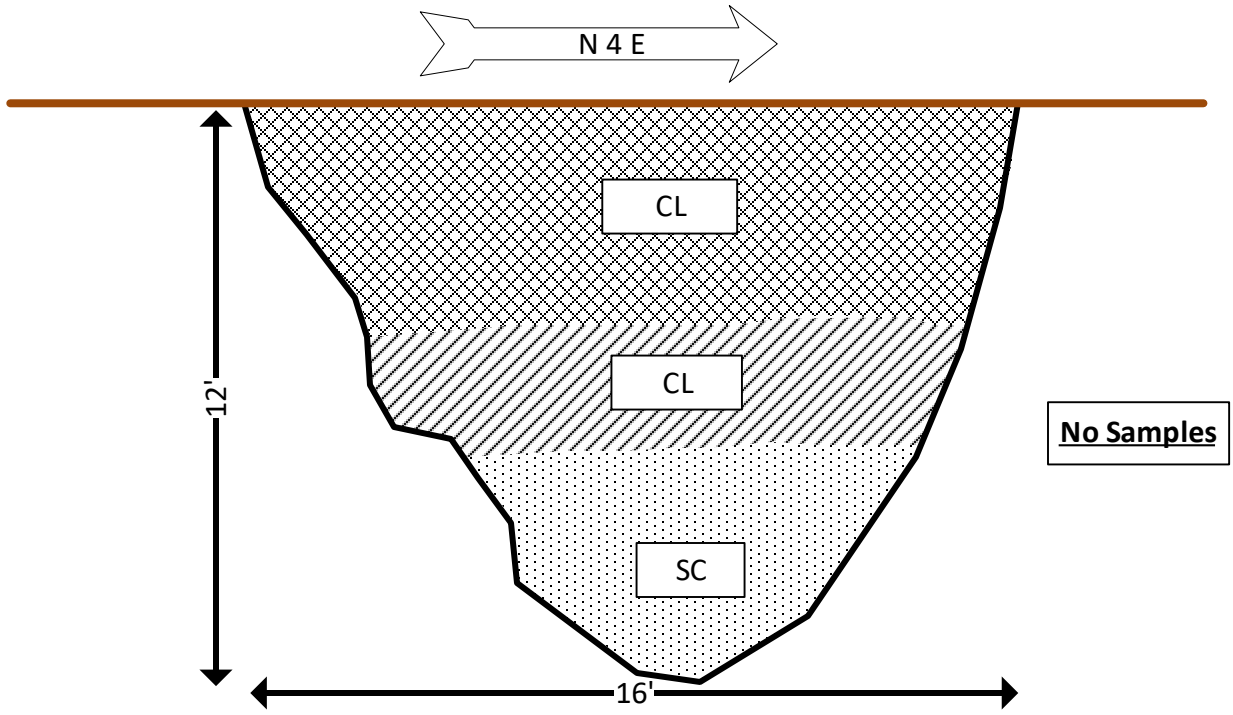
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-1

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



Geologic Description:

0' ARTIFICIAL FILL

@ 0 - 5' Silty to Sandy CLAY (CL) – grayish to reddish-brown mottled, dry to slightly moist, medium stiff to stiff, faint lifts, abundant roots, oxidation mottled, fine to medium-grained sand, gravel sized sandstone and brick fragments, low to medium plasticity.

5' OLDER ALLUVIUM

@ 5' - 8' Sandy CLAY (CL) – light grayish-brown mottled, slightly moist, stiff to hard, caliche "blobs" and stringers, minor roots, pinhole porosity, very fine to fine-grained sand, low to medium plasticity, horizontal contact with underlying bedrock.

8' SANTIAGO FORMATION

@ 8' - 12' Clayey SANDSTONE, light yellowish to grayish-brown mottled, moist, loose, massive, fine-grained sand, friable, moderately well indurated.

Total Trench Depth = 12'
No Groundwater; Trench Backfilled

Trench Excavated on July 29, 2019

LEGEND

Approximate Trench Limits

Ground Surface

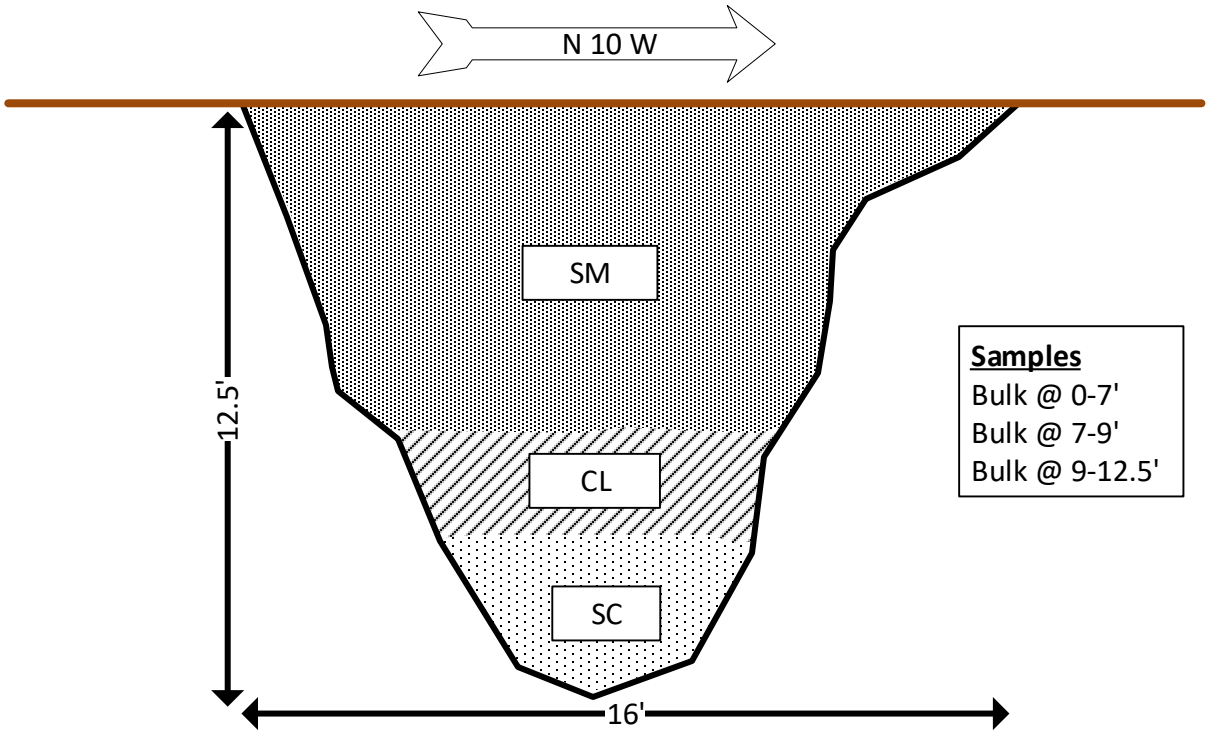
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-2

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



Geologic Description:

0' ARTIFICIAL FILL

@ 0 - 7' Clayey Silty SAND (SM) – cream to light grayish-brown mottled, dry to slightly moist, loose to medium dense, no discernible lifts, abundant roots, oxidation mottled, fine to medium-grained sand, gravel sized sandstone and brick fragments, minor clay.

7' OLDER ALLUVIUM

@ 7' - 9' Sandy CLAY (CL) – off white to light grayish-brown mottled, slightly moist, stiff to hard, caliche "blobs" and stringers, minor roots, pinhole porosity, very fine to fine-grained sand.

9' SANTIAGO FORMATION

@ 9' – 12.5' Clayey SANDSTONE (SC), light yellowish to grayish-brown mottled, moist, loose, massive, fine-grained sand, friable, moderately well indurated.

Total Trench Depth = 12.5'
No Groundwater; Trench Backfilled

Trench Excavated on July 29, 2019

LEGEND

Approximate Trench Limits

Ground Surface

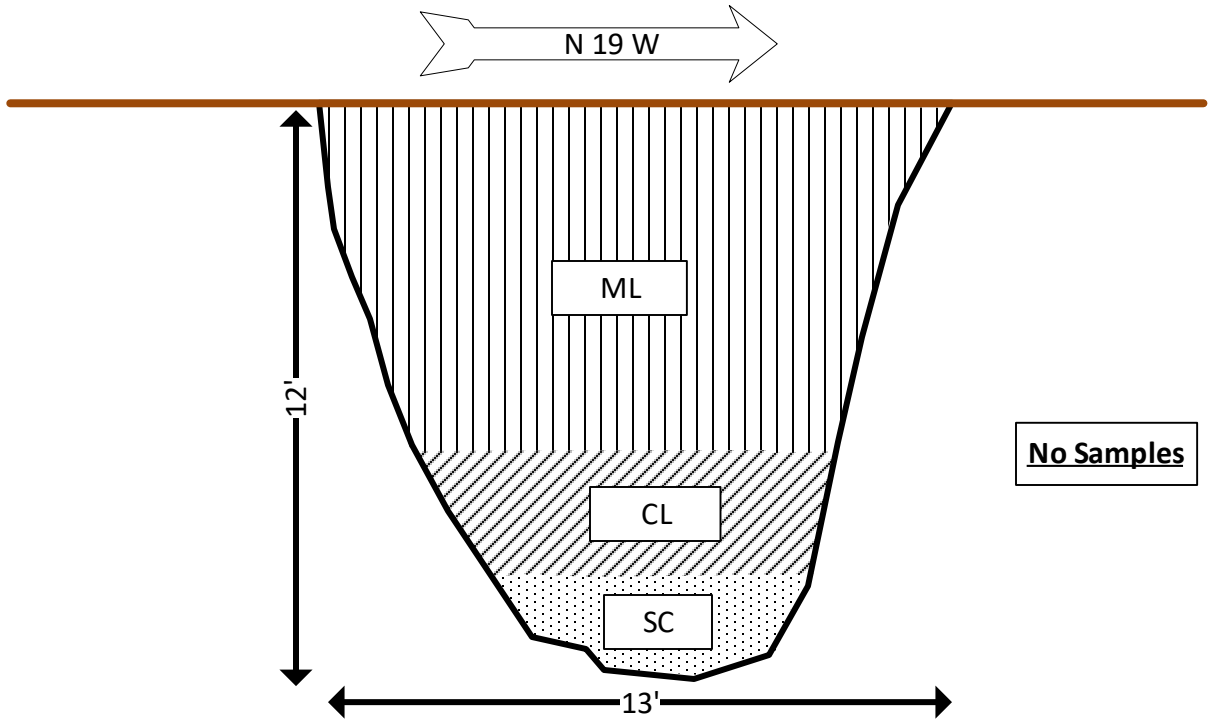
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-3

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



No Samples

Geologic Description:

0' ARTIFICIAL FILL

@ 0 - 7' Sandy to Clayey SILT (ML) – cream to light grayish-brown mottled, dry to slightly moist, soft to medium stiff, faint lifts, abundant roots, oxidation mottled, fine to medium-grained sand, gravel sized sandstone and brick fragments, minor clay.

7' OLDER ALLUVIUM

@ 7' - 10' Sandy CLAY (CL) – off white to light grayish-brown mottled, slightly moist, stiff to hard, caliche "blobs" and stringers, minor roots, pinhole porosity, very fine to fine-grained sand.

10' SANTIAGO FORMATION

@ 10' – 12' Clayey SANDSTONE (SC), light yellowish to grayish-brown mottled, moist, loose, massive, fine-grained sand, friable, moderately well indurated.

Total Trench Depth = 12'
No Groundwater; Trench Backfilled

Trench Excavated on July 29, 2019

LEGEND

Approximate Trench Limits

Ground Surface

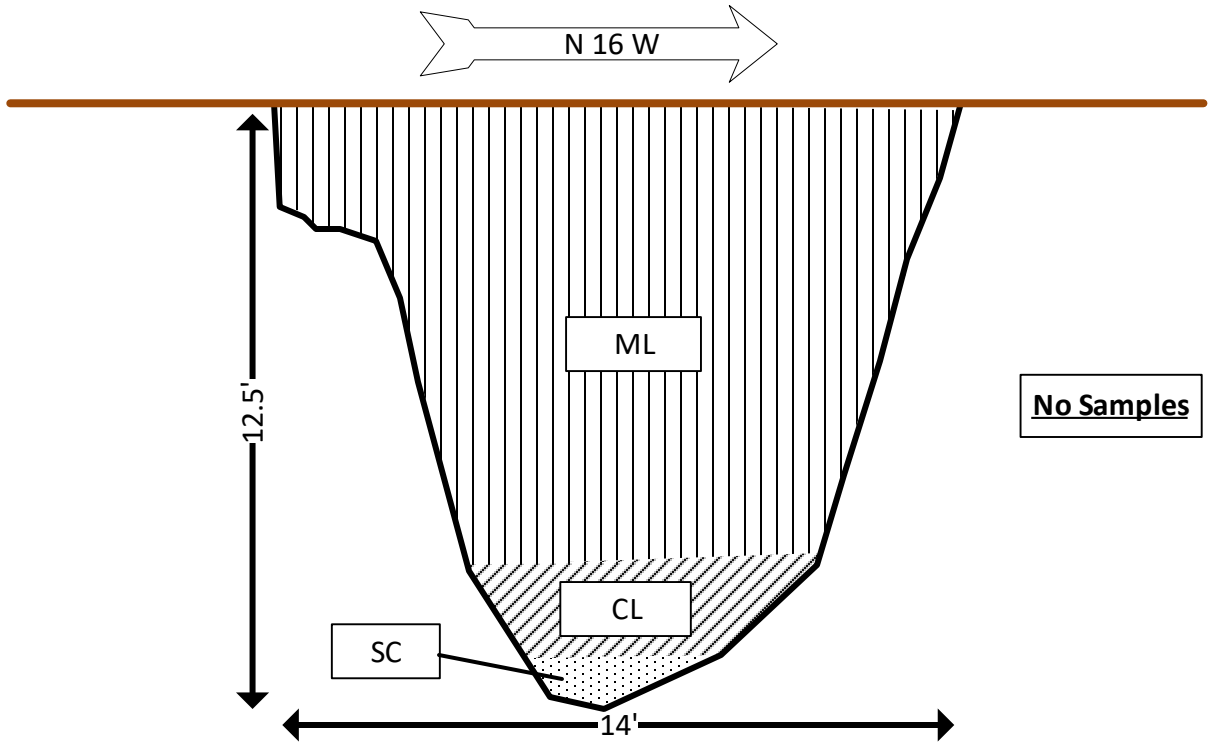
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-4

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



No Samples

Geologic Description:

0' ARTIFICIAL FILL

@ 0 - 9' Sandy to Clayey SILT (ML) – cream to light grayish-brown mottled, dry to slightly moist, soft to medium stiff, faint lifts, abundant roots, oxidation mottled, fine to medium-grained sand, gravel sized sandstone and brick fragments, minor clay.

9' OLDER ALLUVIUM

@ 9' - 11' Sandy CLAY (CL) – off white to light grayish-brown mottled, slightly moist, medium stiff to stiff, abundant caliche, low plasticity, minor roots, pinhole porosity, very fine to fine-grained sand.

11' SANTIAGO FORMATION

@ 11' – 12.5' Clayey SANDSTONE (SC), light yellowish to grayish-brown mottled, moist, loose, massive, fine-grained sand, friable, moderately well indurated.

Total Trench Depth = 12.5'
No Groundwater; Trench Backfilled

Trench Excavated on July 29, 2019

LEGEND

Approximate Trench Limits

Ground Surface

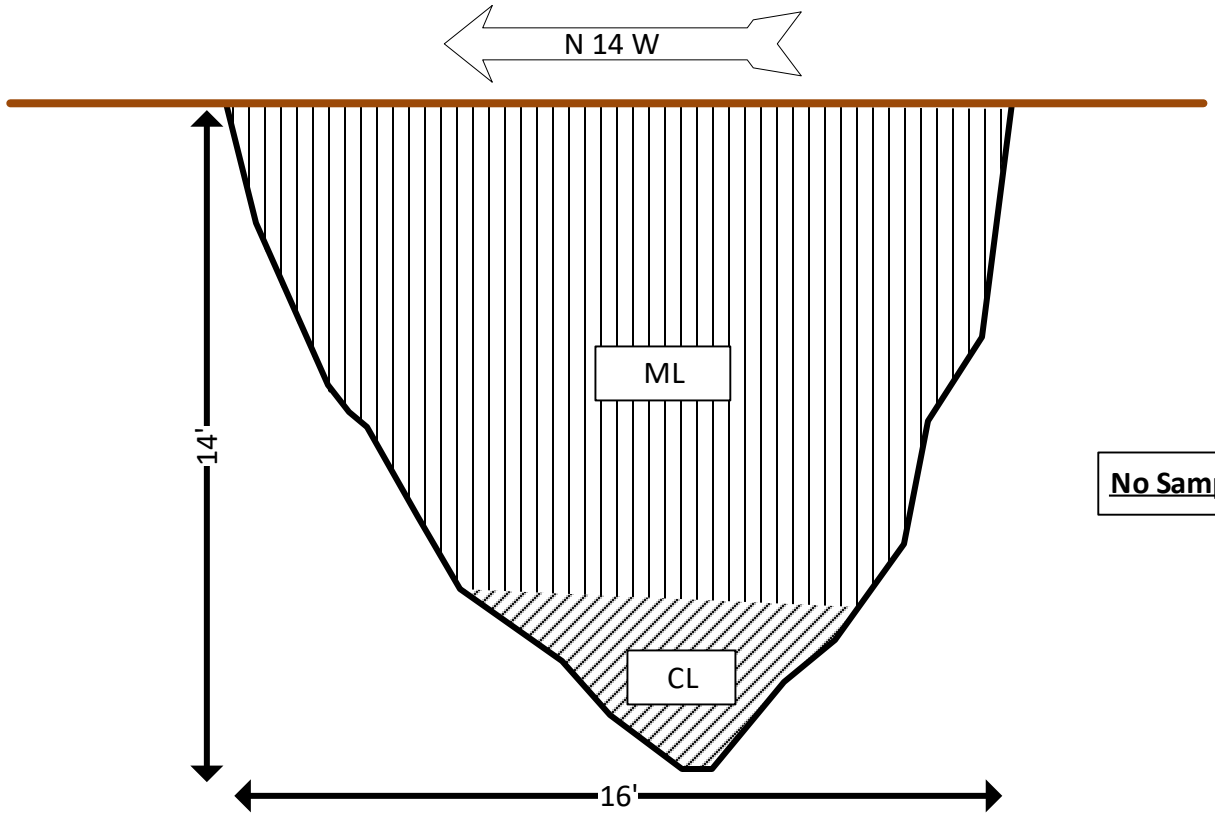
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-5

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



No Samples

Geologic Description:

0' ARTIFICIAL FILL

@ 0 - 11' Sandy to Clayey SILT (ML) – cream to light grayish-brown mottled, dry to slightly moist, soft to medium stiff, faint lifts, relatively homogenous, abundant roots, oxidation mottled, fine to medium-grained sand, gravel sized sandstone and brick fragments, minor clay.

11' OLDER ALLUVIUM

@ 11' - 14' Silty to Sandy CLAY (CL) – off white to light grayish-brown mottled, slightly moist, medium stiff to stiff, abundant caliche, low plasticity, minor roots, pinhole porosity, very fine to fine-grained sand.

Total Trench Depth = 14'
No Groundwater; Trench Backfilled

Trench Excavated on July 29, 2019

LEGEND

Approximate Trench Limits

Ground Surface

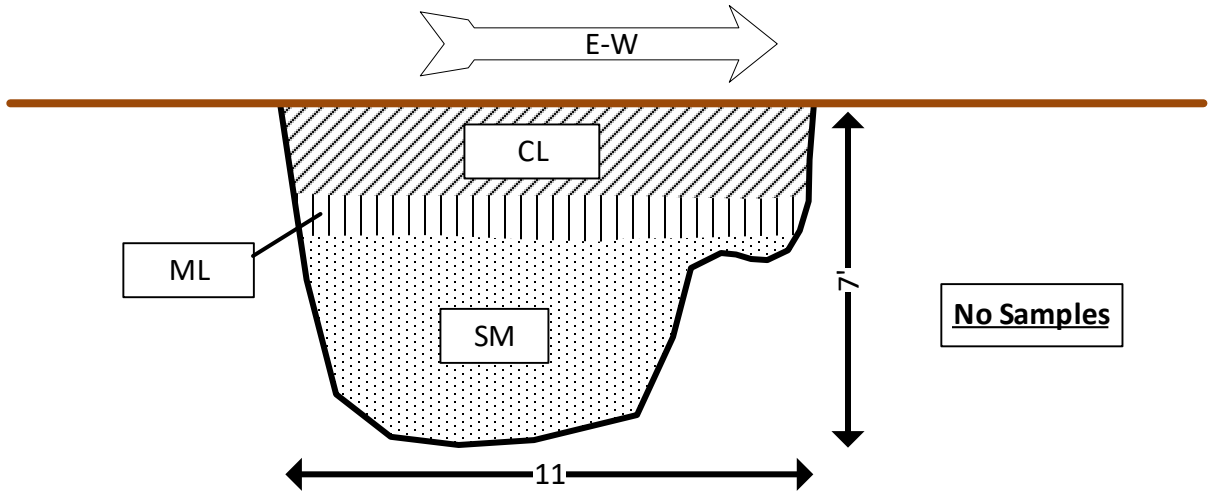
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-6

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



Geologic Description:

0' ARTIFICIAL FILL

@ 0 - 2' Sandy CLAY (CL) – light grayish to reddish-brown mottled, dry to slightly moist, soft to slightly stiff, porous, fine to medium-grained sand, oxidation, roots and rootlets, pinhole root porosity, slight plasticity, brick fragments

2' OLDER ALLUVIUM

@ 2' - 3' Sandy SILT (ML) – light to grayish-brown mottled, slightly moist, loose to medium dense, fine to medium sand, minor roots, pinhole root porosity, minor clay, caliche "blobs" and stringers.

3' SANTIAGO FORMATION

3' - 7' Silty SANDSTONE (SM) –light yellowish to grayish-brown mottled, slightly moist, loose, very fine to fine-grained, moderately well indurated, friable, minor oxidation, massive.s

Total Trench Depth = 7'
No Groundwater; Trench Backfilled

Trench Excavated on July 30, 2019

LEGEND

Approximate Trench Limits

Ground Surface

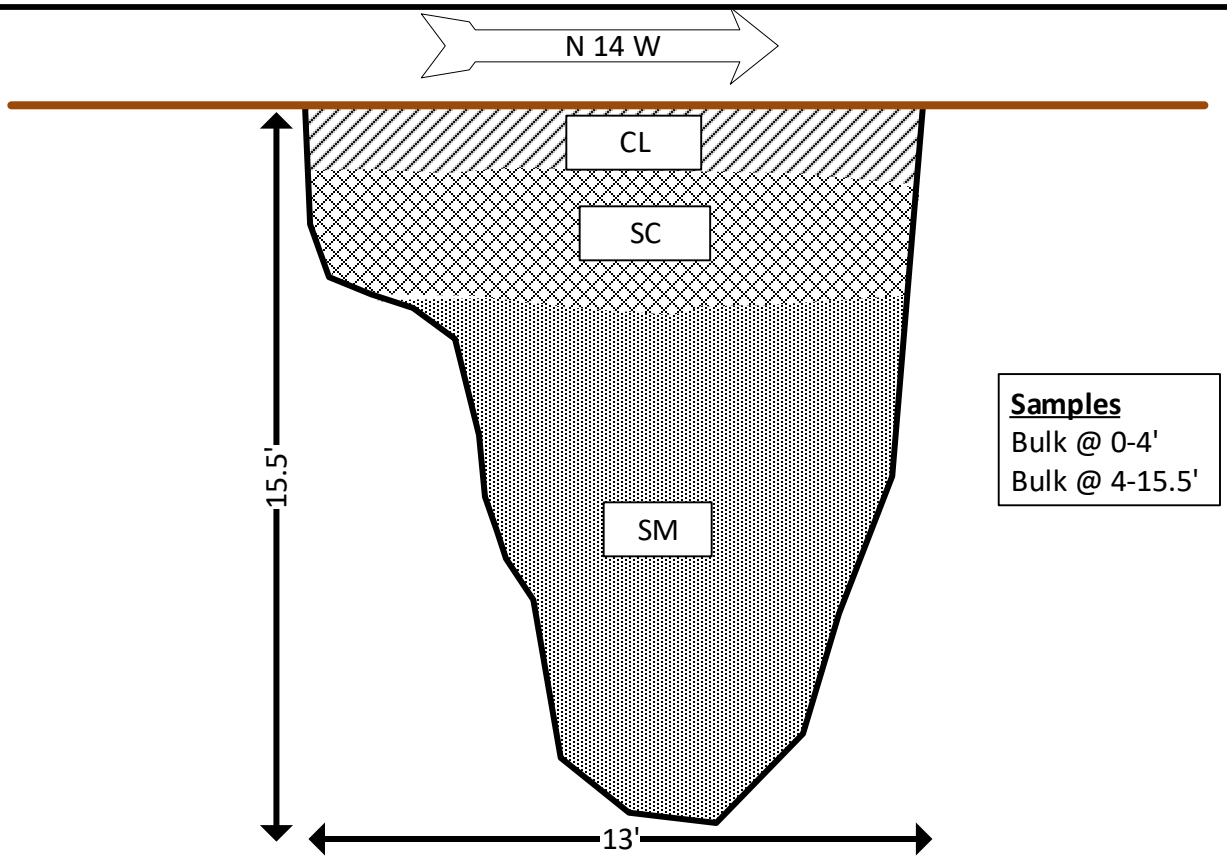
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-7

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



Samples
Bulk @ 0-4'
Bulk @ 4-15.5'

Geologic Description:

0' ARTIFICIAL FILL
@ 0 – 1.5' Sandy CLAY (CL) – grayish to reddish-brown mottled, dry, soft to medium stiff, fine to medium-grained sand, porous pinhole porosity, roots, oxidation, brick fragments.

@ 1.5 - 4' Clayey SAND (SC) – grayish to yellowish-gray mottled, slightly moist to moist, medium dense to dense, fine-grained, oxidation, slight plasticity, gravel-sized gray-white sandstone fragments, brick fragments, 6 to 12" lifts.

4' OLDER ALLUVIUM
@ 4' – 15.5' Silty SAND (SM) – light brown to orange-brown mottled, slightly moist to moist, medium dense to dense, fine-grained, caliche "blobs" and stringers, pinhole porosity, minor clay, faint layering.

Total Trench Depth = 15.5'
No Groundwater; Trench Backfilled

Trench Excavated on July 30, 2019

LEGEND

Approximate Trench Limits

Ground Surface

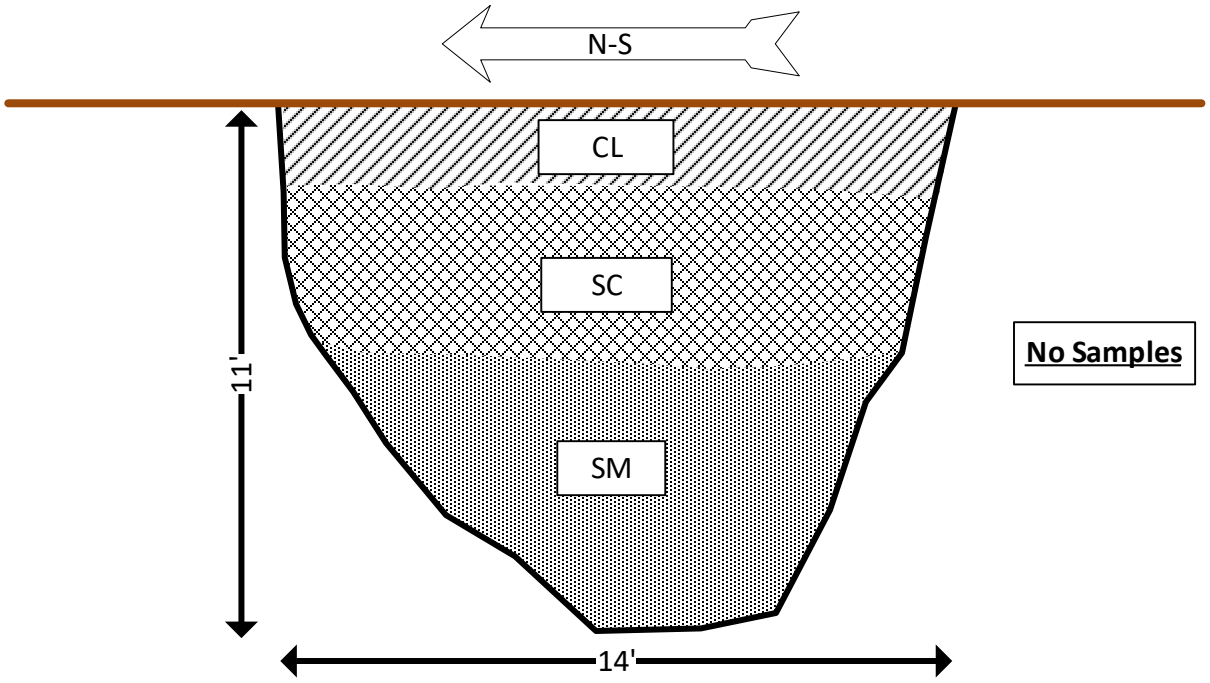
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-8

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



No Samples

Geologic Description:

0' ARTIFICIAL FILL

@ 0 – 2' Sandy CLAY (CL) – grayish to reddish-brown mottled, dry, soft to medium stiff, fine to medium-grained sand, porous pinhole porosity, roots, oxidation, brick fragments.

@ 2 - 6' Clayey SAND (SC) – grayish to yellowish-gray mottled, slightly moist to moist, medium dense to dense, fine-grained, oxidation, slight plasticity, gravel-sized gray-white sandstone fragments, brick fragments, 6 to 12" lifts.

6' OLDER ALLUVIUM

@ 6' – 11' Silty SAND (SM) – light brown to orange-brown mottled, slightly moist to moist, medium dense to dense, fine-grained, caliche “blobs” and stringers, pinhole porosity, minor clay, faint layering.

Total Trench Depth = 11'
No Groundwater; Trench Backfilled

Trench Excavated on July 30, 2019

LEGEND

Approximate Trench Limits

Ground Surface

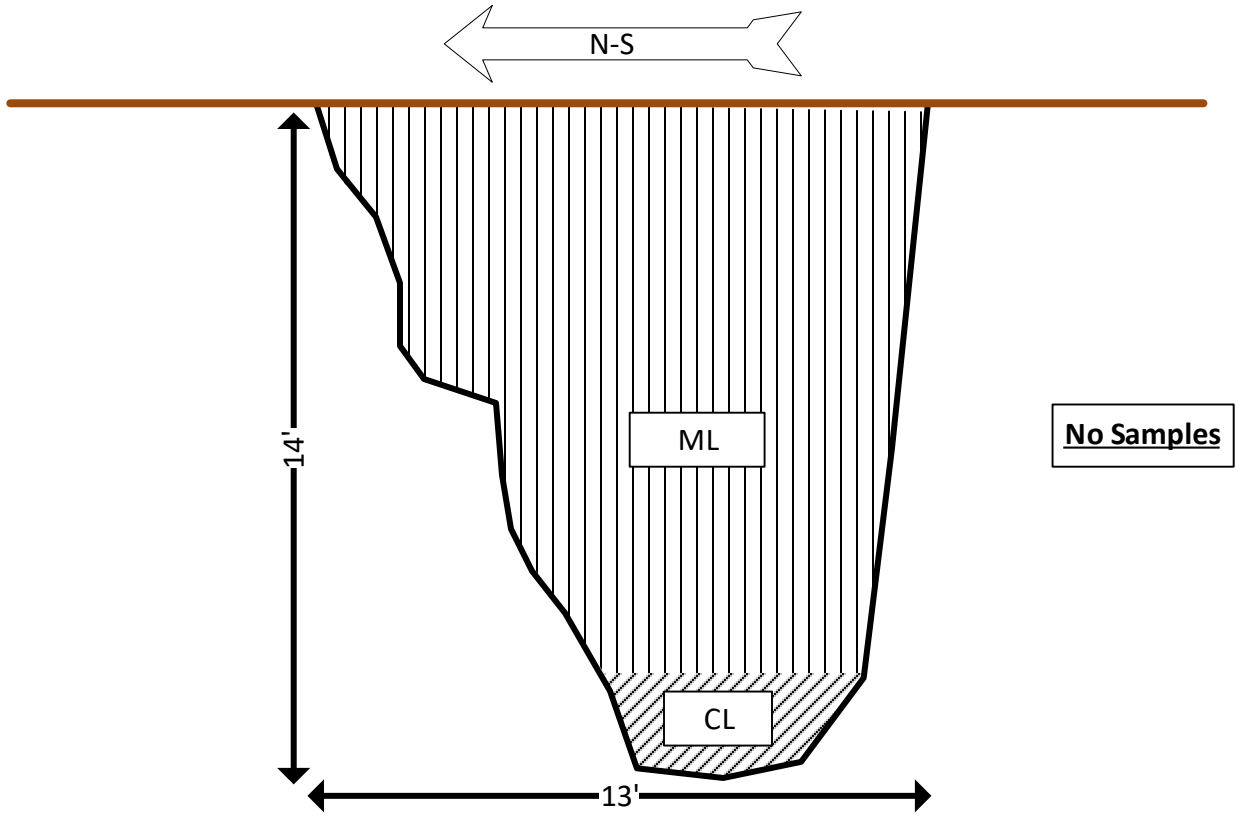
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-9

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



No Samples

Geologic Description:

0' ARTIFICIAL FILL

@ 0 – 12' Sandy to Clayey SILT (ML) – cream to light grayish white/brown mottled, dry to slightly moist, soft to medium stiff, relatively homogenous, faint lifts, very fine to fine-grained sand, minor clay, oxidation, cream to grayish-brown gravel-sized sandstone fragments, roots, brick fragments.

12' OLDER ALLUVIUM

@ 12' – 14' Silty to Sandy CLAY (CL) – off-white to grayish-brown mottled, slightly moist, medium stiff to stiff, low plasticity, minor oxidation, pinhole porosity, abundant caliche, very fine to fine-grained sand.

Total Trench Depth = 14'
No Groundwater; Trench Backfilled

Trench Excavated on July 30, 2019

LEGEND

Approximate Trench Limits

Ground Surface

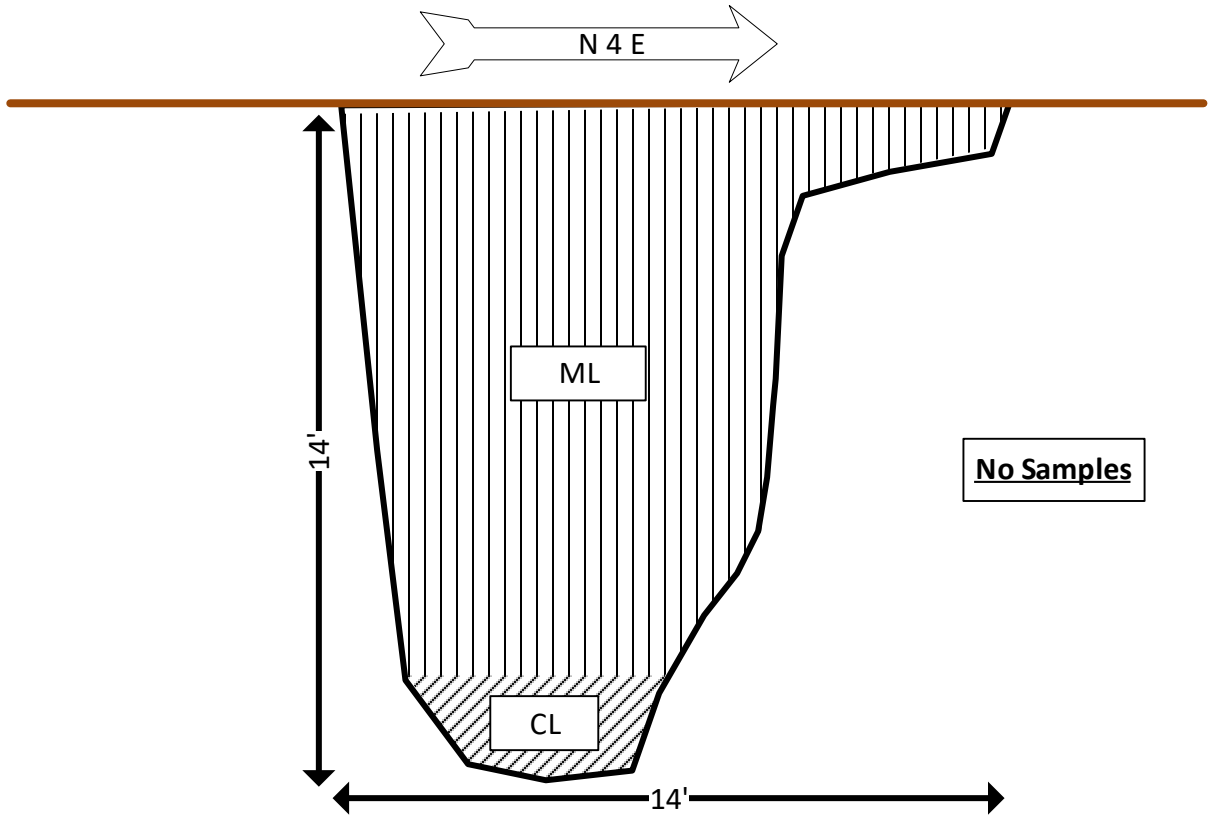
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-10

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



Geologic Description:

0' ARTIFICIAL FILL

@ 0 – 12' Sandy to Clayey SILT (ML) – cream to light grayish white/brown mottled, @ 4' color change to yellowish-gray brown mottled, dry to slightly moist, soft to medium stiff, relatively homogenous, faint lifts, very fine to fine-grained sand, minor clay, oxidation, cream to grayish-brown gravel-sized sandstone fragments, roots, brick fragments.

12' OLDER ALLUVIUM

@ 12' – 14' Silty to Sandy CLAY (CL) – off-white to grayish-brown mottled, slightly moist, medium stiff to stiff, low plasticity, minor oxidation, pinhole porosity, abundant caliche, very fine to fine-grained sand.

Total Trench Depth = 14'
No Groundwater; Trench Backfilled

Trench Excavated on July 30, 2019

LEGEND

Approximate Trench Limits

Ground Surface

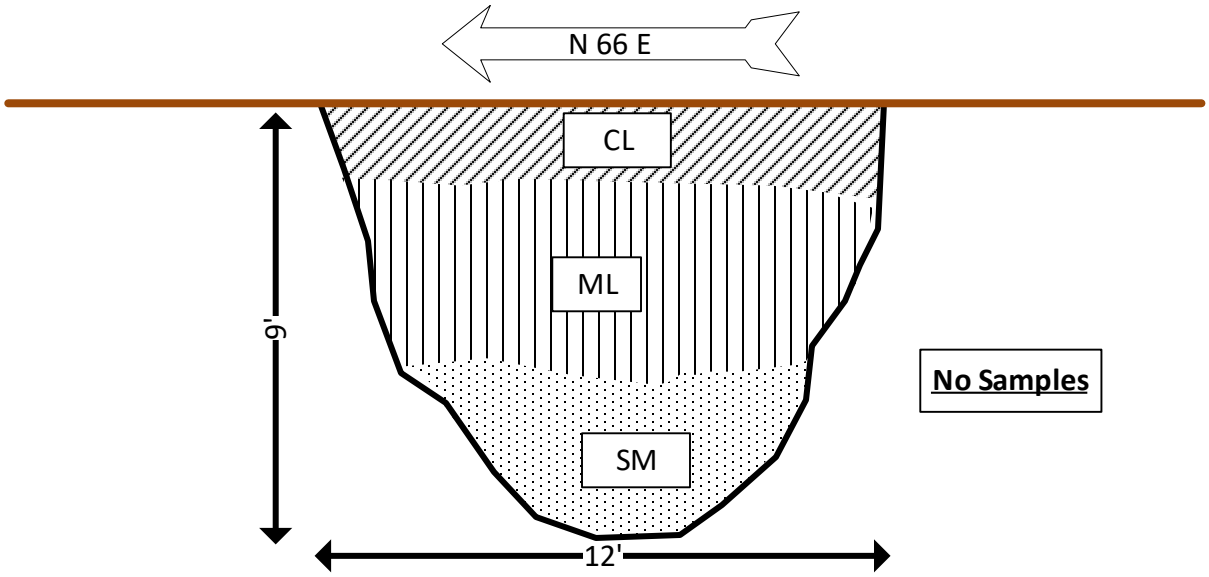
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-11

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



Geologic Description:

0' ARTIFICIAL FILL

@ 0 – 2' Sandy CLAY (CL) – light grayish to reddish-brown mottled, dry to slightly moist, soft to slightly stiff, porous, fine to medium-grained sand, oxidation, roots, slight plasticity, brick fragments

2' OLDER ALLUVIUM

@ 2' – 6' Sandy SILT (ML) – light grayish-brown mottled, slightly moist, loose to medium dense, fine to medium-grained sand, minor roots, pinhole porosity, minor clay, caliche "blobs"/stringers

6' SANTIAGO FORMATION

@ 6' – 9' Silty SANDSTONE (SM) – light yellowish-brown to light grayish-brown mottled, slightly moist, loose, very fine to fine-grained, moderately well indurated, friable, minor oxidation, massive

@ 9' Refusal

Total Trench Depth = 9'
No Groundwater; Trench Backfilled

Trench Excavated on July 30, 2019

LEGEND

Approximate Trench Limits

Ground Surface

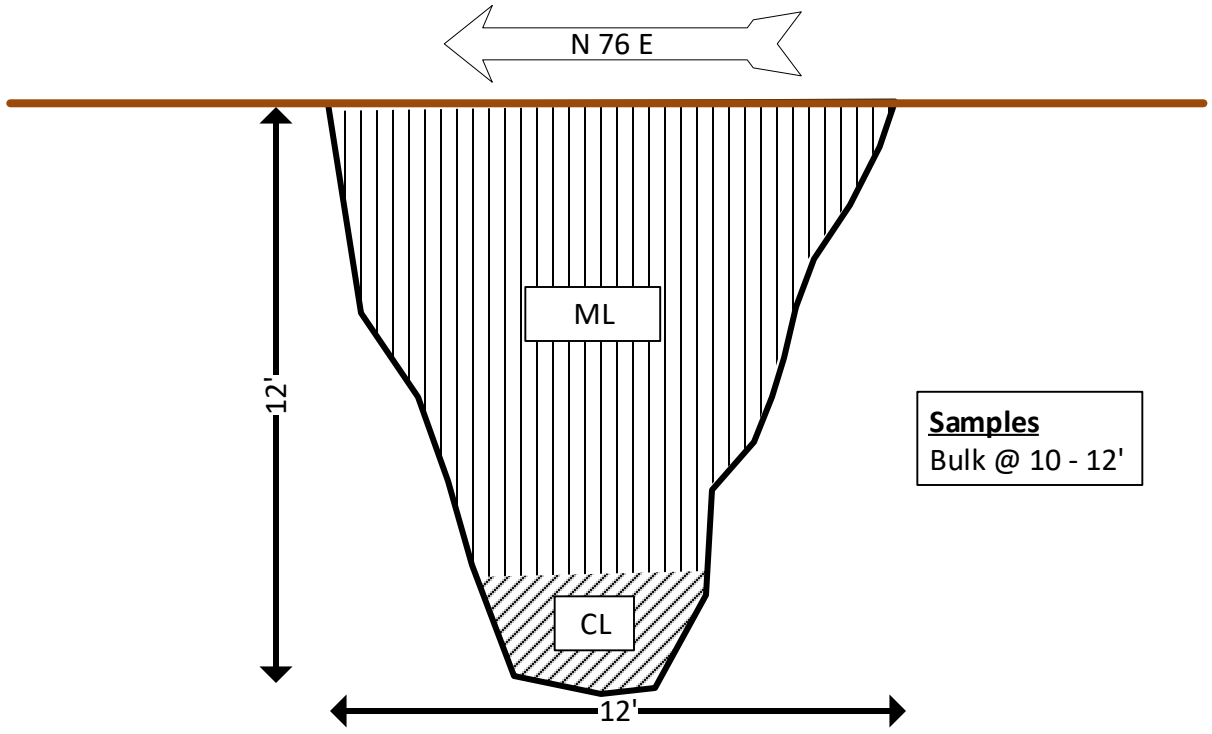
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-12

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



Geologic Description:

0' ARTIFICIAL FILL

@ 0 – 10' Sandy to Clayey SILT (ML) – light grayish-white to grayish-brown mottled, dry to slightly moist, soft to medium stiff, 6-12" lifts, very fine-grained sand, minor clay, oxidation, minor roots, brick fragments

10' OLDER ALLUVIUM

@ 10' – 12' Silty to Sandy CLAY (CL) – light brown to reddish-brown mottled, moist, soft to medium stiff, low to medium plasticity, very fine-grained sand, oxidation, pinhole porosity, minor caliche “blobs”

Total Trench Depth = 12'
No Groundwater; Trench Backfilled

Trench Excavated on July 30, 2019

LEGEND

Approximate Trench Limits

Ground Surface

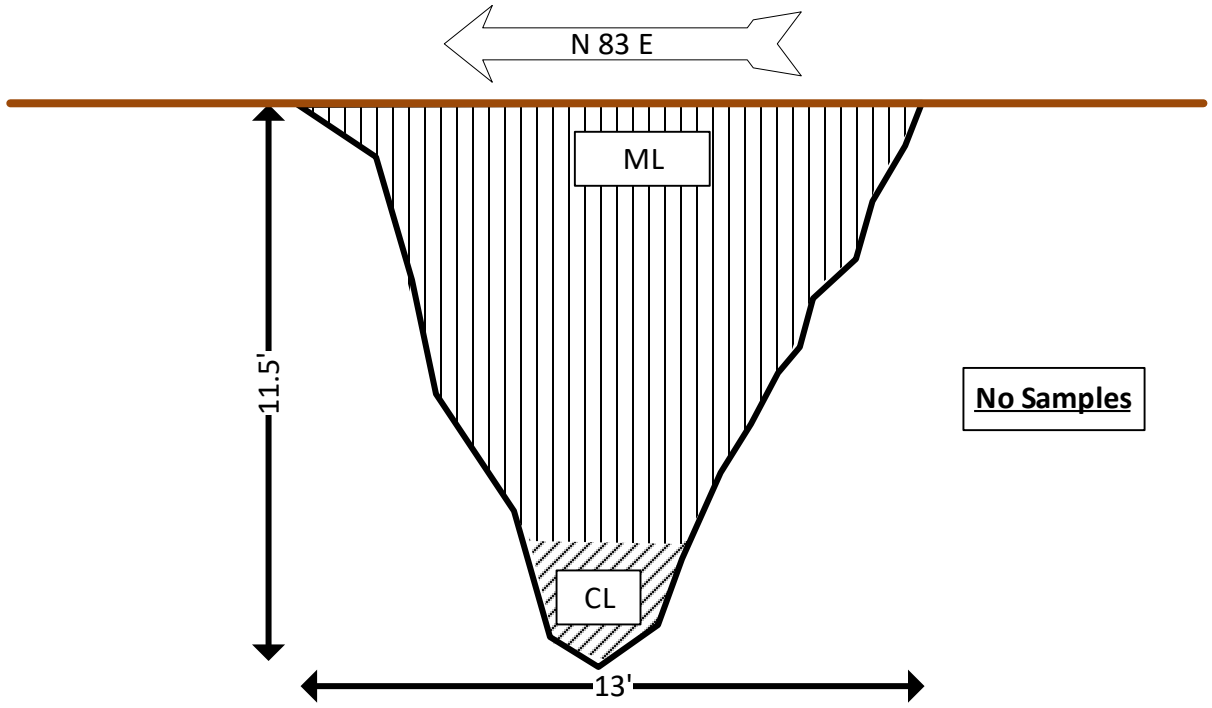
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-13

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



No Samples

Geologic Description:

0' ARTIFICIAL FILL

@ 0 – 9' Sandy to Clayey SILT (ML) – light grayish-white to grayish-brown mottled, dry to slightly moist, soft to medium stiff, 6-12" lifts, very fine-grained sand, minor clay, oxidation, minor roots, brick fragments

9' OLDER ALLUVIUM

@ 9' – 11.5' Silty to Sandy CLAY (CL) – light brown to reddish-brown mottled, moist, soft to medium stiff, low to medium plasticity, very fine-grained sand, oxidation, pinhole porosity, minor caliche "blobs"

Total Trench Depth = 11.5'
No Groundwater; Trench Backfilled

Trench Excavated on July 30, 2019

LEGEND

Approximate Trench Limits

Ground Surface

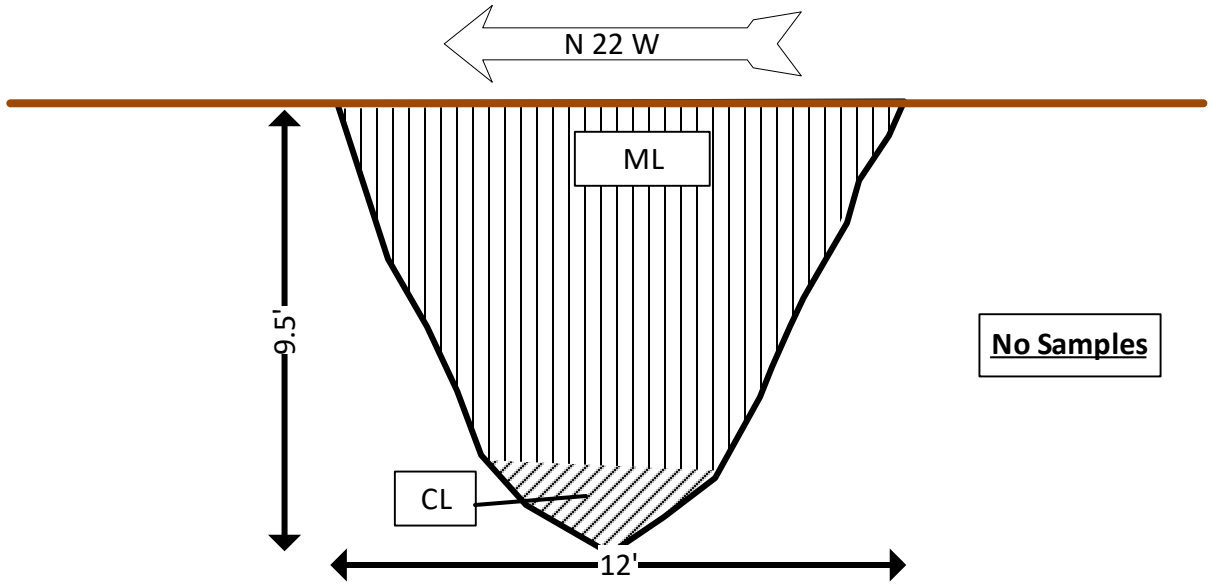
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-14

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



No Samples

Geologic Description:

0' ARTIFICIAL FILL

@ 0 – 8' Sandy to Clayey SILT (ML) – light grayish-white to grayish-brown mottled, dry to slightly moist, soft to medium stiff, 6-12" lifts, very fine-grained sand, minor clay, oxidation, minor roots, brick fragments

8' OLDER ALLUVIUM

@ 8' – 9.5' Silty to Sandy CLAY (CL) – light brown to reddish-brown mottled, moist, soft to medium stiff, low to medium plasticity, very fine-grained sand, oxidation, pinhole porosity, minor caliche “blobs”

Total Trench Depth = 9.5'
No Groundwater; Trench Backfilled

Trench Excavated on July 31, 2019

LEGEND

Approximate Trench Limits

Ground Surface

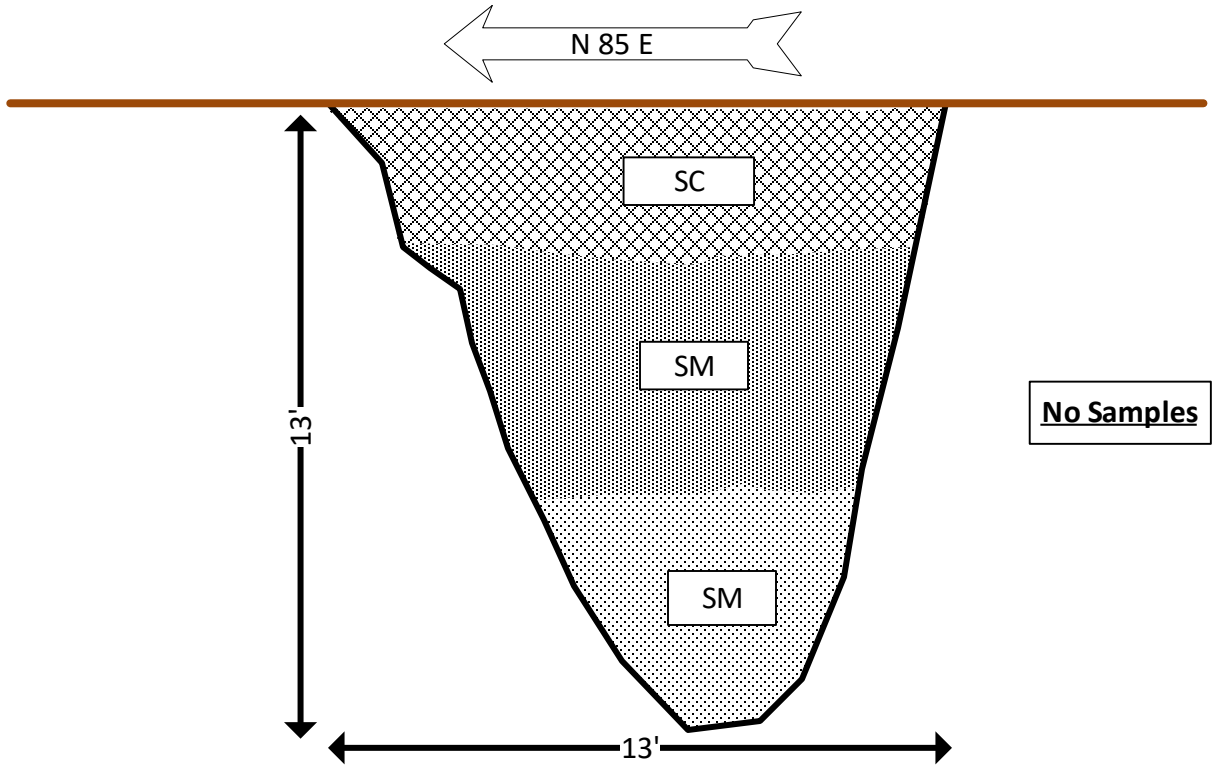
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-15

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



No Samples

Geologic Description:

0' ARTIFICIAL FILL

@ 0 – 3.5' Clayey SAND (SC) – whiteish-gray to yellowish-gray mottled, slightly moist to moist, medium dense to dense, fine-grained, oxidation, slight plasticity, gravel-sized gray-white sandstone fragments, brick fragments, 6 to 12" lifts.

3.5' OLDER ALLUVIUM

@ 3.5' – 8' Silty SAND (SM) – light brown to orange-brown mottled, slightly moist to moist, medium dense to dense, fine-grained, caliche "blobs" and stringers, pinhole porosity, minor clay, faint layering.

8' SANTIAGO FORMATION

@ 8' – 13' Silty SANDSTONE (SM) – light yellowish-brown mottled, moist, loose, massive, very fine to fine-grained, trace clay, poorly to moderately indurated, friable.

Total Trench Depth = 13'
No Groundwater; Trench Backfilled

Trench Excavated on July 31, 2019

LEGEND

Approximate Trench Limits

Ground Surface

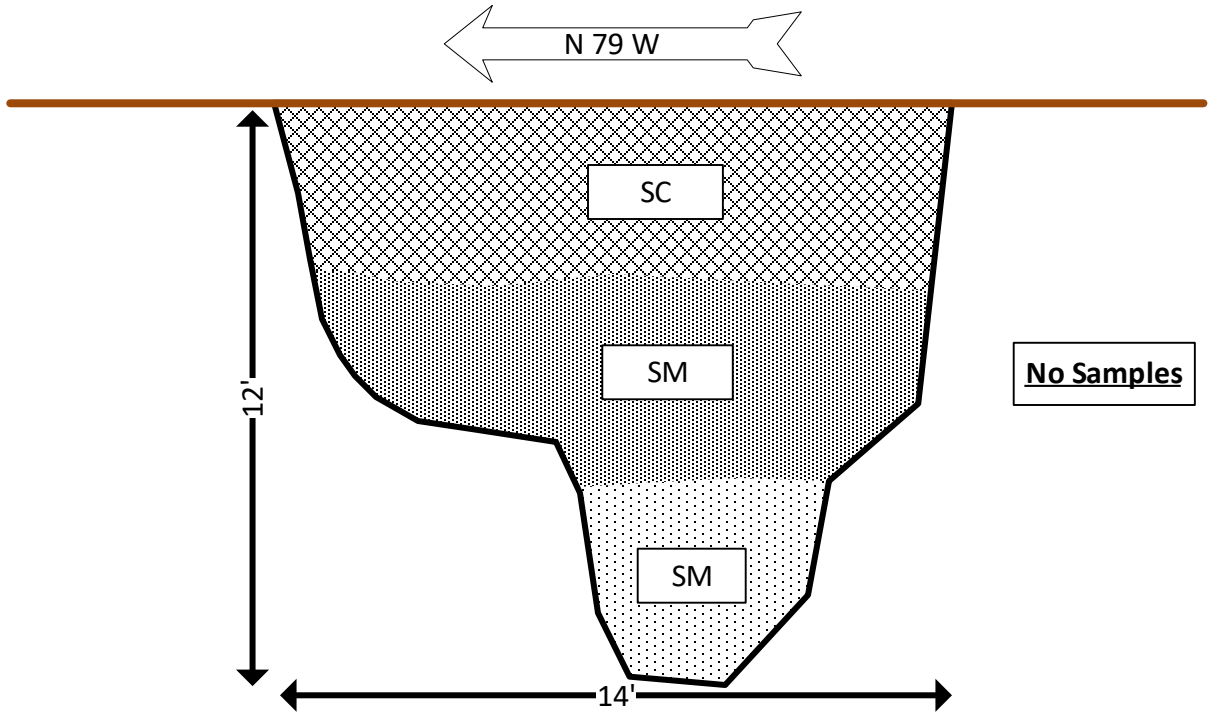
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-16

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



No Samples

Geologic Description:

0' ARTIFICIAL FILL

@ 0 – 4' Clayey SAND (SC) – whiteish-gray to yellowish-gray mottled, slightly moist to moist, medium dense to dense, fine-grained, oxidation, slight plasticity, gravel-sized gray-white sandstone fragments, brick fragments, 6 to 12" lifts.

4' OLDER ALLUVIUM

@ 4' – 8' Silty SAND (SM) – light brown to orange-brown mottled, slightly moist to moist, medium dense to dense, fine-grained, caliche “blobs” and stringers, pinhole porosity, minor clay, faint layering.

8' SANTIAGO FORMATION

@ 8' – 12' Silty SANDSTONE (SM) – light yellowish-brown mottled, moist, loose, massive, very fine to fine-grained, trace clay, poorly to moderately indurated, friable.

Total Trench Depth = 12'
No Groundwater; Trench Backfilled

Trench Excavated on July 31, 2019

LEGEND

Approximate Trench Limits

Ground Surface

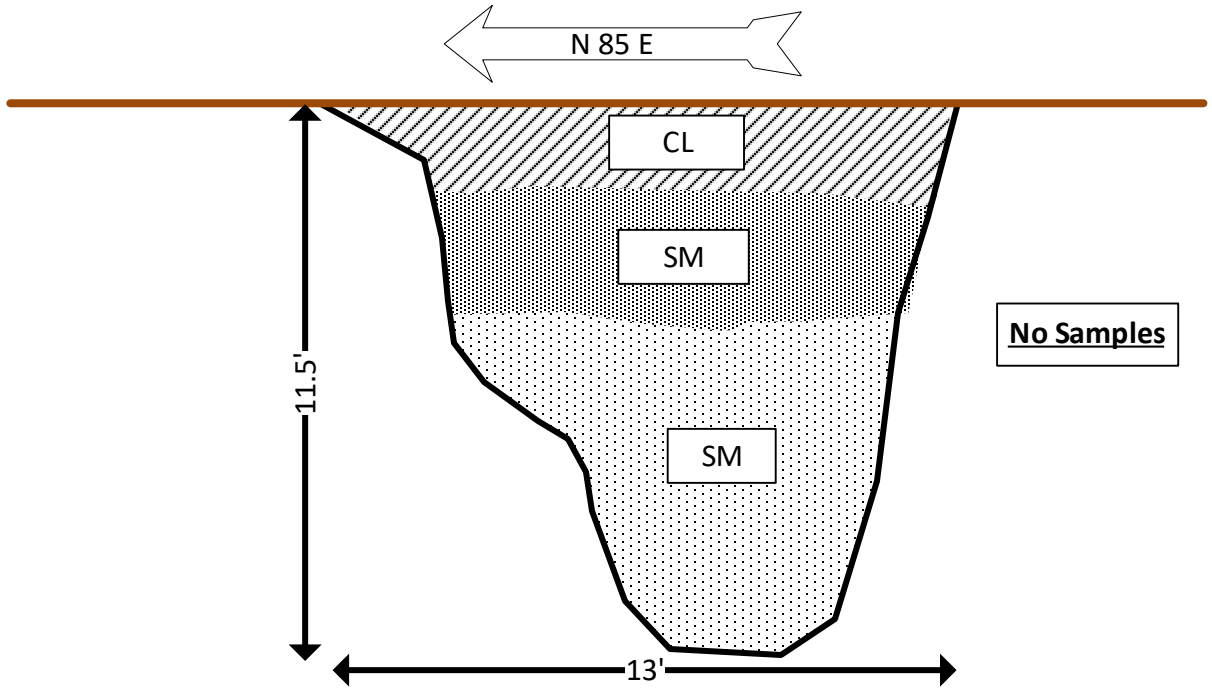
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-17

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



Geologic Description:

0' ARTIFICIAL FILL

@ 0 – 2' Sandy CLAY (CL) – light grayish-brown mottled, dry to slightly moist, soft to slightly stiff, fine to medium-grained, oxidation, slight plasticity, pinhole porosity, brick fragments, 6 to 12" lifts.

2' OLDER ALLUVIUM

@ 2' – 5' Silty SAND (SM) – light brown to orange-brown mottled, slightly moist to moist, medium dense to dense, fine-grained, caliche "blobs" and stringers, pinhole porosity, minor clay, faint layering.

5' SANTIAGO FORMATION

@ 5' – 11.5' Silty SANDSTONE (SM) – yellowish-orange mottled, moist, loose, massive, very fine to fine-grained, trace clay, poorly to moderately indurated, oxidation, friable.

Total Trench Depth = 11.5'
No Groundwater; Trench Backfilled

Trench Excavated on July 31, 2019

LEGEND

Approximate Trench Limits

Ground Surface

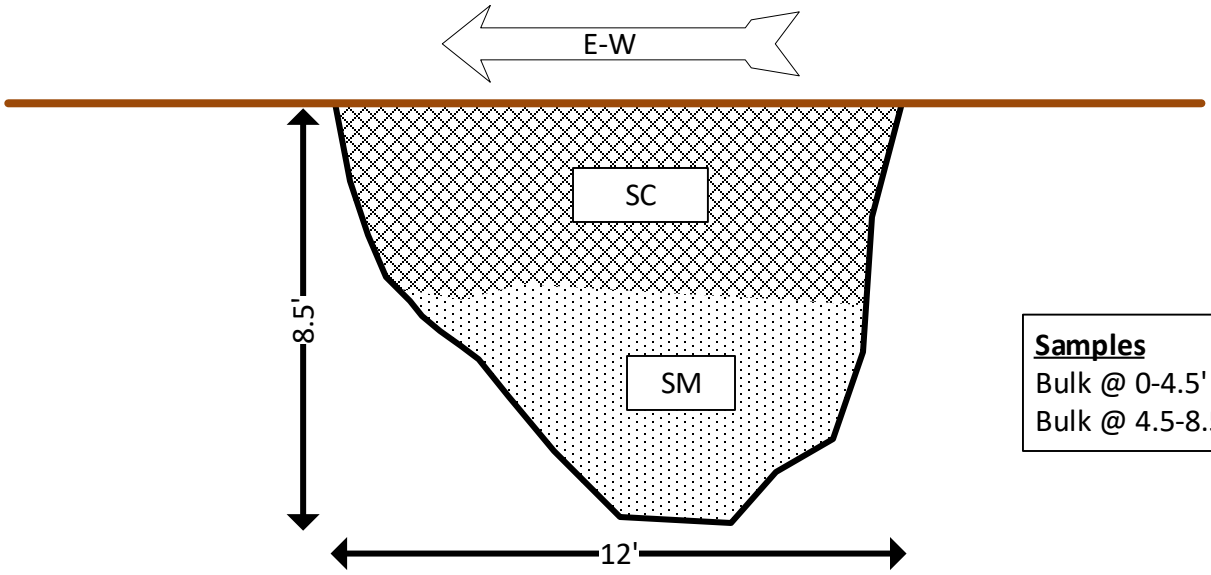
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-18

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



Samples
Bulk @ 0-4.5'
Bulk @ 4.5-8.5'

Geologic Description:

0' ARTIFICIAL FILL

@ 0 – 4.5' Clayey SAND (SC) – light brown to grayish-brown mottled, dry to slightly moist, medium dense to dense, fine to medium-grained, oxidation, low plasticity, pinhole porosity, abundant roots, faint lifts.

4.5' SANTIAGO FORMATION

@ 4.5' – 8.5' Silty SANDSTONE (SM) – light grayish-white to light greenish-gray, moist, loose, massive, fine-grained, trace clay, moderately indurated, friable.

Total Trench Depth = 8.5'
No Groundwater; Trench Backfilled

Trench Excavated on July 31, 2019

LEGEND

Approximate Trench Limits

Ground Surface

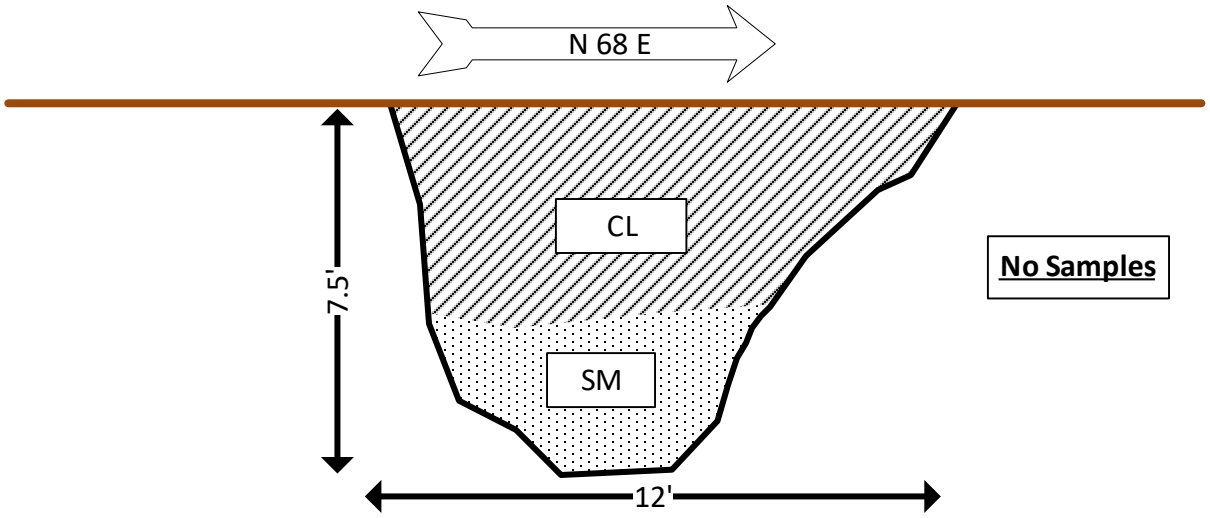
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-19

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



Geologic Description:

0' ARTIFICIAL FILL

@ 0 – 4.5' Sandy CLAY (CL) – light brown to grayish-brown mottled, dry to slightly moist, medium stiff to stiff, fine to medium-grained, oxidation, low plasticity, pinhole porosity, abundant roots, faint lifts.

4.5' SANTIAGO FORMATION

@ 4.5' – 7.5' Silty SANDSTONE (SM) – light grayish-white to light greenish-gray, moist, loose, massive, fine-grained, moderately indurated, friable.

Total Trench Depth = 7.5'
No Groundwater; Trench Backfilled

Trench Excavated on July 31, 2019

LEGEND

Approximate Trench Limits

Ground Surface

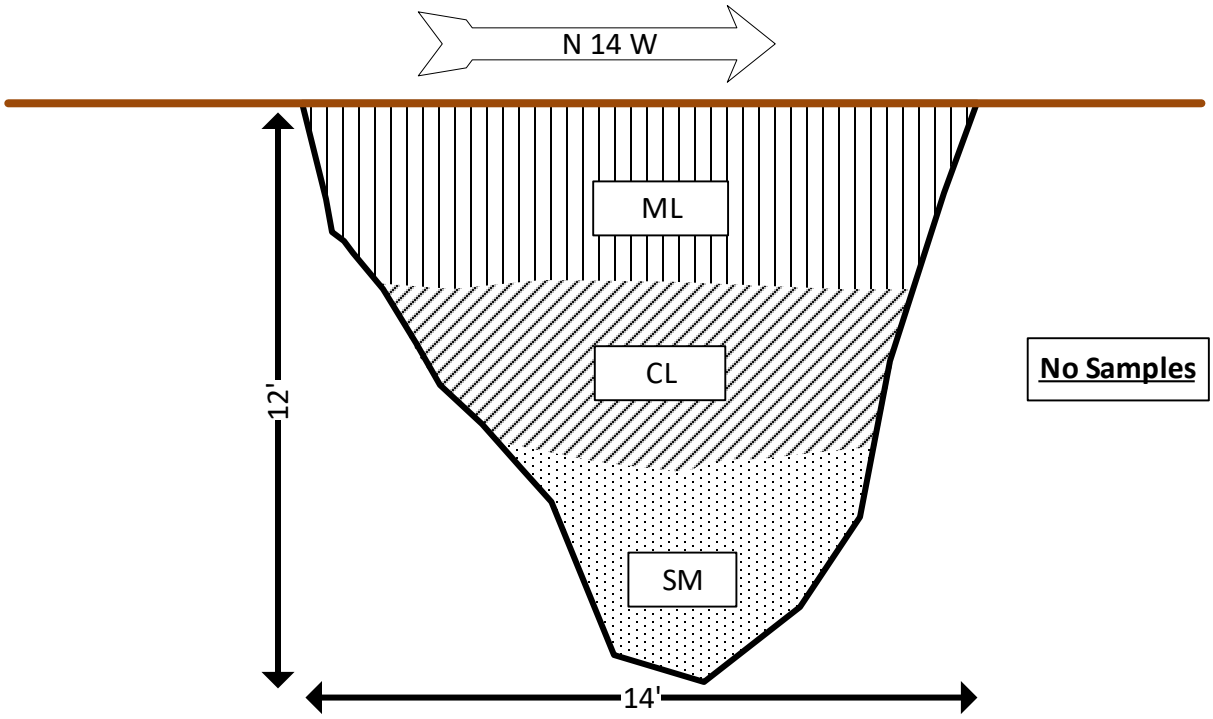
Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-20

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

EEI Engineering Solutions



No Samples

Geologic Description:

0' ARTIFICIAL FILL

@ 0 – 4' Sandy to Clayey SILT (ML) – light grayish-white to light grayish-brown mottled, slightly moist to moist, soft to medium stiff, faint lifts, very fine to fine-grained, minor clay, oxidation, gravel-sized sandstone fragments, abundant roots, brick fragments

4' OLDER ALLUVIUM

@ 4' – 8' Silty to Sandy CLAY (CL) – off-white to grayish-brown mottled, moist, medium stiff to stiff, low plasticity, minor oxidation, pinhole porosity, abundant caliche stringers, very fine to fine-grained, minor roots

8' SANTIAGO FORMATION

@ 8' – 12' Silty SANDSTONE (SM) – light yellowish-gray to light yellowish-brown mottled, very moist, loose, massive, fine to medium-grained, oxidized, moderately indurated, friable.

Total Trench Depth = 12'
No Groundwater; Trench Backfilled

Trench Excavated on July 31, 2019

LEGEND

Approximate Trench Limits

Ground Surface

Scale: 1" = 4'

Note: All Locations Are Approximate

TRENCH LOG T-21

Centerpoint Integrated Solutions, LLC
Proposed CarMax Development
Plaza/Hacienda Dr. and Thunder Dr.
Oceanside, CA
EEI Project CSI-72940.4

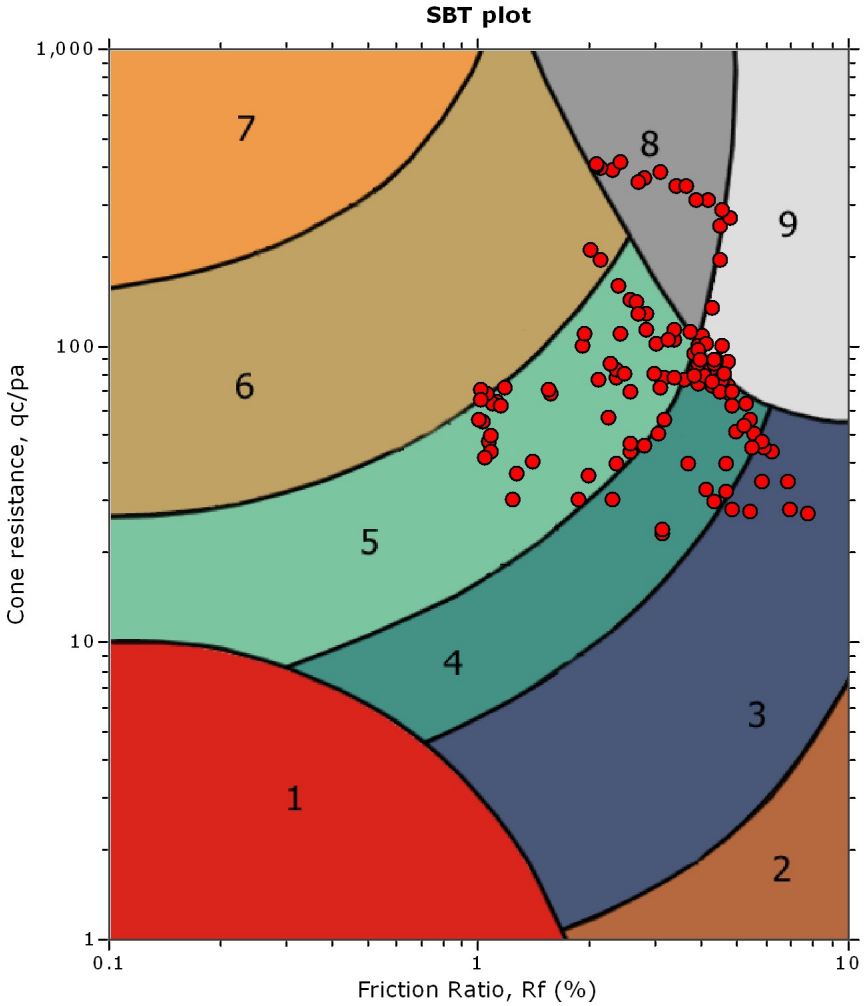
EEI Engineering Solutions

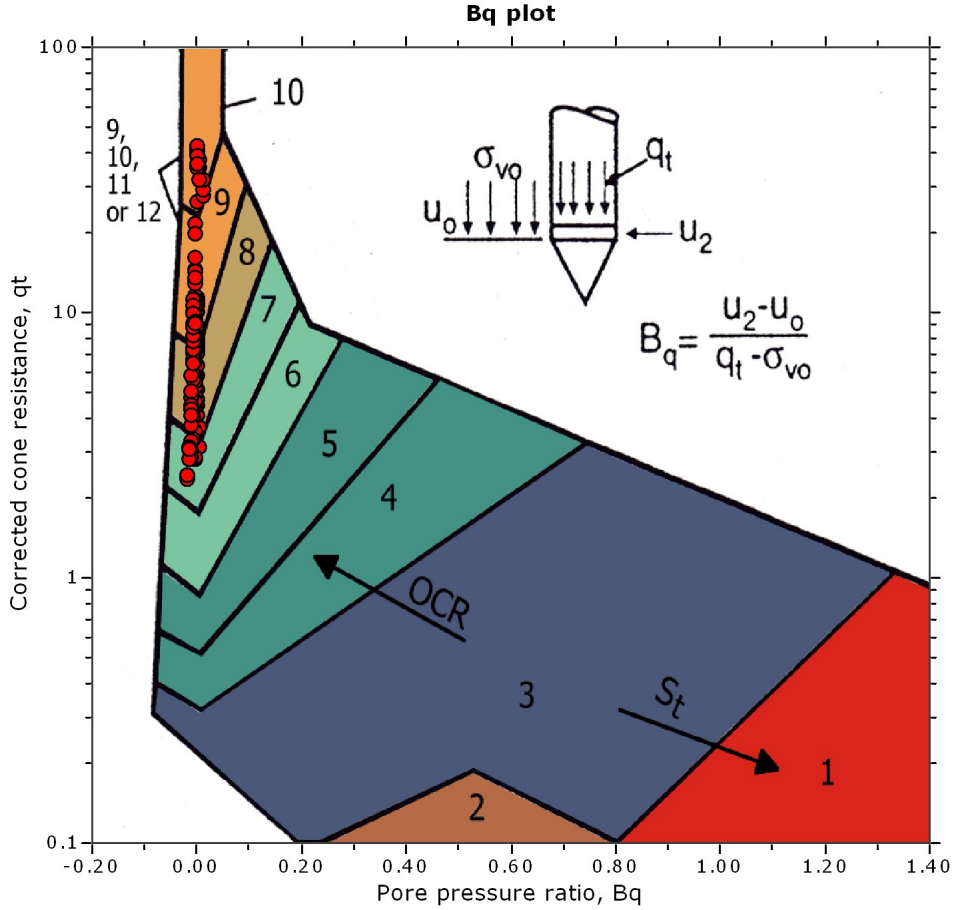
Environmental Equalizers Inc. (EEI)
Geotechnical Engineers
3146 Tiger Run Court, Suite 119
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-01
Total depth: 20.51 ft, Date: 7/12/2019
Surface Elevation: 200.00 ft
Cone Type: DDG1379
Cone Operator: Middle Earth Geotechnical Testing

SBT - Bq plots





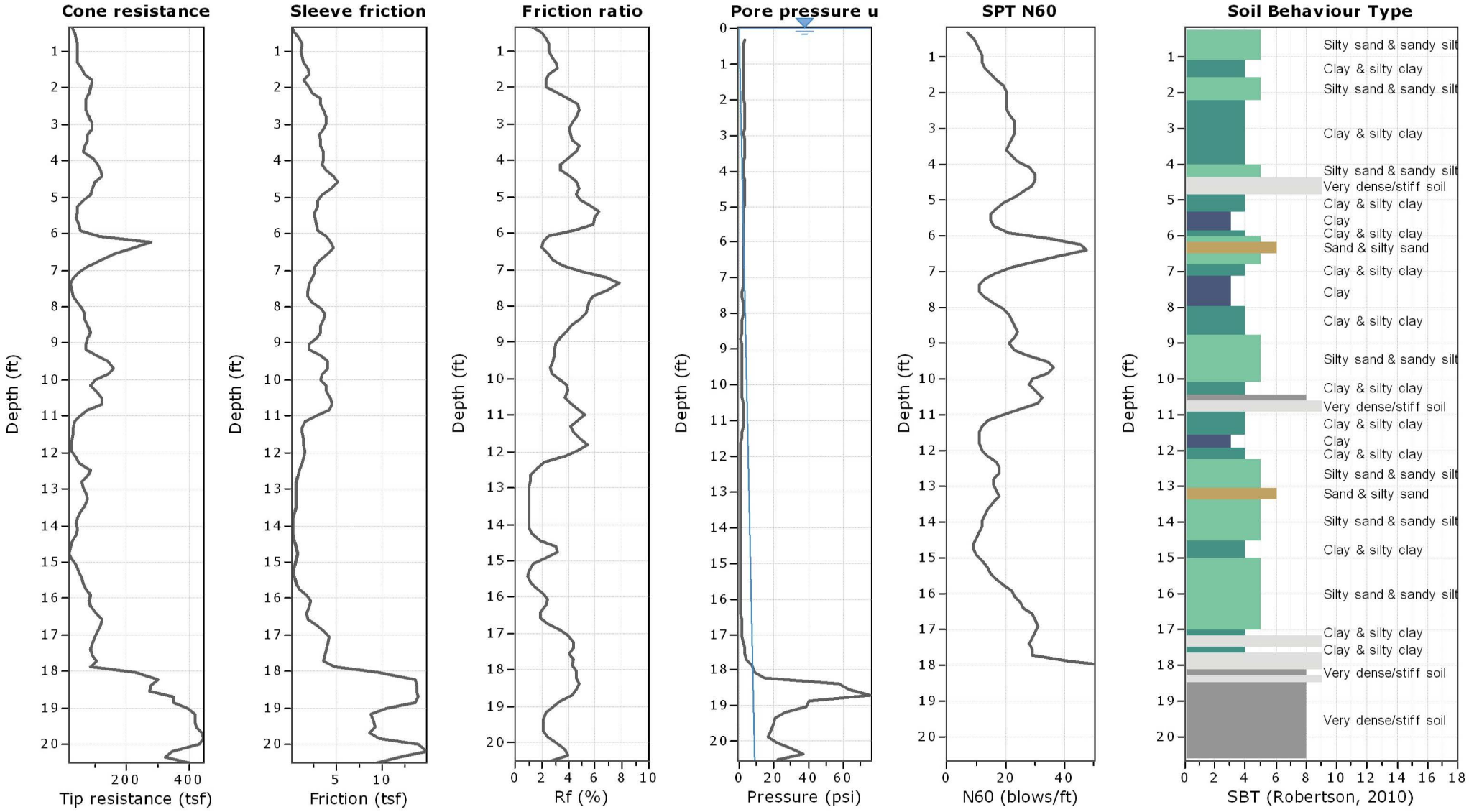
SBT legend

1. Sensitive fine grained	4. Clayey silt to silty clay	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to clayey sand
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

Environmental Equalizers Inc. (EEI)
Geotechnical Engineers
3146 Tiger Run Court, Suite 119
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-01
Total depth: 20.51 ft, Date: 7/12/2019
Surface Elevation: 200.00 ft
Cone Type: DDG1379
Cone Operator: Middle Earth Geotechnical Testing

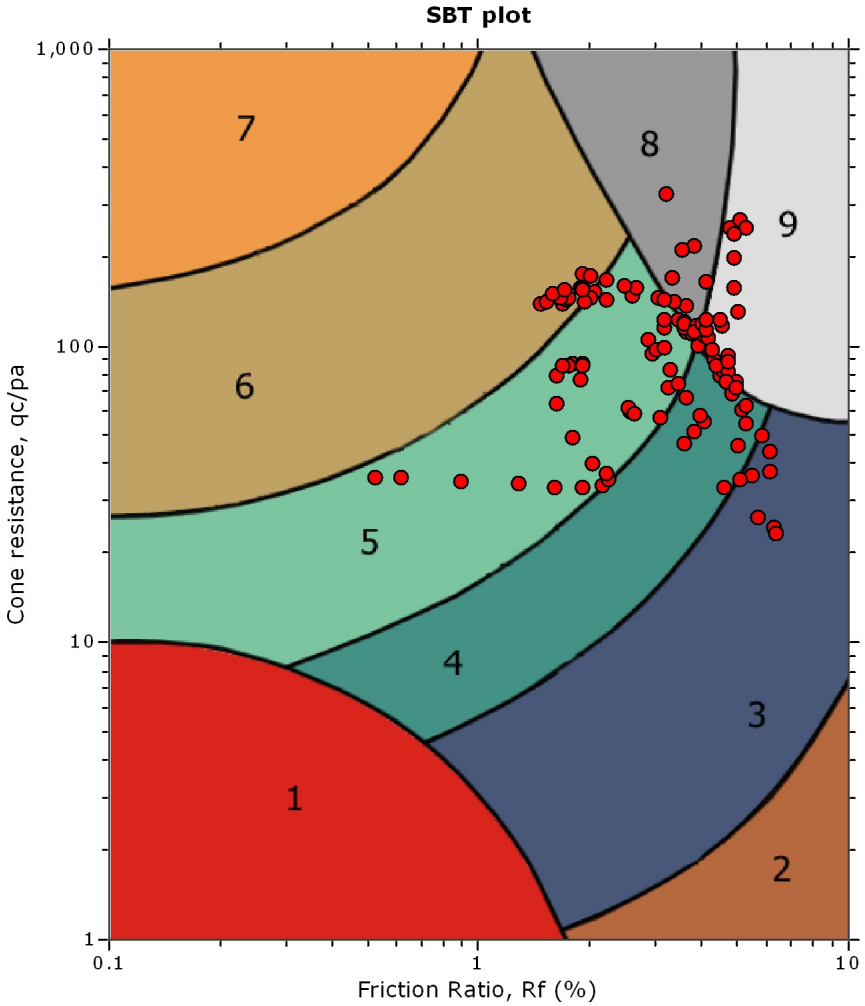


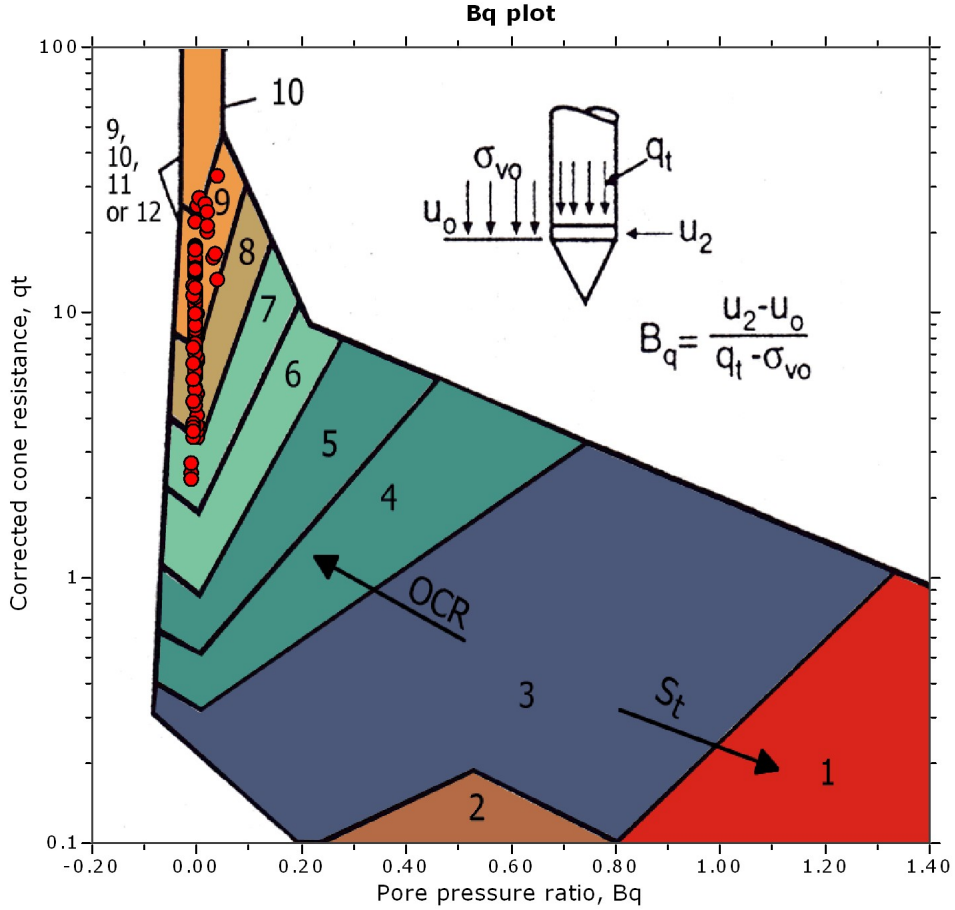
Environmental Equalizers Inc. (EEI)
Geotechnical Engineers
3146 Tiger Run Court, Suite 119
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-02
Total depth: 19.85 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown

SBT - Bq plots





SBT legend

1. Sensitive fine grained	4. Clayey silt to silty clay	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to clayey sand
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

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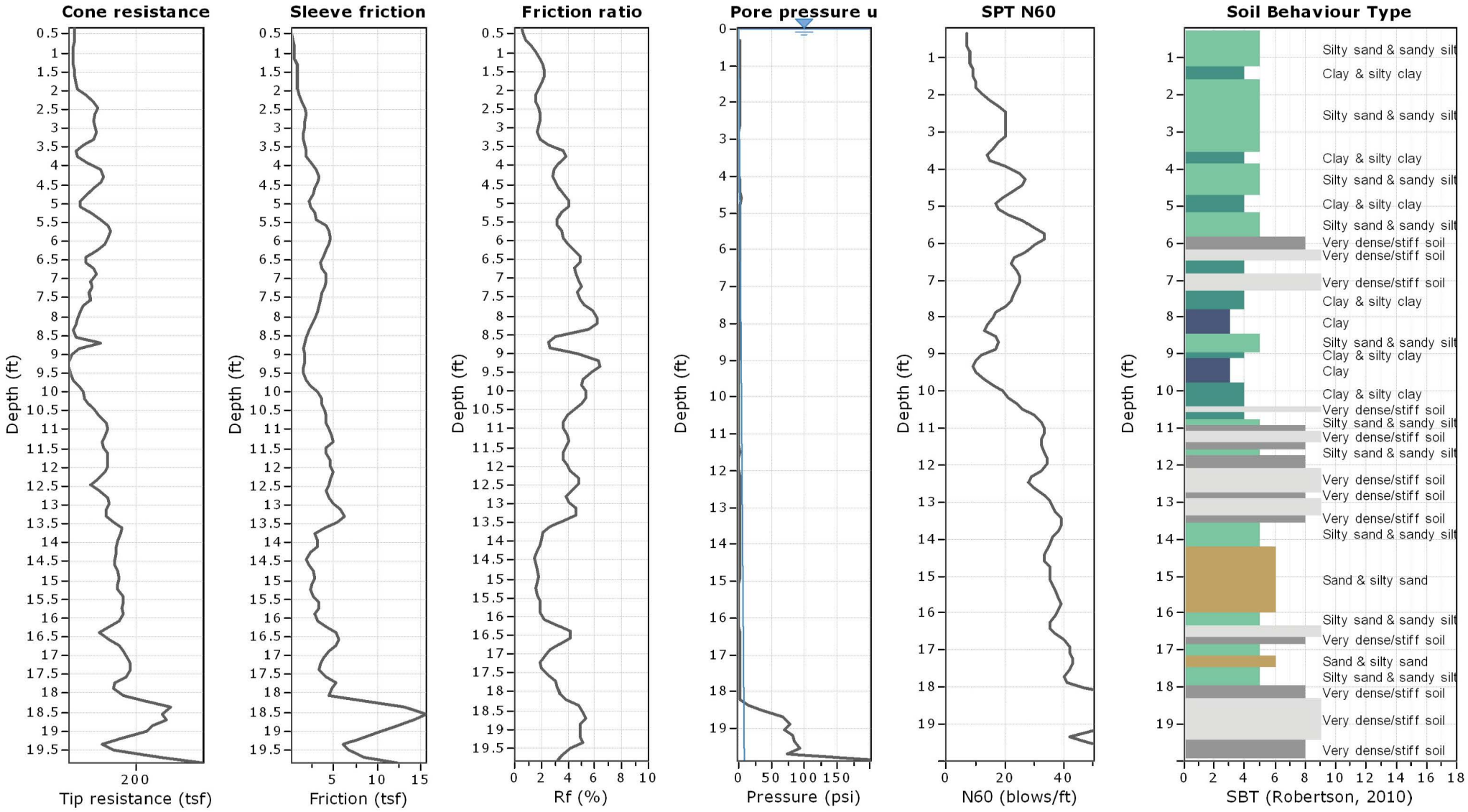
Geotechnical Engineers
3146 Tiger Run Court, Suite 119
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-02
Total depth: 19.85 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown



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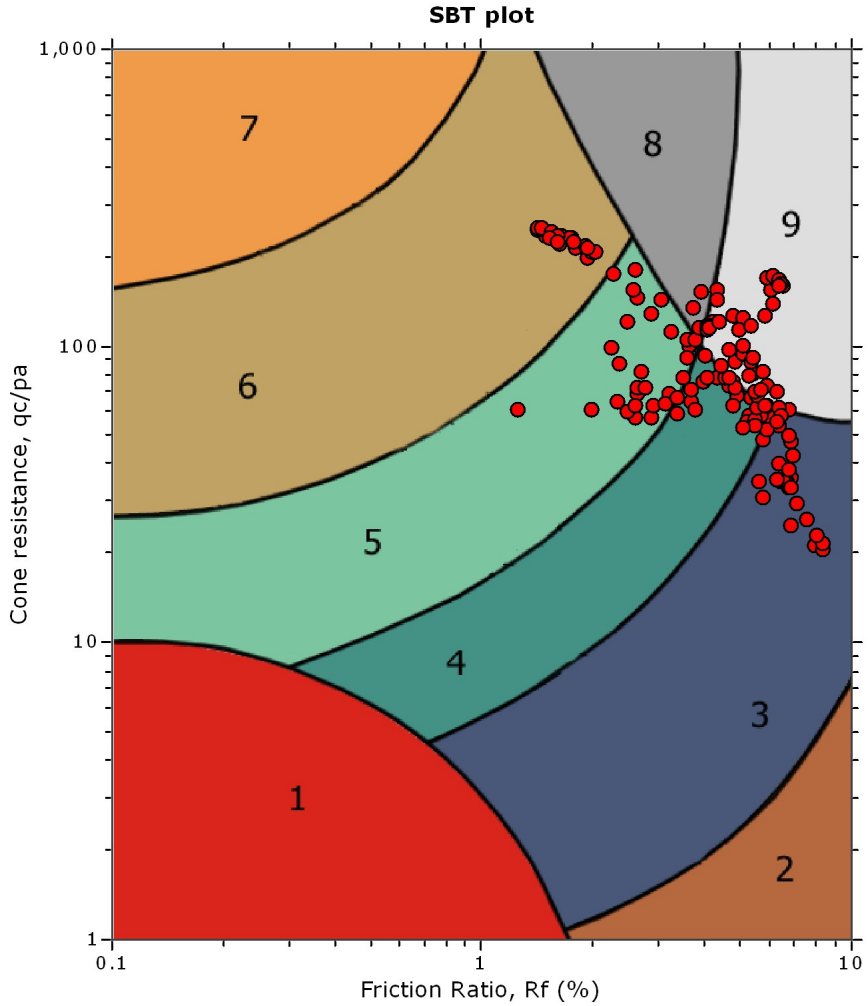
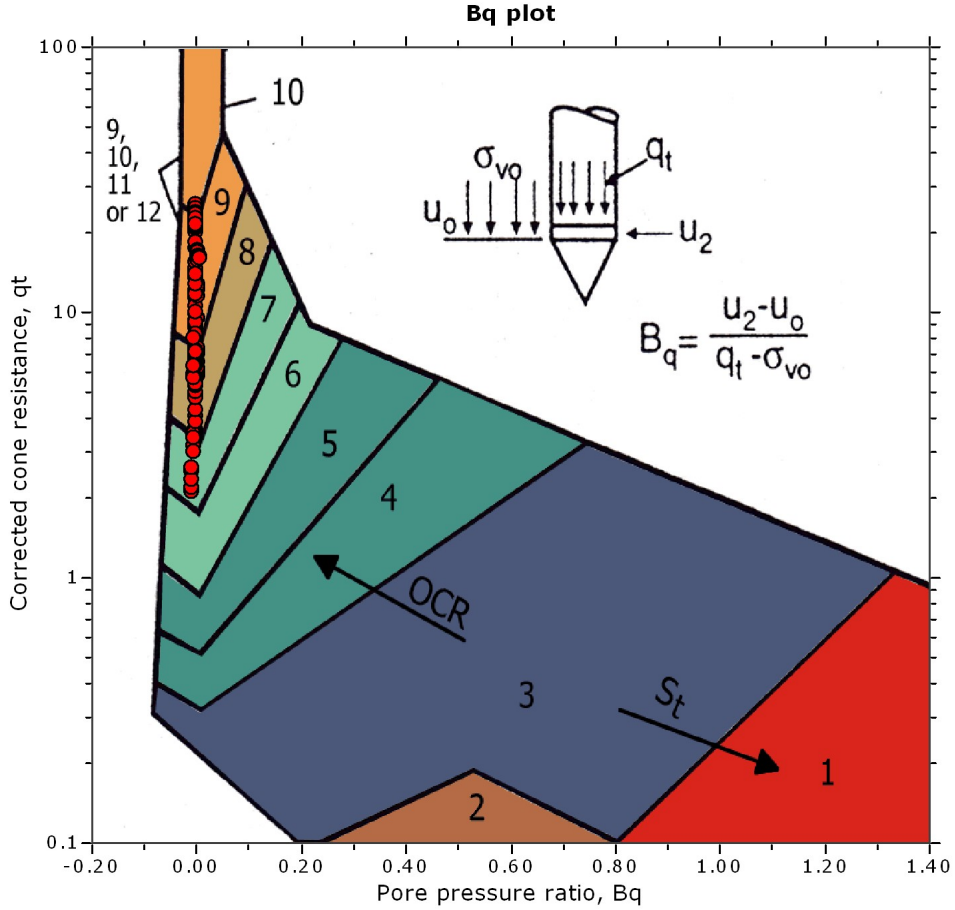
Geotechnical Engineers
3146 Tiger Run Court, Suite 119
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-03
Total depth: 24.12 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown

SBT - Bq plots





SBT legend

1. Sensitive fine grained	4. Clayey silt to silty clay	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to clayey sand
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

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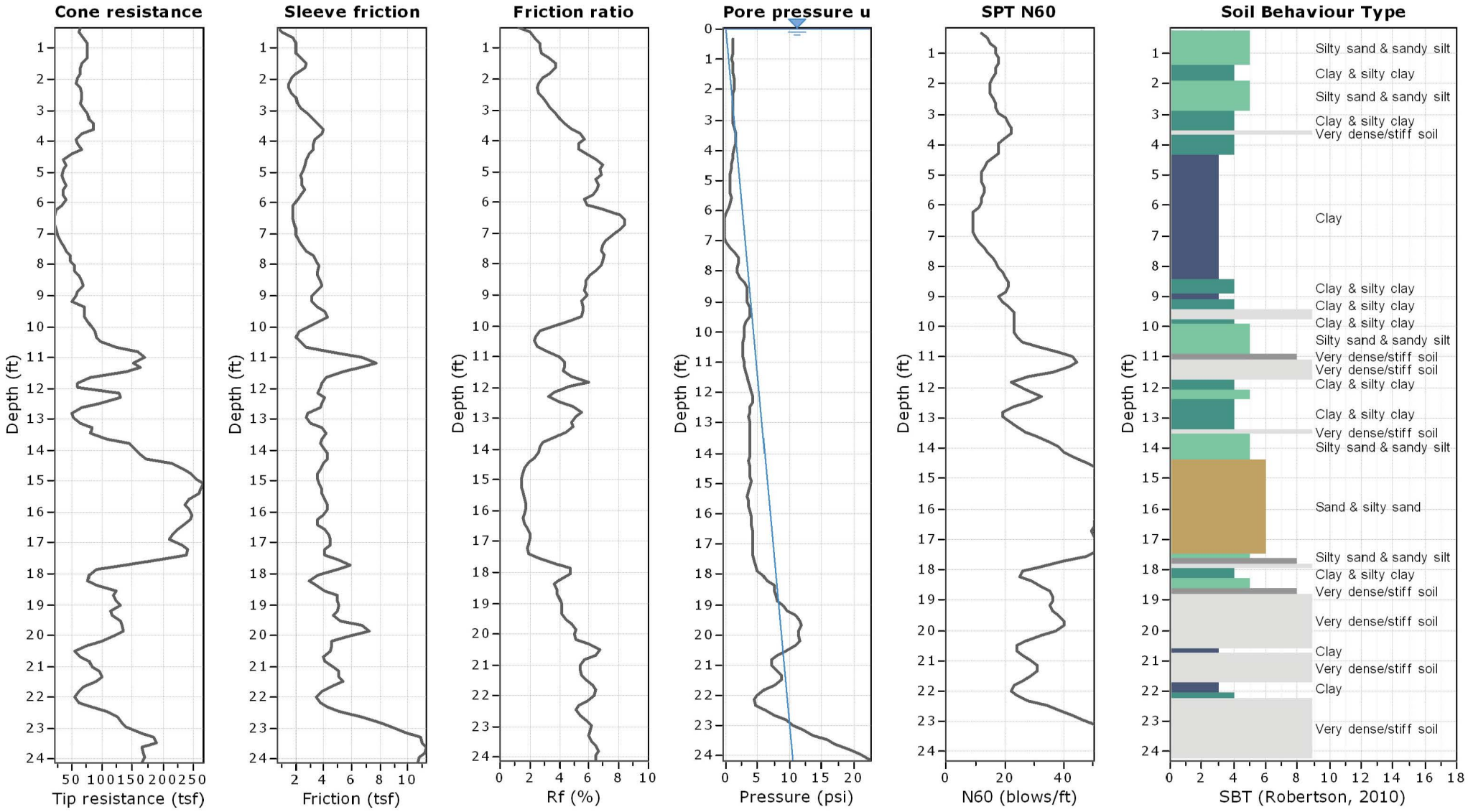
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-03
Total depth: 24.12 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown



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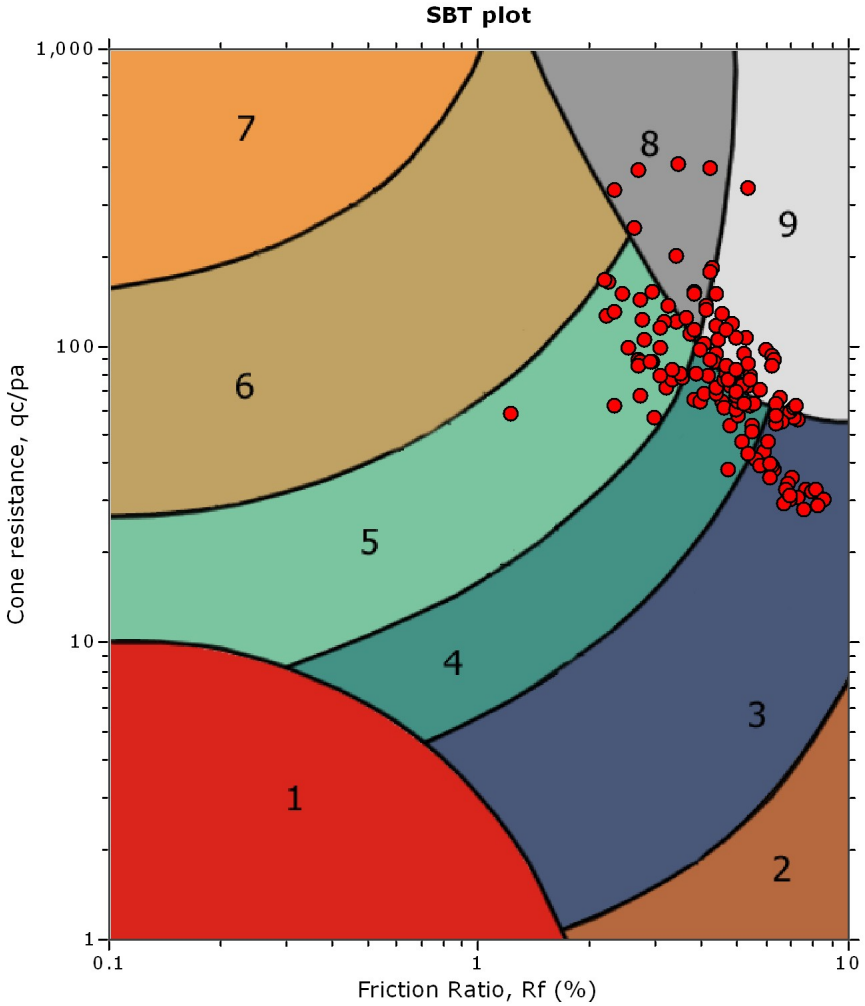
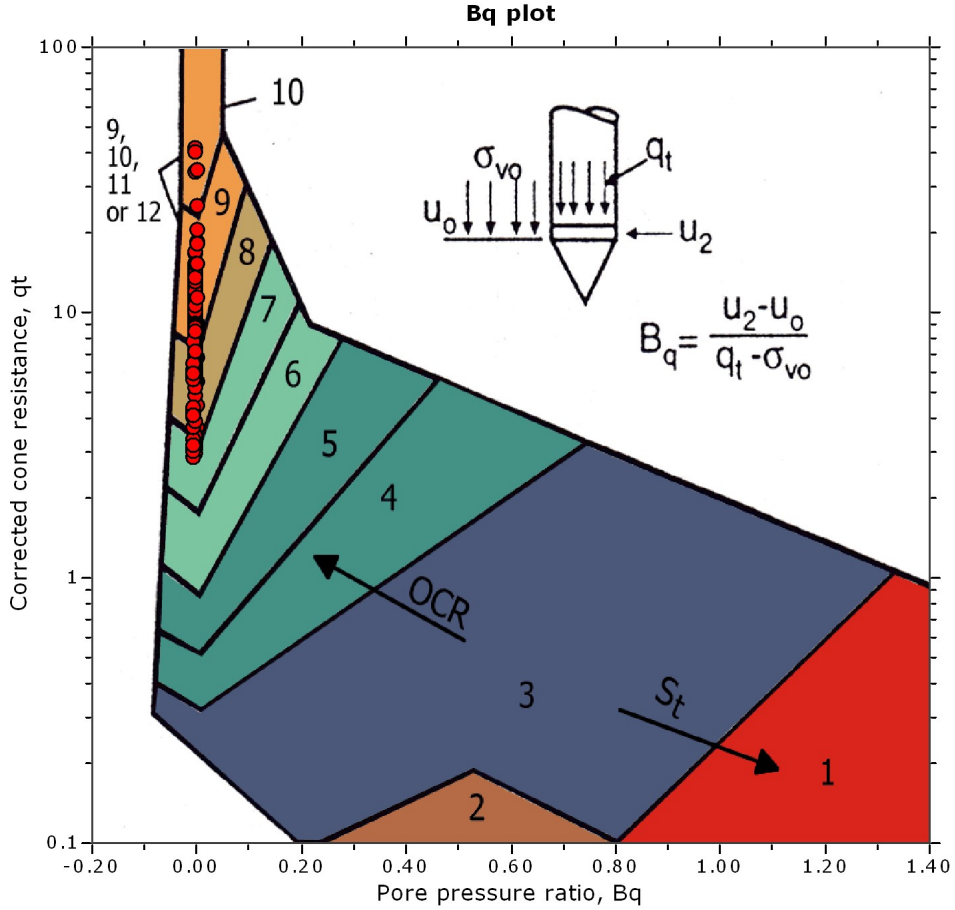
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-04
Total depth: 22.80 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown

SBT - Bq plots





SBT legend

1. Sensitive fine grained	4. Clayey silt to silty clay	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to clayey sand
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

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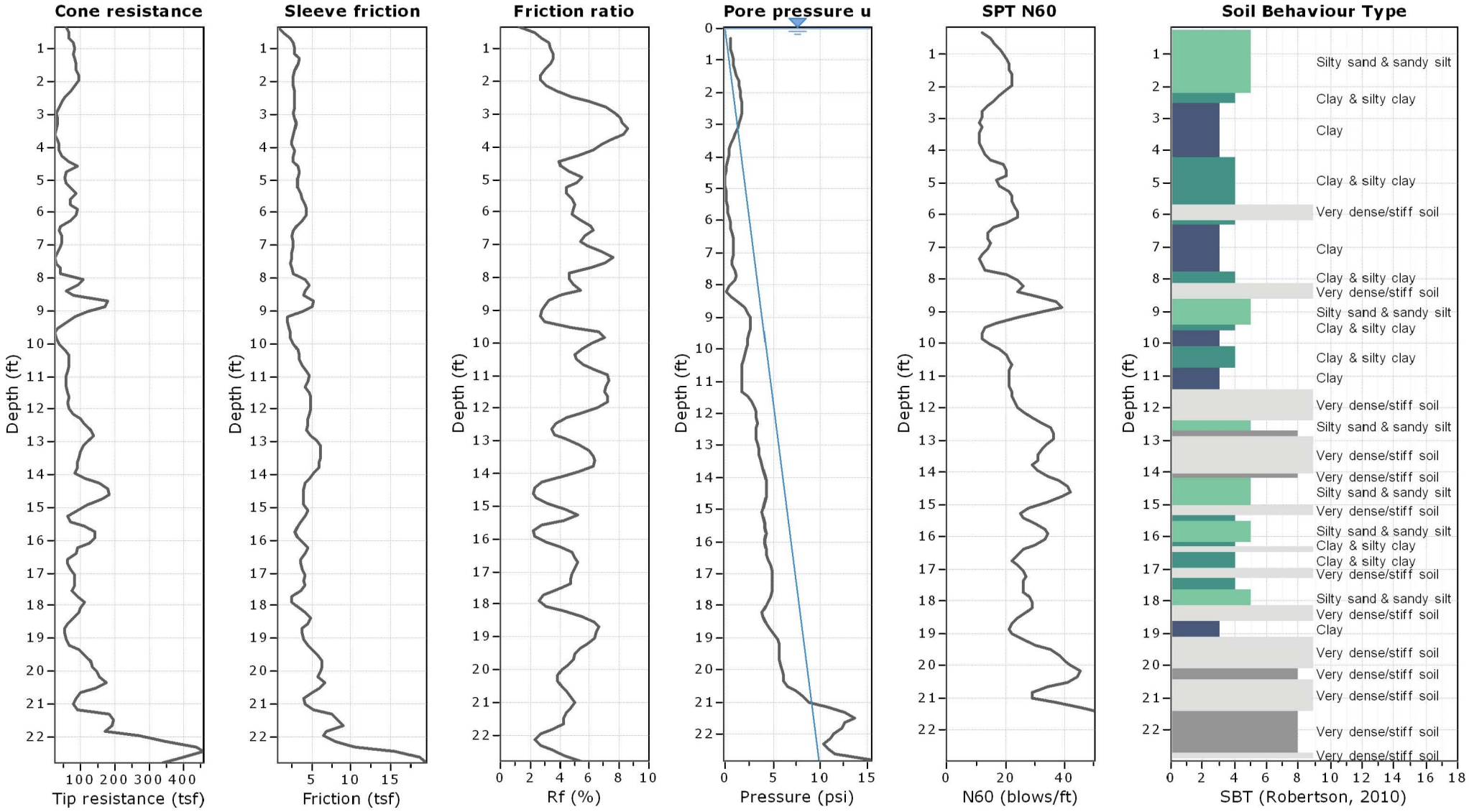
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-04
Total depth: 22.80 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown



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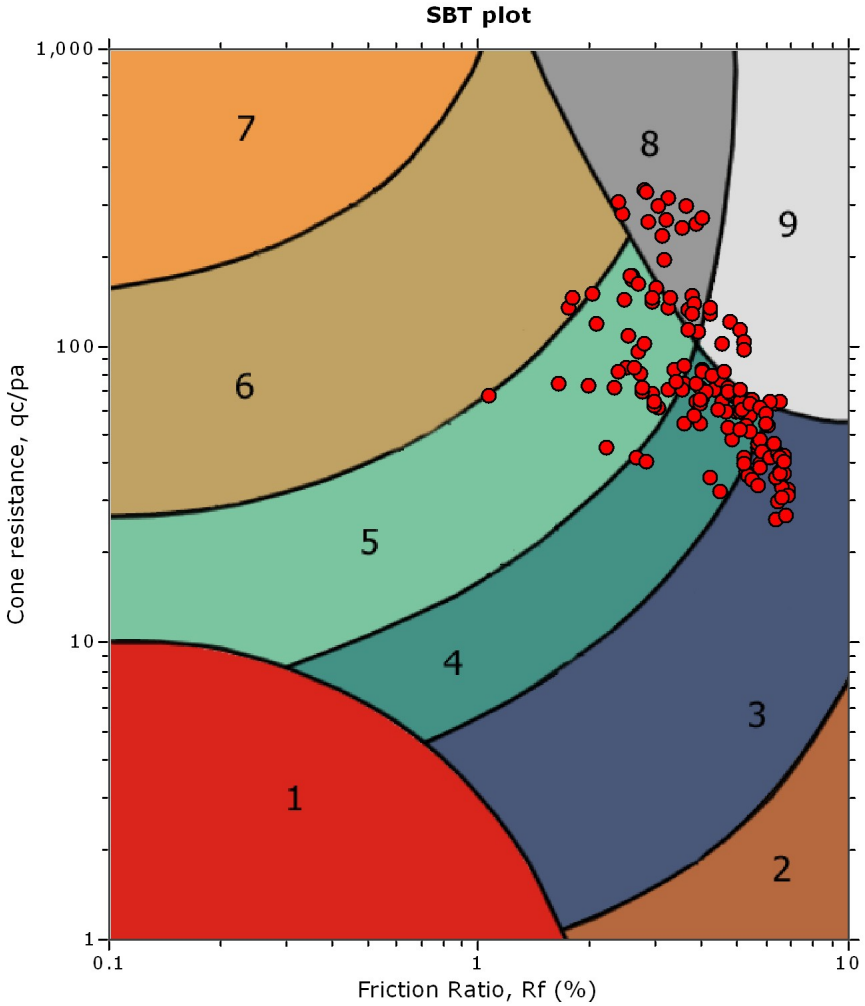
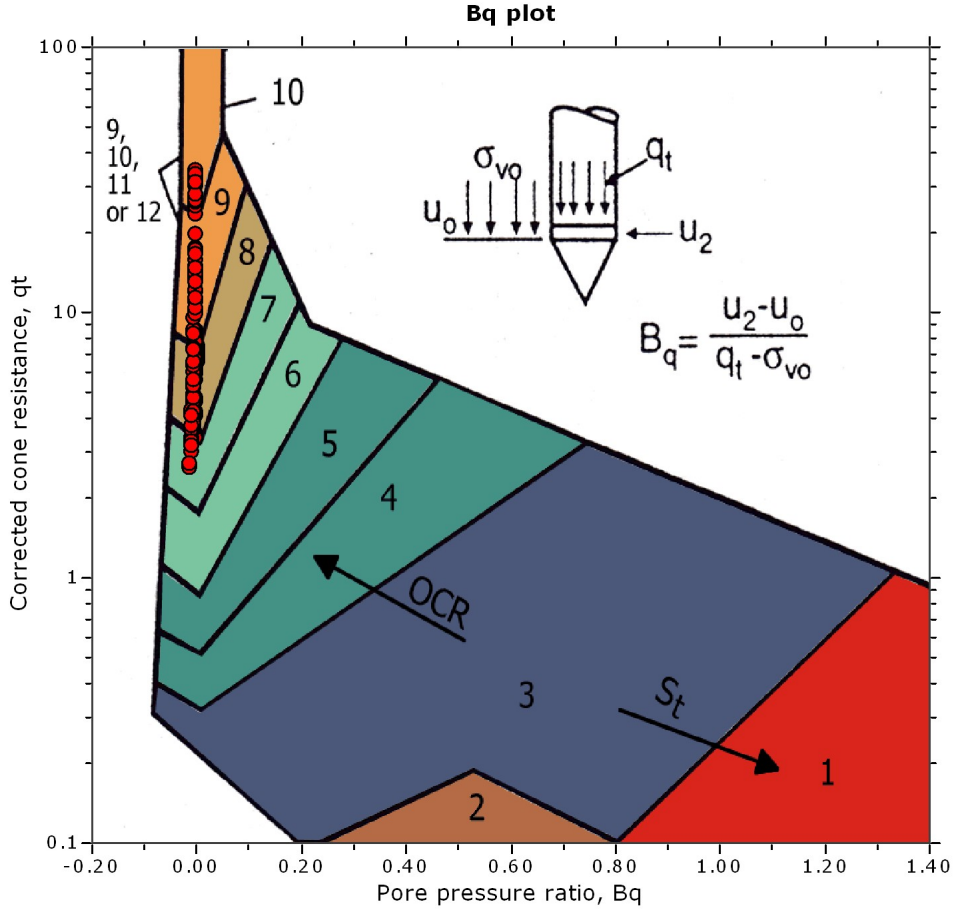
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-05
Total depth: 23.79 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown

SBT - Bq plots





SBT legend

1. Sensitive fine grained	4. Clayey silt to silty clay	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to clayey sand
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

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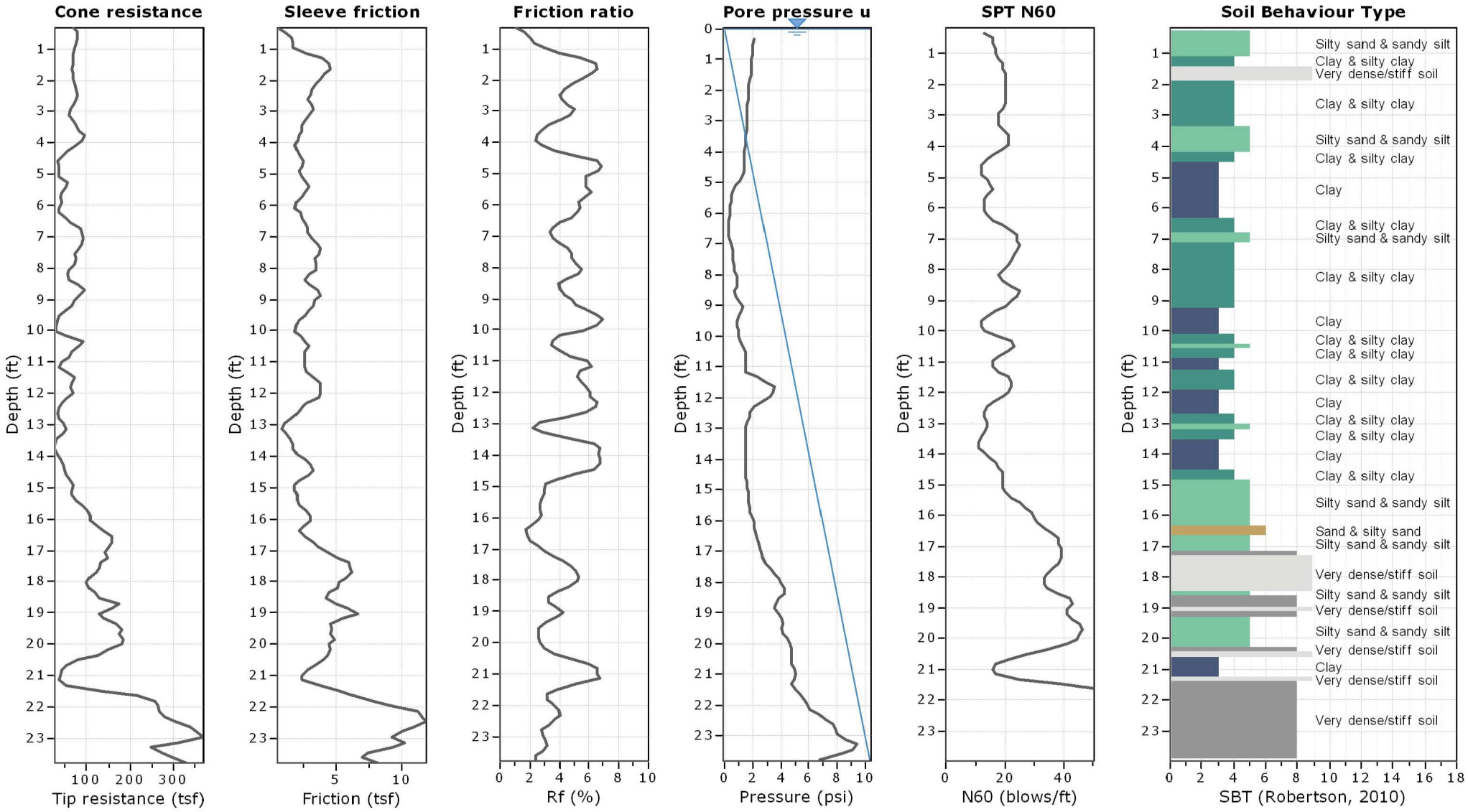
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-05
Total depth: 23.79 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown

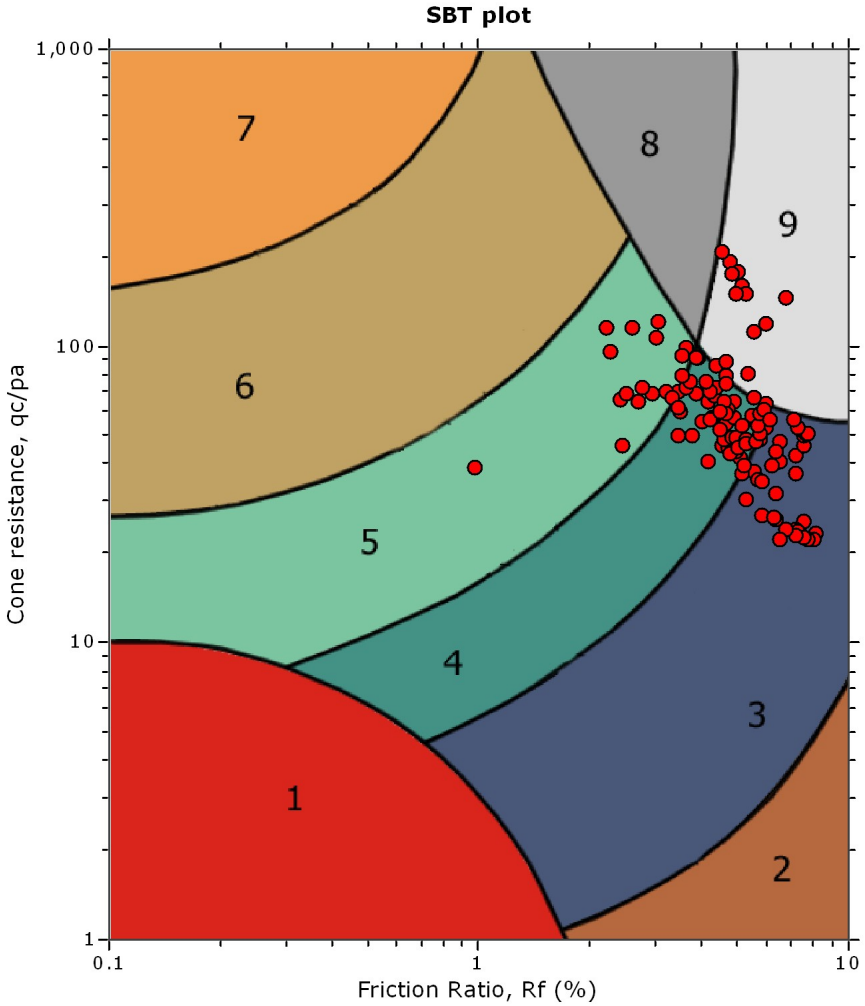


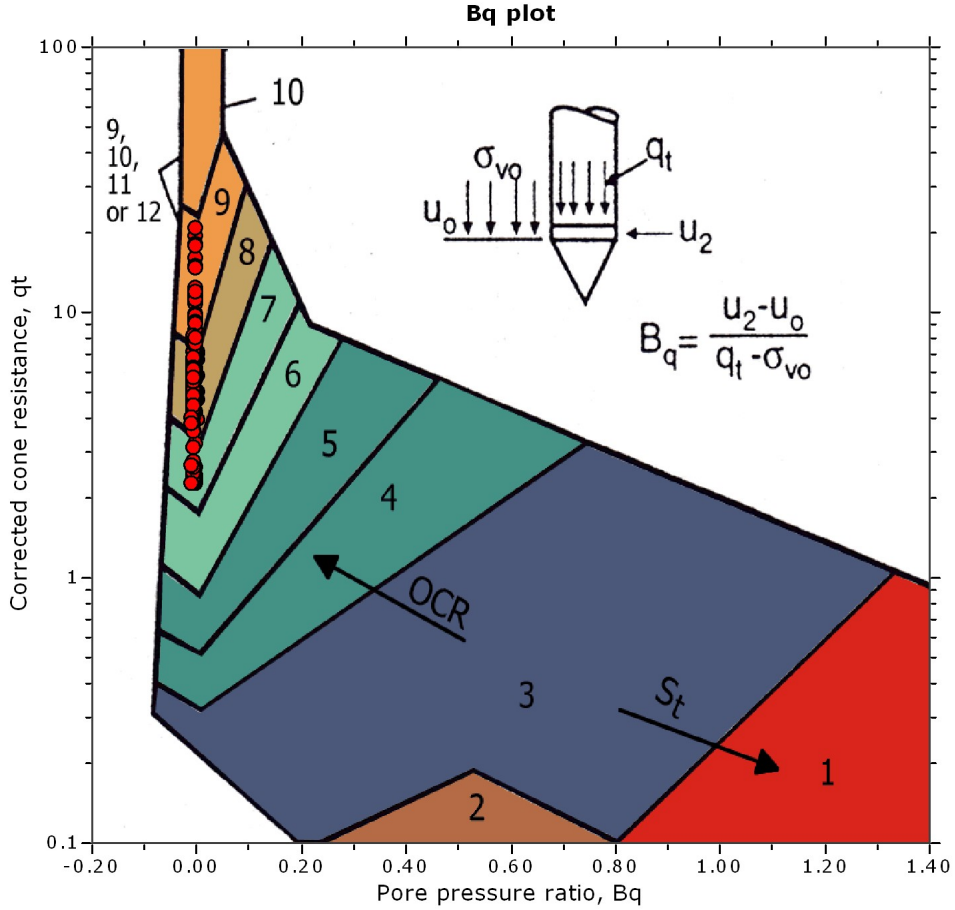
Environmental Equalizers Inc. (EEI)
Geotechnical Engineers
3146 Tiger Run Court, Suite 119
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-06
Total depth: 20.01 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown

SBT - Bq plots





SBT legend

1. Sensitive fine grained	4. Clayey silt to silty clay	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to clayey sand
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

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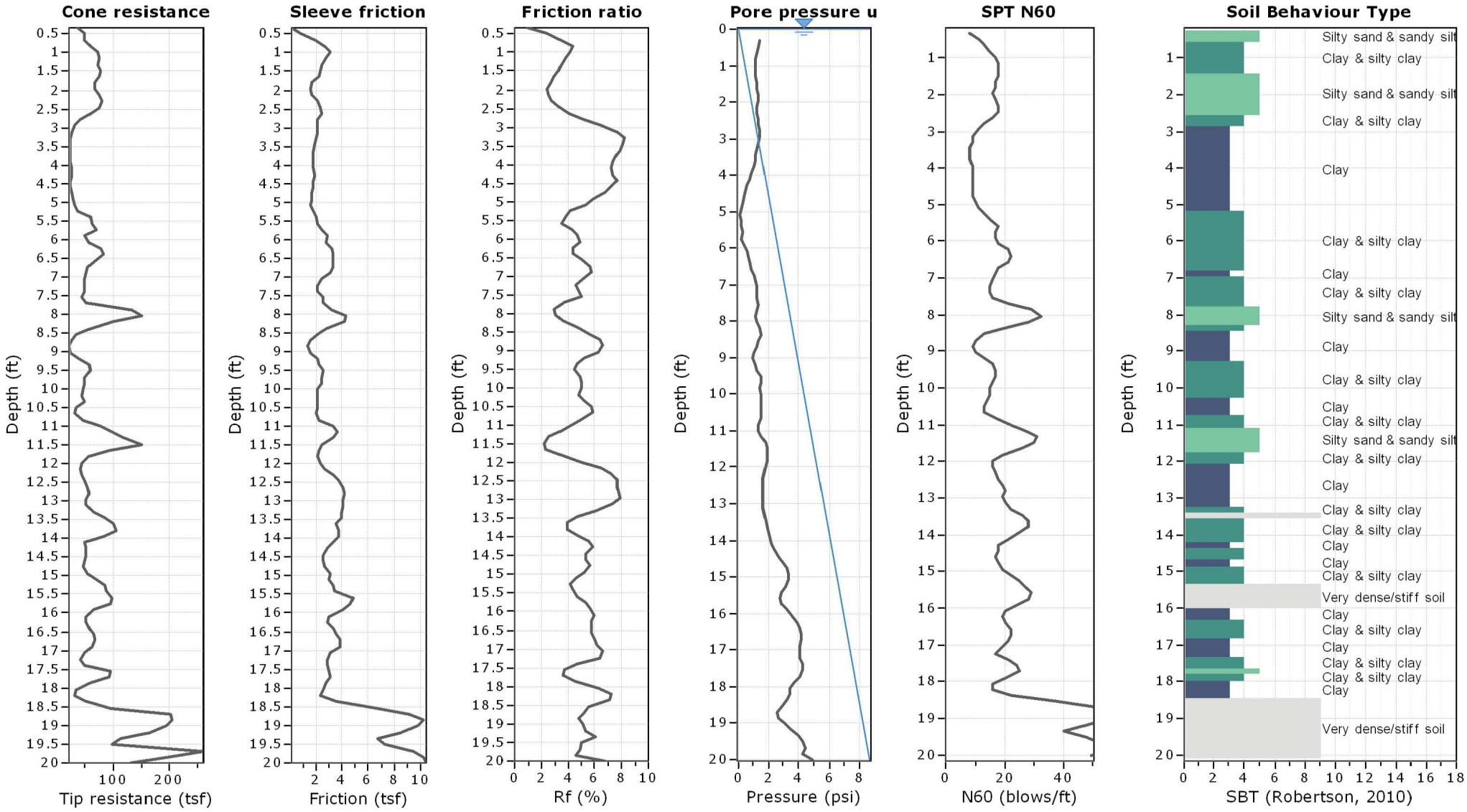
Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-06
Total depth: 20.01 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown



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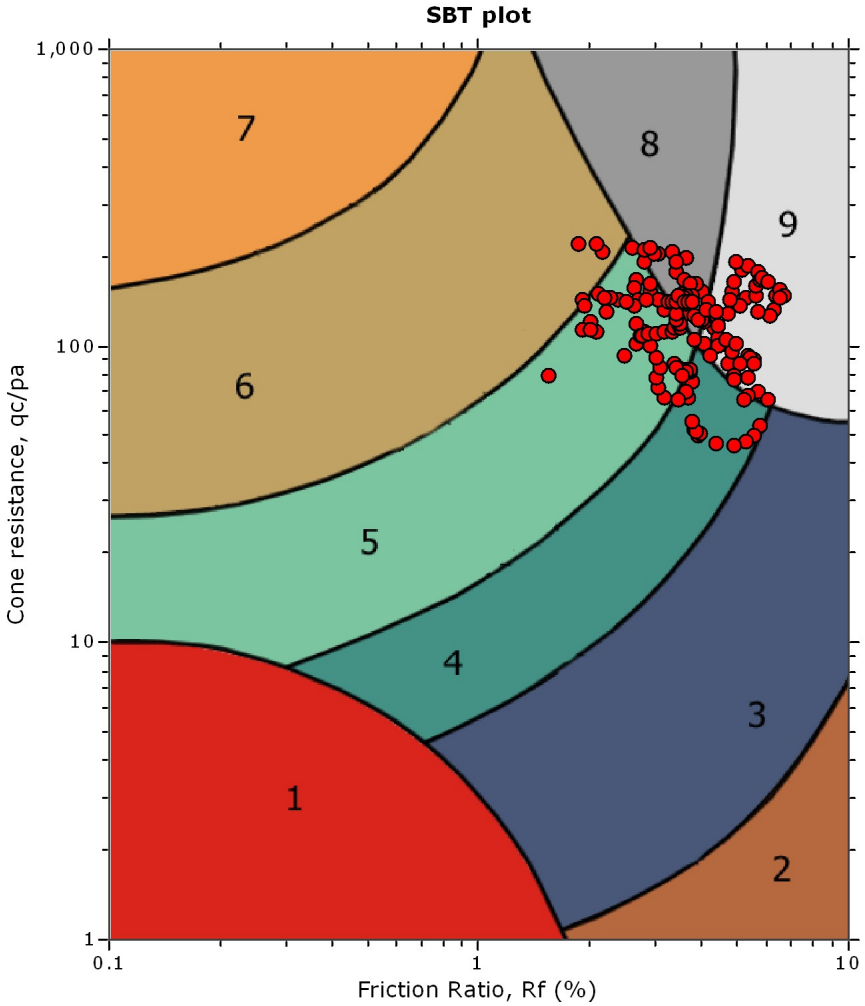
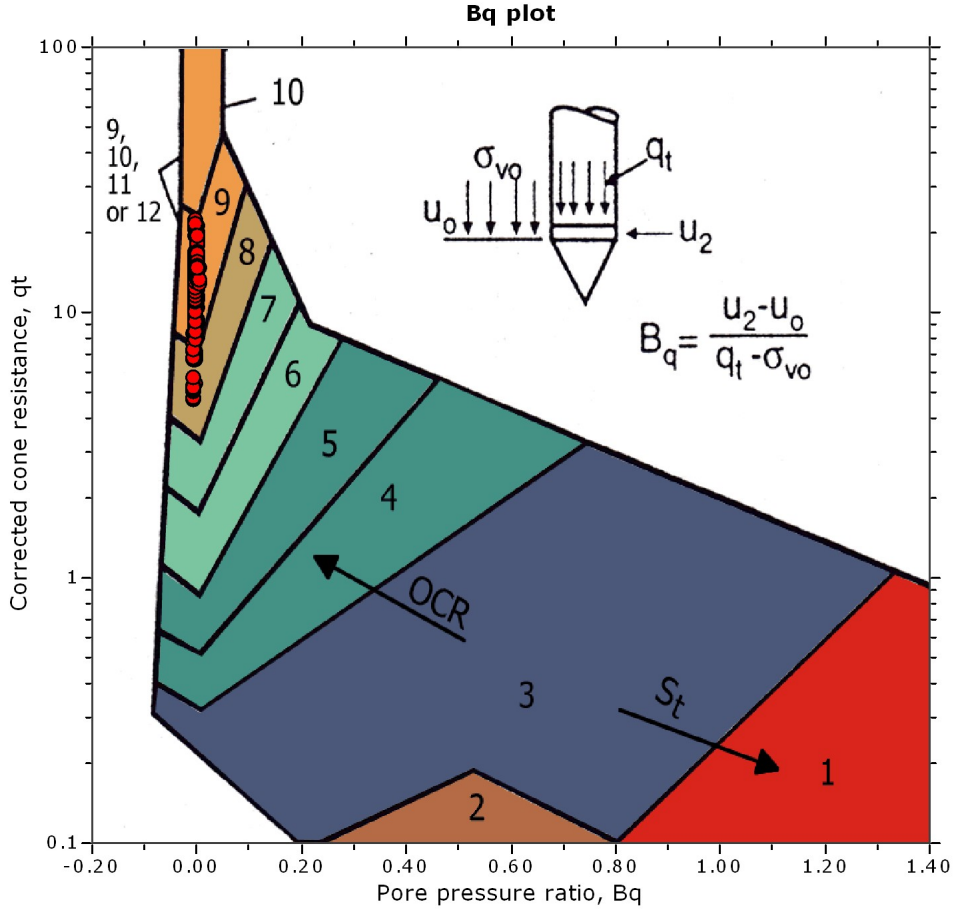
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-07
Total depth: 25.92 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown

SBT - Bq plots





SBT legend

1. Sensitive fine grained	4. Clayey silt to silty clay	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to clayey sand
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

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Geotechnical Engineers
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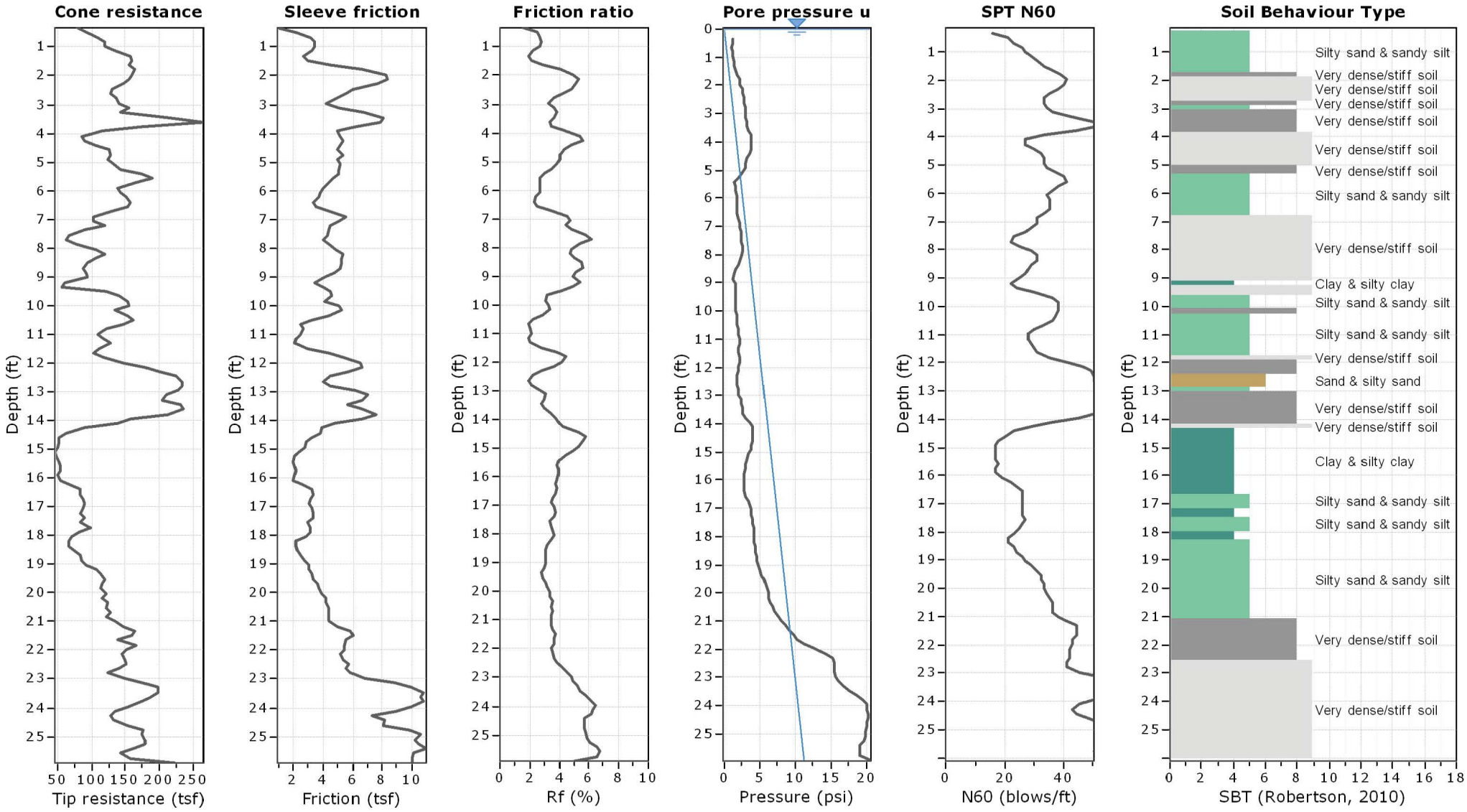
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-07
Total depth: 25.92 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown



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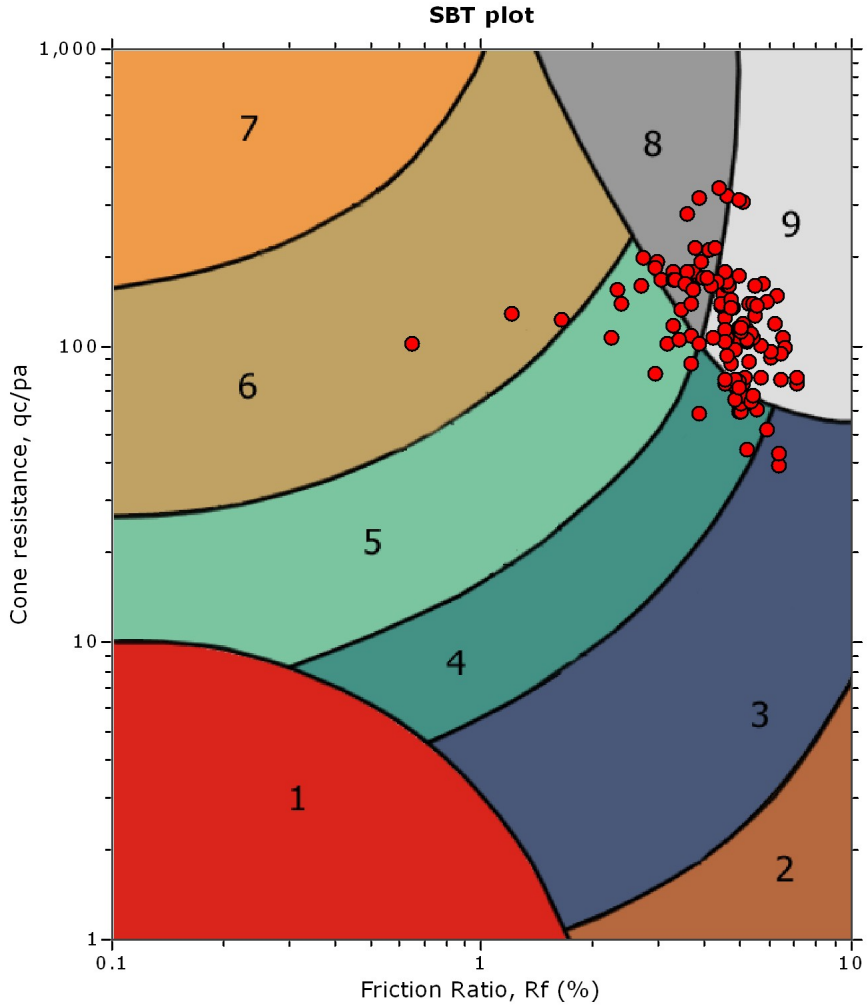
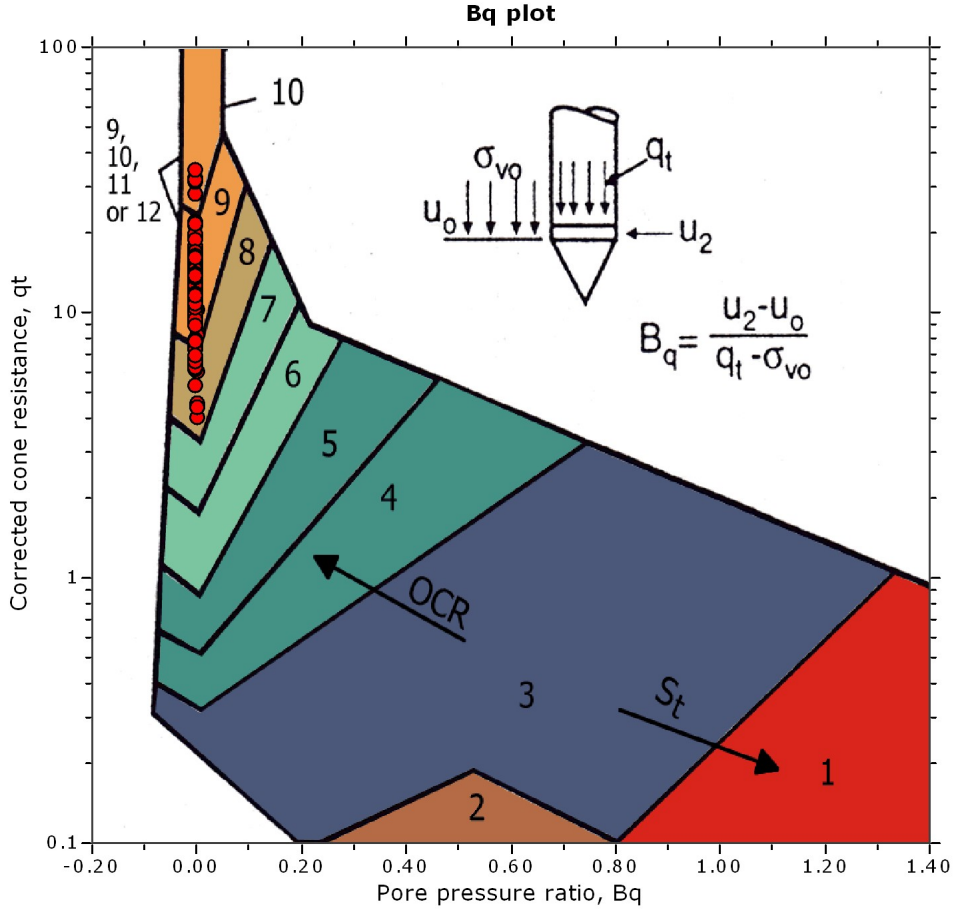
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-08
Total depth: 19.69 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown

SBT - Bq plots





SBT legend

1. Sensitive fine grained	4. Clayey silt to silty clay	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to clayey sand
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

Environmental Equalizers Inc. (EEI)
Geotechnical Engineers
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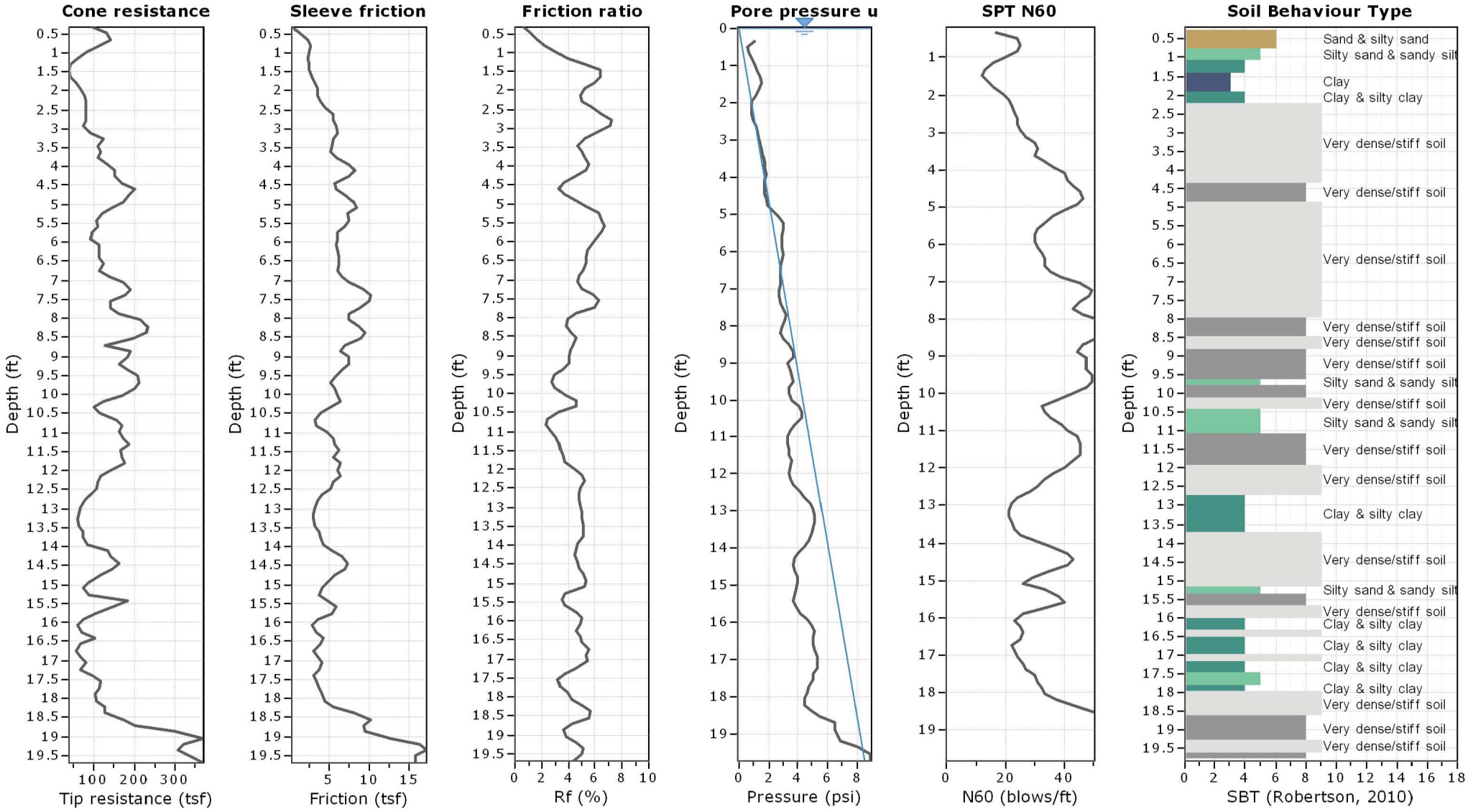
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-08
Total depth: 19.69 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown



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Geotechnical Engineers
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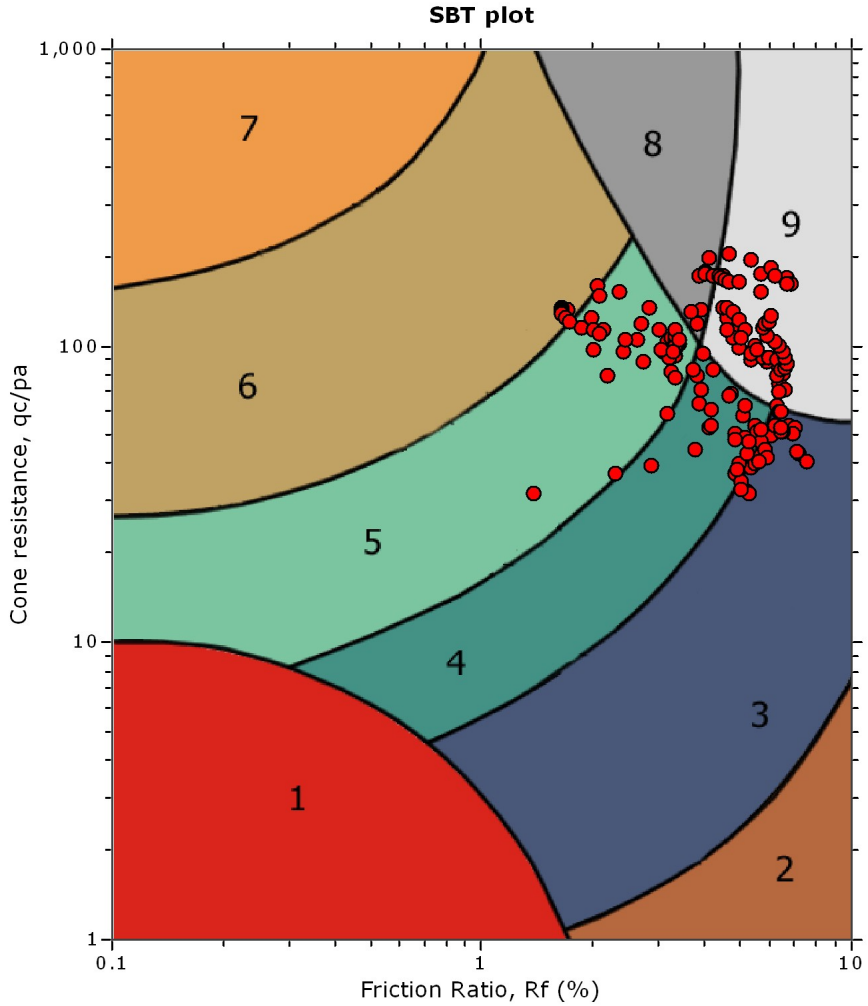
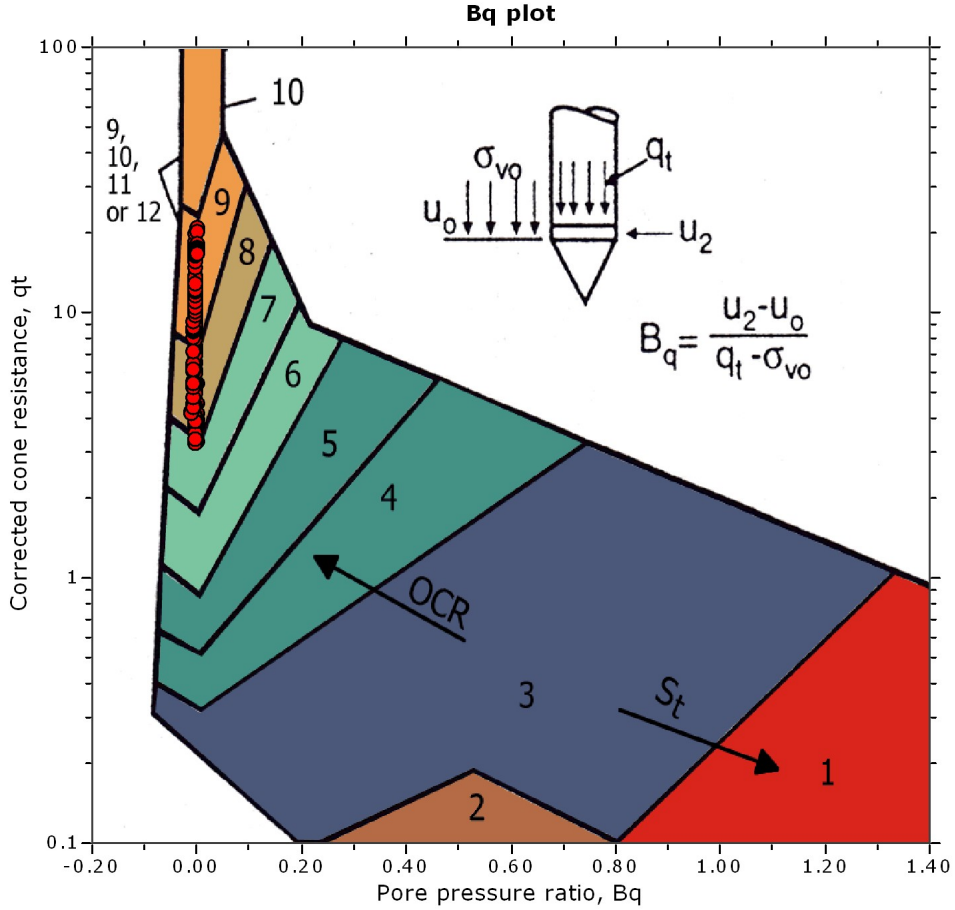
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-09
Total depth: 26.90 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown

SBT - Bq plots





SBT legend

1. Sensitive fine grained	4. Clayey silt to silty clay	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to clayey sand
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

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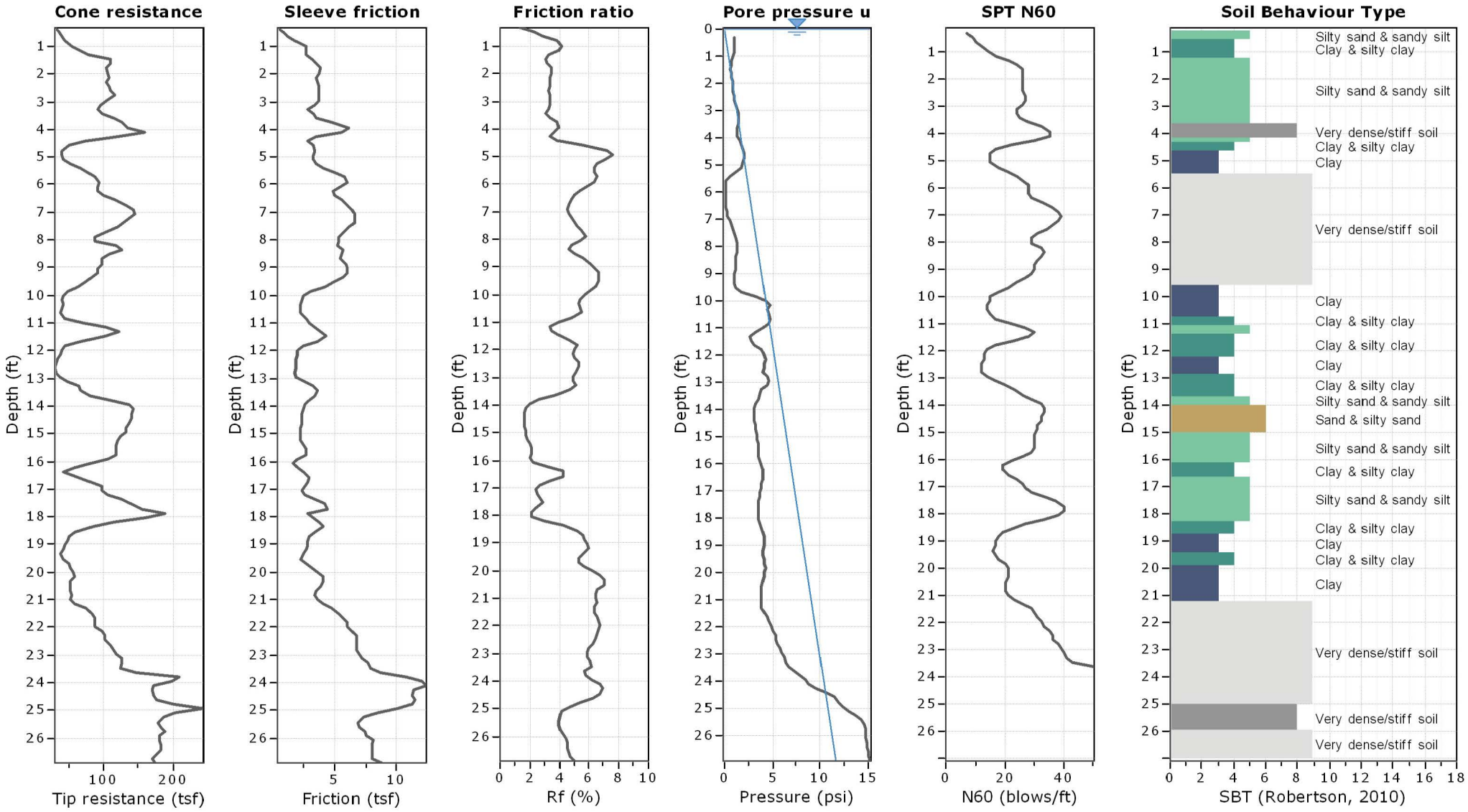
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-09
Total depth: 26.90 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown



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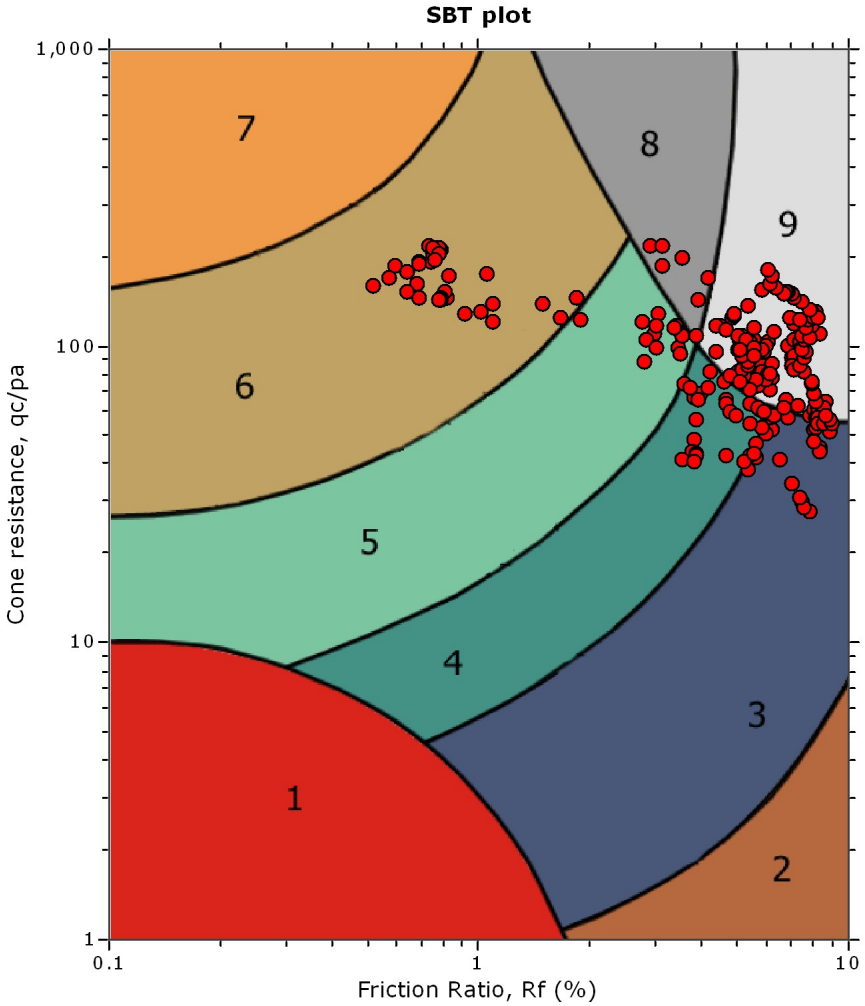
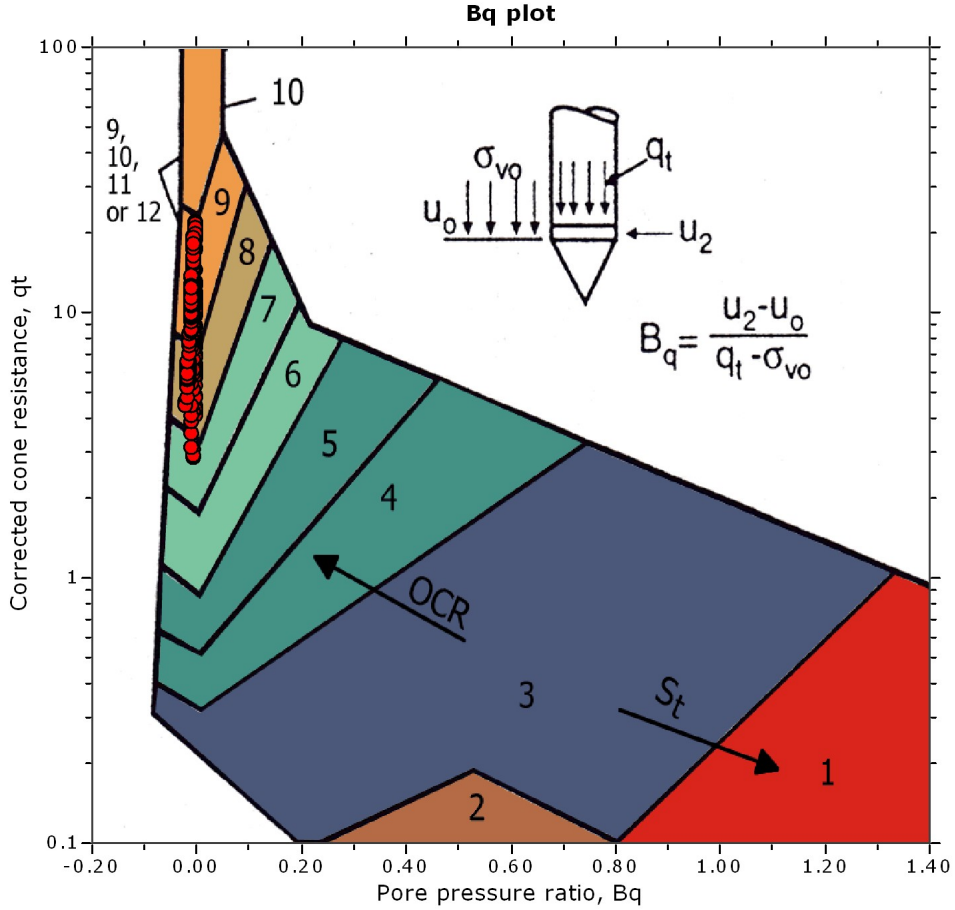
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-10
Total depth: 38.22 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown

SBT - Bq plots





SBT legend

1. Sensitive fine grained	4. Clayey silt to silty clay	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to clayey sand
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

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Geotechnical Engineers
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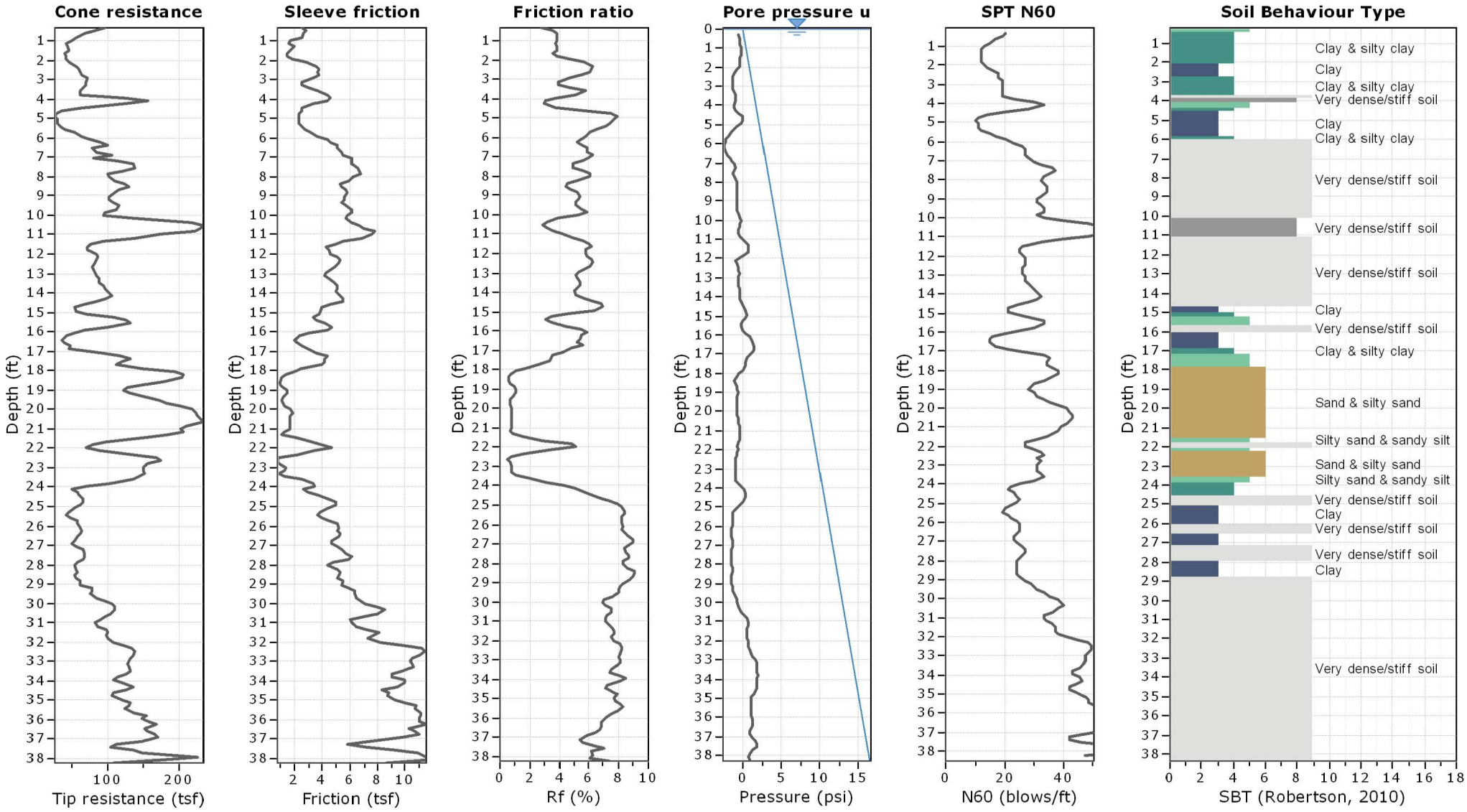
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-10
Total depth: 38.22 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown



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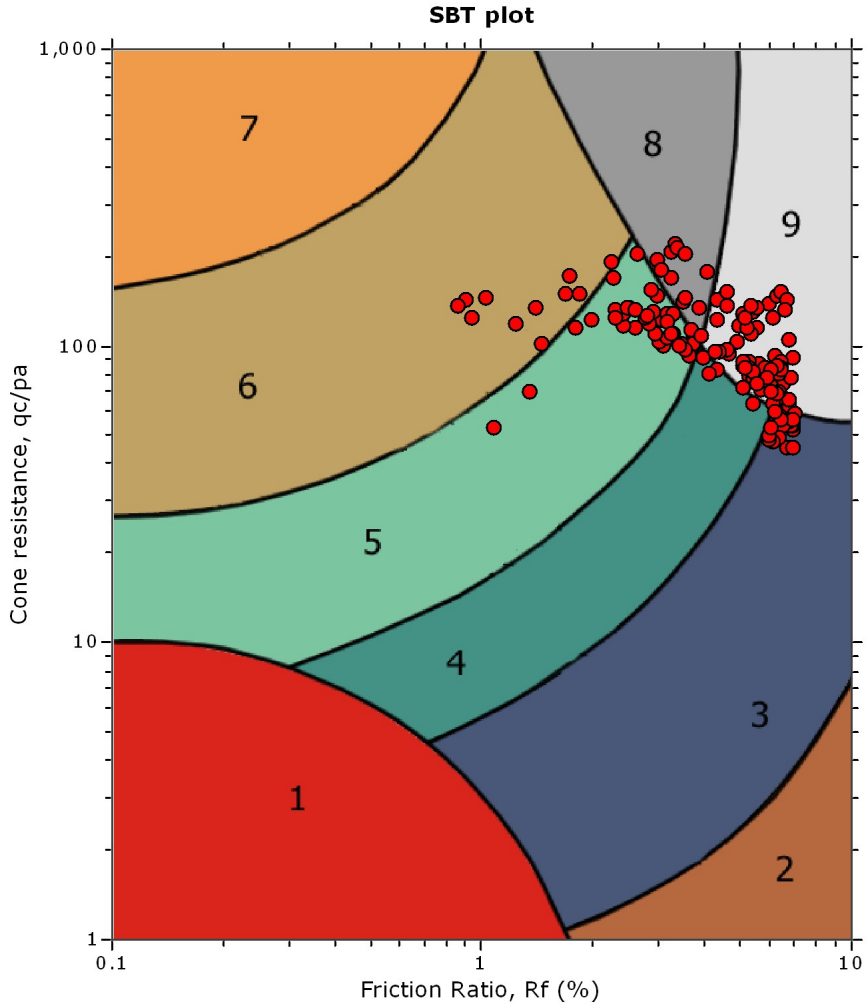
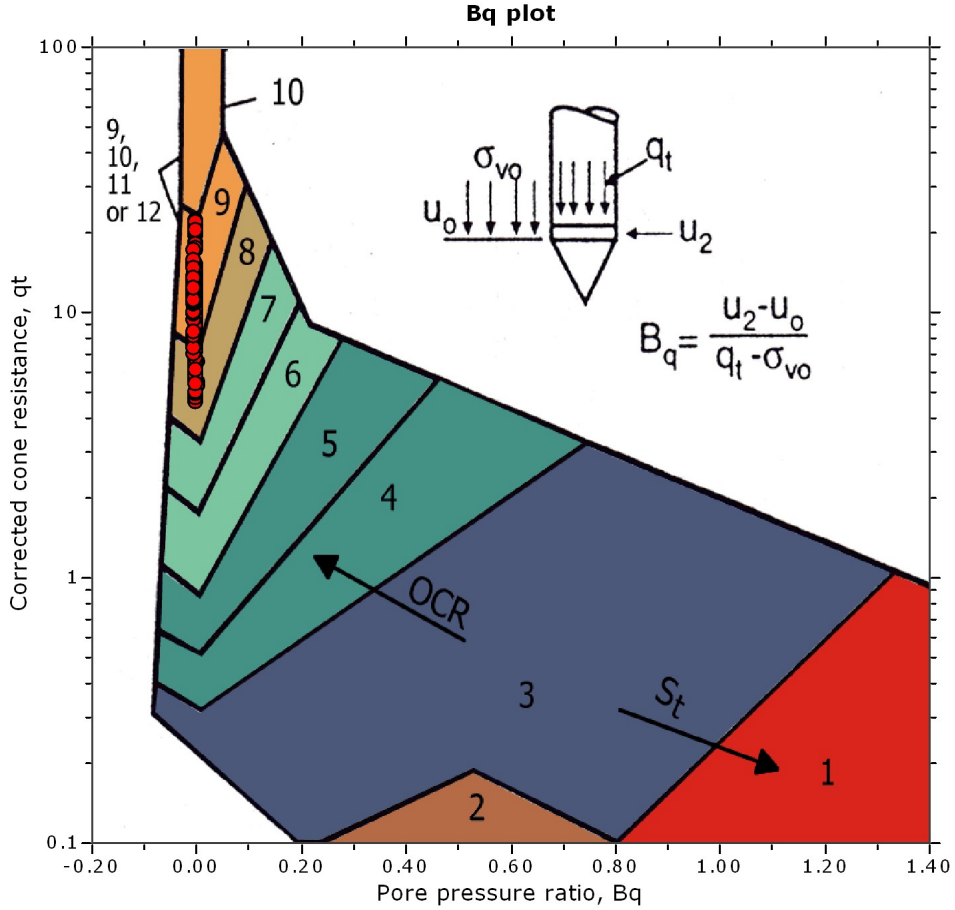
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-11
Total depth: 24.94 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown

SBT - Bq plots





SBT legend

1. Sensitive fine grained	4. Clayey silt to silty clay	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to clayey sand
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

Environmental Equalizers Inc. (EEI)
Geotechnical Engineers
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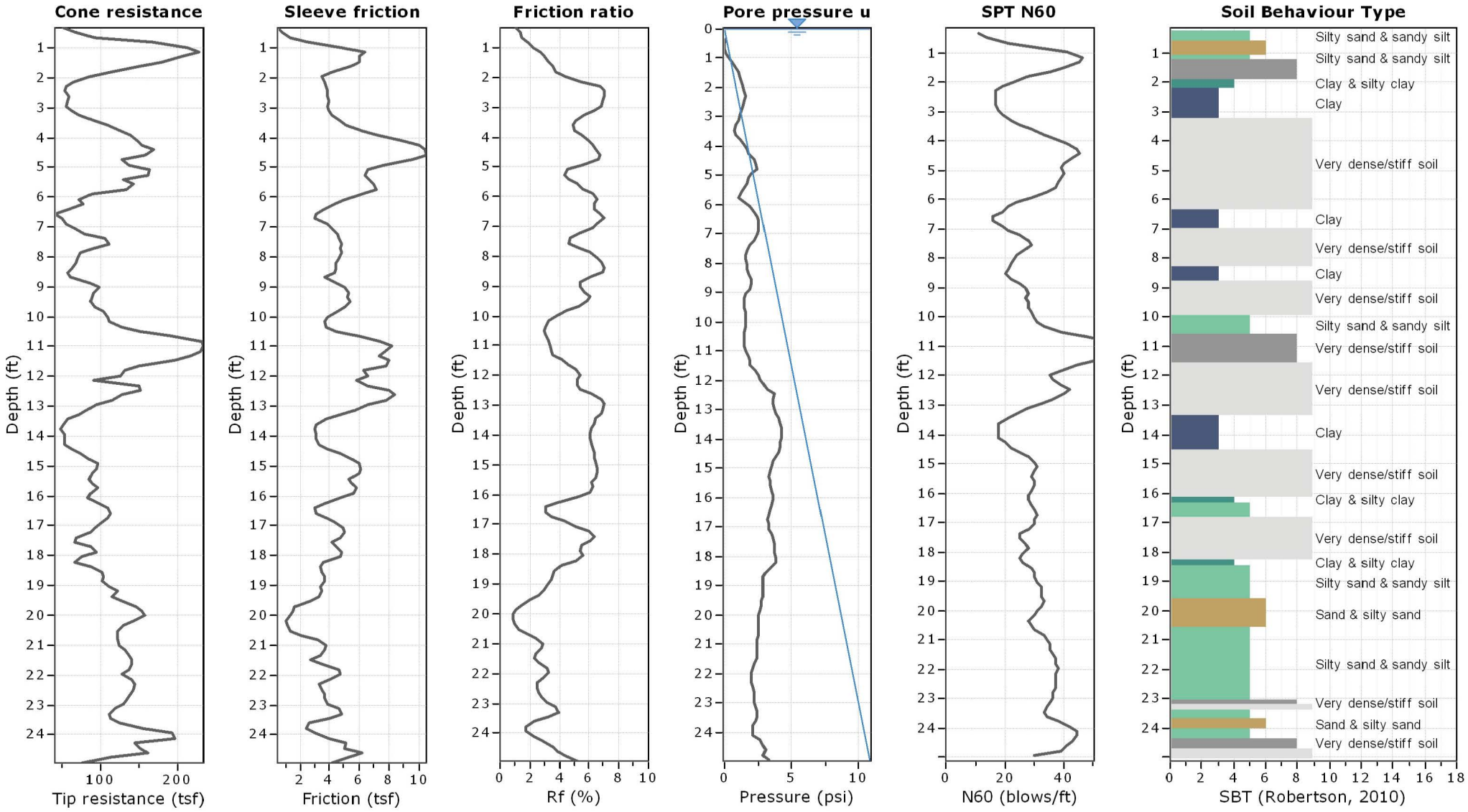
Carlsbad, CA 92010

Project: **Oceanside CarMax**
Location: **Plaza Dr. and Thunder Dr., Oceanside, CA**

CPT: CPT-11
Total depth: 24.94 ft, Date: 8/8/2019
Surface Elevation: 0.00 ft
Cone Type: Uknown
Cone Operator: Uknown



NORCAL ENGINEERING (2007) BORING LOGS

Log of Boring B-1

Project	La Caze Development / Oceanside
Date of Drilling: 6/30/07	Groundwater Depth: None Encountered
Drilling Method: Simco 2800 HS	
Hammer Weight: 140 lbs.	Drop: 30"

Depth (feet)	Geotechnical Description	Lith-ology	Samples: Type	Samples: Blow counts	Laboratory: Moisture (%)	Laboratory: Dry Density (pcf)	Laboratory: Fines (%)
	Surface Elevation Not Measured						
0	FILL Silty to Clayey SAND Brown to light grey, medium dense to dense, damp			15/11/12	14.0		49
5							
	NATURAL Sandy CLAY Brown, stiff, moist			5/10/13	16.3		63
10							
	Clayey SAND ed brown to grey, dense, damp to moist			11/16/16	5.9		38
15							
20				20/53/55	11.9		22
	Bedrock Clayey SILTSTONE Light to dark grey, hard, moist			25/30/58	16.8		86
25							
30				34/50-3"	14.0		74
35							

SuperLog v2.2 CivilTech Software www.civiltech.com

NorCal Engineering

Project No. 13811-07

Log of Boring B-1

Project La Caze Development / Oceanside

Date of Drilling: 6/30/07 | **Groundwater Depth:** None Encountered

Drilling Method: Simco 2800 HS

Hammer Weight: 140 lbs. | **Drop:** 30"

Depth (feet)	Geotechnical Description	Lith-ology	Samples: Type	Samples: Blow counts	Laboratory: Moisture (%)	Laboratory: Dry Density (pcf)	Laboratory: Fines (%)
	Surface Elevation Not Measured						
35	Bedrock Clayey SILTSTONE Light to dark grey, hard, moist			28/55/51	14.7		74
	Clayey SANDSTONE Grey, hard, moist						
40				27/50-4"	12.2		47
45				35/50-3"	13.3		37
50	Boring completed at depth of 50'			22/50-4"	13.9		54
55							
60							
65							
70							

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Log of Boring B-2

Project	La Caze Development / Oceanside
Date of Drilling: 6/30/07	Groundwater Depth: None Encountered
Drilling Method: Simco 2800 HS	
Hammer Weight: 140 lbs.	Drop: 30"

Depth (feet)	Geotechnical Description	Lith-ology	Samples: Type	Samples: Blow counts	Laboratory: Moisture (%)	Laboratory: Dry Density (pcf)	Laboratory: Fines (%)
	Surface Elevation Not Measured						
0	FILL Silty SAND Brown, soft, damp		■	15/24	8.9	117.5	
	NATURAL Clayey SAND Brown, dense, damp to moist						
5			■	15/18	8.5	116.0	
10	Boring completed at depth of 10'		■	9/19	14.7	114.6	
15							
20							
25							
30							
35							

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Log of Boring B-3

Project	La Caze Development / Oceanside
Date of Drilling: 6/30/07	Groundwater Depth: None Encountered
Drilling Method: Simco 2800 HS	
Hammer Weight: 140 lbs.	Drop: 30"

Depth (feet)	Geotechnical Description	Lith-ology	Samples: Type	Samples: Blow counts	Laboratory: Moisture (%)	Laboratory: Dry Density (pcf)	Laboratory: Fines (%)
	Surface Elevation Not Measured						
0	FILL Clayey SAND to Sandy CLAY with gravel Brown, medium dense to firm, damp						
5	NATURAL Sandy CLAY Light grey to brown, dense, moist		■	10/26	8.7	116.4	
10			■	7/14	10.9	113.6	
	Silty SAND Grey brown, dense, damp						
15			■	13/29	6.2	112.5	
	Bedrock Clayey SILTSTONE Light grey, hard, moist						
20			■	18/40	14.1	109.9	
25	Boring completed at depth of 25'		■	21/36	17.0	107.9	
30							
35							

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Log of Boring B-4

Project	La Caze Development / Oceanside
Date of Drilling: 6/30/07	Groundwater Depth: None Encountered
Drilling Method: Simco 2800 HS	
Hammer Weight: 140 lbs.	Drop: 30"

Depth (feet)	Geotechnical Description	Lith-ology	Samples: Type	Samples: Blow counts	Laboratory: Moisture (%)	Laboratory: Dry Density (pcf)	Laboratory: Fines (%)
	Surface Elevation Not Measured						
0	FILL Clayey SAND Grey brown, loose to medium dense, damp		M				
	NATURAL Sandy CLAY Brown, dense, damp						
5							
10	Boring completed at depth of 10'						
15							
20							
25							
30							
35							

SuperLog v2.2 CivilTech Software www.civiltech.com

Log of Boring B-5

Project La Caze Development / Oceanside

Date of Drilling: 6/30/07 | **Groundwater Depth:** None Encountered

Drilling Method: Simco 2800 HS

Hammer Weight: 140 lbs. | **Drop:** 30"

Depth (feet)	Geotechnical Description	Lith-ology	Samples: Type	Samples: Blow counts	Laboratory: Moisture (%)	Laboratory: Dry Density (pcf)	Laboratory: Fines (%)
	Surface Elevation Not Measured						
0	FILL Silty SAND Grey brown, loose, damp		■	16/31	8.0	113.3	
	NATURAL Silty to Clayey SAND Light grey brown, dense, damp						
5	Sandy CLAY Grey brown, stiff, moist		■	6/12	17.7	108.9	
	Clayey SAND Grey, dense, moist						
10			■	10/20	13.5	112.0	
	Bedrock SANDSTONE Light grey, hard, moist to damp						
15			■	32/50	11.3	117.5	
20	Boring completed at depth of 20'		■	26/50-3"	7.9	120.1	
25							
30							
35							

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Log of Boring B-6

Project	La Caze Development / Oceanside
Date of Drilling: 6/30/07	Groundwater Depth: None Encountered
Drilling Method: Simco 2800 HS	
Hammer Weight: 140 lbs.	Drop: 30"

Depth (feet)	Geotechnical Description	Lith-ology	Samples: Type	Samples: Blow counts	Laboratory: Moisture (%)	Laboratory: Dry Density (pcf)	Laboratory: Fines (%)
	Surface Elevation Not Measured						
0	FILL Silty SAND Grey brown, loose, damp NATURAL Silty SAND Light grey, medium dense, damp						
5	Sandy CLAY Grey brown, stiff, moist						
	Boring completed at depth of 8'						
10							
15							
20							
25							
30							
35							

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NorCal Engineering

Project No. 13811-07

Log of Boring B-7

Project	La Caze Development / Oceanside
Date of Drilling: 6/30/07	Groundwater Depth: None Encountered
Drilling Method: Simco 2800 HS	
Hammer Weight: 140 lbs.	Drop: 30"

Depth (feet)	Geotechnical Description	Lith-ology	Samples		Laboratory		
			Type	Blow counts	Moisture (%)	Dry Density (pcf)	Fines (%)
	Surface Elevation Not Measured						
0	FILL Clayey to Silty SAND Dark grey to brown, medium dense to dense, damp		■	9/22	7.0	108.4	
5	NATURAL Sandy CLAY Brown, stiff, moist		■	6/19	12.9	113.6	
	Clayey SAND Light brown, dense, moist						
10			■	7/15	12.7	116.2	
15	Boring completed at depth of 15'		■	8/17	14.1	114.7	
20							
25							
30							
35							

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NorCal Engineering

Project No. 13811-07

Log of Boring B-8

Project	La Caze Development / Oceanside
Date of Drilling: 6/30/07	Groundwater Depth: None Encountered
Drilling Method: Simco 2800 HS	
Hammer Weight: 140 lbs.	Drop: 30"

Depth (feet)	Geotechnical Description	Lith-ology	Samples		Laboratory		
			Type	Blow counts	Moisture (%)	Dry Density (pcf)	Fines (%)
	Surface Elevation Not Measured						
0	FILL Clayey SAND Grey to brown, medium dense, damp						
5	NATURAL Sandy CLAY Brown, stiff, moist		■	7/17	14.1	113.2	
10	Boring completed at depth of 10'		■	9/18	13.4	111.5	
15							
20							
25							
30							
35							

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Log of Boring B-9

Project La Caze Development / Oceanside

Date of Drilling: 6/30/07 | **Groundwater Depth:** None Encountered

Drilling Method: Simco 2800 HS

Hammer Weight: 140 lbs. | **Drop:** 30"

Depth (feet)	Geotechnical Description	Lith-ology	Samples: Type	Samples: Blow counts	Laboratory: Moisture (%)	Laboratory: Dry Density (pcf)	Laboratory: Fines (%)
	Surface Elevation Not Measured						
0	FILL Silty to Clayey SAND Light brown, loose to medium dense, damp		■	8/15	12.1	111.9	
	NATURAL Sandy CLAY Brown, stiff, moist						
5			■	11.14	15.3	114.2	
10	Boring completed at depth of 10'						
15							
20							
25							
30							
35							

SuperLog v2.2 CivilTech Software www.civiltech.com

NorCal Engineering

Project No. 13811-07

APPENDIX B
LABORATORY TEST DATA

GRAIN SIZE DISTIBUTION - PASSING #200 SIEVE

ASTM METHOD D422

Boring No.	TP-1	TP-3	TP-8	TP-19			
Depth	0-5 ft.	0-7 ft.	0-4 ft.	0-4 ft.			ft
Total Sample Weight	103.2	102.9	104.5	102.7			gm
Retained on #200 Sieve	56.5	59.8	46.6	56.2			gm
Passing #200 Sieve	46.7	43.1	57.9	46.5			gm
Fines Content	**45.3**	**41.9**	**55.4**	**45.3**			%

Boring No.							
Depth							ft
Total Sample Weight							gm
Retained on #200 Sieve							gm
Passing #200 Sieve							gm
Fines Content							%

Boring No.							
Depth							ft
Total Sample Weight							gm
Retained on #200 Sieve							gm
Passing #200 Sieve							gm
Fines Content							%

EEI Engineering Solutions

2195 Faraday Avenue, Suite K, Carlsbad, CA 92008

Client:	Centerpoint Intergral Solutions
Project Name:	Carmax
Project Number:	CIS-72940.4
Date:	8/6/19
Tested by:	B D
Reviewed by:	

EXPANSION INDEX TEST

ASTM METHOD D4829

TP-1 @ 0-5 ft.

Moisture Content of Initial Sample		% Saturation of Re-molded Sample		Moisture Content of Final Sample	
Tare No. -	56	Wt. of Soil and Ring (g) -	576.2	Wt. of Soil and Ring (g) -	633.2
Wet Weight and Tare (g) -	166.6	Ring Weight (g) -	198.6	Ring Weight (g) -	198.6
Dry Weight and Tare (g) -	154.2	Wet Weight of Soil (g) -	377.6	Wet Weight of Soil (g) -	434.6
Tare Weight (g) -	51.1	Dry Weight of Soil (g) -	337.1	Dry Weight of Soil (g) -	337.1
Water Loss (g) -	12.4	Volume of Ring (ft^3) -	0.0073	Weight of Water (g) -	97.5
Dry Weight (g) -	103.1	Dry Density (pcf) -	101.8	Final Moisture (%)	28.9
Initial Moisture (%) -	12.0	Initital Saturation (%) -	49.6	Final Saturation (%) -	119.3

Expansion Test - UBC (144 PSF)				
	Date	Time	Reading	
Add Weight	8/14/19	7:11	0.000	
10 Minutes		7:21	0.000	Initial Reading
Add Water		8:26	0.063	
			0.103	
	8/15/19		0.108	Final Reading

EImeasured	=	108
EI_{50}	=	108

Expansion Index, EI_{50}	Potential Expansion
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
>130	Very High

EEI Engineering Solutions

2195 Faraday Avenue, Suite K, Carlsbad, CA 92008

Client:	Centerpoint Integral Solutions
Project Name:	Carmax
Project No.:	CIS-72940.4
Date:	8/14/2019
Boring/Sample No.:	TP-1
Depth/Location:	0-5 ft.
Soil Description:	Brown Clayey Sand (SC)
Tested By:	B D

EXPANSION INDEX TEST

ASTM METHOD D4829

TP-3 @ 0-7 ft.

Moisture Content of Initial Sample		% Saturation of Re-molded Sample		Moisture Content of Final Sample	
Tare No. -	57	Wt. of Soil and Ring (g) -	569	Wt. of Soil and Ring (g) -	601.9
Wet Weight and Tare (g) -	165.3	Ring Weight (g) -	198.6	Ring Weight (g) -	198.6
Dry Weight and Tare (g) -	151.7	Wet Weight of Soil (g) -	370.4	Wet Weight of Soil (g) -	403.3
Tare Weight (g) -	50.3	Dry Weight of Soil (g) -	326.6	Dry Weight of Soil (g) -	326.6
Water Loss (g) -	13.6	Volume of Ring (ft^3) -	0.0073	Weight of Water (g) -	76.7
Dry Weight (g) -	101.4	Dry Density (pcf) -	98.6	Final Moisture (%)	23.5
Initial Moisture (%) -	13.4	Initital Saturation (%) -	51.1	Final Saturation (%) -	89.5

Expansion Test - UBC (144 PSF)				
	Date	Time	Reading	
Add Weight	8/7/19	6:56	0.000	
10 Minutes		7:06	0.000	Initial Reading
Add Water		7:13	0.053	
		10:10	0.057	
	8/8/19	7:51	0.060	Final Reading

EImeasured	=	60
EI_{50}	=	61

Expansion Index, EI_{50}	Potential Expansion
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
>130	Very High

EEI Engineering Solutions

2195 Faraday Avenue, Suite K, Carlsbad, CA 92008

Client:	Centerpoint Integral Solutions
Project Name:	Carmax
Project No.:	CIS-72940.4
Date:	8/7/2019
Boring/Sample No.:	TP-3
Depth/Location:	0-7 ft.
Soil Description:	Brown Silty Sand SM
Tested By:	B D

EXPANSION INDEX TEST

ASTM METHOD D4829

TP-8 @ 0-4 ft.

Moisture Content of Initial Sample		% Saturation of Re-molded Sample		Moisture Content of Final Sample	
Tare No. -	57	Wt. of Soil and Ring (g) -	552.1	Wt. of Soil and Ring (g) -	597.8
Wet Weight and Tare (g) -	164.4	Ring Weight (g) -	189.0	Ring Weight (g) -	189.0
Dry Weight and Tare (g) -	150.2	Wet Weight of Soil (g) -	363.1	Wet Weight of Soil (g) -	408.8
Tare Weight (g) -	50.3	Dry Weight of Soil (g) -	317.9	Dry Weight of Soil (g) -	317.9
Water Loss (g) -	14.2	Volume of Ring (ft^3) -	0.0073	Weight of Water (g) -	90.9
Dry Weight (g) -	99.9	Dry Density (pcf) -	96.0	Final Moisture (%)	28.6
Initial Moisture (%) -	14.2	Initital Saturation (%) -	50.8	Final Saturation (%) -	102.3

Expansion Test - UBC (144 PSF)				
	Date	Time	Reading	
Add Weight	8/7/19	8:08	0.000	
10 Minutes		8:18	0.000	Initial Reading
Add Water		8:50	0.067	
		10:11	0.070	
	8/8/19	7:45	0.072	Final Reading

EImeasured	=	72
EI_{50}	=	73

Expansion Index, EI_{50}	Potential Expansion
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
>130	Very High

EEI Engineering Solutions

2195 Faraday Avenue, Suite K, Carlsbad, CA 92008

Client:	Centerpoint Integral Solutions
Project Name:	Carmax
Project No.:	CIS-72940.4
Date:	8/7/2019
Boring/Sample No.:	EI # 4
Depth/Location:	import
Soil Description:	Grey Clay CL
Tested By:	B D

EXPANSION INDEX TEST

ASTM METHOD D4829

TP-19 @ 0-4.5 ft.

Moisture Content of Initial Sample		% Saturation of Re-molded Sample		Moisture Content of Final Sample	
Tare No. -	61	Wt. of Soil and Ring (g) -	608.1	Wt. of Soil and Ring (g) -	642.1
Wet Weight and Tare (g) -	161.0	Ring Weight (g) -	198.6	Ring Weight (g) -	198.6
Dry Weight and Tare (g) -	151.4	Wet Weight of Soil (g) -	409.5	Wet Weight of Soil (g) -	443.5
Tare Weight (g) -	43.6	Dry Weight of Soil (g) -	376.0	Dry Weight of Soil (g) -	376.0
Water Loss (g) -	9.6	Volume of Ring (ft^3) -	0.0073	Weight of Water (g) -	67.5
Dry Weight (g) -	107.8	Dry Density (pcf) -	113.6	Final Moisture (%)	17.9
Initial Moisture (%) -	8.9	Initital Saturation (%) -	49.7	Final Saturation (%) -	100.2

Expansion Test - UBC (144 PSF)				
	Date	Time	Reading	
Add Weight	1/0/00	7:13	0.000	
10 Minutes		7:23	0.000	Initial Reading
Add Water		8:06	0.031	
		11:03	0.034	
	8/13/19	6:18	0.036	Final Reading

EImeasured	=	36
EI_{50}	=	36

Expansion Index, EI_{50}	Potential Expansion
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
>130	Very High

EEI Engineering Solutions

2195 Faraday Avenue, Suite K, Carlsbad, CA 92008

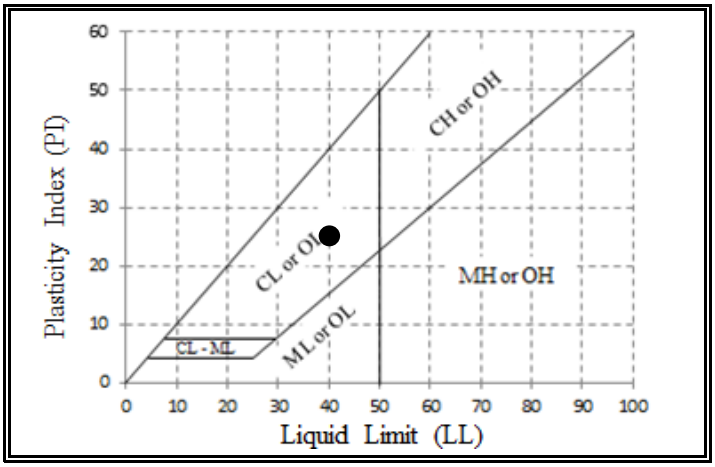
Client:	Centerpoint Integral Solutions
Project Name:	Carmax
Project No.:	CIS-72940.4
Date:	8/12/2019
Boring/Sample No.:	TP-19
Depth/Location:	0-4.5 ft.
Soil Description:	Brown Silty Sand SM
Tested By:	B D

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX

ASTM METHOD D 4318

Sample	TP-1 @ 0-5 ft.					
	Liquid Limit			Plastic Limit		
Test Number	1	2	3	1	2	2
Container Number	2	5	9	15	17	63
Weight of Container (g)	14.28	13.92	14.25	14.53	14.31	14.02
Wet Weight of Soil and Container (g)	25.88	25.70	24.86	19.82	19.71	19.45
Dry Weight of Soil and Container (g)	22.58	22.33	21.76	19.15	19.01	18.76
Number of Blows	28	23	18			
Moisture Content (%)	39.8	40.1	41.3	14.5	14.9	14.6

Liquid Limit =	**40.1**
Plastic Limit =	**14.7**
Plasticity Index =	**25.4**
Classification:	**CL**



EEI Engineering Solutions

2195 Faraday Avenue, Suite K, Carlsbad, CA 92008

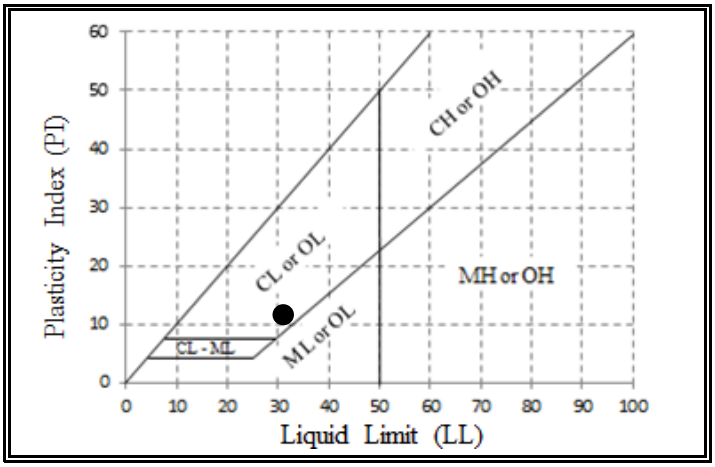
Client:	Centerpoint Integral Solutions
Project Name:	Carmax
Job Number:	CIS-72940.4
Date:	8/16/19
Boring Number:	TP-1
Depth:	0-5 ft.
Soil Description:	Lt Brown Sandy Clay SC
Tested by:	B D

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX

ASTM METHOD D 4318

Sample	TP-8 @ 0-4 ft.					
	Liquid Limit			Plastic Limit		
Test Number	1	2	3	1	2	2
Container Number	1	3	4	12	18	28
Weight of Container (g)	13.99	14.07	14.42	14.30	14.17	14.23
Wet Weight of Soil and Container (g)	25.32	24.42	24.54	19.89	19.69	19.80
Dry Weight of Soil and Container (g)	22.70	21.87	21.94	19.01	18.81	18.93
Number of Blows	27	21	15			
Moisture Content (%)	30.1	32.7	34.6	18.7	19.0	18.5

Liquid Limit =	**31.0**
Plastic Limit =	**18.7**
Plasticity Index =	**12.2**
Classification:	**CL**



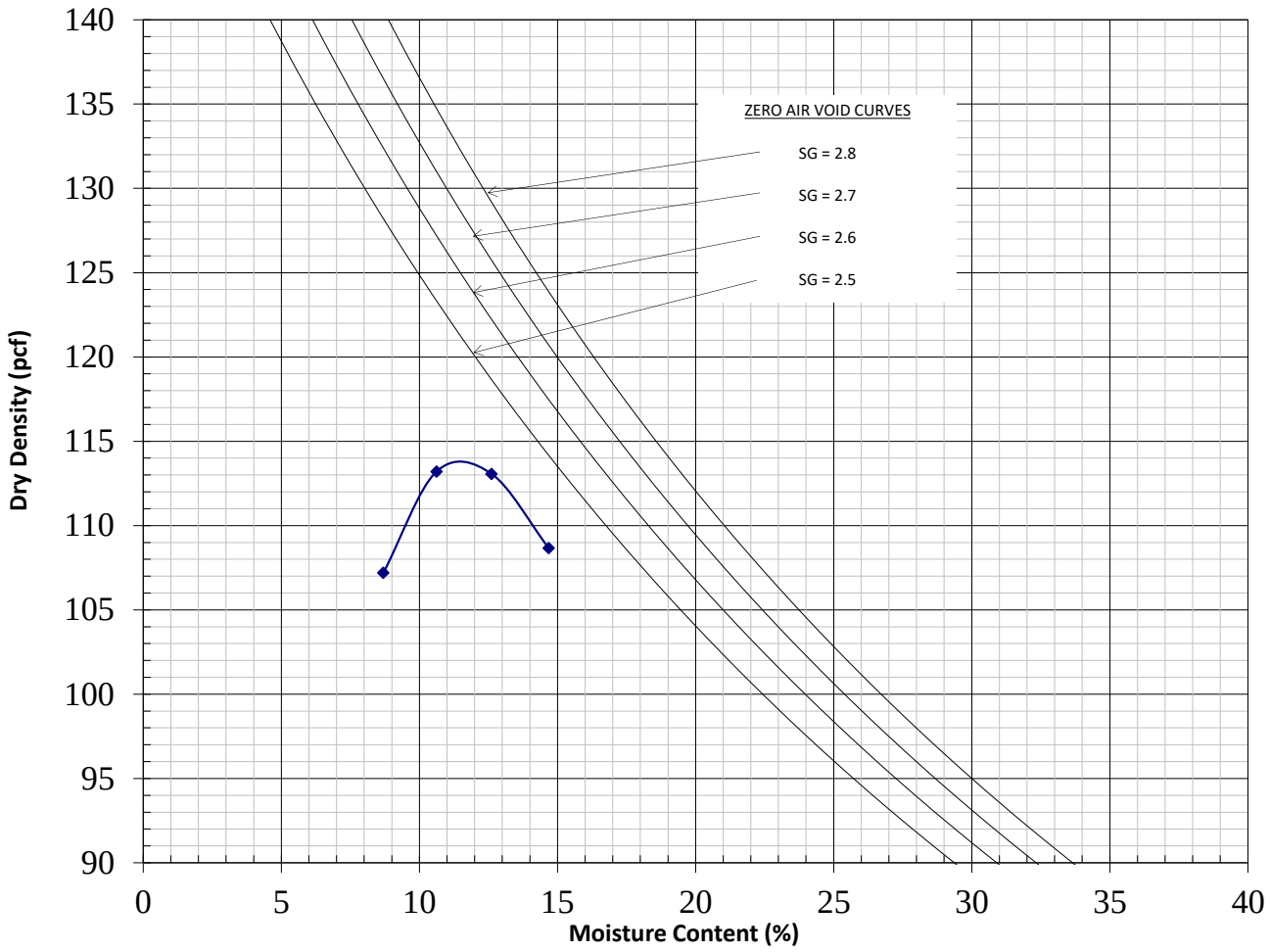
EEI Engineering Solutions

2195 Faraday Avenue, Suite K, Carlsbad, CA 92008

Client:	Centerpoint Integral Solutions
Project Name:	Carmax
Job Number:	CIS-72940.4
Date:	8/16/19
Boring Number:	TP-8
Depth:	0-4 ft.
Soil Description:	Grey/Green Sandy Clay CL
Tested by:	B D

LABORATORY COMPACTION ASTM D 1557

Sample	1	2	3	4
Mold and Wet Soil (lbs.)	8.16	8.45	8.52	8.43
Small Mold (lbs.)	4.28	4.28	4.28	4.28
Wet Soil (lbs.)	3.88	4.17	4.24	4.15
Wet Density (pcf)	116.5	125.2	127.3	124.6
Tare and Wet Soil (gm.)	100.00	100.00	100.00	100.00
Tare and Dry Soil (gm.)	92.00	90.40	88.80	87.20
Moisture (%)	**8.7**	**10.6**	**12.6**	**14.7**
Dry Density (pcf)	**107.2**	**113.2**	**113.1**	**108.7**



Maximum Density 114.5 pcf @ 12.0 % Moisture

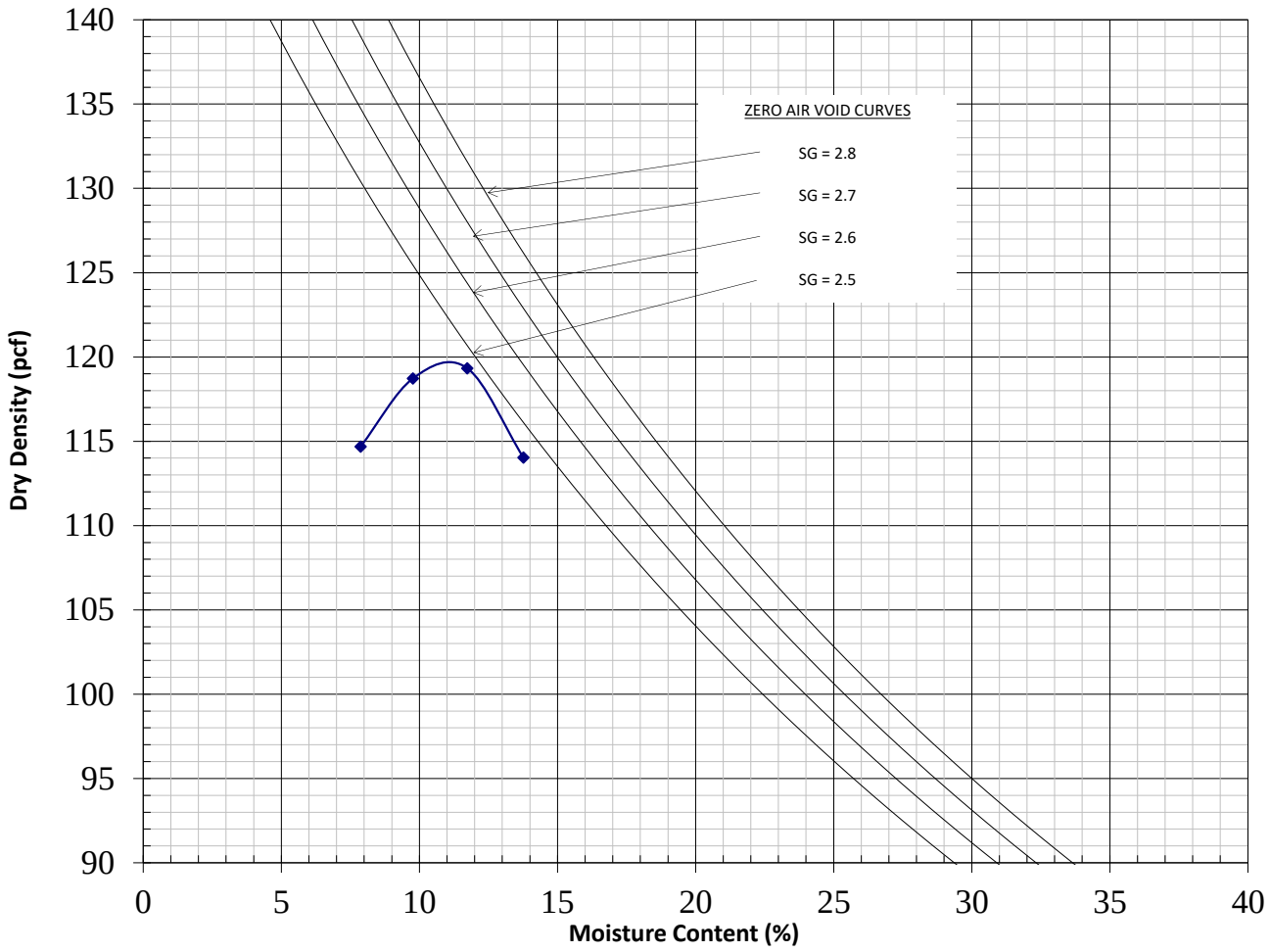
EEI Engineering Solutions

2195 Faraday, Suite K, Carlsbad, CA 92008

Client:	Centerpoint Integral Solutions
Project Name:	Carmax
Project Number:	CIS-72940.4
Date:	8/14/2019
Procedure:	D-1557-A
Boring/Sample No.:	TP-1
Depth/Location:	0-5 ft.
Soil Description:	Brown Sandy Clay CL
Tested By:	B D

LABORATORY COMPACTION ASTM D 1557

Sample	1	2	3	4
Mold and Wet Soil (lbs.)	8.40	8.62	8.72	8.60
Small Mold (lbs.)	4.28	4.28	4.28	4.28
Wet Soil (lbs.)	4.12	4.34	4.44	4.32
Wet Density (pcf)	123.7	130.3	133.3	129.7
Tare and Wet Soil (gm.)	100.00	100.00	100.00	100.00
Tare and Dry Soil (gm.)	92.70	91.10	89.50	87.90
Moisture (%)	**7.9**	**9.8**	**11.7**	**13.8**
Dry Density (pcf)	**114.7**	**118.7**	**119.3**	**114.0**



Maximum Density 121.0 pcf @ 10.5 % Moisture

EEI Engineering Solutions

2195 Faraday, Suite K, Carlsbad, CA 92008

Client:	Centerpoint Integral Solutions
Project Name:	Carmax
Project Number:	CIS-72940.4
Date:	8/12/2019
Procedure:	D-1557-A
Boring/Sample No.:	TP-3
Depth/Location:	7-9 ft.
Soil Description:	Brown Sandy Clay (CL)
Tested By:	B D

DIRECT SHEAR TEST (ASTM D3080)

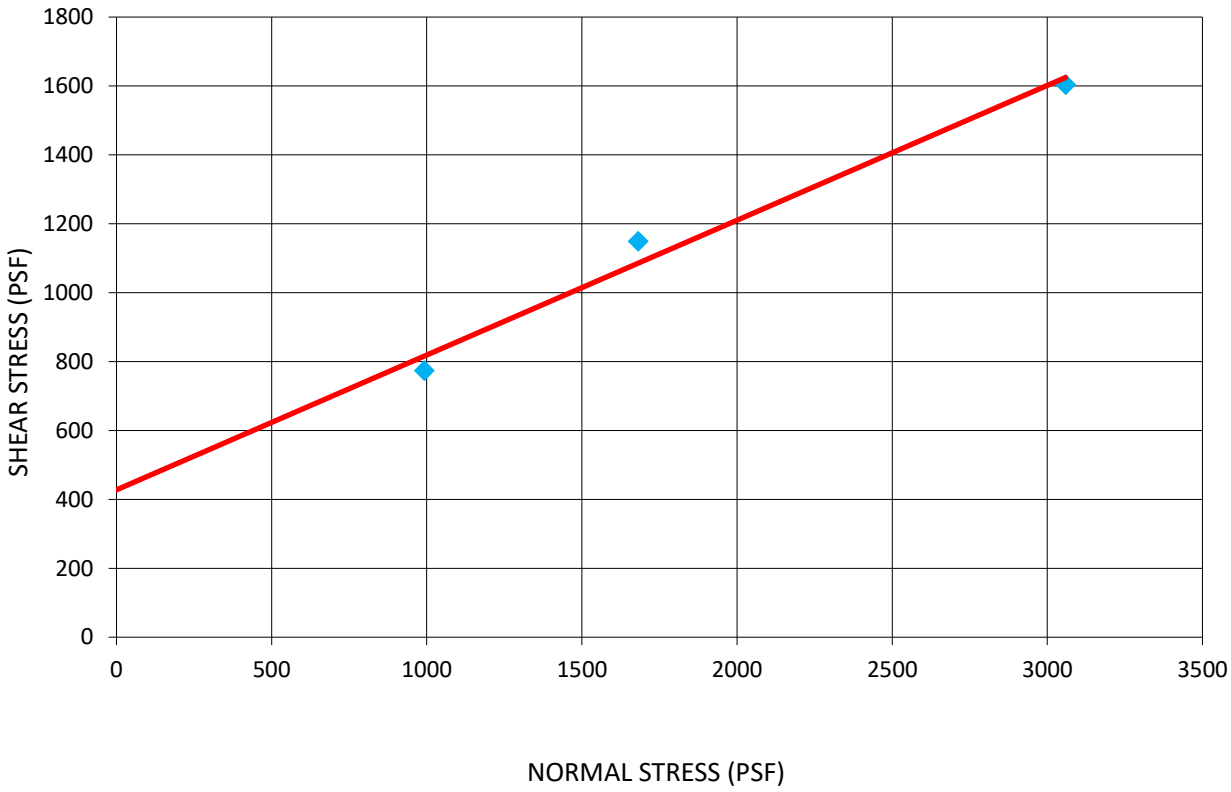
TP-3 @ 7-9 ft.

Sample Data	
Remolded:	90%
Remarks:	Sample inundated prior to testing
Soil Description:	Brown Sandy Clay CL

Test Results		
Average Initial Moisture =	10.5	%
Average Dry Density =	108.8	pcf
Average Final Moisture =	21.6	%

Peak Strength	ϕ = 21 deg.	c = 428 psf

SHEAR TEST DIAGRAM



EEI Engineering Solutions

2195 Faraday Avenue, Suite K, Carlsbad, CA 92008

Client:	Centerpoint Integral Solutions
Project Name:	Carmax
Project No.:	CIS-72940.4
Date:	8/12/19
Boring/Sample No:	TP-3
Depth/Location:	7-9 ft.
Soil Description:	Brown Sandy Clay CL
Tested by:	B D

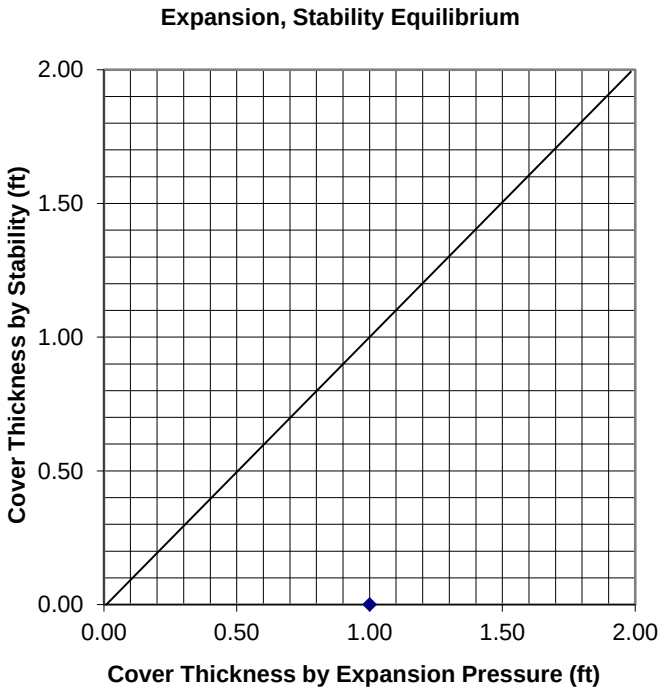
TEST SPECIMEN		A	B	C	D
Compactor air pressure	PSI	150			
Water added	%	9.3			
Moisture at compaction	%	22.8			
Height of sample	IN	-			
Dry density	PCF	-			
R-Value by exudation		-			
R-Value by exudation, corrected		-			
Exudation pressure	PSI	800			
Stability thickness	FT	-			
Expansion pressure thickness	FT	-			

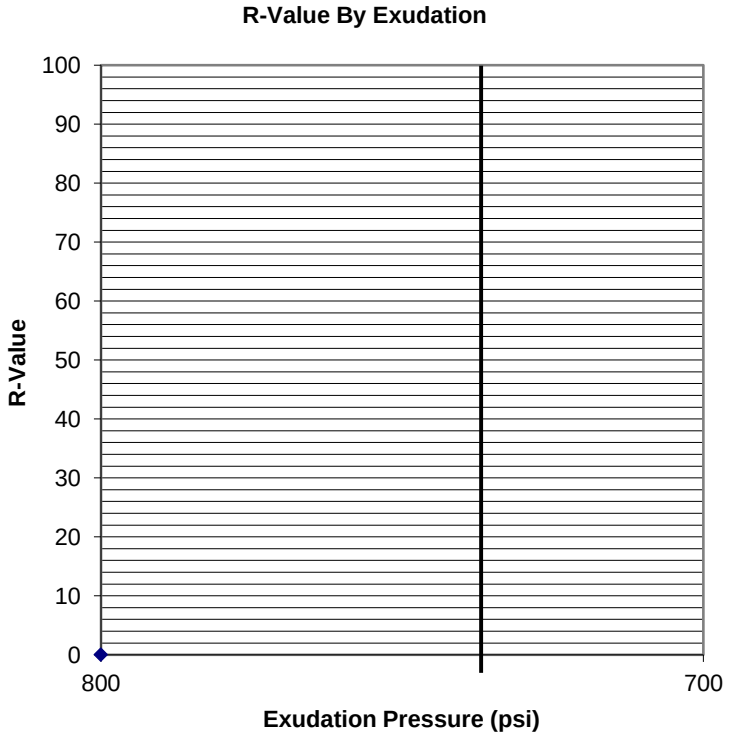
DESIGN CALCULATION DATA

Traffic index, assumed	5.0
Gravel equivalent factor, assumed	1.25
Expansion, stability equilibrium	0
R-Value by expansion	NA
R-Value by exudation	<5
R-Value at equilibrium	**<5**

SAMPLE INFORMATION

Sample Location:	TP-1, 0-5ft
Sample Description:	Yellowish Brown Sandy Clay
Notes:	CIS 729404
	0% Retained on 3/4 inch sieve
Test Method:	Cal-Trans Test 301





*** R-Value (<5) provision from CT 301, Part 1, Section B, Sub-section K**
**** Three (3) lights at 800 psi**

GeoSoils, Inc.
5741 Palmer Way
Carlsbad, CA 92008
Telephone: (760) 438-3155
Fax: (760) 931-0915

9/2/2010

R - VALUE TEST RESULTS

Project: EEI Tiger

Number: 5932-E-SC

Date: August 2019 Plate: 1

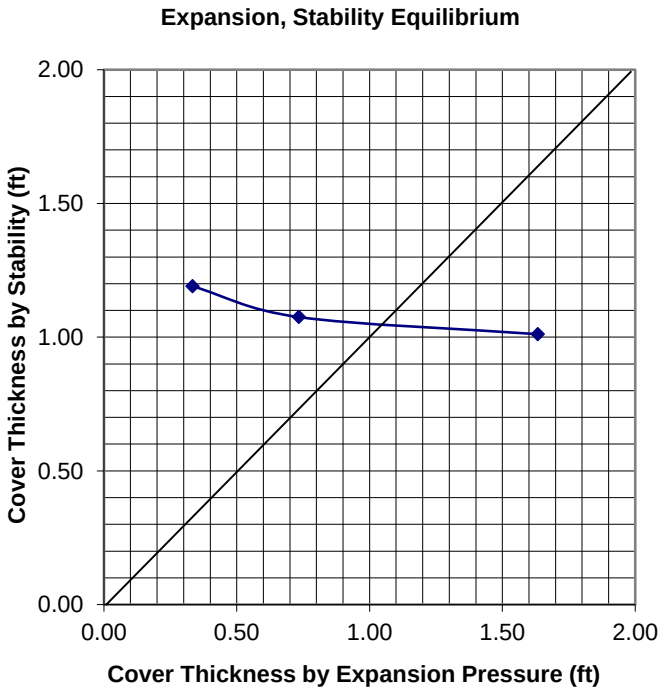
TEST SPECIMEN		A	B	C	D
Compactor air pressure	PSI	240	150	80	
Water added	%	3.5	4.9	7.6	
Moisture at compaction	%	16.9	18.3	21.0	
Height of sample	IN	2.44	2.44	2.51	
Dry density	PCF	113.1	109.4	105.2	
R-Value by exudation		21	16	7	
R-Value by exudation, corrected		20	15	7	
Exudation pressure	PSI	490	350	107	
Stability thickness	FT	1.01	1.08	1.19	
Expansion pressure thickness	FT	1.63	0.73	0.33	

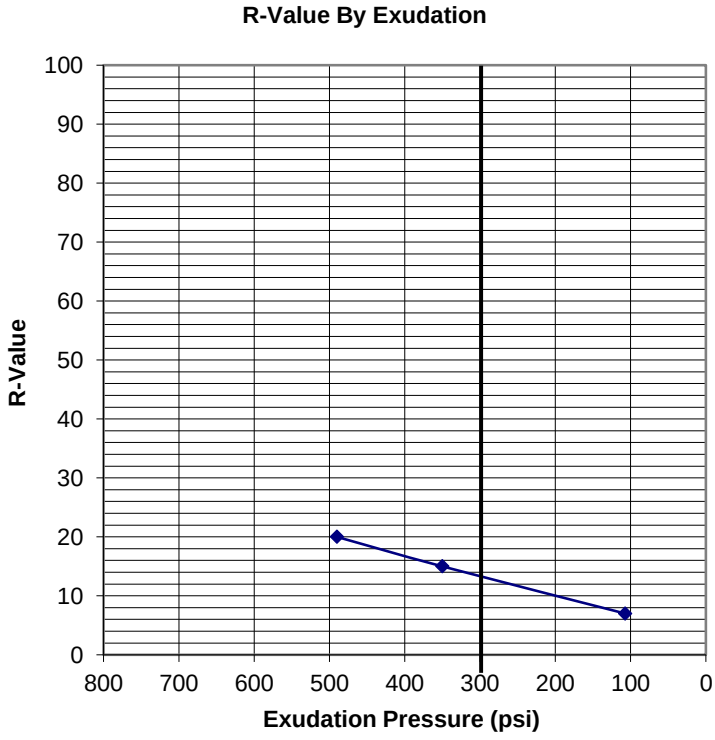
DESIGN CALCULATION DATA

Traffic index, assumed	5.0
Gravel equivalent factor, assumed	1.25
Expansion, stability equilibrium	1.05
R-Value by expansion	18
R-Value by exudation	13
R-Value at equilibrium	**13**

SAMPLE INFORMATION

Sample Location:	TP-3, 0-7ft
Sample Description:	Light Gray Sandy Clay
Notes:	CIS 729404
	0% Retained on 3/4 inch sieve
Test Method:	Cal-Trans Test 301





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9/2/2010

R - VALUE TEST RESULTS

Project: EEI Tiger

Number: 5932-E-SC

Date: August 2019 Plate: 1

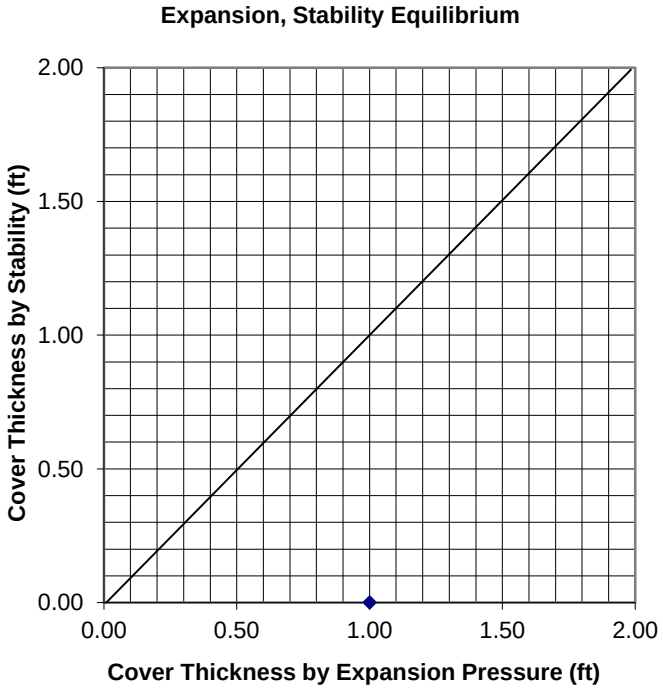
TEST SPECIMEN		A	B	C	D
Compactor air pressure	PSI	100			
Water added	%	6.7			
Moisture at compaction	%	20.0			
Height of sample	IN	-			
Dry density	PCF	-			
R-Value by exudation		-			
R-Value by exudation, corrected		-			
Exudation pressure	PSI	800			
Stability thickness	FT	-			
Expansion pressure thickness	FT	-			

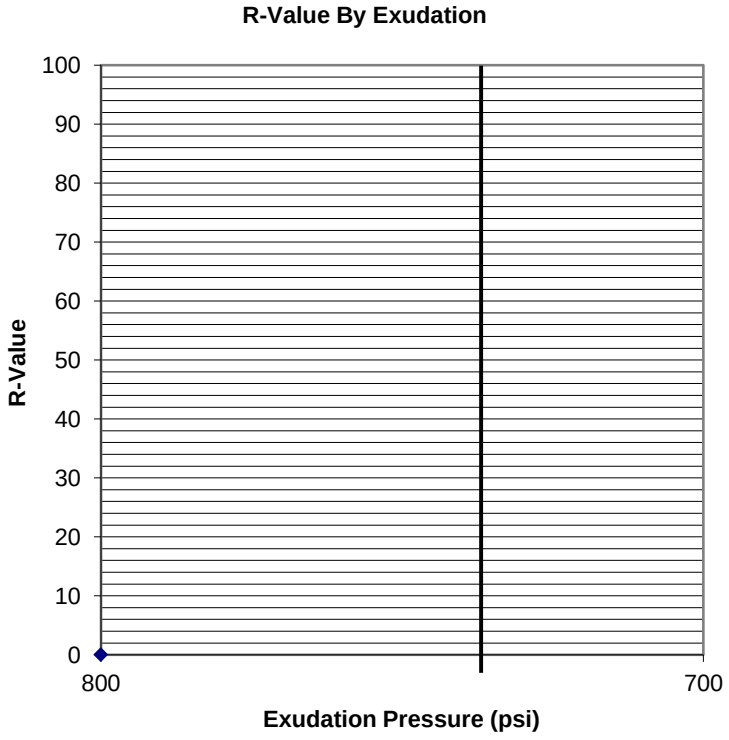
DESIGN CALCULATION DATA

Traffic index, assumed	5.0
Gravel equivalent factor, assumed	1.25
Expansion, stability equilibrium	0
R-Value by expansion	NA
R-Value by exudation	<5
R-Value at equilibrium	**<5**

SAMPLE INFORMATION

Sample Location:	TP-8, 0-4ft
Sample Description:	Light Gray Sandy Clay
Notes:	CIS 729404
	0% Retained on 3/4 inch sieve
Test Method:	Cal-Trans Test 301





*** R-Value (<5) provision from CT 301, Part 1, Section B, Sub-section K**
**** Four (4) lights at 800 psi**

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5741 Palmer Way
Carlsbad, CA 92008
Telephone: (760) 438-3155
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9/2/2010

R - VALUE TEST RESULTS

Project: EEI Tiger

Number: 5932-E-SC

Date: August 2019 Plate: 1

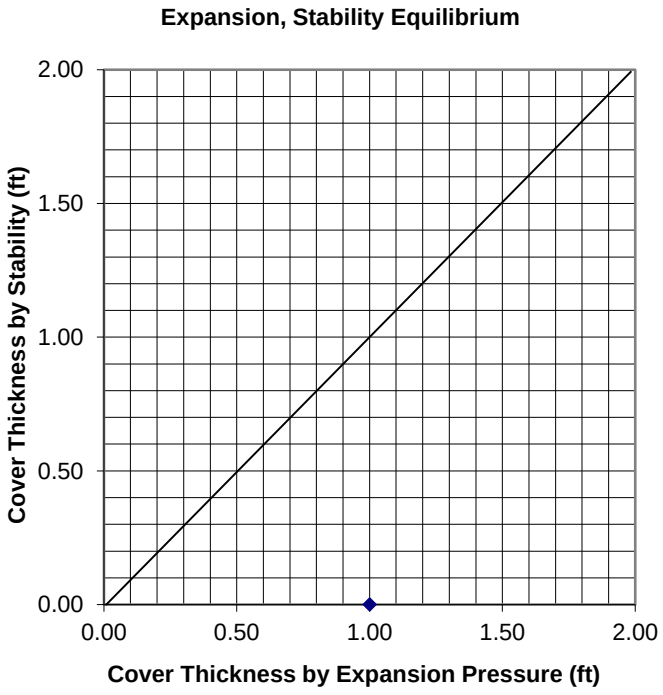
TEST SPECIMEN		A	B	C	D
Compactor air pressure	PSI	30			
Water added	%	9.0			
Moisture at compaction	%	21.2			
Height of sample	IN	-			
Dry density	PCF	-			
R-Value by exudation		-			
R-Value by exudation, corrected		-			
Exudation pressure	PSI	800			
Stability thickness	FT	-			
Expansion pressure thickness	FT	-			

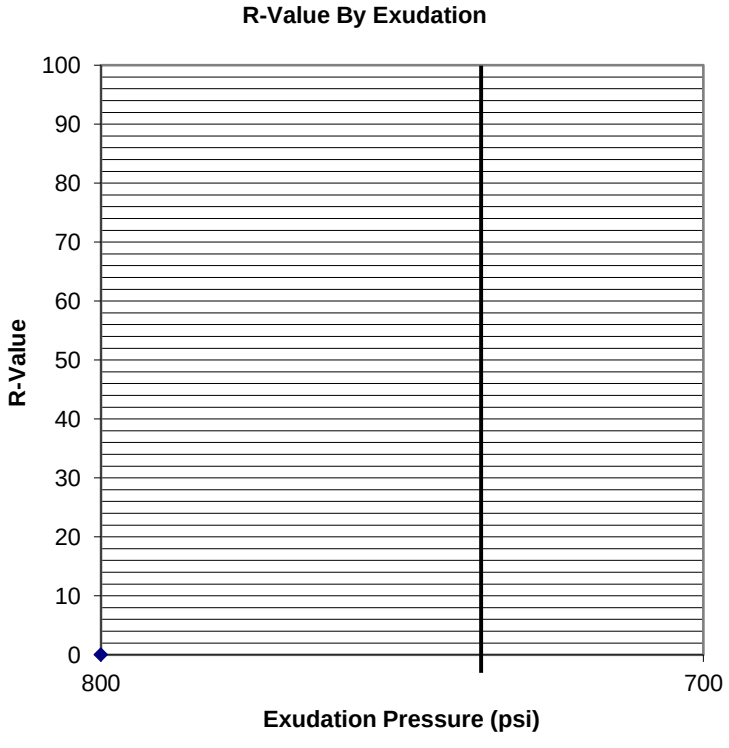
DESIGN CALCULATION DATA

Traffic index, assumed	5.0
Gravel equivalent factor, assumed	1.25
Expansion, stability equilibrium	0
R-Value by expansion	NA
R-Value by exudation	<5
R-Value at equilibrium	**<5**

SAMPLE INFORMATION

Sample Location:	TP-19, 0-4.5ft
Sample Description:	Yellowish Brown Sandy Clay
Notes:	CIS 729404
	0% Retained on 3/4 inch sieve
Test Method:	Cal-Trans Test 301





*** R-Value (<5) provision from CT 301, Part 1, Section B, Sub-section K**
**** Three (3) lights at 800 psi**

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Fax: (760) 931-0915

9/2/2010

R - VALUE TEST RESULTS

Project: EEI Tiger

Number: 5932-E-SC

Date: August 2019 Plate: 1

L A B O R A T O R Y R E P O R T

Telephone (619) 425-1993 Fax 425-7917 Established 1928

C L A R K S O N L A B O R A T O R Y A N D S U P P L Y I N C.
350 Trousdale Dr. Chula Vista, Ca. 91910 www.clarksonlab.com
A N A L Y T I C A L A N D C O N S U L T I N G C H E M I S T S

Date: August 16, 2019
Purchase Order Number: C15-72940-4
Sales Order Number: 45293
Account Number: EEI
To:
--
EEI Environmental Equalizers Inc
3146 Tiger Run Court, Suite 118
Carlsbad, CA 92010
Attention: Jeff Blake

Laboratory Number: SO7463-1 Customers Phone: 760-431-3747

Sample Designation:
--
One soil sample received on 08/13/19 at 10:30am,
from Centerpoint Integral Solutions marked as TP-1@0-5'

Analysis By California Test 643, 1999, Department of Transportation Division of Construction, Method for Estimating the Service Life of Steel Culverts.

pH 7.2

Water Added (ml)	Resistivity (ohm-cm)
20	930
5	760
5	510
5	400
5	350
5	310
5	290
5	320
5	330

16 years to perforation for a 16 gauge metal culvert.
21 years to perforation for a 14 gauge metal culvert.
29 years to perforation for a 12 gauge metal culvert.
38 years to perforation for a 10 gauge metal culvert.
46 years to perforation for a 8 gauge metal culvert.

Water Soluble Sulfate Calif. Test 417 0.081%

Water Soluble Chloride Calif. Test 422 0.053%

Laura Torres
LT/dbb

L A B O R A T O R Y R E P O R T

Telephone (619) 425-1993 Fax 425-7917 Established 1928

C L A R K S O N L A B O R A T O R Y A N D S U P P L Y I N C.
350 Trousdale Dr. Chula Vista, Ca. 91910 www.clarksonlab.com
A N A L Y T I C A L A N D C O N S U L T I N G C H E M I S T S

Date: August 16, 2019
Purchase Order Number: C15-72940-4
Sales Order Number: 45293
Account Number: EEI
To:
--
EEI Environmental Equalizers Inc
3146 Tiger Run Court, Suite 118
Carlsbad, CA 92010
Attention: Jeff Blake

Laboratory Number: SO7463-2 Customers Phone: 760-431-3747

Sample Designation:
--
One soil sample received on 08/13/19 at 10:30am,
from Centerpoint Integral Solutions marked as TP-3@0-7'

Analysis By California Test 643, 1999, Department of Transportation Division of Construction, Method for Estimating the Service Life of Steel Culverts.

pH 8.6

Water Added (ml)	Resistivity (ohm-cm)
10	1700
5	780
5	440
5	350
5	370
5	390
5	410

20 years to perforation for a 16 gauge metal culvert.
26 years to perforation for a 14 gauge metal culvert.
36 years to perforation for a 12 gauge metal culvert.
46 years to perforation for a 10 gauge metal culvert.
56 years to perforation for a 8 gauge metal culvert.

Water Soluble Sulfate Calif. Test 417 0.053%

Water Soluble Chloride Calif. Test 422 0.038%

Laura Torres
LT/dbb

L A B O R A T O R Y R E P O R T

Telephone (619) 425-1993 Fax 425-7917 Established 1928

C L A R K S O N L A B O R A T O R Y A N D S U P P L Y I N C.
350 Trousdale Dr. Chula Vista, Ca. 91910 www.clarksonlab.com
A N A L Y T I C A L A N D C O N S U L T I N G C H E M I S T S

Date: August 16, 2019
Purchase Order Number: C15-72940-4
Sales Order Number: 45293
Account Number: EEI
To:
--
EEI Environmental Equalizers Inc
3146 Tiger Run Court, Suite 118
Carlsbad, CA 92010
Attention: Jeff Blake

Laboratory Number: SO7463-3 Customers Phone: 760-431-3747

Sample Designation:
--
One soil sample received on 08/13/19 at 10:30am,
from Centerpoint Integral Solutions marked as TP-19@4.5-8.5'

Analysis By California Test 643, 1999, Department of Transportation Division of Construction, Method for Estimating the Service Life of Steel Culverts.

pH 8.2

Water Added (ml)	Resistivity (ohm-cm)
10	1500
5	860
5	650
5	510
5	500
5	530
5	550

23 years to perforation for a 16 gauge metal culvert.
30 years to perforation for a 14 gauge metal culvert.
41 years to perforation for a 12 gauge metal culvert.
53 years to perforation for a 10 gauge metal culvert.
64 years to perforation for a 8 gauge metal culvert.

Water Soluble Sulfate Calif. Test 417 0.016%

Water Soluble Chloride Calif. Test 422 0.033%

Laura Torres
LT/dbb

NORCAL ENGINEERING (2007) LABORATORY TEST DATA

TABLE I
MAXIMUM DENSITY TESTS
(ASTM: D-1557)

Sample	Classification	Optimum Moisture	Maximum Dry Density (lbs./cu.ft.)
B-3 @ 2'	Clayey SAND	12.0	121.0
B-5 @ 2'	Clayey SAND	11.0	124.0
B-7 @ 2'	Sandy CLAY	13.5	116.0

TABLE II
EXPANSION INDEX TESTS
(U.B.C. STD. 18-2)

Soil Type	Classification	Expansion Index
B-3 @ 2'	Clayey SAND	33
B-5 @ 2'	Clayey SAND	25
B-5 @ 2'	Sandy CLAY	63

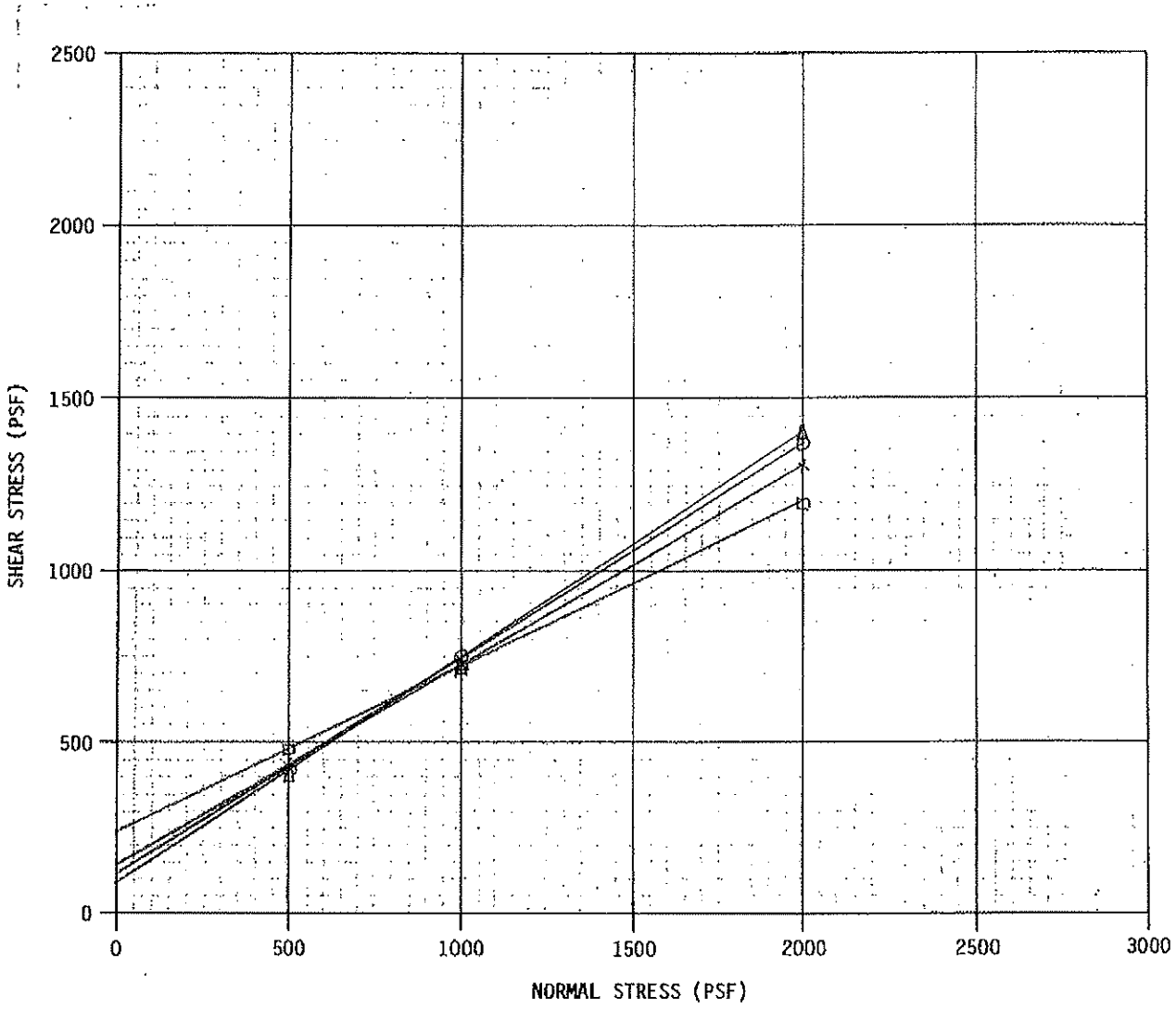
TABLE III
ATTERBERG LIMITS

Sample	Liquid Limit	Plastic Limit	Plasticity Index
B-3 @ 2-5'	27	18	9
B-1 @ 11-13'	44	27	17

TABLE IV
CORROSION TESTS

Sample	pH	Electrical Resistivity (ohm-cm)	Sulfate (%)	Chloride (ppm)
B-3 @ 2'	7.4	1,270	0.008	33
B-5 @ 2'	7.3	1,370	0.011	45
B-7 @ 2'	7.1	1,730	0.008	67

ND denotes not detected
% by weight
ppm – mg/kg



	SYMBOL	BORING NUMBER	DEPTH (FEET)	ø (DEGREES)	C (PSF)	DRY DENSITY (PCF)	MOISTURE CONTENT (%)
	X	2	2	30	150	117.5	8.9
(R)	○	3	2	32	125	117.0	11.7
	△	5	2	33	100	113.3	8.0
(R)	□	7	2	27	250	107.1	13.3

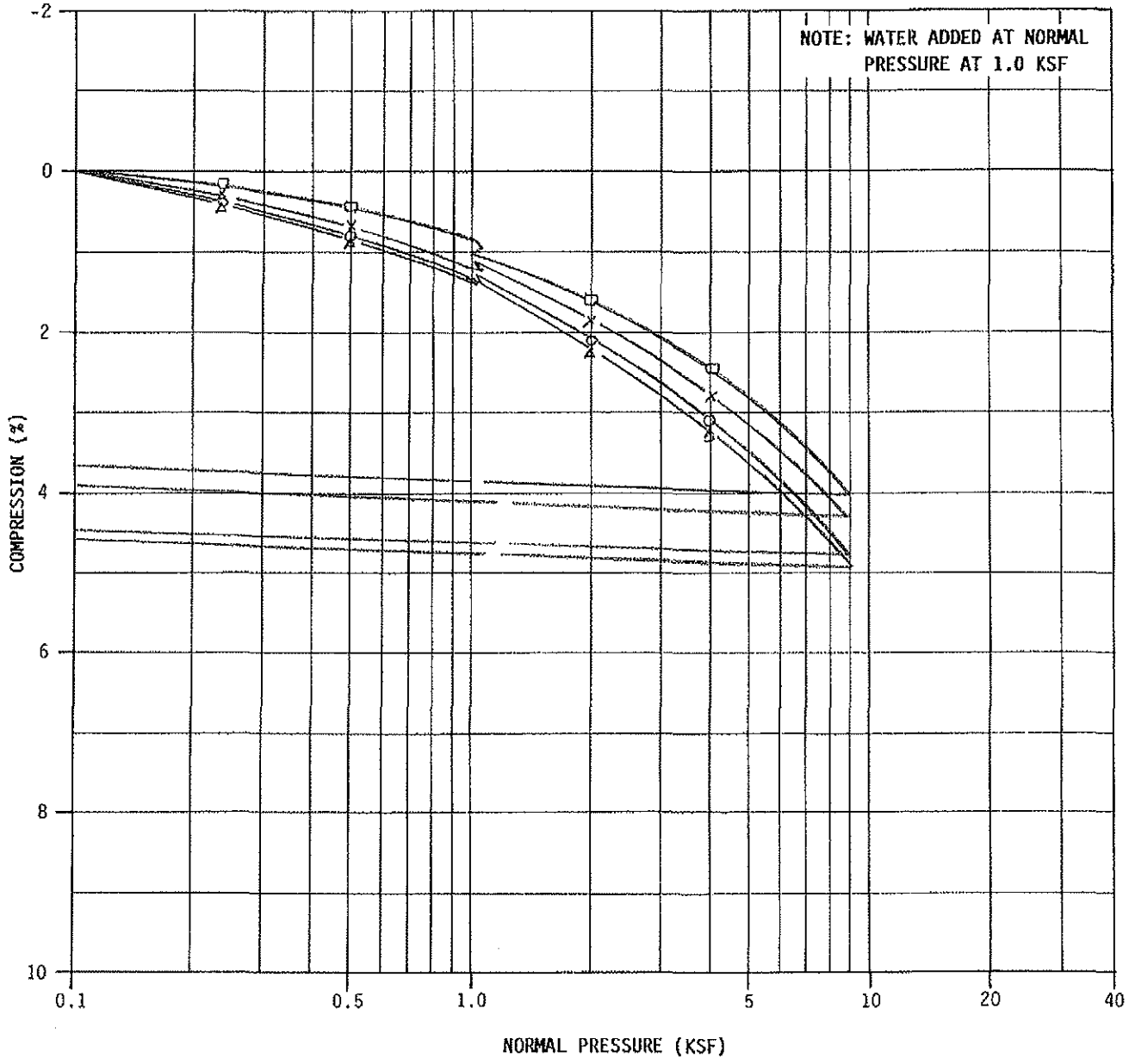
NOTE: TESTS PERFORMED ON SATURATED SAMPLES UNLESS SHOWN BELOW.
(FM) FIELD MOISTURE
TESTS PERFORMED ON UNDISTURBED SAMPLES UNLESS SHOWN BELOW.
(R) SAMPLES REMOLDED AT 90% OF MAXIMUM DRY DENSITY

NorCal Engineering
SOILS AND GEOTECHNICAL CONSULTANTS

PROJECT 13811-07 | DATE

DIRECT SHEAR TEST RESULTS

Plate A



SYMBOL	BORING NUMBER	DEPTH (FEET)	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)
X	3	5	116.4	8.7		
O	3	10	113.6	10.9		
△	5	10	112.0	13.5		
□	7	10	116.2	12.7		

——— COMPRESSION (FM) FIELD MOISTURE - NO WATER ADDED

– – – REBOUND (R) SAMPLE REMOLDED AT 90% OF MAXIMUM DRY DENSITY

NorCal Engineering

SOILS AND GEOTECHNICAL CONSULTANTS

PROJECT 13811-07 DATE

CONSOLIDATION TEST RESULTS

Plate B

'R' VALUE CA 301

Project Norcal # La Caze **Job No.** 2003-072

Sample B-4 @ 0-3' - 3809 Plaza Dr., Oceanside **By:** LD

Soil Type Gray, F.M. Sandy Clay **Date** 7/5/2007

TEST SPECIMEN		A	B	C	Grain Size Distribution		
Compactor Air Pressure	psi	**150**	**75**	**110**	Sieve	As Rec'vd. (%Pass.)	As Tested (%Pass.)
Initial Moisture Content	%	**6.2**	**6.2**	**6.2**	3"		
Water Added	ml	**90**	**110**	**100**	2 1/2"		
Moisture at Compaction	%	14.2	15.9	15.1	2"		
Sample & Mold Weight	gms	**3150**	**3122**	**3120**	1 1/2"		
Mold Weight	gms	**2111**	**2116**	**2112**	1"		
Net Sample Weight	gms	1039	1006	1008	3/4"		
Sample Height	in.	**2.541**	**2.48**	**2.477**	1/2"		
Dry Density	pcf	108.5	106.0	107.2	3/8"		
Pressure	lbs	**6405**	**3030**	**4300**	#4		
Exudation Pressure	psi	510	241	342	#8		
Expansion Dial	x 0.0001	**30**	**11**	**20**	#16		
Expansion Pressure	psf	130	48	87	#30		
Ph at 1000lbs	psi	**29**	**58**	**43**	#50		
Ph at 2000lbs	psi	**62**	**122**	**88**	#100		
Displacement	turns	**4.05**	**4.67**	**4.33**	#200		
R' Value		49	14	32	**Sand Equivalent**		
Corrected 'R' Value		**49**	**14**	**32**	(CTM 217)		

FINAL 'R' VALUE	
By Exudation Pressure (@ 300 psi):	**25**
By Epansion Pressure :	**33**

GeoLogic Associates

APPENDIX C
EARTHWORK AND GRADING GUIDELINES

EEI
Engineering Solutions

EARTHWORK AND GRADING GUIDELINES

GENERAL

These guidelines present general procedures and recommendations for earthwork and grading as required on the approved grading plans, including preparation of areas to be filled, placement of fill and installation of subdrains and excavations. The recommendations contained in the geotechnical report are applicable to each specific project, are part of the earthwork and grading guidelines and would supersede the provisions contained hereafter in the case of conflict. Observations and/or testing performed by the consultant during the course of grading may result in revised recommendations which could supersede these guidelines or the recommendations contained in the geotechnical report. Figures A through O is provided at the back of this appendix, exhibiting generalized cross sections relating to these guidelines.

The contractor is responsible for the satisfactory completion of all earthworks in accordance with provisions of the project plans and specifications. The project soil engineer and engineering geologist (geotechnical consultant) or their representatives should provide observation and testing services, and geotechnical consultation throughout the duration of the project.

EARTHWORK OBSERVATIONS AND TESTING

Geotechnical Consultant

Prior to the commencement of grading, a qualified geotechnical consultant (a soil engineer and engineering geologist) should be employed for the purpose of observing earthwork procedures and testing the fills for conformance with the recommendations of the geotechnical report, the approved grading plans, and applicable grading codes and ordinances.

The geotechnical consultant should provide testing and observation so that determination may be made that the work is being completed as specified. It is the responsibility of the contractor to assist the consultant and keep them aware of work schedules and predicted changes, so that the consultant may schedule their personnel accordingly.

All removals, prepared ground to receive fill, key excavations, and subdrains should be observed and documented by the project engineering geologist and/or soil engineer prior to placing any fill. It is the contractor's responsibility to notify the engineering geologist and soil engineer when such areas are ready for observation.

Laboratory and Field Tests

Maximum dry density tests to determine the degree of compaction should be performed in accordance with American Standard Testing Materials test method ASTM designation D-1557-78. Random field compaction tests should be performed in accordance with test method ASTM designations D-1556-82, D-2937 or D-2922 & D-3017, at intervals of approximately two feet of fill height per 10,000 sq. ft. or every one thousand cubic yards of fill placed. These criteria would vary depending on the soil conditions and the size of the project. The location and frequency of testing would be at the discretion of the geotechnical consultant

Contractor's Responsibility

All clearing, site preparation, and earthwork performed on the project should be conducted by the contractor, with observation by geotechnical consultants and staged approval by the appropriate governing agencies. It is the contractor's responsibility to prepare the ground surface to receive the fill to the satisfaction of the soil engineer, and to place, spread, moisture condition, mix and compact the fill in accordance with the recommendations of the soil engineer. The contractor should also remove all major deleterious material considered unsatisfactory by the soil engineer.

It is the sole responsibility of the contractor to provide adequate equipment and methods to accomplish the earthwork in accordance with applicable grading guidelines, codes or agency ordinances, and approved grading plans. Sufficient watering apparatus and compaction equipment should be provided by the contractor with due consideration for the fill material, rate of placement, and climatic conditions. If, in the opinion of the geotechnical consultant, unsatisfactory conditions such as questionable weather, excessive oversized rock, deleterious material or insufficient support equipment are resulting in a quality of work that is not acceptable, the consultant will inform the contractor, and the contractor is expected to rectify the conditions, and if necessary, stop work until conditions are satisfactory.

The contractor will properly grade all surfaces to maintain good drainage and prevent ponding of water. The contractor will take action to control surface water and to prevent erosion control measures that have been installed.

SITE PREPARATION

All vegetation including brush, trees, thick grasses, organic debris, and other deleterious material should be removed and disposed of offsite, and must be concluded prior to placing fill. Existing fill, soil, alluvium, colluvium, or rock materials determined by the soil engineer or engineering geologist as unsuitable for structural in-place support should be removed prior to fill placement. Depending upon the soil conditions, these materials may be reused as compacted fills. Any materials incorporated as part of the compacted fills should be approved by the soil engineer.

Any underground structures such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, pipelines, or other structures not located prior to grading are to be removed or treated in a manner recommended by the soil engineer. Soft, dry, spongy, highly fractured, or otherwise unsuitable ground extending to such a depth that surface processing cannot adequately improve the condition should be over excavated down to firm ground and approved by the soil engineer before compaction and filling operations continue. Over excavated and processed soils which

have been properly mixed and moisture-conditioned should be recompacted to the minimum relative compaction as specified in these guidelines.

Existing ground which is determined to be satisfactory for support of the fills should be scarified to a minimum depth of 6 inches, or as directed by the soil engineer. After the scarified ground is brought to optimum moisture (or greater) and mixed, the materials should be compacted as specified herein. If the scarified zone is greater than 6 inches in depth, it may be necessary to remove the excess and place the material in lifts restricted to 6 inches in compacted thickness.

Existing grind which is not satisfactory to support compacted fill should be over excavated as required in the geotechnical report or by the onsite soils engineer and/or engineering geologists. Scarification, discing, or other acceptable form of mixing should continue until the soils are broken down and free of large fragments or clods, until the working surface is reasonably uniform and free from ruts, hollows, hummocks, or other uneven features which would inhibit compaction as described above.

Where fills are to be placed on ground with slopes steeper than 5:1 (horizontal to vertical) gradient, the ground should be benched. The lowest bench, which will act as a key, should be a minimum of 12 feet wide and should be at least two feet deep into competent material, approved by the soil engineer and/or engineering geologist. In fill over cut slope conditions, the recommended minimum width of the lowest bench or key is at least 15 feet with the key excavated on competent material, as designated by the Geotechnical Consultant. As a general rule, unless superseded by the Soil Engineer, the minimum width of fill keys should be approximately equal to one-half (½) the height of the slope.

Standard benching is typically four feet (minimum) vertically, exposing competent material. Benching may be used to remove unsuitable materials, although it is understood that the vertical height of the bench may exceed four feet. Pre stripping may be considered for removal of unsuitable materials in excess of four feet in thickness.

All areas to receive fill, including processed areas, removal areas, and toe of fill benches should be observed and approved by the soil engineer and/or engineering geologist prior to placement of fill. Fills may then be properly placed and compacted until design grades are attained.

COMPACTED FILLS

Earth materials imported or excavated on the property may be utilized as fill provided that each soil type has been accepted by the soil engineer. These materials should be free of roots, tree branches, other organic matter or other deleterious materials. All unsuitable materials should be removed from the fill as directed by the soil engineer. Soils of poor gradation, undesirable expansion potential, or substandard strength characteristics may be designated unsuitable by the consultant and may require mixing with other earth materials to serve as a satisfactory fill material.

Fill materials generated from benching operations should be dispersed throughout the fill area. Benching operations should not result in the benched material being placed only within a single equipment width away from the fill/bedrock contact.

Oversized materials, defined as rock or other irreducible materials with a maximum size exceeding 12 inches in one dimension, should not be buried or placed in fills unless the location of materials and disposal methods are specifically approved by the soil engineer. Oversized material should be taken offsite or placed in accordance with recommendations of the soil engineer in areas designated as suitable for rock disposal. Oversized material should not be placed vertically within 10 feet of finish grade or horizontally within 20 feet of slope faces.

To facilitate trenching, rock should not be placed within the range of foundation excavations or future utilities unless specifically approved by the soil engineer and/or the representative developers.

If import fill material is required for grading, representative samples of the material should be analyzed in the laboratory by the soil engineer to determine its physical properties. If any material other than that previously analyzed is imported to the fill or encountered during grading, analysis of this material should be conducted by the soil engineer as soon as practical.

Fill material should be placed in areas prepared to receive fill in near-horizontal layers that should not exceed six inches compacted in thickness. The soil engineer may approve thicker lifts if testing indicates the grading procedures are such that adequate compaction is being achieved. Each layer should be spread evenly and mixed to attain uniformity of material and moisture suitable for compaction.

Fill materials at moisture content less than optimum should be watered and mixed, and “wet” fill materials should be aerated by scarification, or should be mixed with drier material. Moisture conditioning and mixing of fill materials should continue until the fill materials have uniform moisture content at or above optimum moisture.

After each layer has been evenly spread, moisture-conditioned and mixed, it should be uniformly compacted to a minimum of 90 percent of maximum density as determined by ASTM test designation, D 1557-78, or as otherwise recommended by the soil engineer. Compaction equipment should be adequately sized and should be reliable to efficiently achieve the required degree of compaction.

Where tests indicate that the density of any layer of fill, or portion thereof, is below the required relative compaction or improper moisture content, the particular layer or portion will be reworked until the required density and/or moisture content has been attained. No additional fill will be placed in an area until the last placed lift of fill has been tested and found to meet the density and moisture requirements, and is approved by the soil engineer.

Compaction of slopes should be accomplished by over-building the outside edge a minimum of three feet horizontally, and subsequently trimming back to the finish design slope configuration. Testing will be performed as the fill is horizontally placed to evaluate compaction as the fill core is being developed. Special efforts may be necessary to attain the specified compaction in the fill slope zone. Final slope shaping should be performed by trimming and removing loose materials with appropriate equipment. A final determination of fill slope compaction should be based on observation and/or testing of the finished slope face.

If an alternative to over-building and cutting back the compacted fill slope is selected, then additional efforts should be made to achieve the required compaction in the outer 10 feet of each lift of fill by undertaking the following:

- Equipment consisting of a heavy short-shanked sheepsfoot should be used to roll (horizontal) parallel to the slopes continuously as fill is placed. The sheepsfoot roller should also be used to roll perpendicular to the slopes, and extend out over the slope to provide adequate compaction to the face slope.

- Loose fill should not be spilled out over the face of the slope as each lift is compacted. Any loose fill spilled over a previously completed slope face should be trimmed off or be subject to re-rolling.

- Field compaction tests will be made in the outer two to five feet of the slope at two to three foot vertical intervals, subsequent to compaction operations.

- After completion of the slope, the slope face should be shaped with a small dozer and then re-rolled with a sheepsfoot to achieve compaction to near the slope face. Subsequent to testing to verify compaction, the slopes should be grid-rolled to achieve adequate compaction to the slope face. Final testing should be used to confirm compaction after grid rolling.

- Where testing indicates less than adequate compaction, the contractor will be responsible to process, moisture condition, mix and recompact the slope materials as necessary to achieve compaction. Additional testing should be performed to verify compaction.

- Erosion control and drainage devices should be designed by the project civil engineer in compliance with the ordinances of the controlling governmental agencies, and/or in accordance with the recommendations of the soil engineer or engineering geologist.

EXCAVATIONS

Excavations and cut slopes should be observed and mapped during grading by the engineering geologist. If directed by the engineering geologist, further excavations or over-excavation and refilling of cut areas should be performed. When fills over cut slopes are to be graded, the cut portion of the slope should be observed by the engineering geologist prior to placement of the overlying fill portion of the slope. The engineering geologist should observe all cut slopes and should be notified by the contractor when cut slopes are started.

If, during the course of grading, unanticipated adverse or potentially adverse geologic conditions are encountered, the engineering geologist and soil engineer should investigate, evaluate and make recommendations to mitigate (or limit) these conditions. The need for cut slope buttressing or stabilizing should be based on as-grading evaluations by the engineering geologist, whether anticipated previously or not.

Unless otherwise specified in soil and geological reports, no cut slopes should be excavated higher or steeper than that allowed by the ordinances of controlling governmental agencies. Additionally, short-term stability of temporary cut slopes is the contractor's responsibility.

Erosion control and drainage devices should be designed by the project civil engineer and should be constructed in compliance with the ordinances of the controlling governmental agencies, and/or in accordance with the recommendations of the soil engineer or engineering geologist.

SUBDRAIN INSTALLATION

Subdrains should be installed in accordance with the approved embedment material, alignment and details indicated by the geotechnical consultant. Subdrain locations or construction materials should not be changed or modified without approval of the geotechnical consultant. The soil engineer and/or engineering geologist may recommend and direct changes in subdrain line, grade and drain material in the field, pending exposed conditions. The location of constructed subdrains should be recorded by the project civil engineer.

COMPLETION

Consultation, observation and testing by the geotechnical consultant should be completed during grading operations in order to state an opinion that all cut and filled areas are graded in accordance with the approved project specifications.

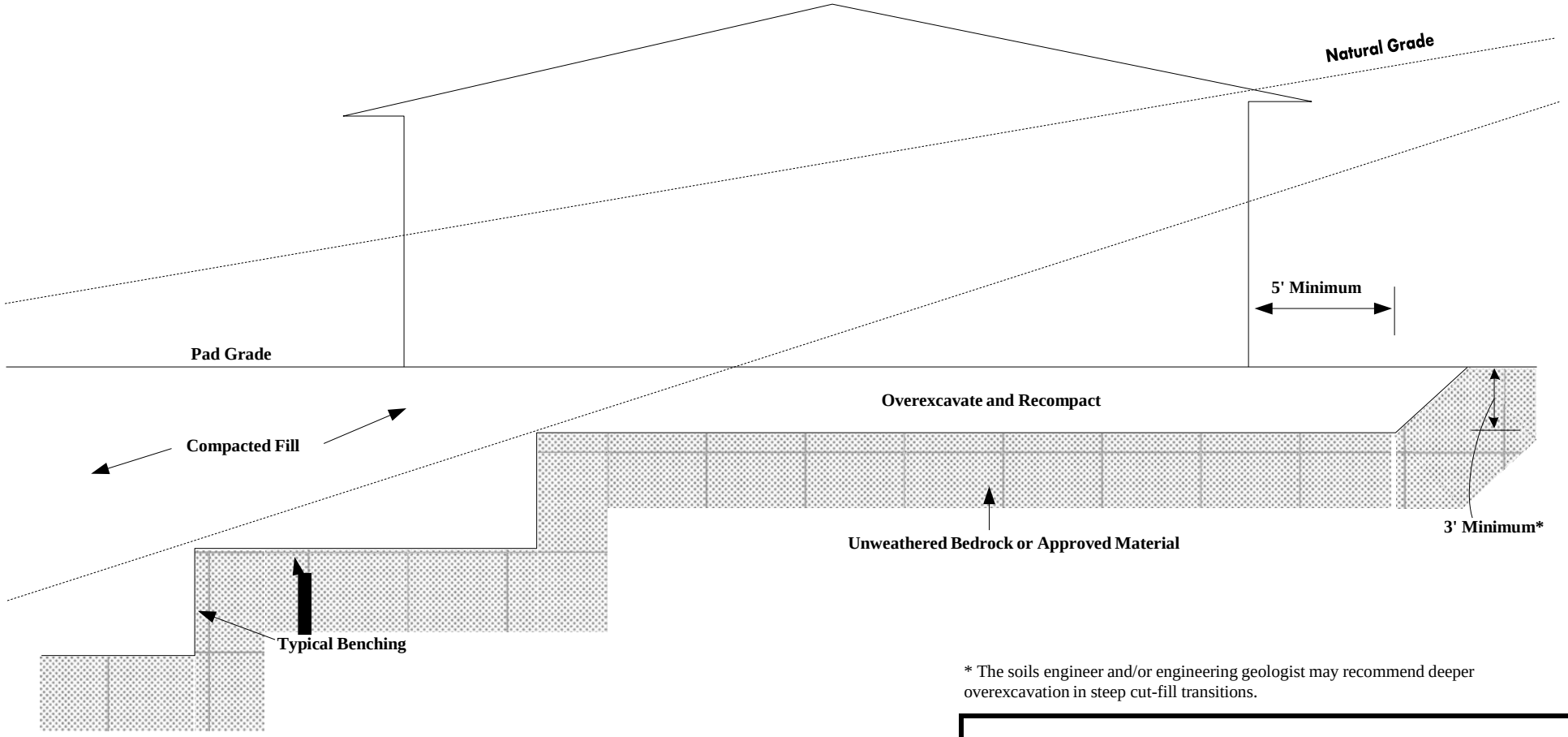
After completion of grading and after the soil engineer and engineering geologist have finished their observations, final reports should be submitted subject to review by the controlling governmental agencies. No additional grading should be undertaken without prior notification of the soil engineer and/or engineering geologist.

All finished cut and fill slopes should be protected from erosion, including but not limited to planting in accordance with the plan design specifications and/or as recommended by a landscape architect. Such protection and/or planning should be undertaken as soon as possible after completion of grading.

ATTACHMENTS

Figure A – Transition Lot Detail Cut Lot
Figure B – Transition Lot Detail Cut - Fill
Figure C – Rock Disposal Pits
Figure D – Detail for Fill Slope Toeing out on a Flat Alluviated Canyon
Figure E – Removal Adjacent to Existing Fill
Figure F – Daylight Cut Lot Detail
Figure G – Skin Fill of Natural Ground
Figure H – Typical Stabilization Buttress Fill Design
Figure I – Stabilization Fill for Unstable Material Exposed in Portion of Cut Slope
Figure J – Fill Over Cut Detail
Figure K – Fill Over Natural Detail
Figure L – Oversize Rock Disposal
Figure M – Canyon Subdrain Detail
Figure N – Canyon Subdrain Alternate Details
Figure O – Typical Stabilization Buttress Subdrain Detail
Figure P – Retaining Wall Backfill

TRANSITION LOT DETAIL
CUT LOT – MATERIAL TYPE TRANSITION



* The soils engineer and/or engineering geologist may recommend deeper overexcavation in steep cut-fill transitions.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
TRANSITION LOT DETAIL
CUT LOT – MATERIAL TYPE TRANSITION

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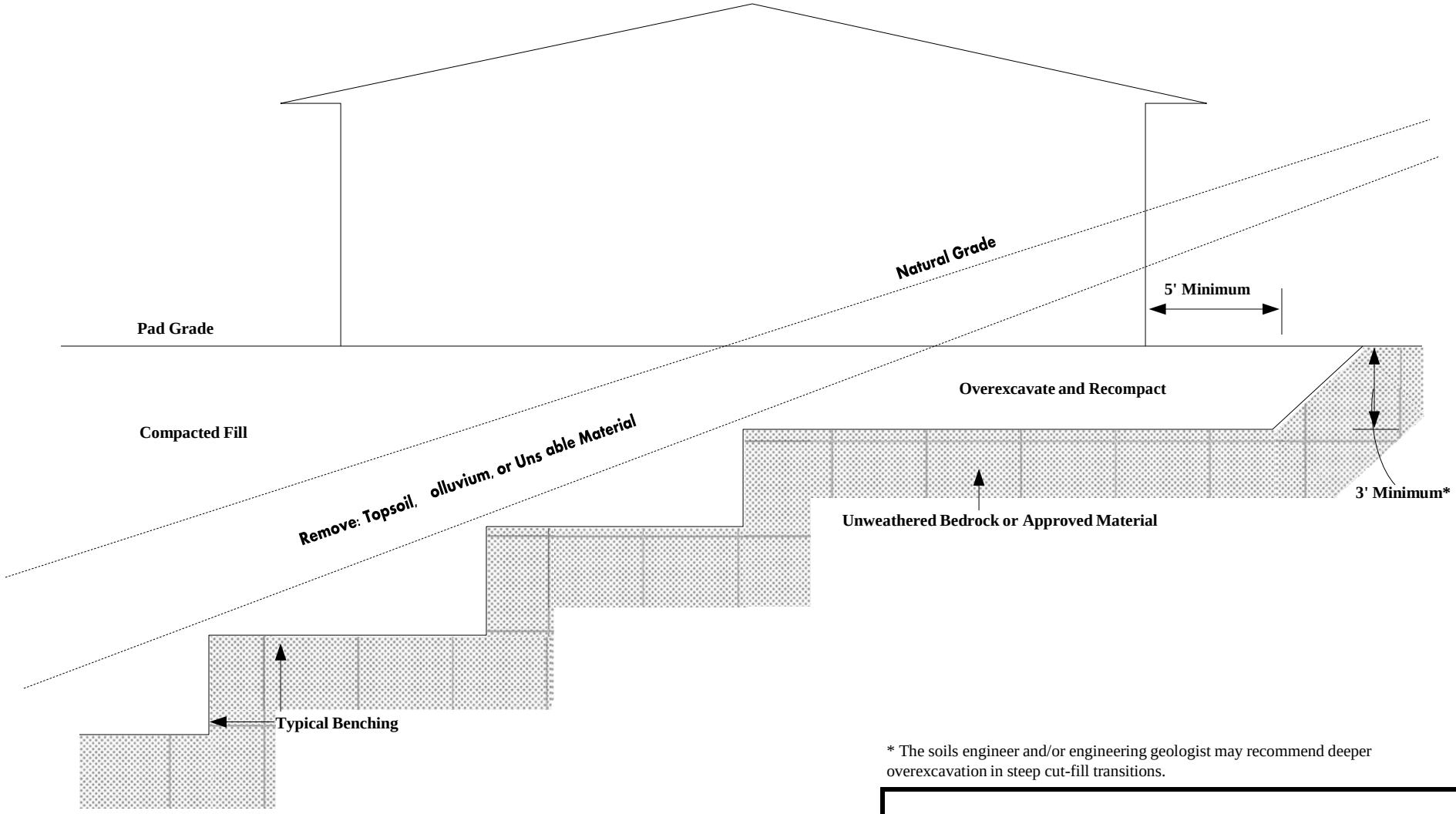
FIGURE A

TRANSITION LOT DETAIL
CUT – FILL – DAYLIGHT TRANSITION



* The soils engineer and/or engineering geologist may recommend deeper overexcavation in steep cut-fill transitions.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
TRANSITION LOT DETAIL
CUT – FILL – DAYLIGHT TRANSITION

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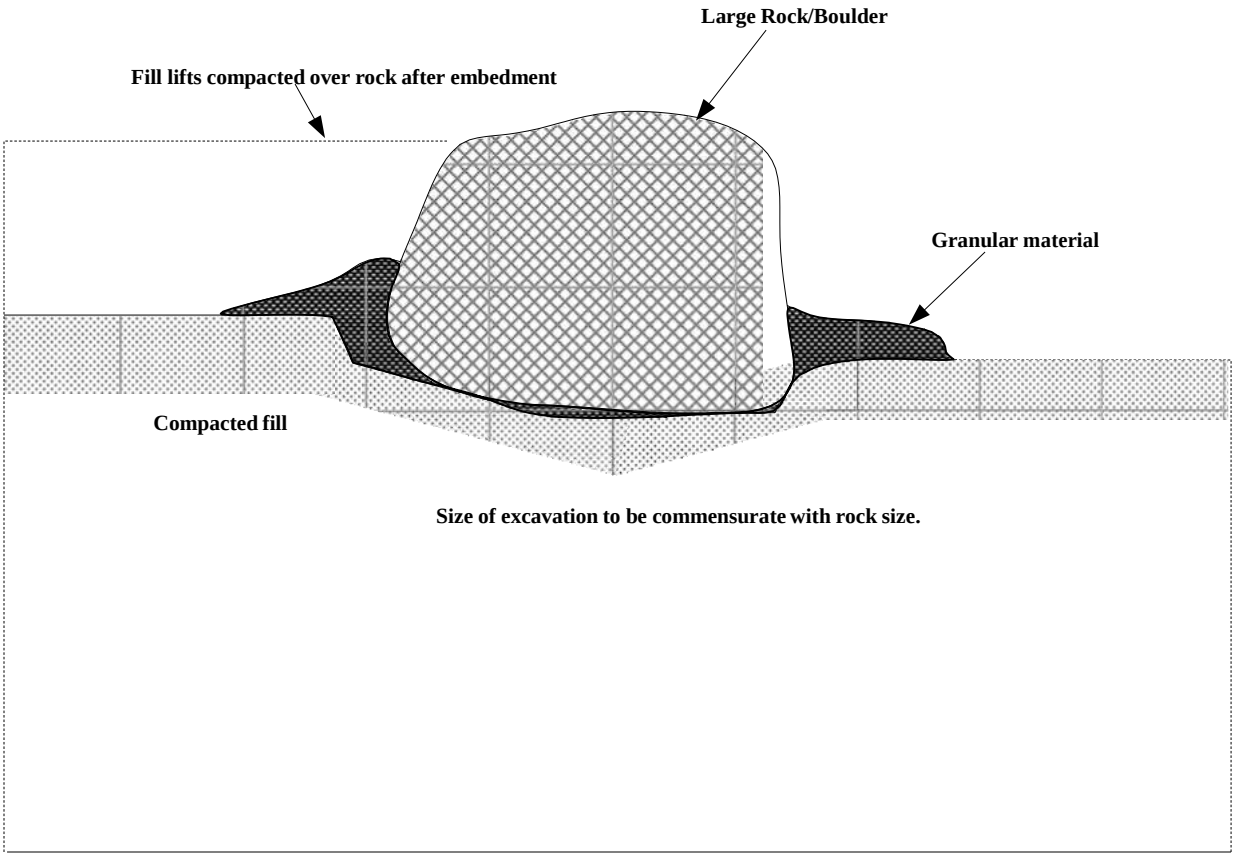
FIGURE B

ROCK DISPOSAL PITS



Note: (1) Large rock is defined as having a diameter larger than 3 feet in maximum size.
(2) Pit shall be excavated into compacted fill to a depth equal to half of the rock size.
(3) Granular soil shall be pushed into the pit and then flooded around the rock using a sheepsfoot to help with compaction.
(4) A minimum of 3 feet of compacted fill should be laid over each pit.
(5) Pits shall have at least 15 feet of separation between one another, horizontally.
(6) Pits shall be placed at least 20 feet from any fill slope.
(7) Pits shall be used only in deep fill areas.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
ROCK DISPOSAL PITS

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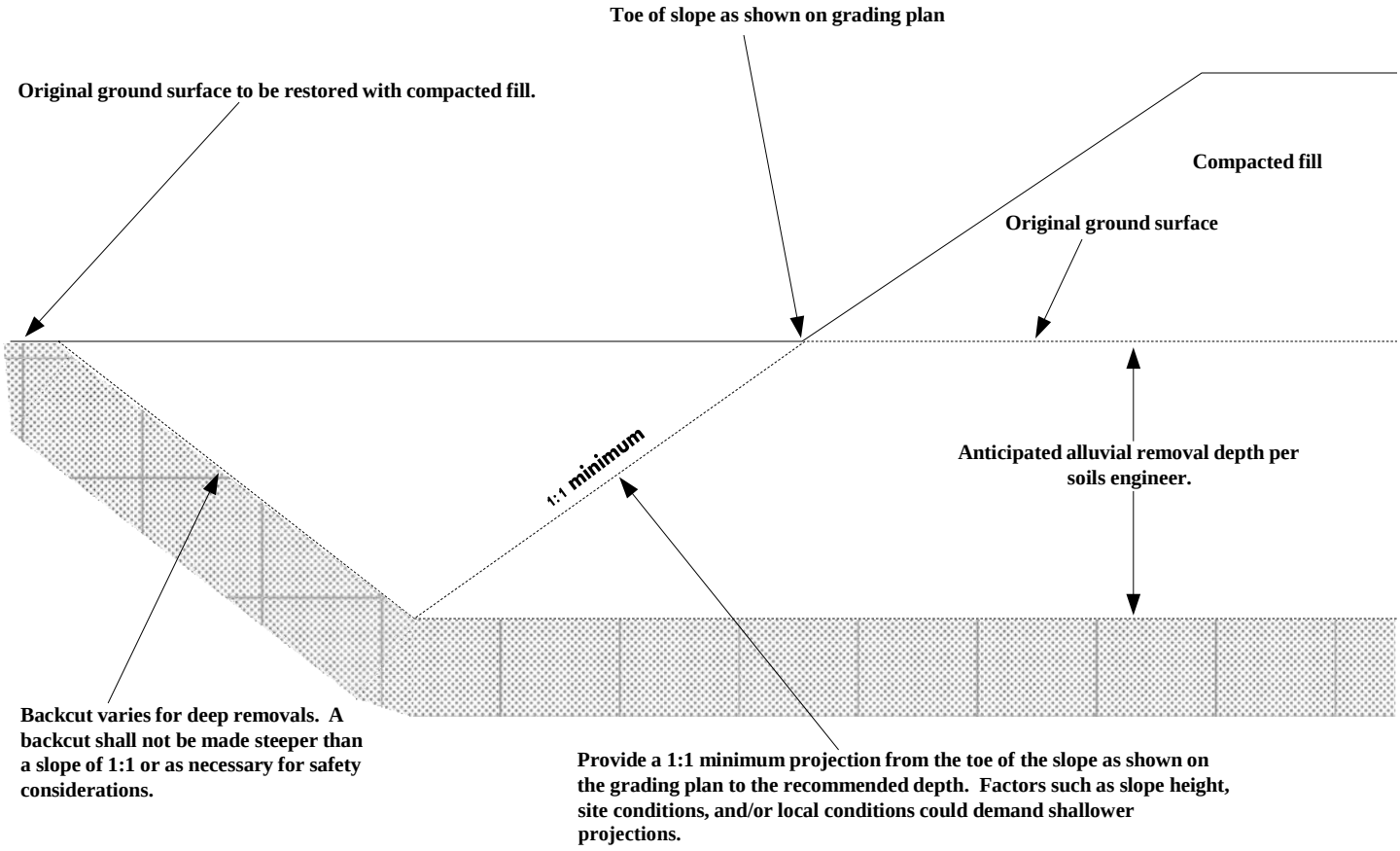
FIGURE C

DETAIL FOR FILL SLOPE TOEING OUT ON FLAT ALLUVIATED CANYON



Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
DETAIL FOR FILL SLOPE TOEING OUT ON A FLAT ALLUVIATED CANYON

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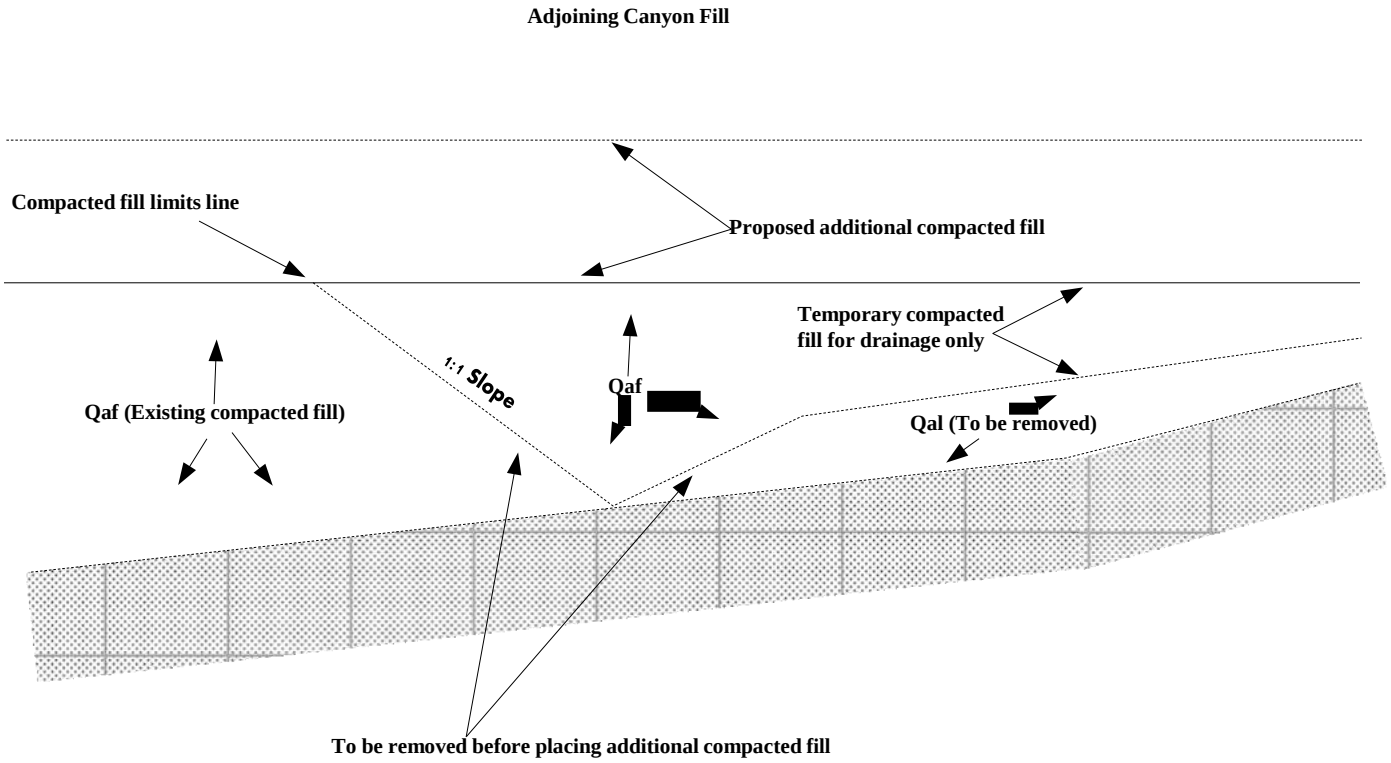
FIGURE D

REMOVAL ADJACENT TO EXISTING FILL



Legend

Qaf - Artificial Fill

Qal - Alluvium

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
REMOVAL ADJACENT TO EXISTING FILL

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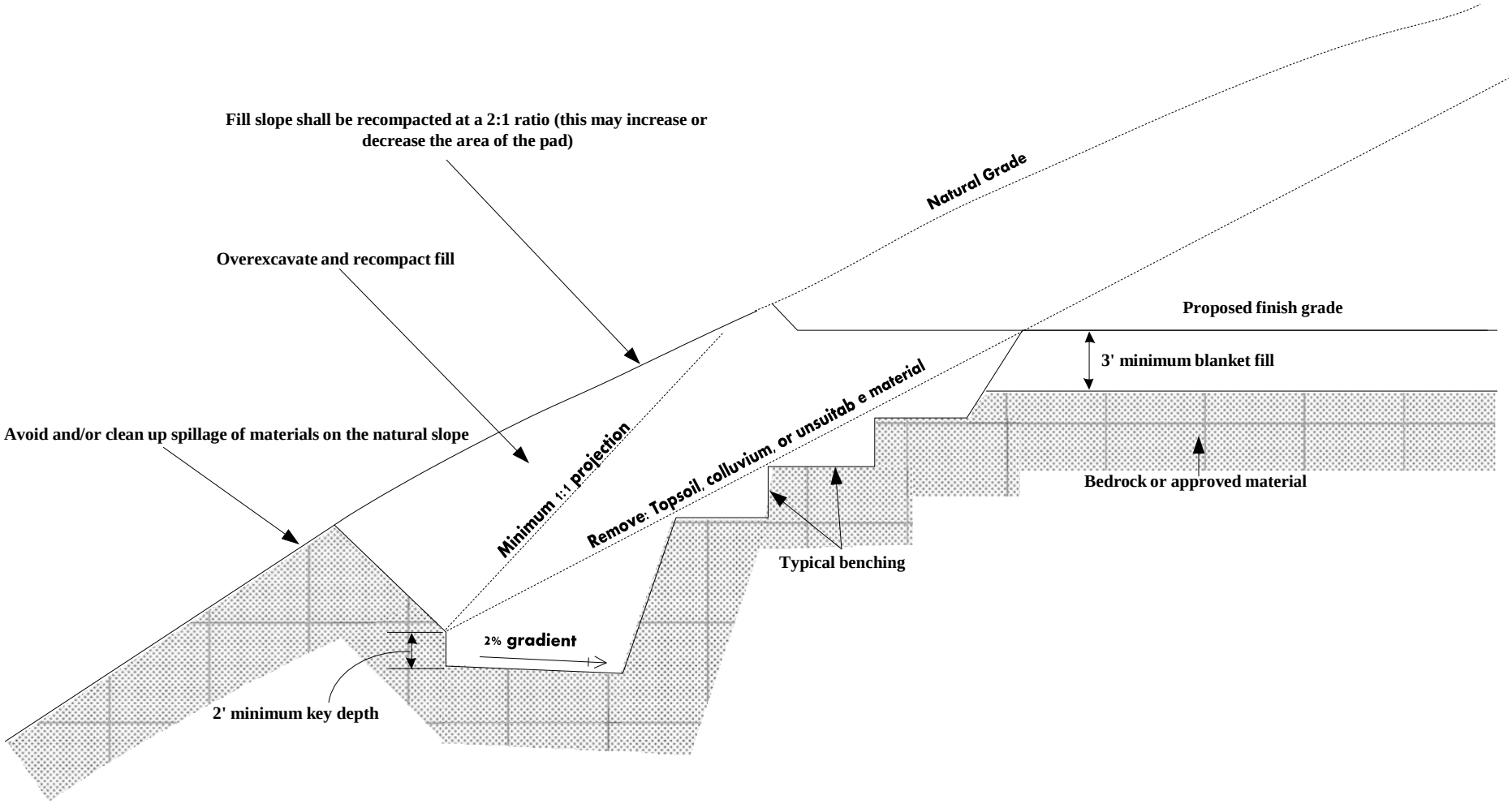
FIGURE E

DAYLIGHT CUT LOT DETAIL



Note: (1) Subdrain and key width requirements shall be determined based on exposed subsurface conditions and the thickness of overburden.

(2) Pad overexcavation and recompaction shall be completed if determined as necessary by the soils engineer and/or engineering geologist.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
DAYLIGHT CUT LOT DETAIL

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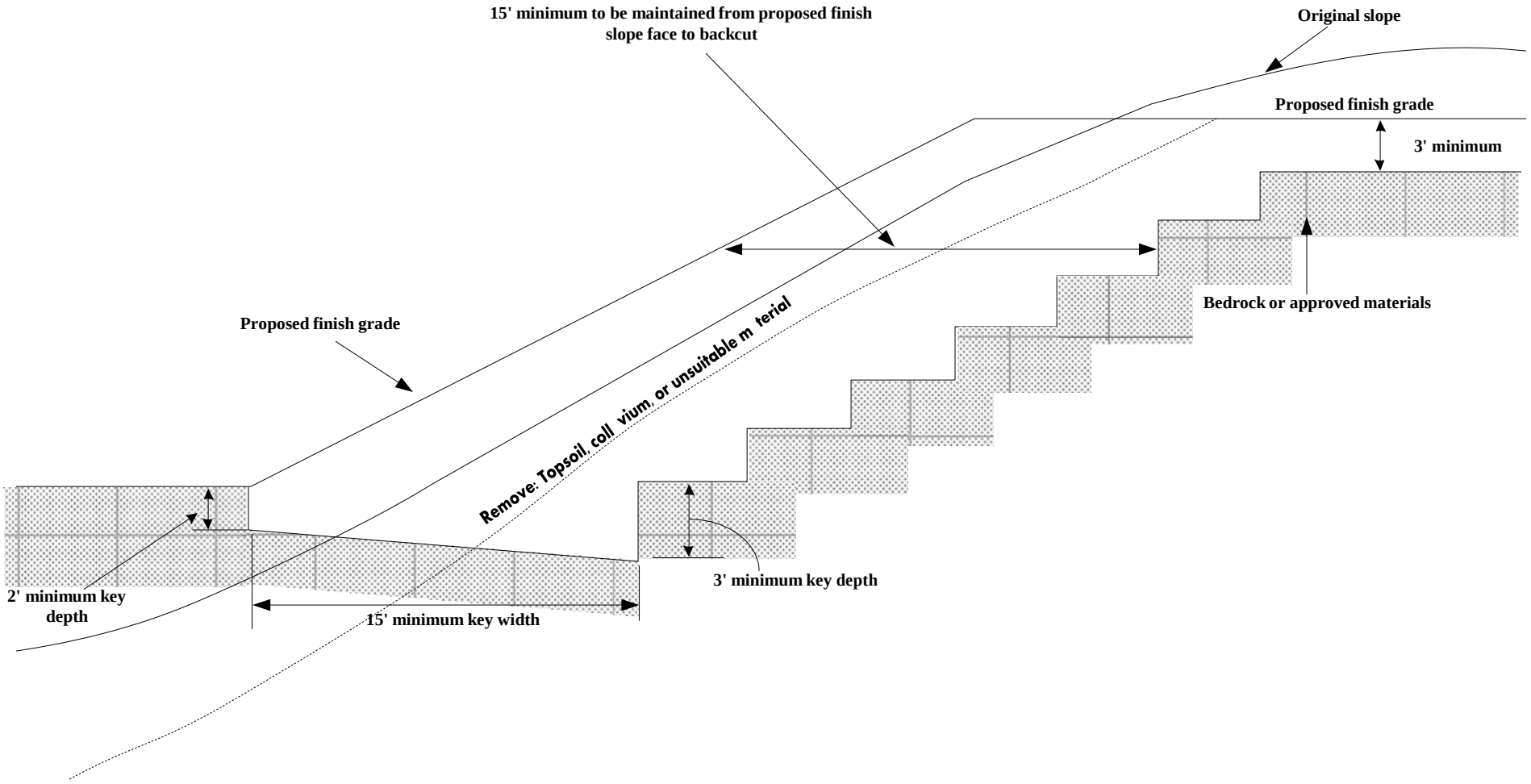
FIGURE F

SKIN FILL OF NATURAL GROUND



Note: (1) The need and disposition of drains will be determined by the soils engineer and/or engineering geologist based on site conditions.

(2) Pad overexcavation and recompaction shall be completed if determined as necessary by the soils engineer and/or engineering geologist.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
SKIN FILL OF NATURAL GROUND

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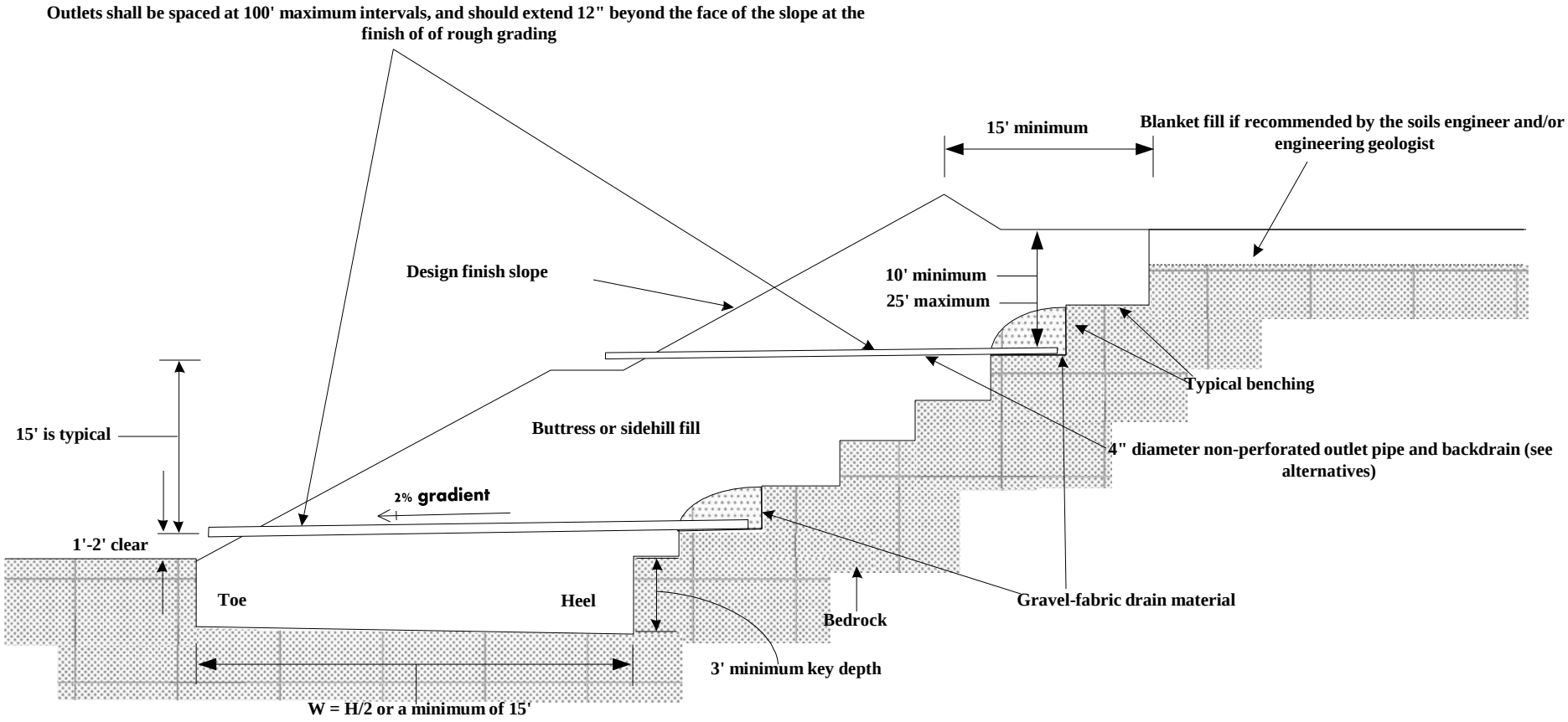
FIGURE G

TYPICAL STABILIZATION BUTTRESS FILL DESIGN



Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
TYPICAL STABILIZATION BUTTRESS FILL DESIGN

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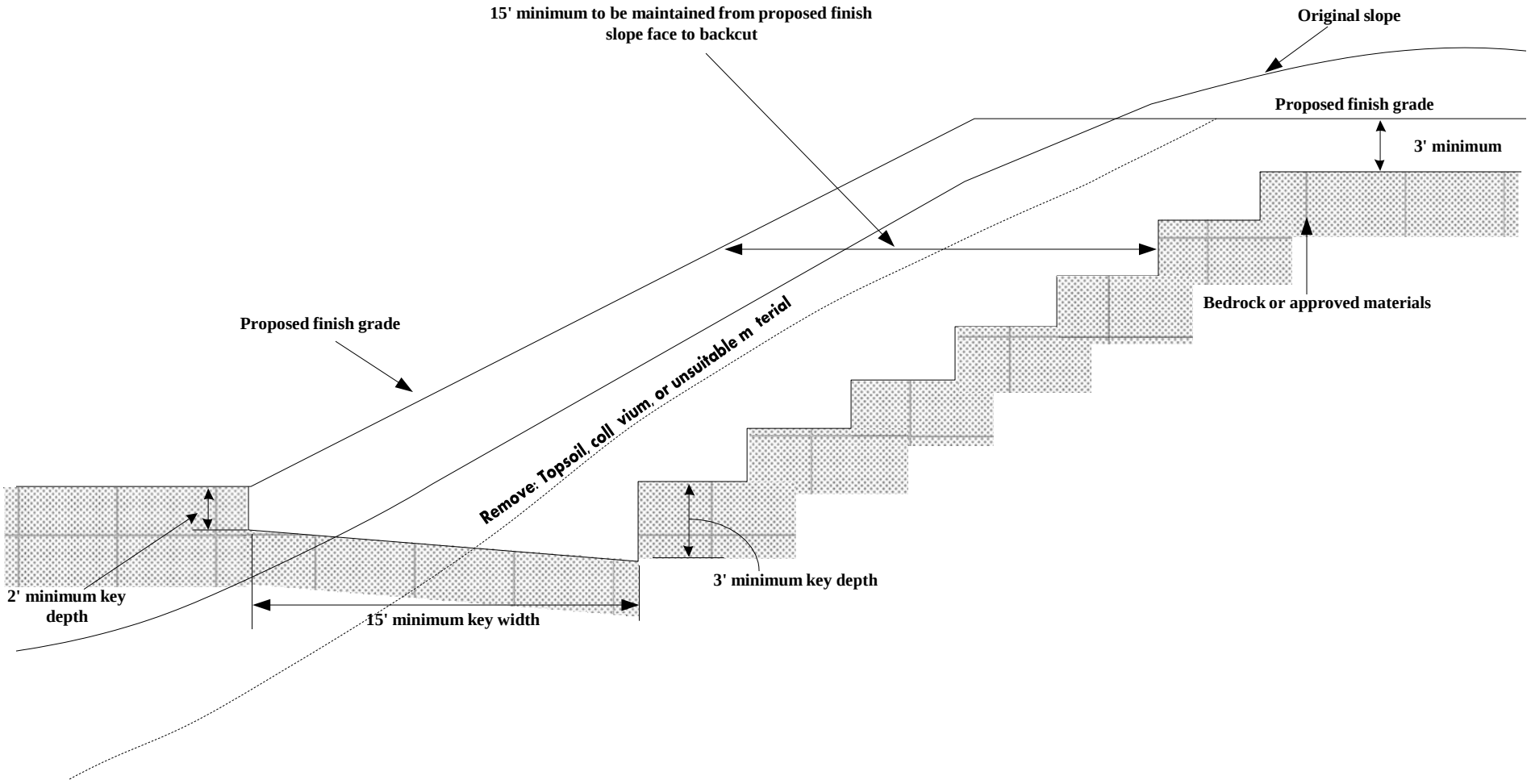
FIGURE H

SKIN FILL OF NATURAL GROUND



Note: (1) The need and disposition of drains will be determined by the soils engineer and/or engineering geologist based on site conditions.

(2) Pad overexcavation and recompaction shall be completed if determined as necessary by the soils engineer and/or engineering geologist.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
SKIN FILL OF NATURAL GROUND

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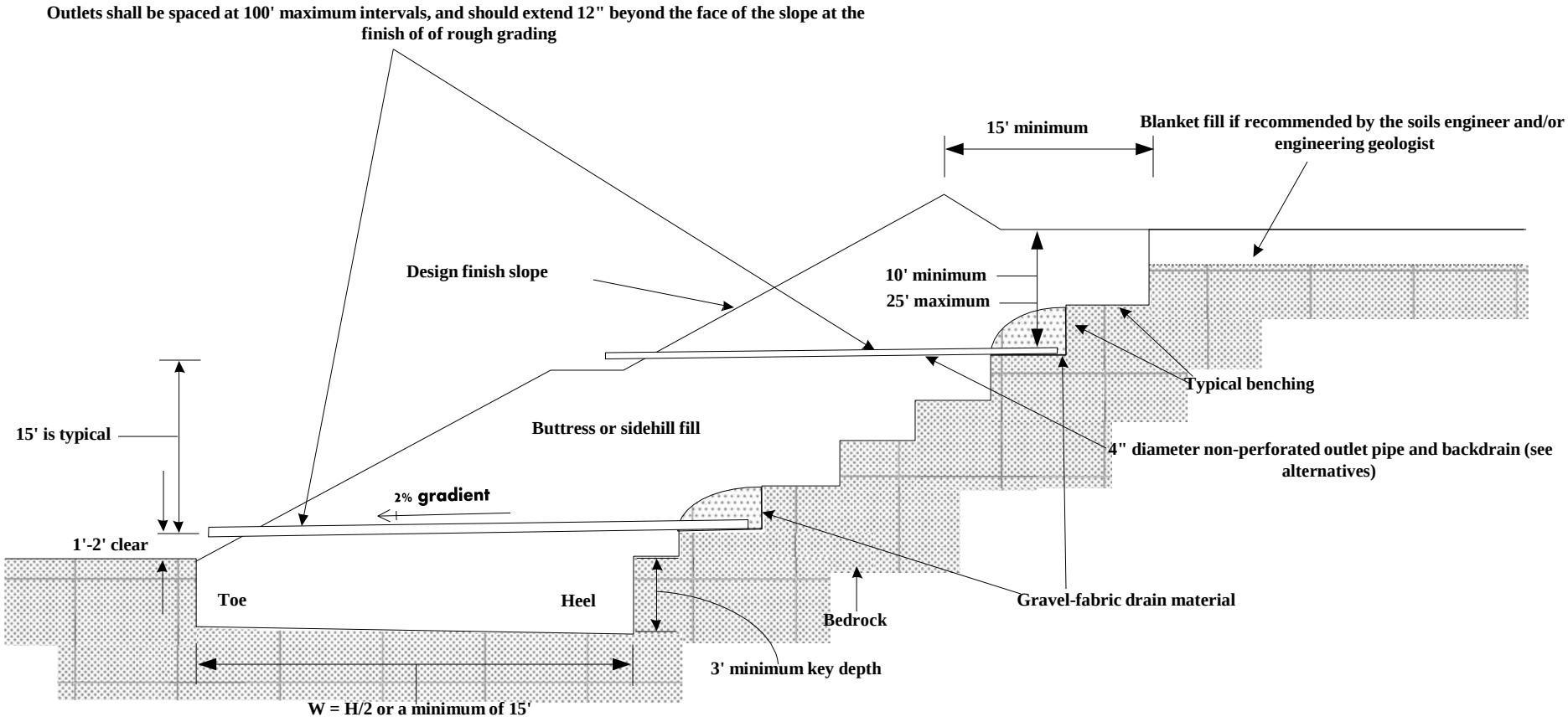
FIGURE G

TYPICAL STABILIZATION BUTTRESS FILL DESIGN



Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
TYPICAL STABILIZATION BUTTRESS FILL DESIGN

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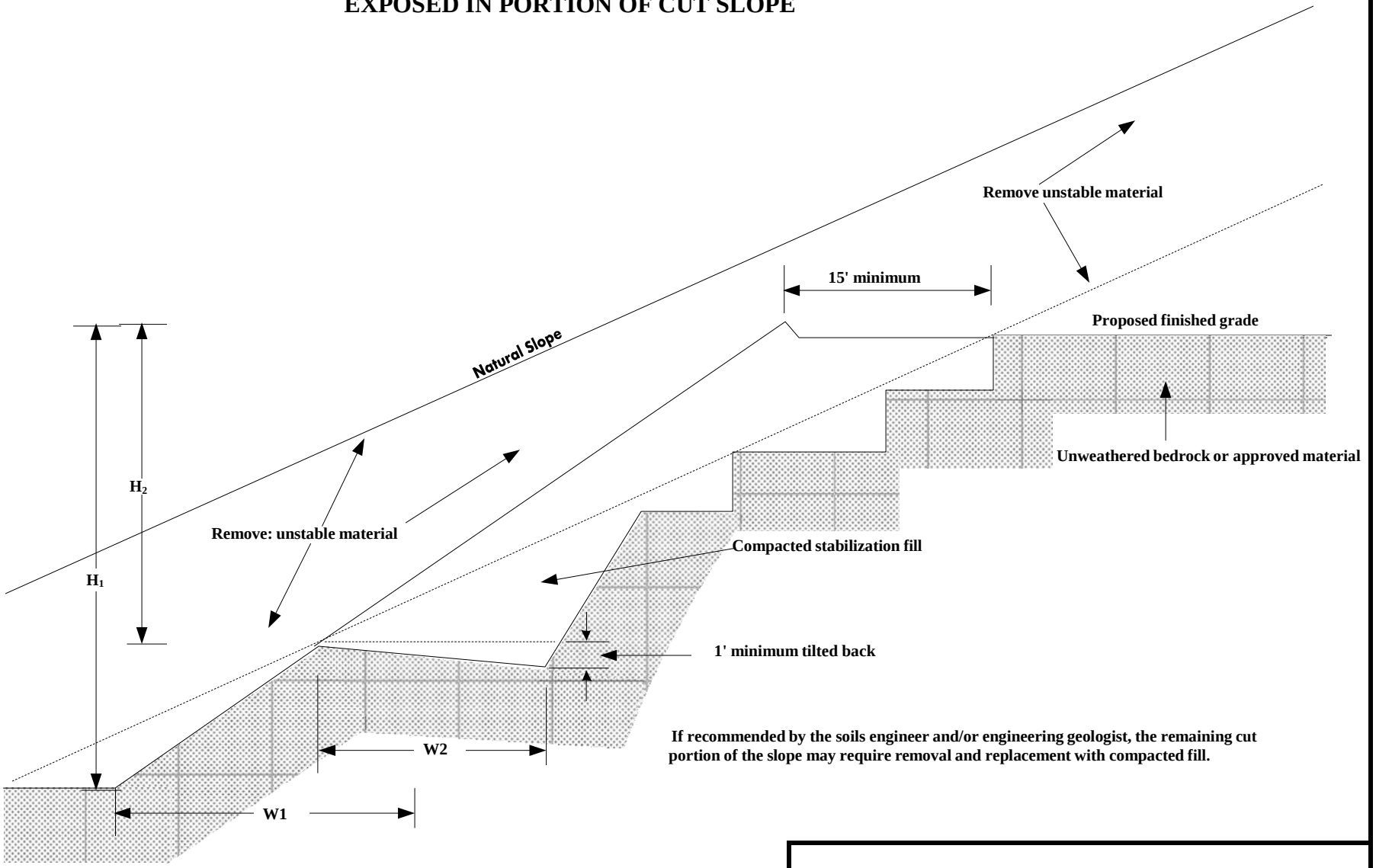
FIGURE H

STABILIZATION FILL FOR UNSTABLE MATERIAL EXPOSED IN PORTION OF CUT SLOPE



Note: (1) Subdrains are required only if specified by the soils engineer and/or engineering geologist.
(2) "W" shall be the equipment width (15') for slope heights less than 25 feet. For slopes greater than 25 feet "W" shall be determined by the project soils engineer and/or the engineering geologist. "W" shall never be less than H/2.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
STABILIZATION FILL FOR UNSTABLE MATERIAL EXPOSED IN PORTION OF CUT SLOPE

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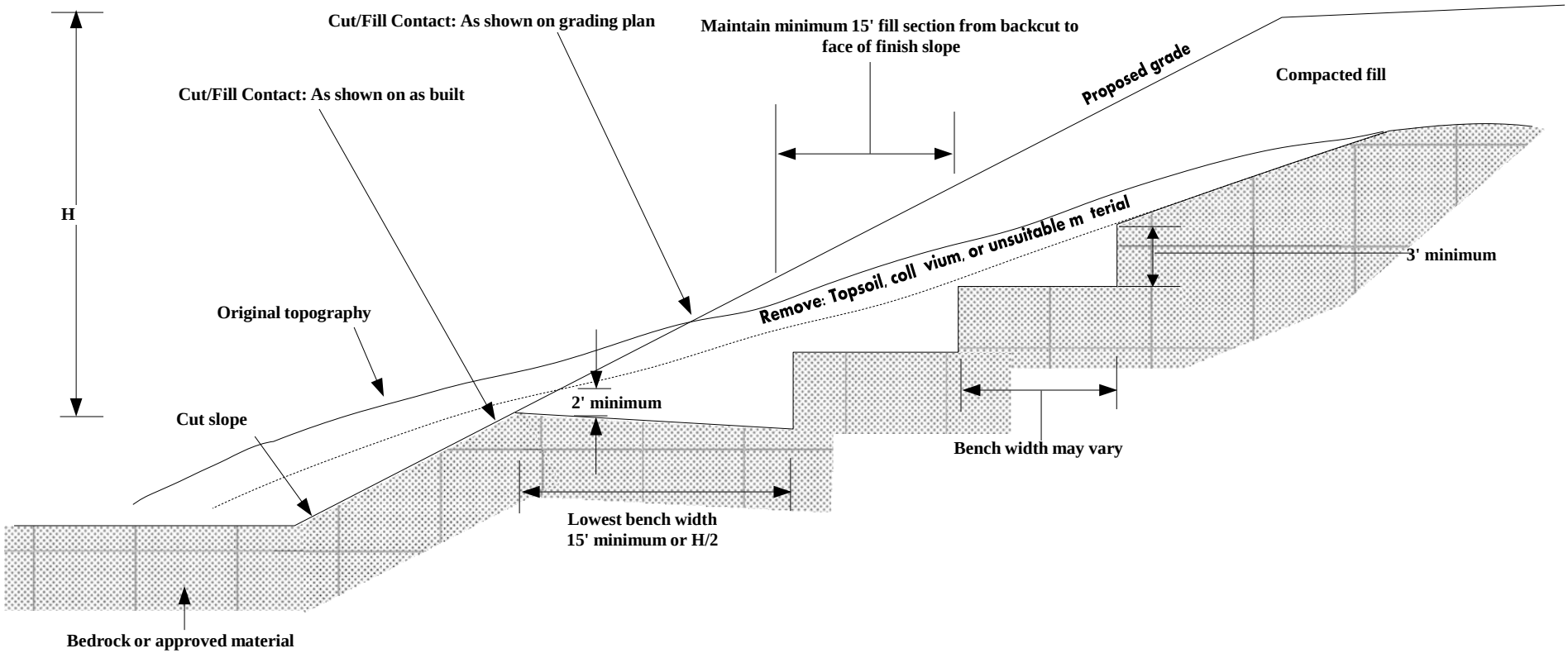
FIGURE I

FILL OVER CUT DETAIL



Note: The cut sectioin shall be excavated and evaluated by the soils engineer/engineering geologist prior to constructing the fill portion.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
FILL OVER CUT DETAIL

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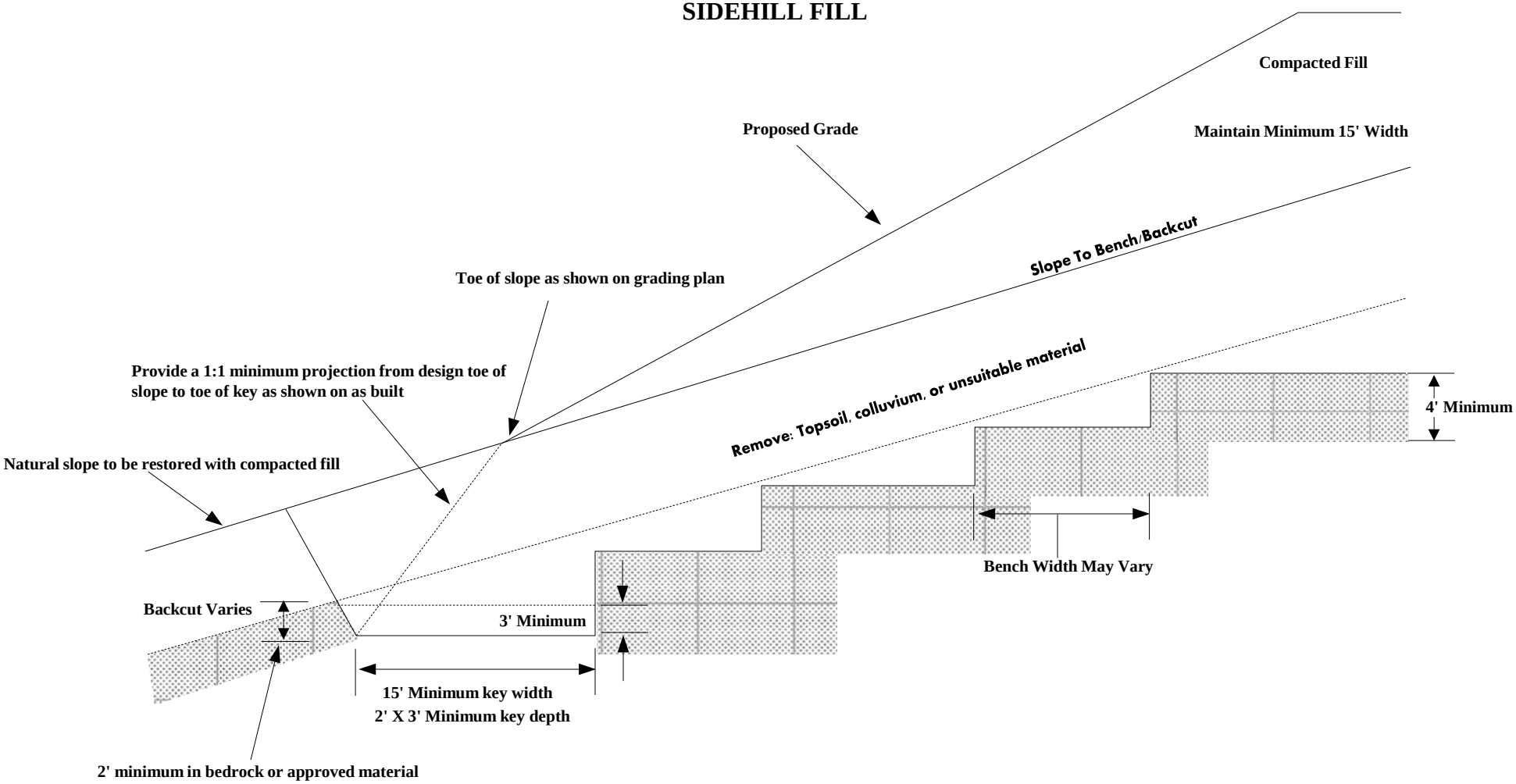
FIGURE J

FILL OVER NATURAL DETAIL
SIDEHILL FILL



Note: (1) Special recommendations shall be provided by the soils engineer/engineering geologist where the natural slope approaches or exceeds the design slope ratio.
(2) The need for and disposition of drains would be determined by the soils engineer/engineering geologist based upon exposed conditions.

Note: Figures not to scale

EARTHWORK AND GRADING GUIDELINES
FILL OVER NATURAL DETAIL SIDEHILL FILL

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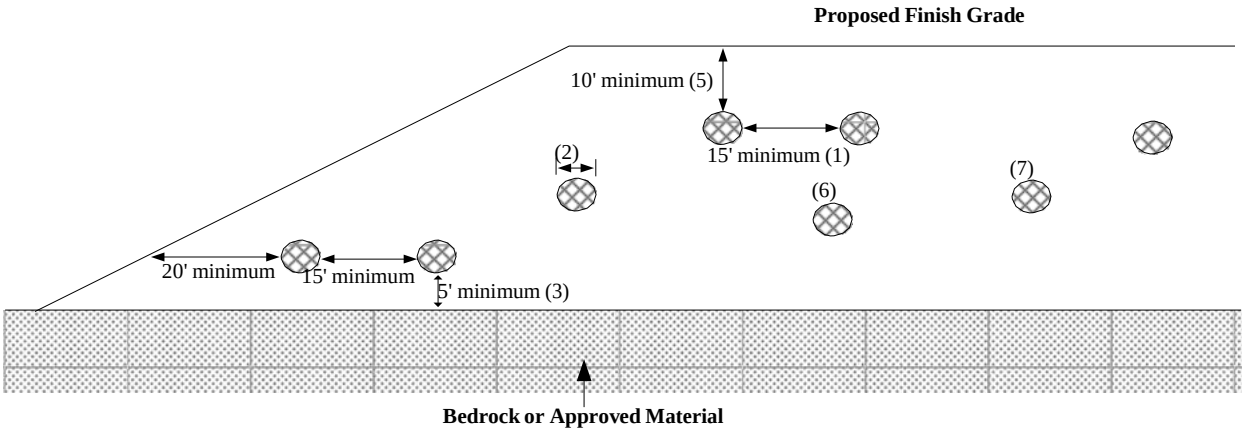
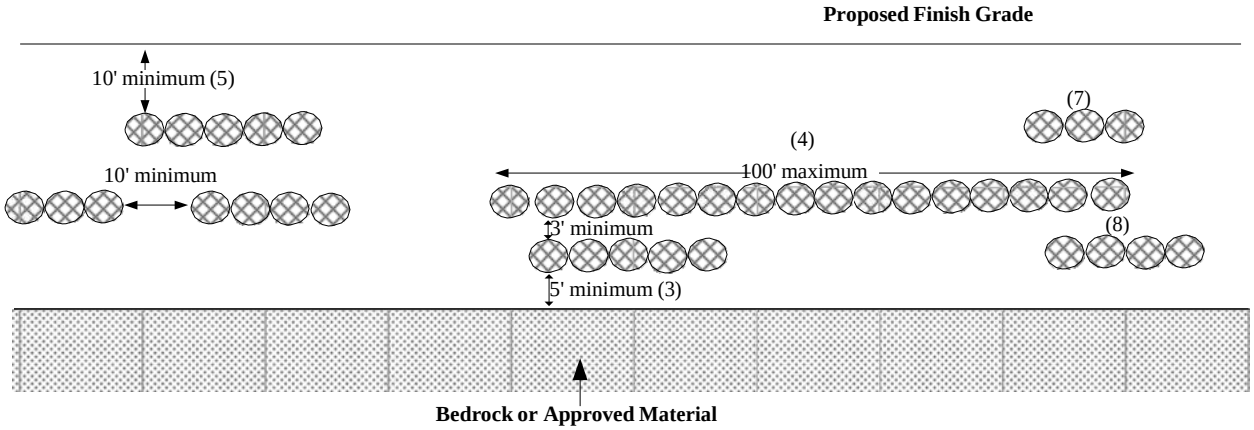
FIGURE K

OVERSIZE ROCK DISPOSAL

View Normal to Slope Face

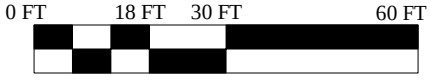


View Parallel to Slope Face



Note: (1) One Equipment width or a minimum of 15 feet.
(2) Height and width may vary depending on rock size and type of equipment used. Length of windrow shall be no greater than 100 feet maximum.
(3) If approved by the soils engineer and/or engineering geologist.
(4) Orientation of windrows may vary but shall be as recommended by the soils engineer and/or engineering geologist. Unless recommended staggering of windrows is not necessary.
(5) Areas shall be cleared for utility trenches, foundations, and swimming pools.
(6) Voids in windrows shall be filled by flooding granular soil into place. Granular soil shall be any soil which has a unified soil classification system (Universal Building Code (UBC) 29-1). Designation of SM, SP, SW, GP, or GW.
(7) After fill between windrows is placed and compacted with the lift of fill covering windrow, windrow shall be proof rolled with a D-9 dozer or equivalent.
(8) Oversized rock is defined as larger than 12", and less than 4 feet in size.

Approximate Scale: 1" = 30'



Note: All distances are approximate

EARTHWORK AND GRADING GUIDELINES
OVERSIZE ROCK DISPOSAL

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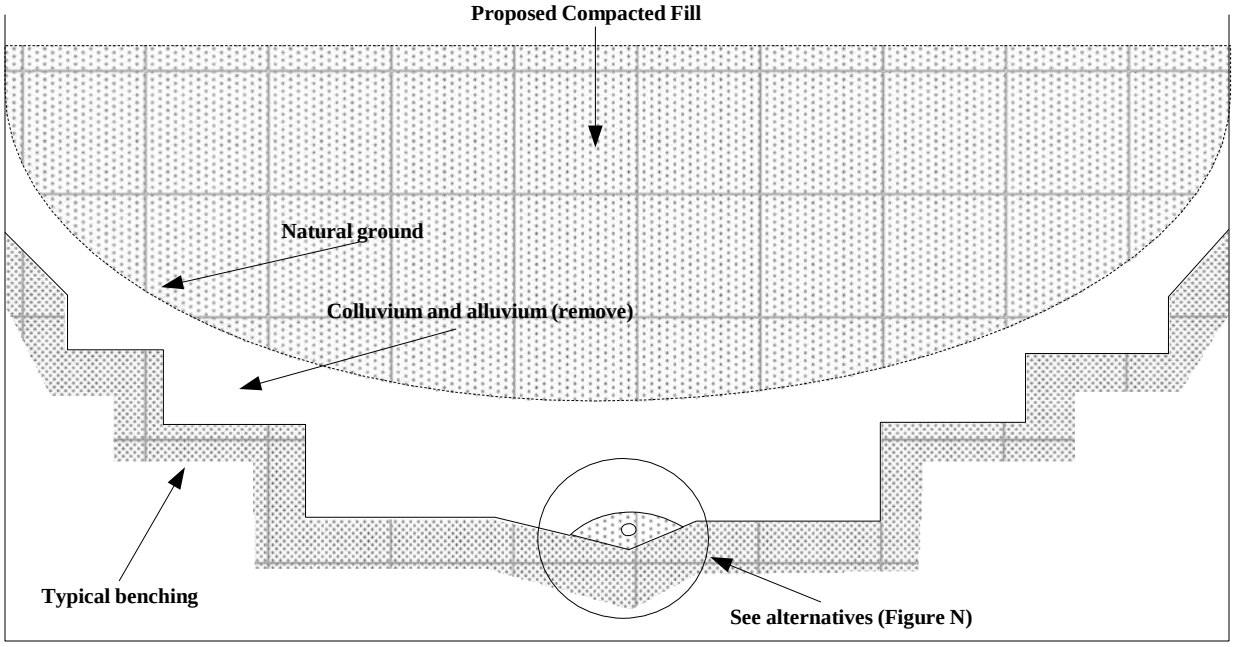
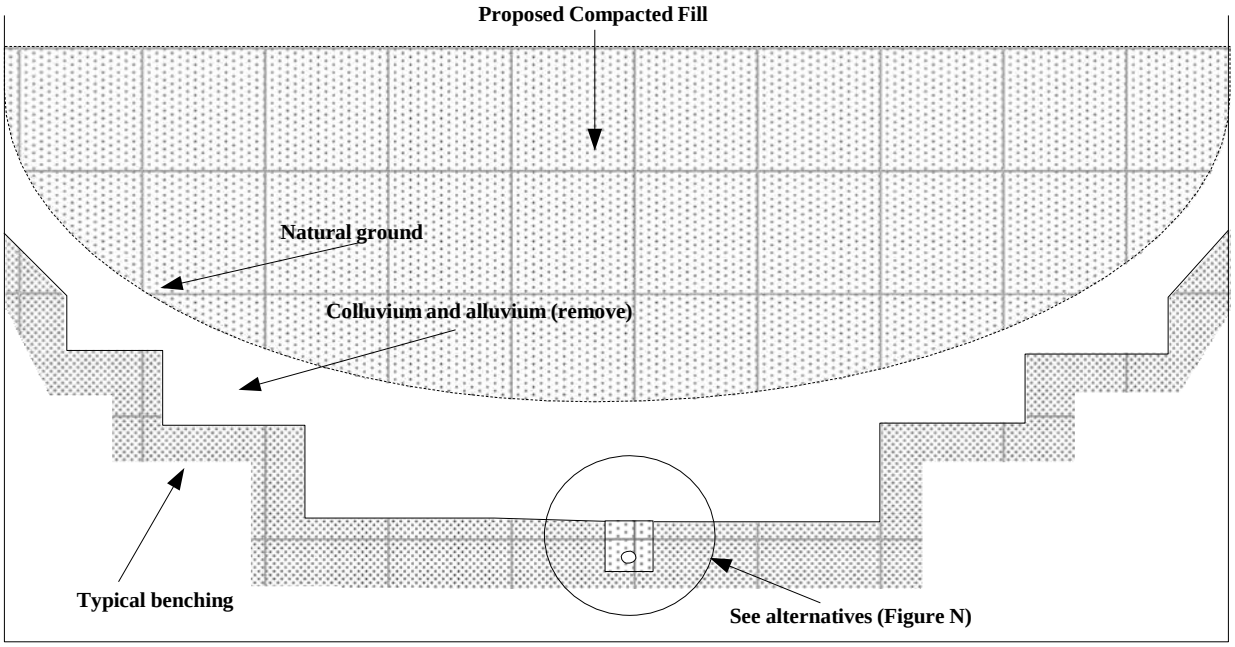
FIGURE L

CANYON SUBDRAIN DETAIL

Type A



Type B



Note: Alternatives, locations, and extent of subdrains should be determined by the soils engineer and/or engineering geologist during actual grading.

EARTHWORK AND GRADING GUIDELINES
CANYON SUBDRAIN DETAIL

Note: Figures not to scale

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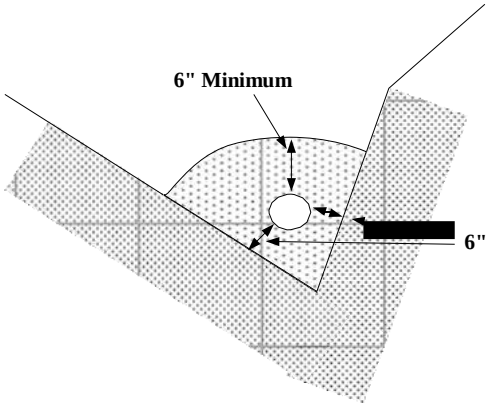
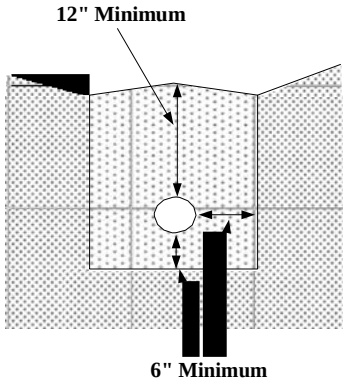
FIGURE M

CANYON SUBDRAIN ALTERNATE DETAILS

Alternate 1: Perforated Pipe and Filter Material



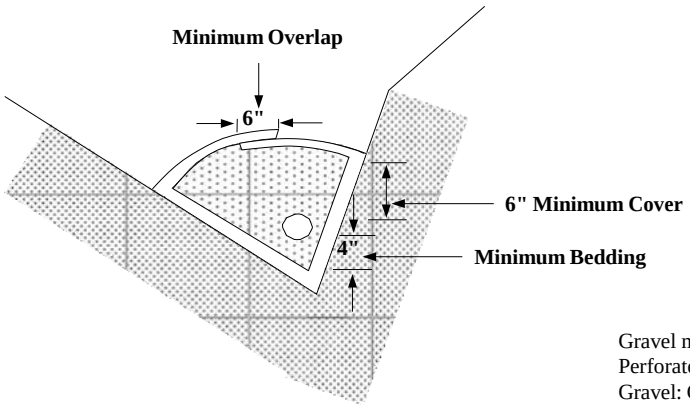
Filter material: Minimum volume of 9 feet^3/linear foot.
6" diameter ABS or PVC pipe or approved substitute with minimum 8 (¼" diameter) perforations per linear foot in bottom half of pipe.
ASTM D 2751, SDR 35 or ASTM D 1527, Schedule 40.
ASTM D 3034, SDR 35 or ASTM D 1785, Schedule 40.
For continuous run in excess of 500 feet use 8" diameter pipe.

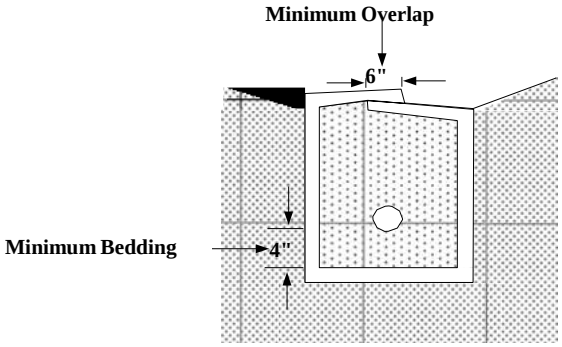


Filter Material

Sieve Size	Percent Passing
1"	100
¾"	90-100
3/8"	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3

Alternate 2: Perforated Pipe, Gravel and Filter Fabric





Gravel material 9 feet^3/linear foot.
Perforated pipe: see alternate 1.
Gravel: Clean ¾" rock or approved substitute.
Filter Fabric: Mirafi 140 or approved substitute.

Note: Figures not to scale

EARTHWORK AND GRADING GUIDELINES
CANYON SUBDRAIN ALTERNATE DETAILS

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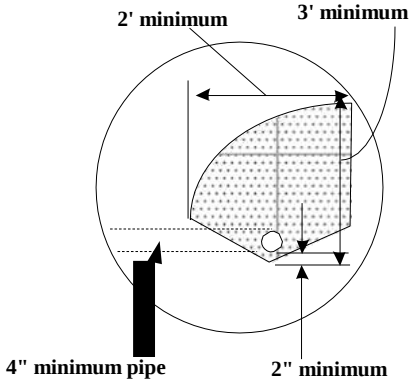
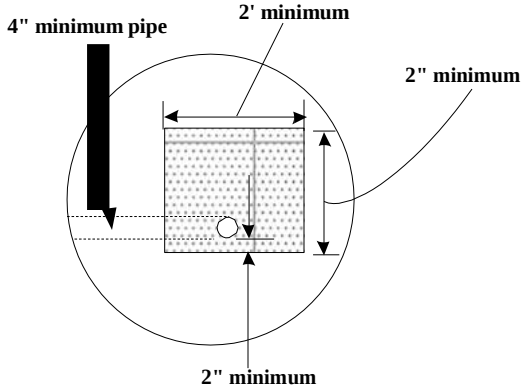
FIGURE N

TYPICAL STABILIZATION BUTTRESS SUBDRAIN DETAIL





Filter Material: Minimum of 5 ft^3/linear foot of pipe or 4 ft^3/linear foot of pipe when placed in square cut trench.

Alternative In Lieu Of Filter Material: Gravel may be encased in approved filter fabric. Filter fabric shall be mirafi 140 or equivalent. Filter fabric shall be lapped a minimum of 12" on all joints.

Minimum 4" Diameter Pipe: ABS-ASTM D-2751, SDR 35 or ASTM D-1527 schedule 40 PVC-ASTM D-3034, SDR 35 or ASTM D-1785 schedule 40 with a crushing strength of 1,000 pounds minimum, and a minimum of 8 uniformly spaced perforations per foot of pipe installed with perforations at bottom of pipe. Provide cap at upstream end of pipe. Slope at 2% to outlet pipe. Outlet pipe shall be connected to the subdrain pipe with tee or elbow.

Note: (1) Trench for outlet pipes shall be backfilled with onsite soil.
(2) Backdrains and lateral drains shall be located at the elevation of every bench drain. First drain shall be located at the elevation just above the lower lot grade. Additional drains may be required at the discretion of the soils engineer and/or engineering geologist.

Filter Material – Shall be of the following specification or an approved equivalent:

Filter Material

Sieve Size	Percent Passing
1"	100
¾"	90-100
3/8"	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3

Gravel - Shall be of the following specification or an approved equivalent:

Filter Material

Sieve Size	Percent Passing
1½"	100
No. 4	50
No. 200	8

Sand equivalent: Minimum of 50

Note: Figures not to scale

EARTHWORK AND GRADING GUIDELINES
TYPICAL STABILIZATION BUTTRESS SUBDRAIN DETAIL

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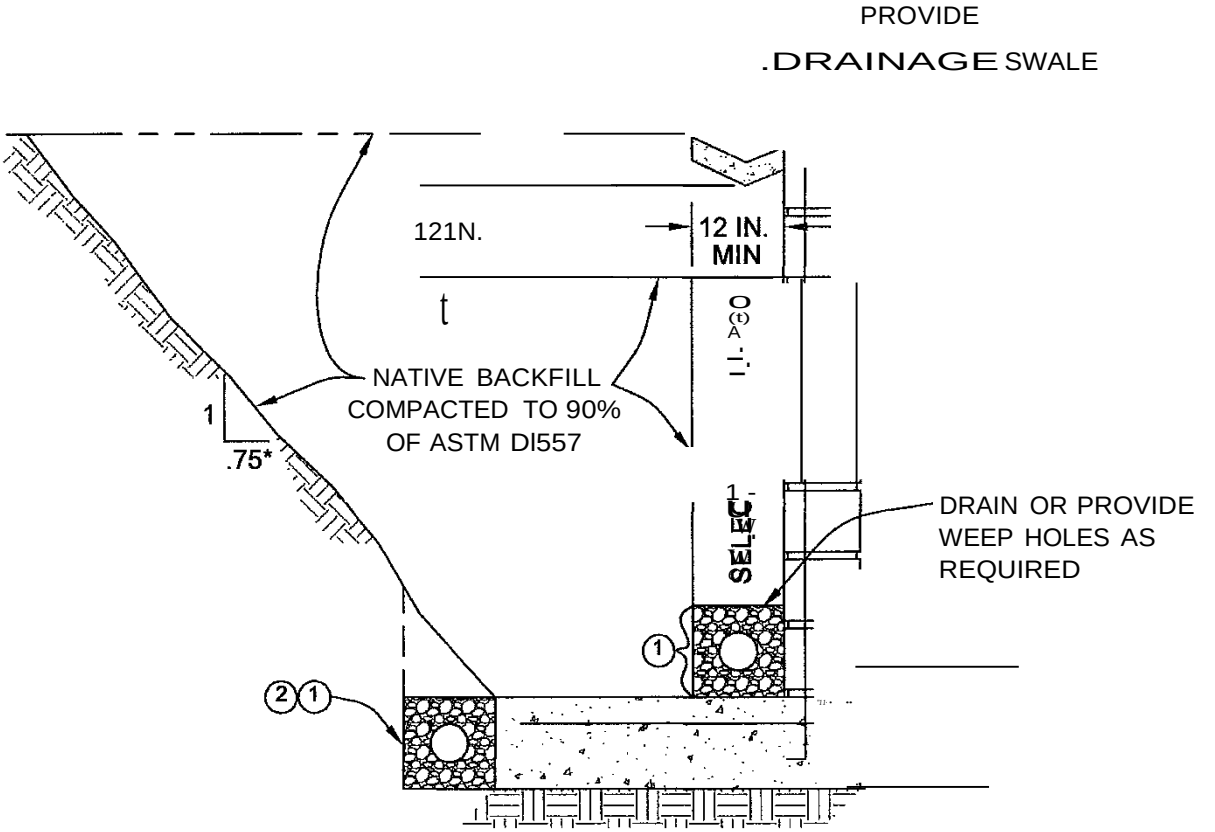
FIGURE O



* OR AS REQUIRED FOR SAFETY

NOTES

(!) 4-INCH PERFORATED PVC SCHEDULE 40 OR APPROVED ALTERNATE. PLACE PERFORATION DOWN AND SURROUND WITH A MINIMUM OF 1 CUBIC FOOT PER LINEAL FOOT (1 FT. /FT.) OF 3/4 INCH ROCK OR APPROVED ALTERNATE AND WRAPPED IN FILTER FABRIC.

® PLACE DRAIN AS SHOWN WHERE MOISTURE MIGRATION THROUGH THE WALL IS UNDESIRABLE.

EARTHWORK & GRADING GUIDELINES

TYPICAL RETAINING WALL BACKFILL

NOTE: FIGURE NOT TO SCALE

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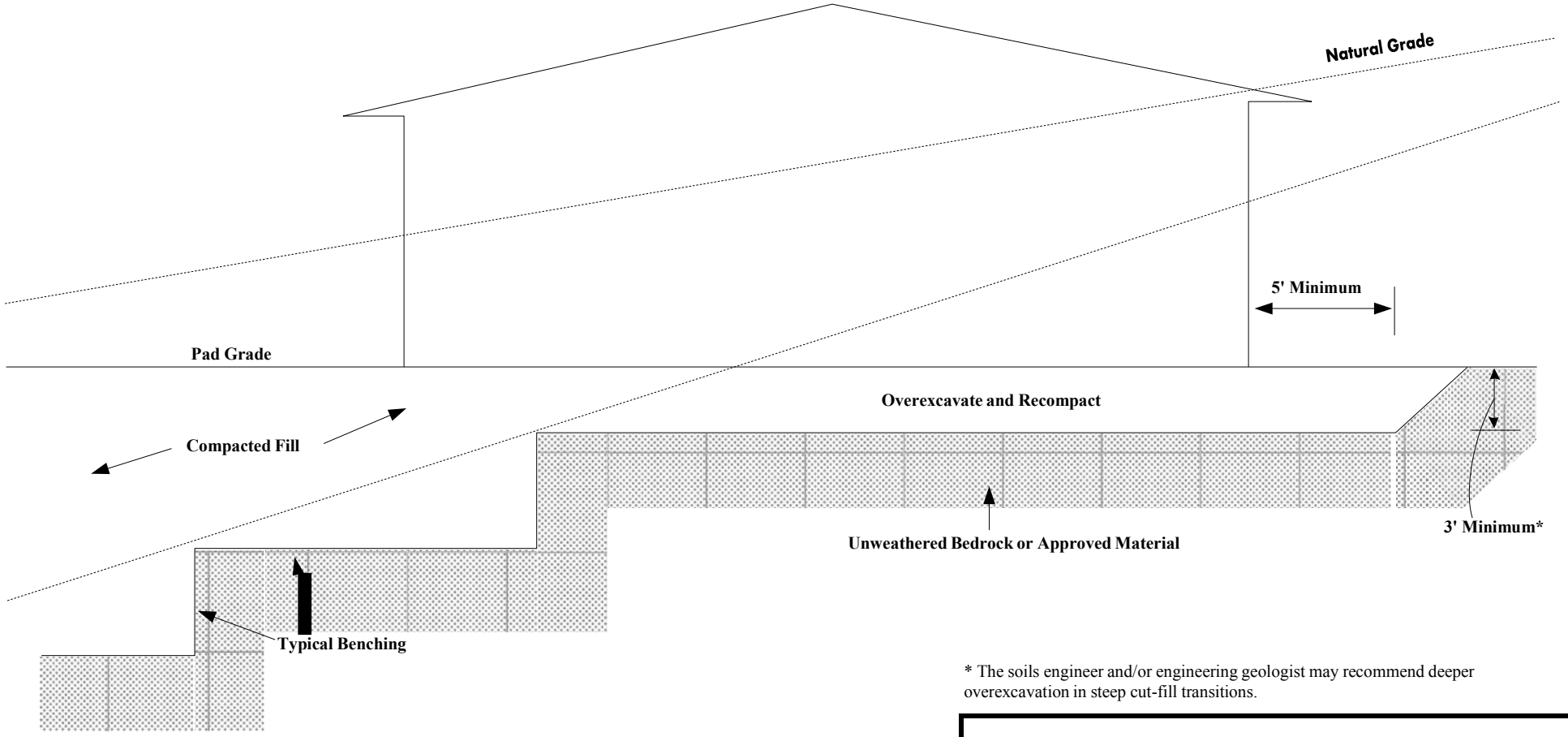
FIGURE P

TRANSITION LOT DETAIL
CUT LOT – MATERIAL TYPE TRANSITION



* The soils engineer and/or engineering geologist may recommend deeper overexcavation in steep cut-fill transitions.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
TRANSITION LOT DETAIL
CUT LOT – MATERIAL TYPE TRANSITION

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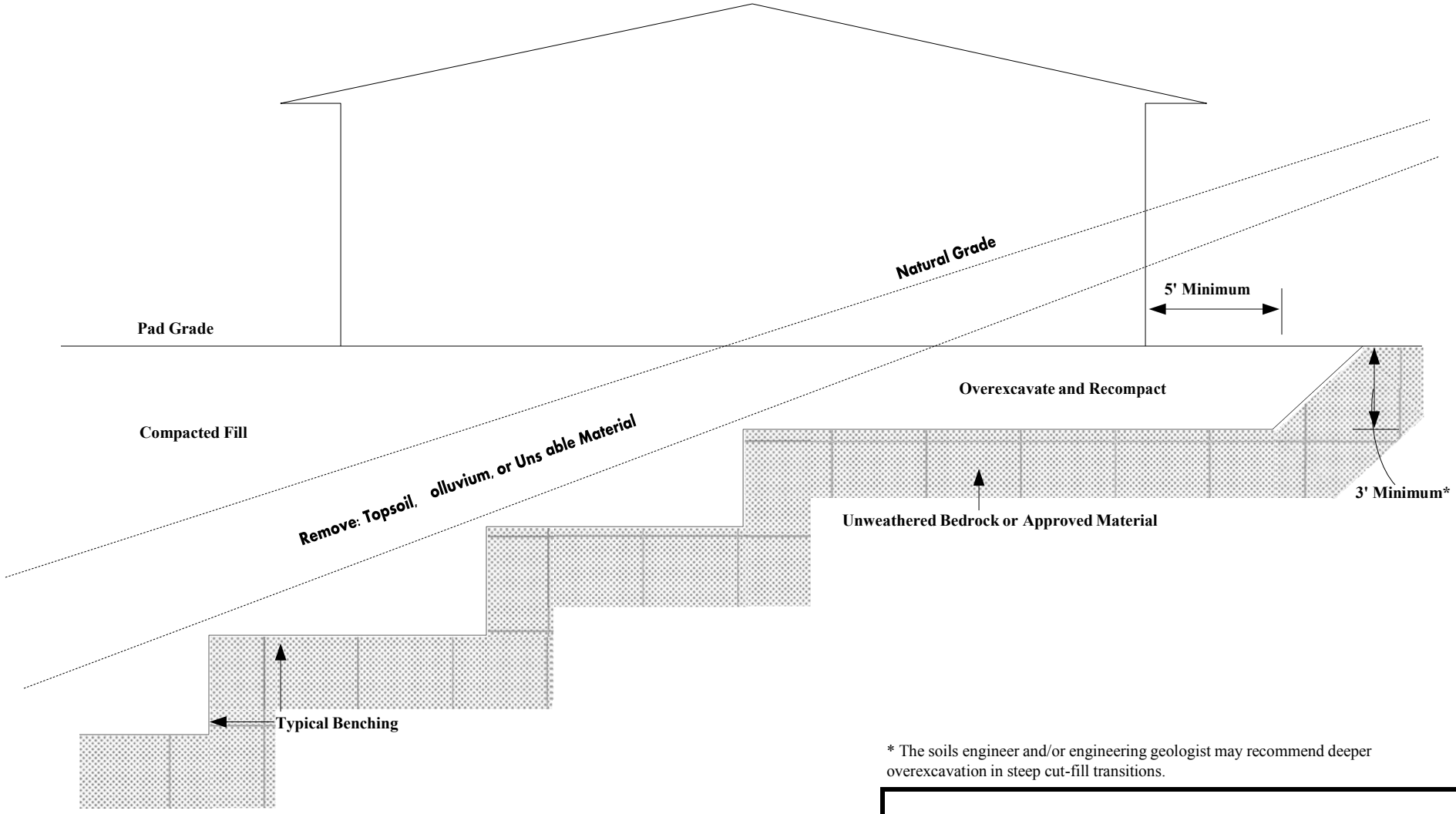
FIGURE A

TRANSITION LOT DETAIL
CUT – FILL – DAYLIGHT TRANSITION



* The soils engineer and/or engineering geologist may recommend deeper overexcavation in steep cut-fill transitions.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
TRANSITION LOT DETAIL
CUT – FILL – DAYLIGHT TRANSITION

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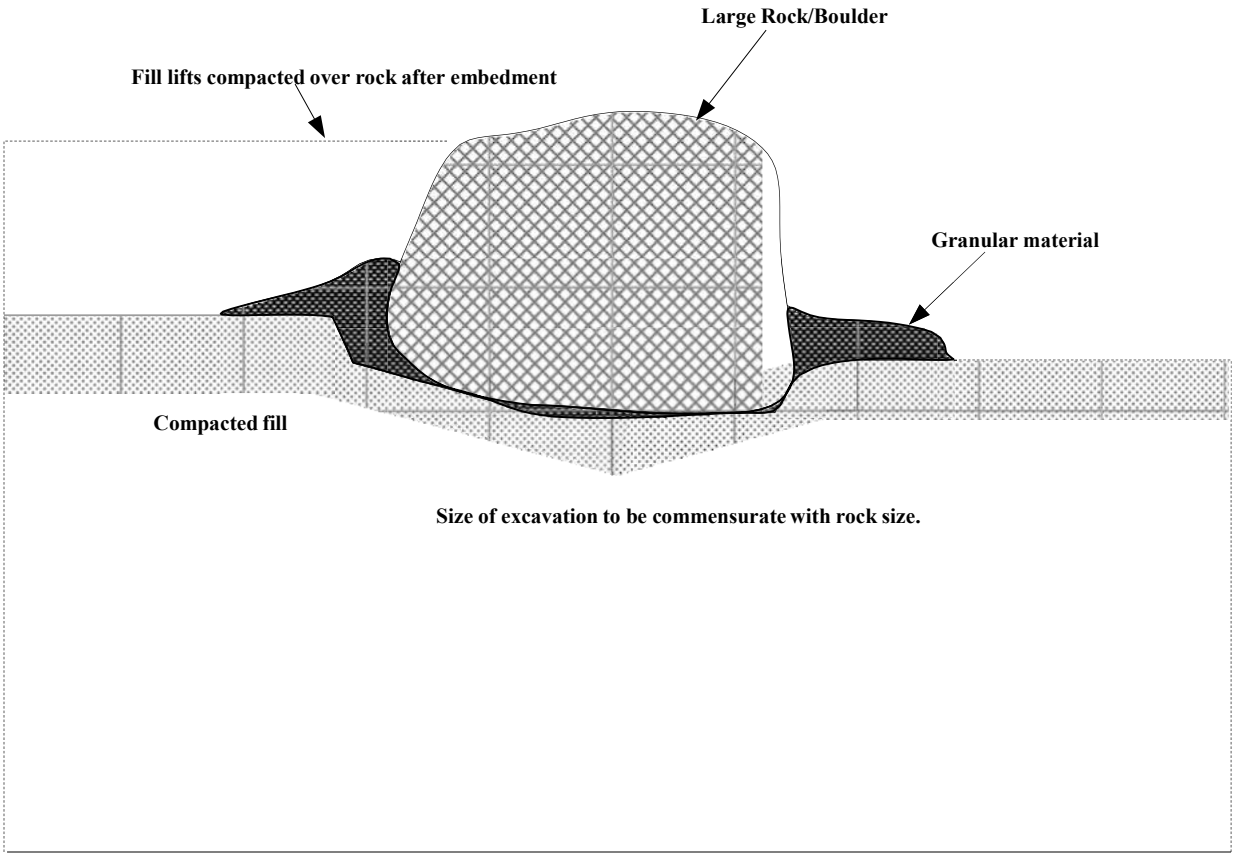
FIGURE B

ROCK DISPOSAL PITS



Note: (1) Large rock is defined as having a diameter larger than 3 feet in maximum size.
(2) Pit shall be excavated into compacted fill to a depth equal to half of the rock size.
(3) Granular soil shall be pushed into the pit and then flooded around the rock using a sheepsfoot to help with compaction.
(4) A minimum of 3 feet of compacted fill should be laid over each pit.
(5) Pits shall have at least 15 feet of separation between one another, horizontally.
(6) Pits shall be placed at least 20 feet from any fill slope.
(7) Pits shall be used only in deep fill areas.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
ROCK DISPOSAL PITS

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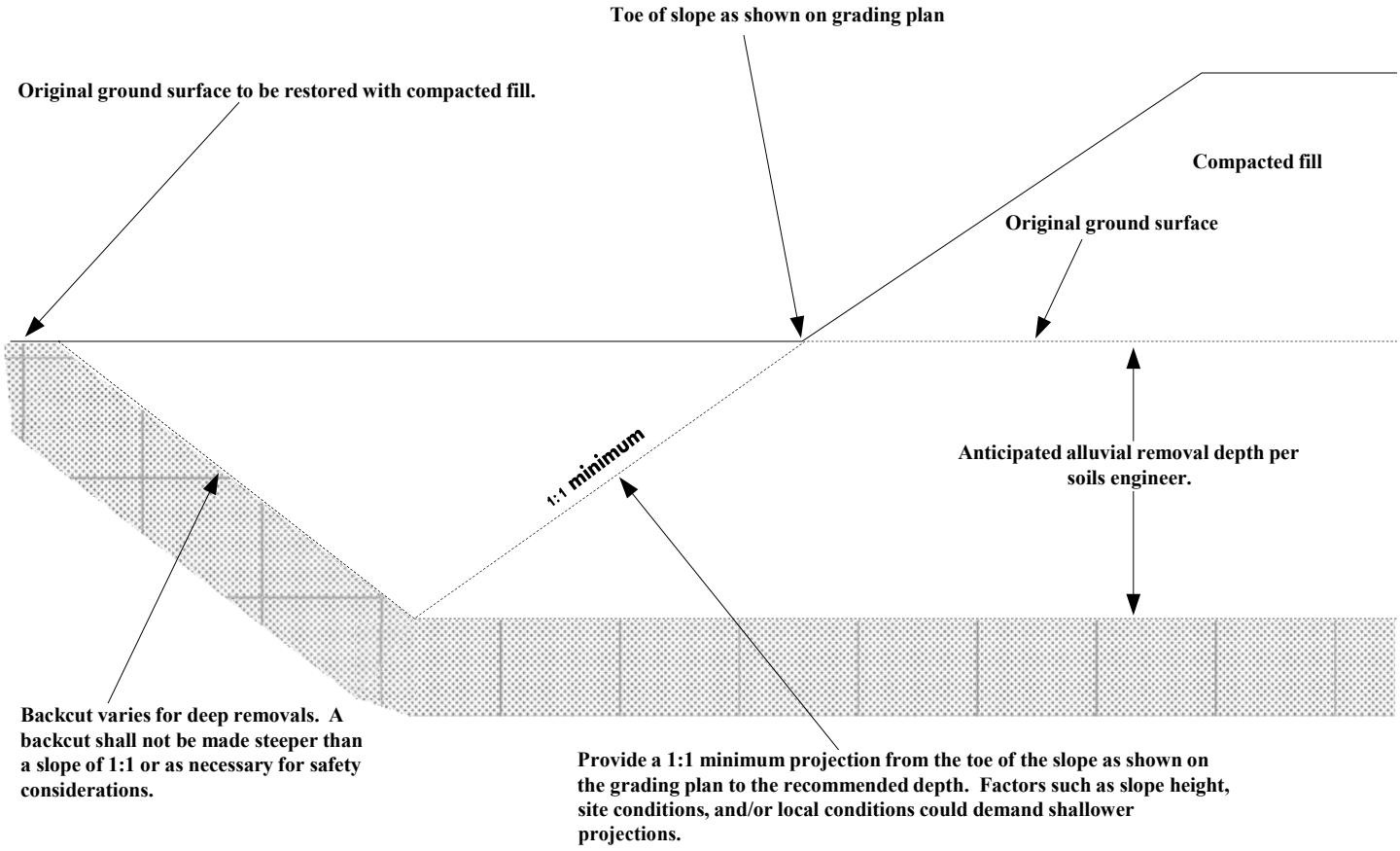
FIGURE C

DETAIL FOR FILL SLOPE TOEING OUT ON FLAT ALLUVIATED CANYON



Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
DETAIL FOR FILL SLOPE TOEING OUT ON A FLAT ALLUVIATED CANYON

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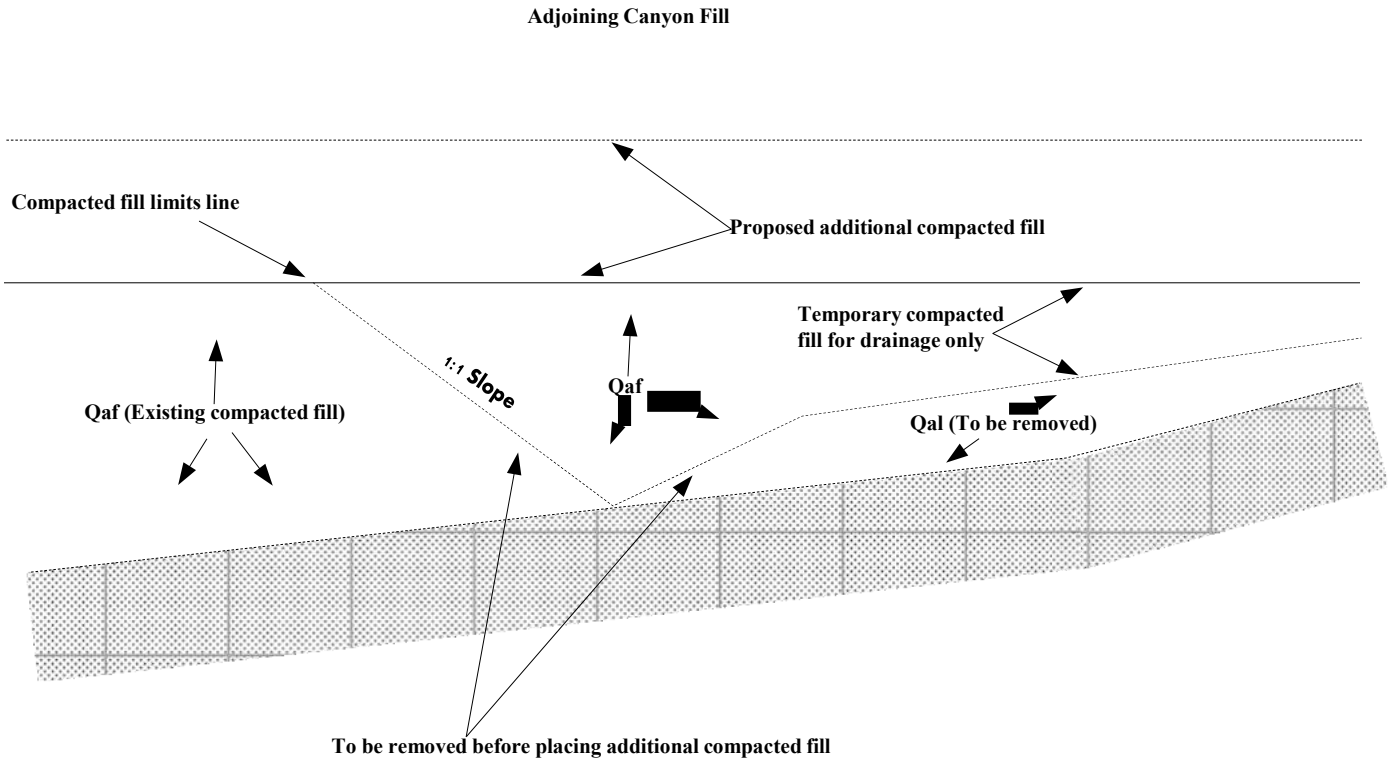
FIGURE D

REMOVAL ADJACENT TO EXISTING FILL



Legend

Qaf - Artificial Fill

Qal - Alluvium

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
REMOVAL ADJACENT TO EXISTING FILL

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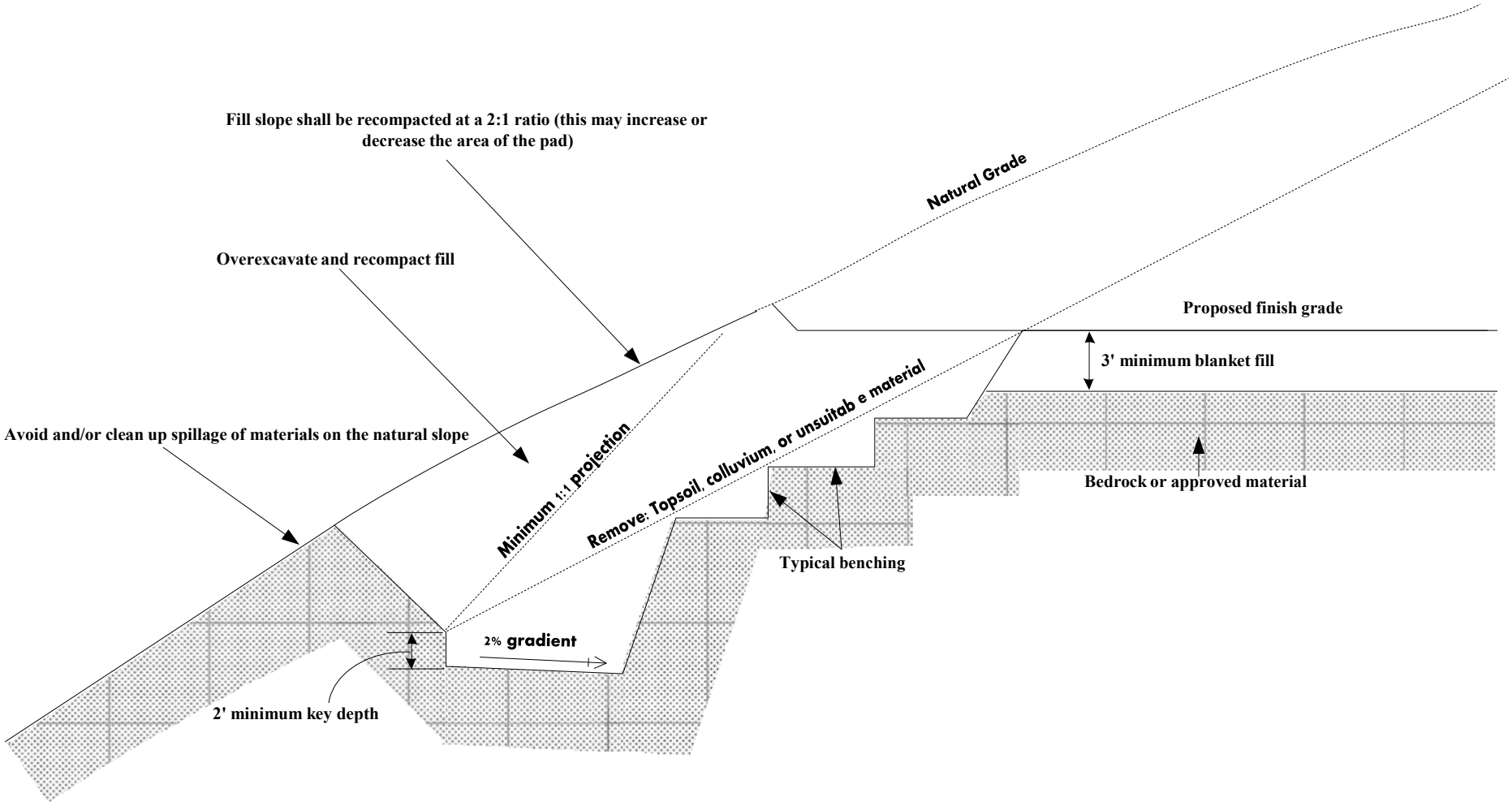
FIGURE E

DAYLIGHT CUT LOT DETAIL



Note: (1) Subdrain and key width requirements shall be determined based on exposed subsurface conditions and the thickness of overburden.

(2) Pad overexcavation and recompaction shall be completed if determined as necessary by the soils engineer and/or engineering geologist.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
DAYLIGHT CUT LOT DETAIL

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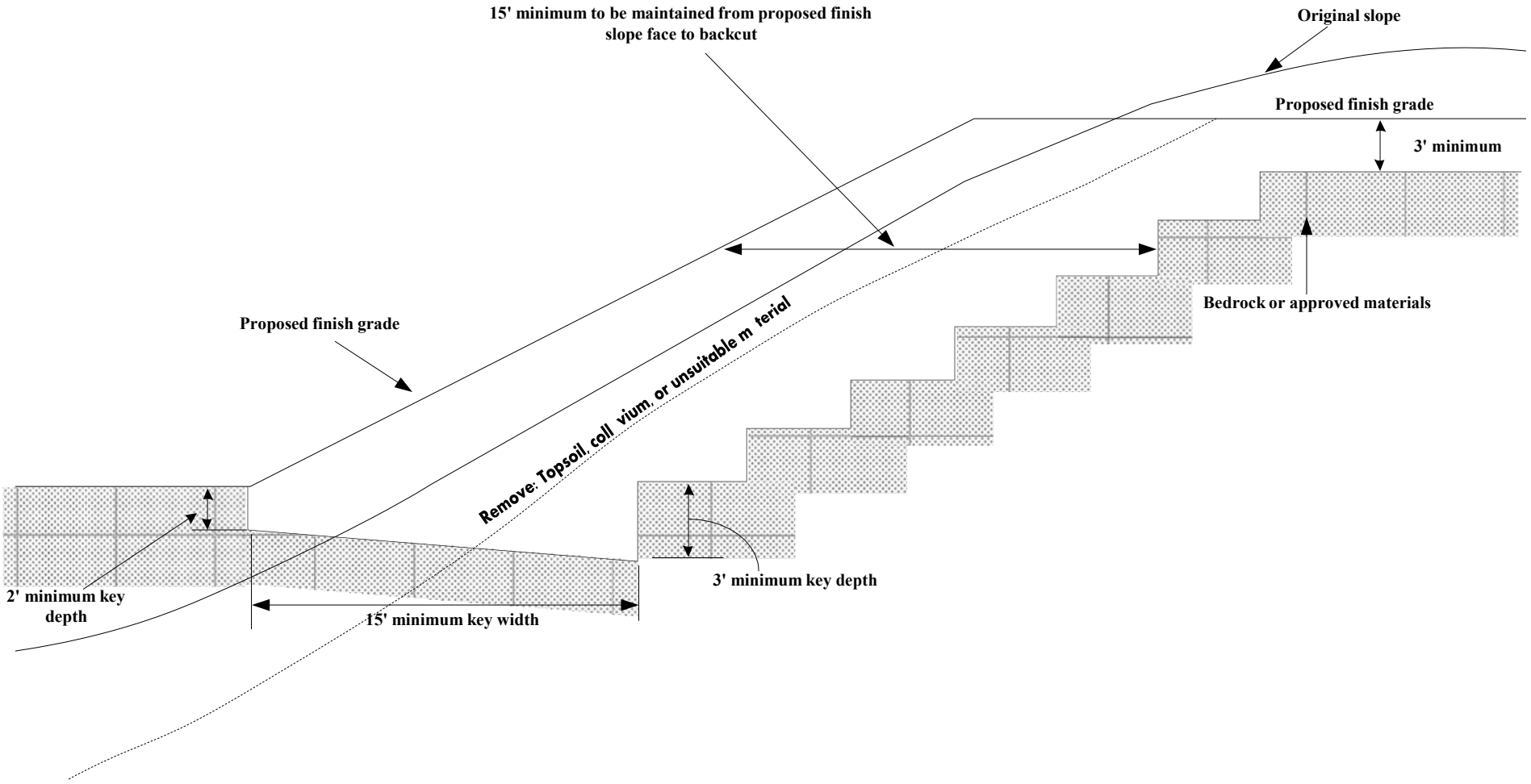
FIGURE F

SKIN FILL OF NATURAL GROUND



Note: (1) The need and disposition of drains will be determined by the soils engineer and/or engineering geologist based on site conditions.

(2) Pad overexcavation and recompaction shall be completed if determined as necessary by the soils engineer and/or engineering geologist.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
SKIN FILL OF NATURAL GROUND

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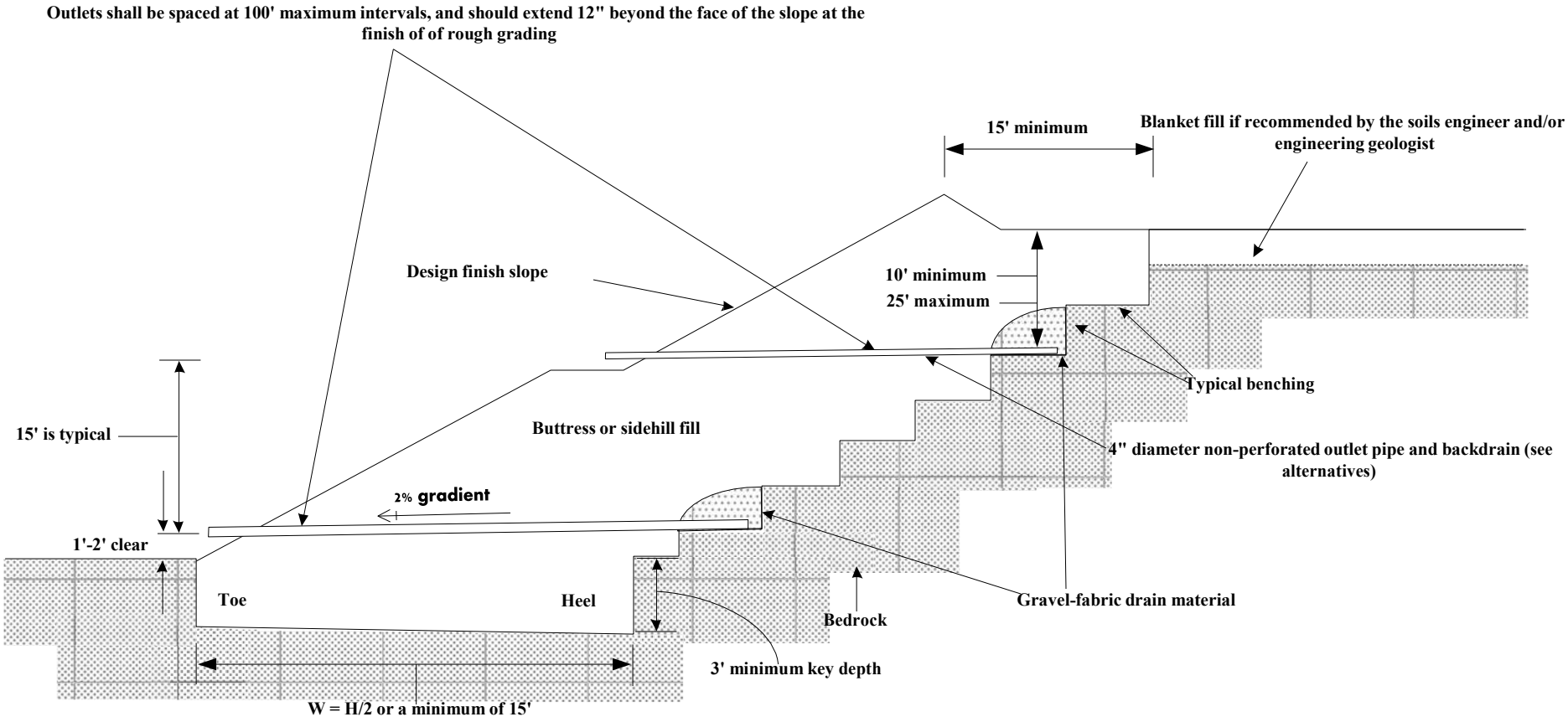
Engineering Solutions

FIGURE G

TYPICAL STABILIZATION BUTTRESS FILL DESIGN



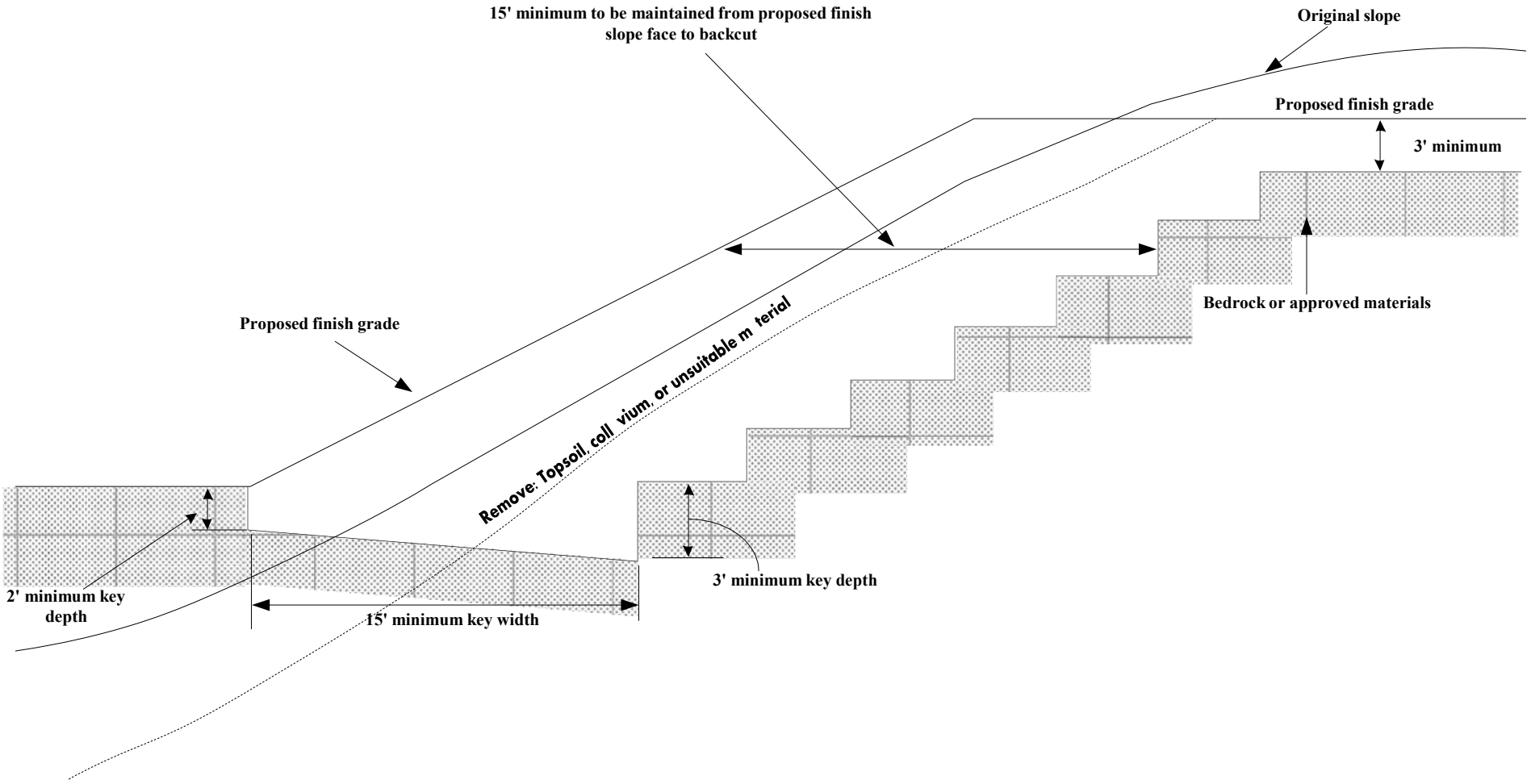
Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
TYPICAL STABILIZATION BUTTRESS FILL DESIGN

EEI
Engineering Solutions

FIGURE H

SKIN FILL OF NATURAL GROUND



Note: (1) The need and disposition of drains will be determined by the soils engineer and/or engineering geologist based on site conditions.

(2) Pad overexcavation and recompaction shall be completed if determined as necessary by the soils engineer and/or engineering geologist.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
SKIN FILL OF NATURAL GROUND

EEI
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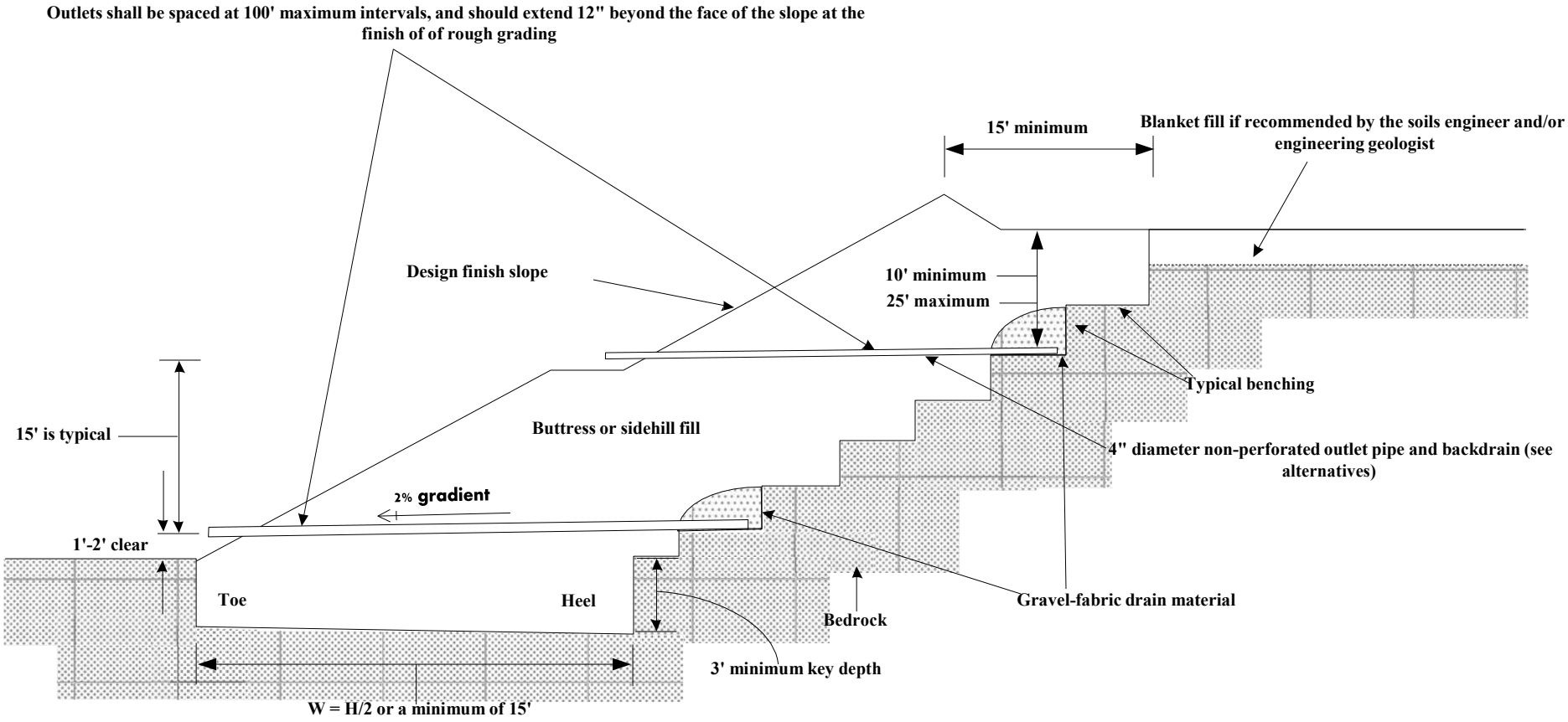
FIGURE G

TYPICAL STABILIZATION BUTTRESS FILL DESIGN



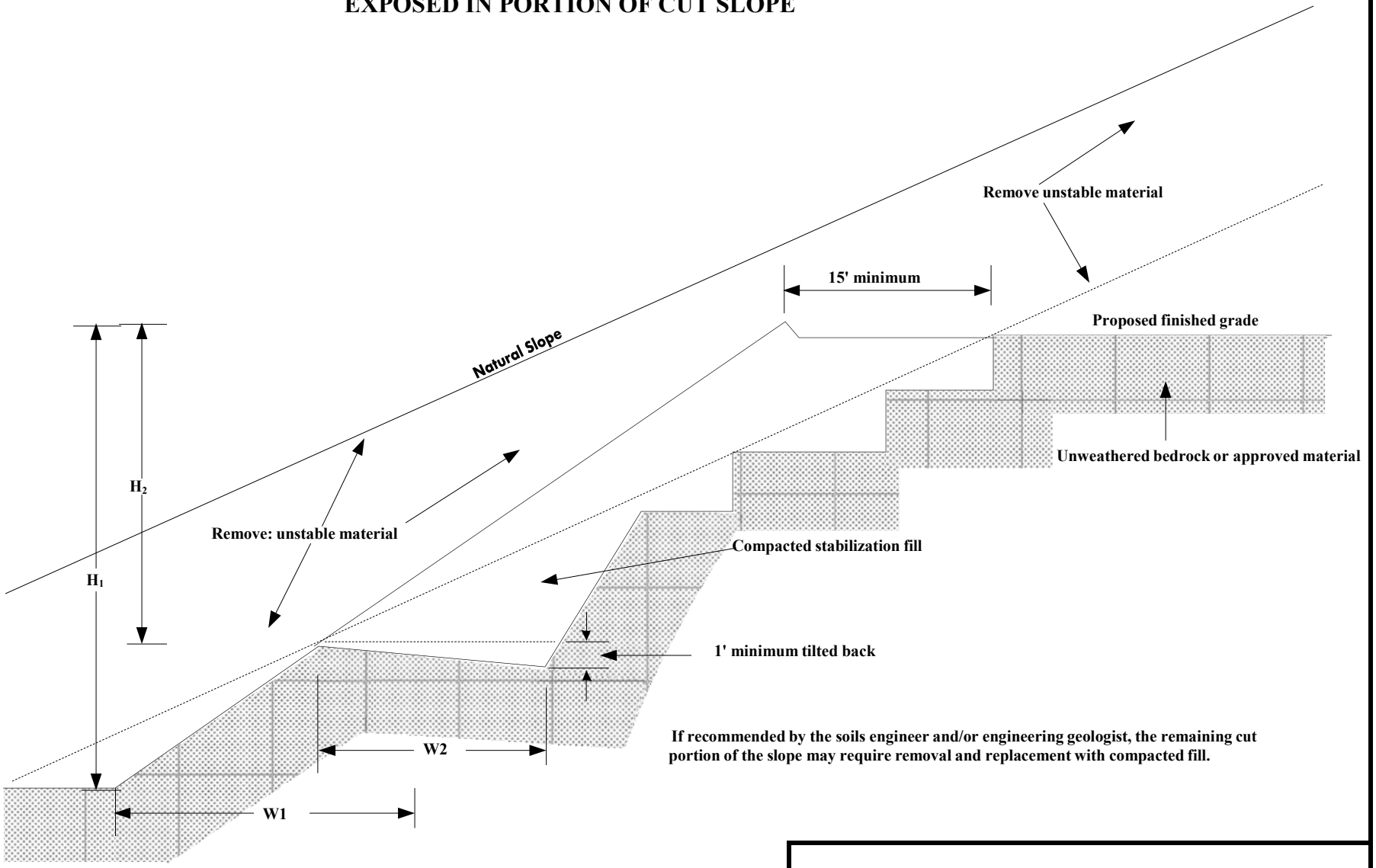
Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
TYPICAL STABILIZATION BUTTRESS FILL DESIGN

EEI Engineering Solutions

FIGURE H

STABILIZATION FILL FOR UNSTABLE MATERIAL EXPOSED IN PORTION OF CUT SLOPE



Note: (1) Subdrains are required only if specified by the soils engineer and/or engineering geologist.
(2) "W" shall be the equipment width (15') for slope heights less than 25 feet. For slopes greater than 25 feet "W" shall be determined by the project soils engineer and/or the engineering geologist. "W" shall never be less than H/2.

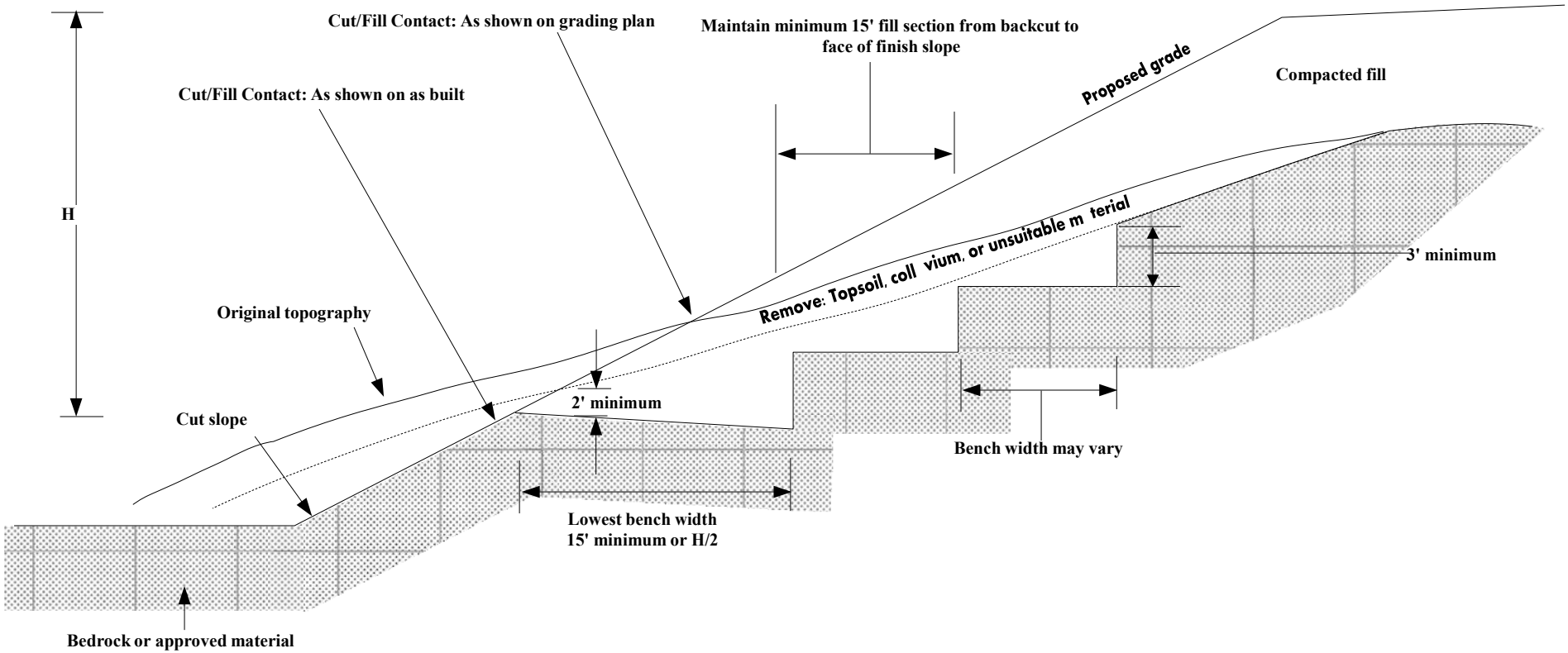
Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
STABILIZATION FILL FOR UNSTABLE MATERIAL EXPOSED IN PORTION OF CUT SLOPE

EEI
Engineering Solutions

FIGURE I

FILL OVER CUT DETAIL



Note: The cut sectioin shall be excavated and evaluated by the soils engineer/engineering geologist prior to constructing the fill portion.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
FILL OVER CUT DETAIL

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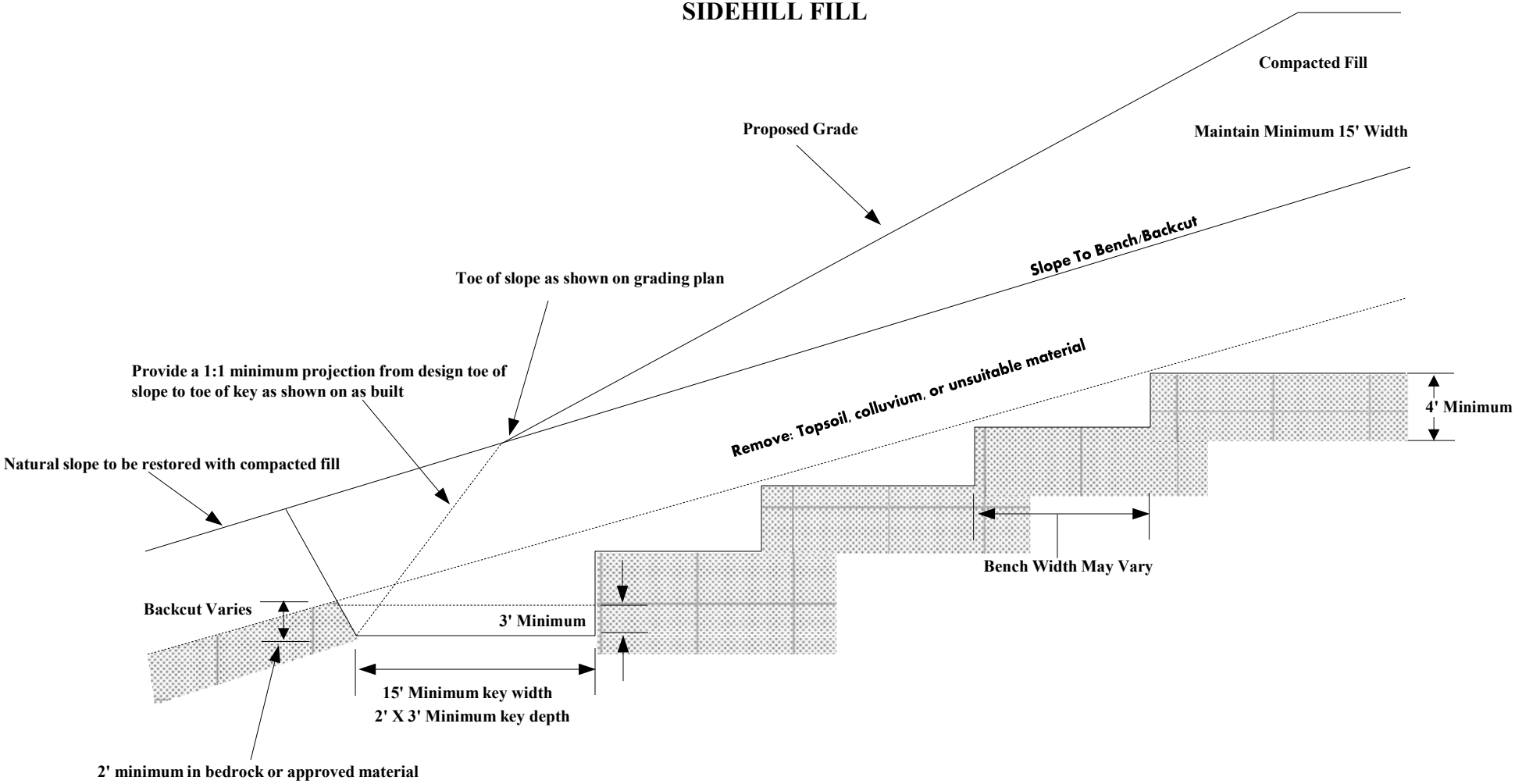
FIGURE J

FILL OVER NATURAL DETAIL
SIDEHILL FILL



Note: (1) Special recommendations shall be provided by the soils engineer/engineering geologist where the natural slope approaches or exceeds the design slope ratio.
(2) The need for and disposition of drains would be determined by the soils engineer/engineering geologist based upon exposed conditions.

Note: Figures not to scale

EARTHWORK AND GRADING GUIDELINES
FILL OVER NATURAL DETAIL SIDEHILL FILL

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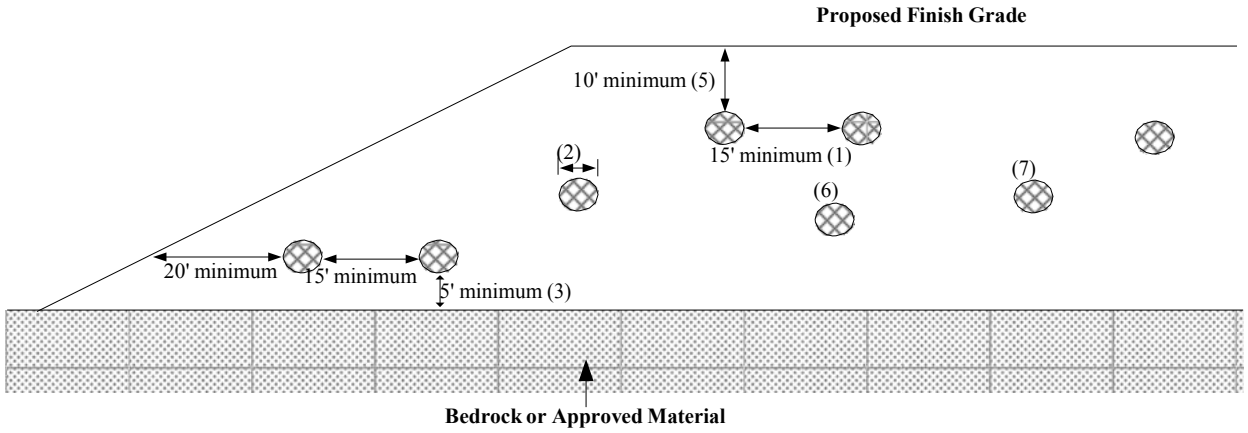
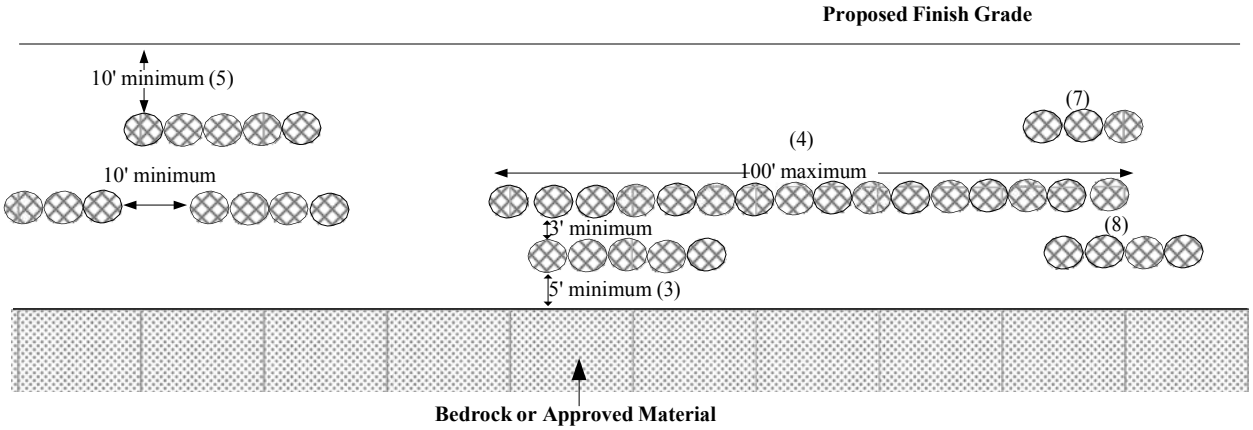
FIGURE K

OVERSIZE ROCK DISPOSAL

View Normal to Slope Face



View Parallel to Slope Face



Note:
(1) One Equipment width or a minimum of 15 feet.
(2) Height and width may vary depending on rock size and type of equipment used. Length of windrow shall be no greater than 100 feet maximum.
(3) If approved by the soils engineer and/or engineering geologist.
(4) Orientation of windrows may vary but shall be as recommended by the soils engineer and/or engineering geologist. Unless recommended staggering of windrows is not necessary.
(5) Areas shall be cleared for utility trenches, foundations, and swimming pools.
(6) Voids in windrows shall be filled by flooding granular soil into place. Granular soil shall be any soil which has a unified soil classification system (Universal Building Code (UBC) 29-1). Designation of SM, SP, SW, GP, or GW.
(7) After fill between windrows is placed and compacted with the lift of fill covering windrow, windrow shall be proof rolled with a D-9 dozer or equivalent.
(8) Oversized rock is defined as larger than 12", and less than 4 feet in size.

Approximate Scale: 1" = 30'

Note: All distances are approximate

EARTHWORK AND GRADING GUIDELINES
OVERSIZE ROCK DISPOSAL

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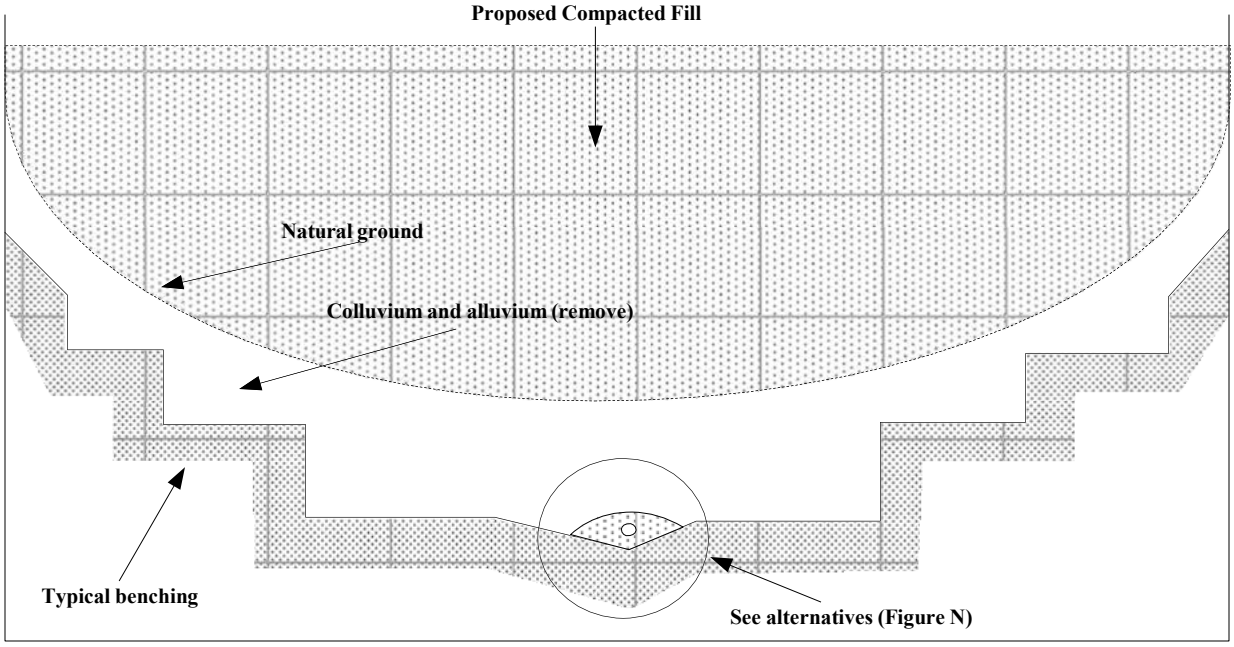
Engineering Solutions

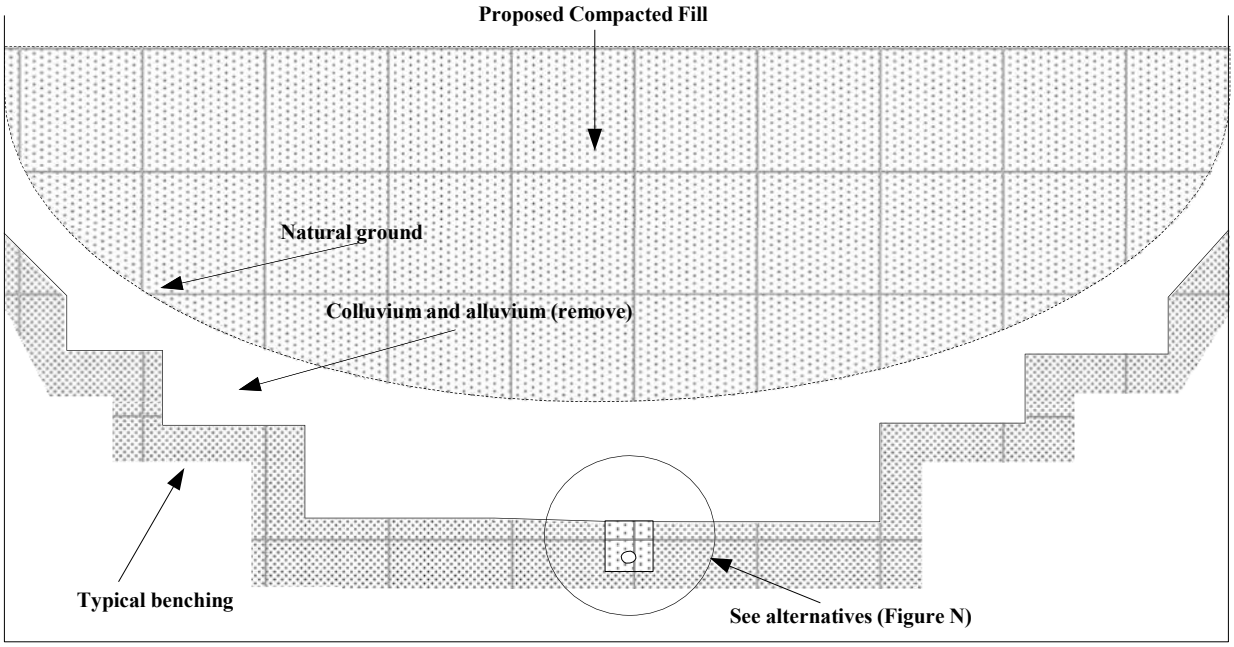
FIGURE L

CANYON SUBDRAIN DETAIL

Type A



Type B



Note: Alternatives, locations, and extent of subdrains should be determined by the soils engineer and/or engineering geologist during actual grading.

Note: Figures not to scale

EARTHWORK AND GRADING GUIDELINES
CANYON SUBDRAIN DETAIL

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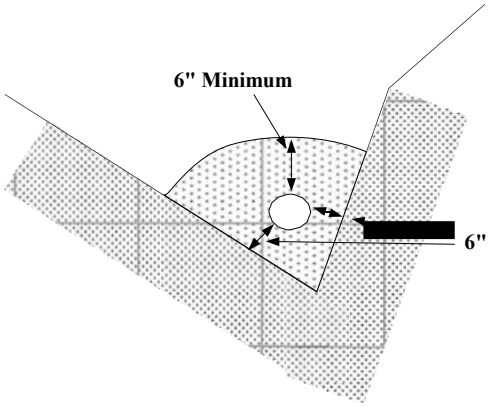
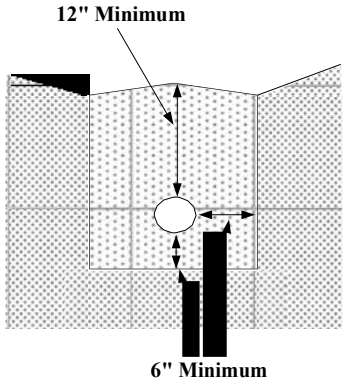
FIGURE M

CANYON SUBDRAIN ALTERNATE DETAILS

Alternate 1: Perforated Pipe and Filter Material



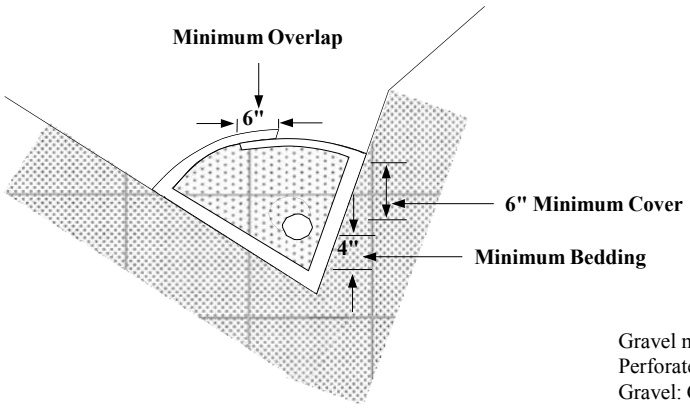
Filter material: Minimum volume of 9 feet^3/linear foot.
6" diameter ABS or PVC pipe or approved substitute with minimum 8 (¼" diameter) perforations per linear foot in bottom half of pipe.
ASTM D 2751, SDR 35 or ASTM D 1527, Schedule 40.
ASTM D 3034, SDR 35 or ASTM D 1785, Schedule 40.
For continuous run in excess of 500 feet use 8" diameter pipe.

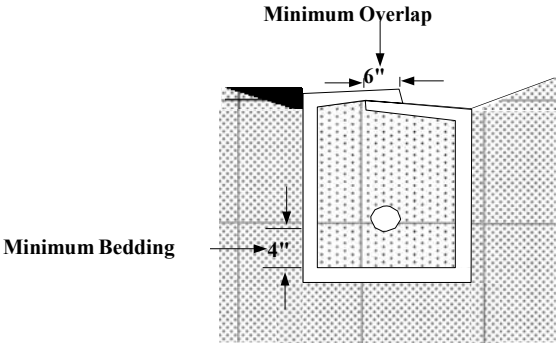


Filter Material

Sieve Size	Percent Passing
1"	100
¾"	90-100
3/8"	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3

Alternate 2: Perforated Pipe, Gravel and Filter Fabric





Gravel material 9 feet^3/linear foot.
Perforated pipe: see alternate 1.
Gravel: Clean ¾" rock or approved substitute.
Filter Fabric: Mirafi 140 or approved substitute.

Note: Figures not to scale

EARTHWORK AND GRADING GUIDELINES
CANYON SUBDRAIN ALTERNATE DETAILS

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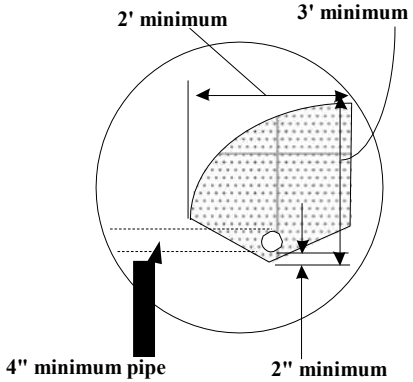
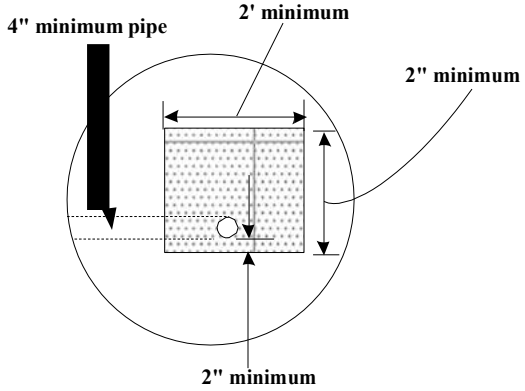
FIGURE N

TYPICAL STABILIZATION BUTTRESS SUBDRAIN DETAIL





Filter Material: Minimum of 5 ft^3/linear foot of pipe or 4 ft^3/linear foot of pipe when placed in square cut trench.

Alternative In Lieu Of Filter Material: Gravel may be encased in approved filter fabric. Filter fabric shall be mirafi 140 or equivalent. Filter fabric shall be lapped a minimum of 12" on all joints.

Minimum 4" Diameter Pipe: ABS-ASTM D-2751, SDR 35 or ASTM D-1527 schedule 40 PVC-ASTM D-3034, SDR 35 or ASTM D-1785 schedule 40 with a crushing strength of 1,000 pounds minimum, and a minimum of 8 uniformly spaced perforations per foot of pipe installed with perforations at bottom of pipe. Provide cap at upstream end of pipe. Slope at 2% to outlet pipe. Outlet pipe shall be connected to the subdrain pipe with tee or elbow.

Note: (1) Trench for outlet pipes shall be backfilled with onsite soil.
(2) Backdrains and lateral drains shall be located at the elevation of every bench drain. First drain shall be located at the elevation just above the lower lot grade. Additional drains may be required at the discretion of the soils engineer and/or engineering geologist.

Filter Material – Shall be of the following specification or an approved equivalent:

Filter Material

Sieve Size	Percent Passing
1"	100
¾"	90-100
3/8"	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3

Gravel - Shall be of the following specification or an approved equivalent:

Filter Material

Sieve Size	Percent Passing
1½"	100
No. 4	50
No. 200	8

Sand equivalent: Minimum of 50

Note: Figures not to scale

EARTHWORK AND GRADING GUIDELINES
TYPICAL STABILIZATION BUTTRESS SUBDRAIN DETAIL

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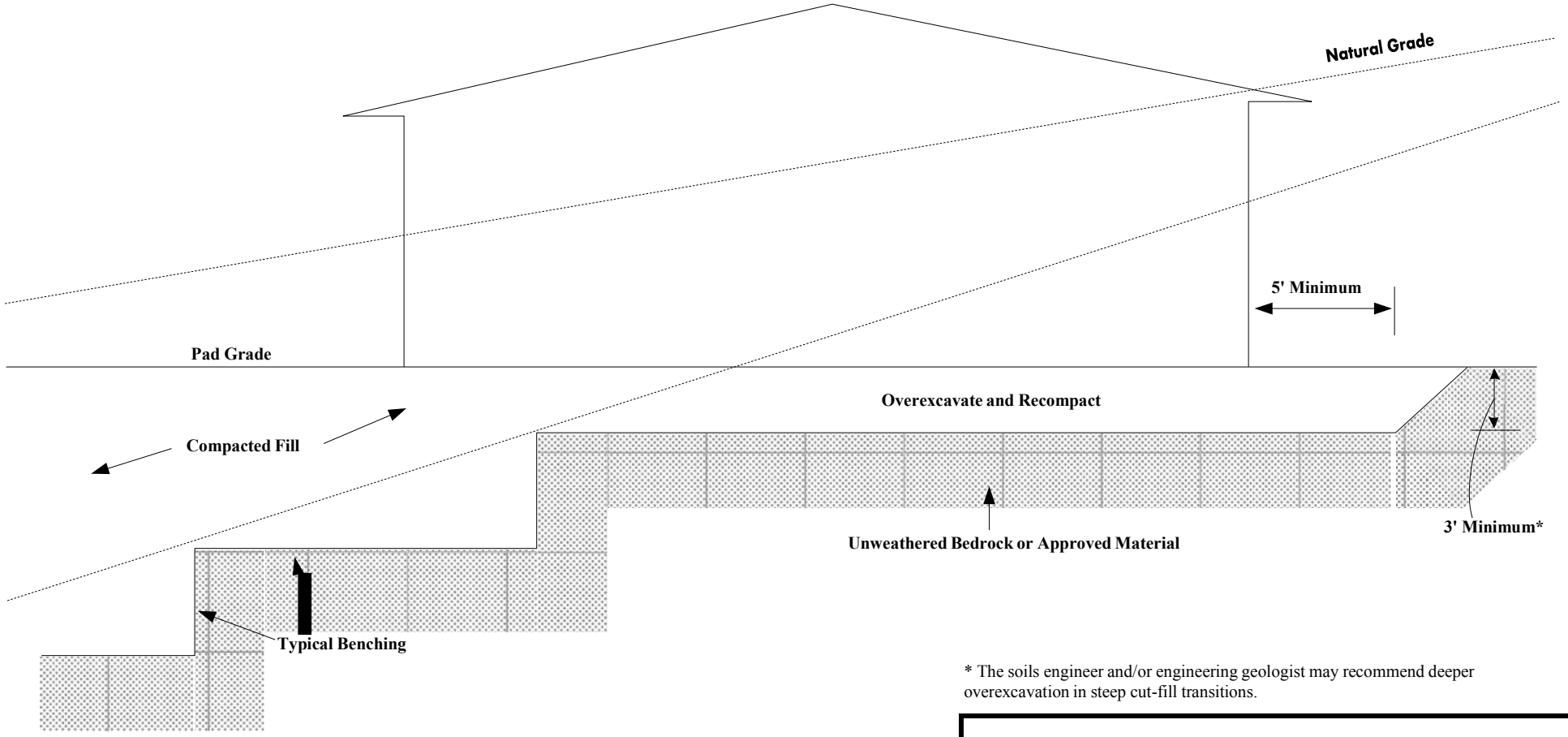
FIGURE O

TRANSITION LOT DETAIL
CUT LOT – MATERIAL TYPE TRANSITION



* The soils engineer and/or engineering geologist may recommend deeper overexcavation in steep cut-fill transitions.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
TRANSITION LOT DETAIL
CUT LOT – MATERIAL TYPE TRANSITION

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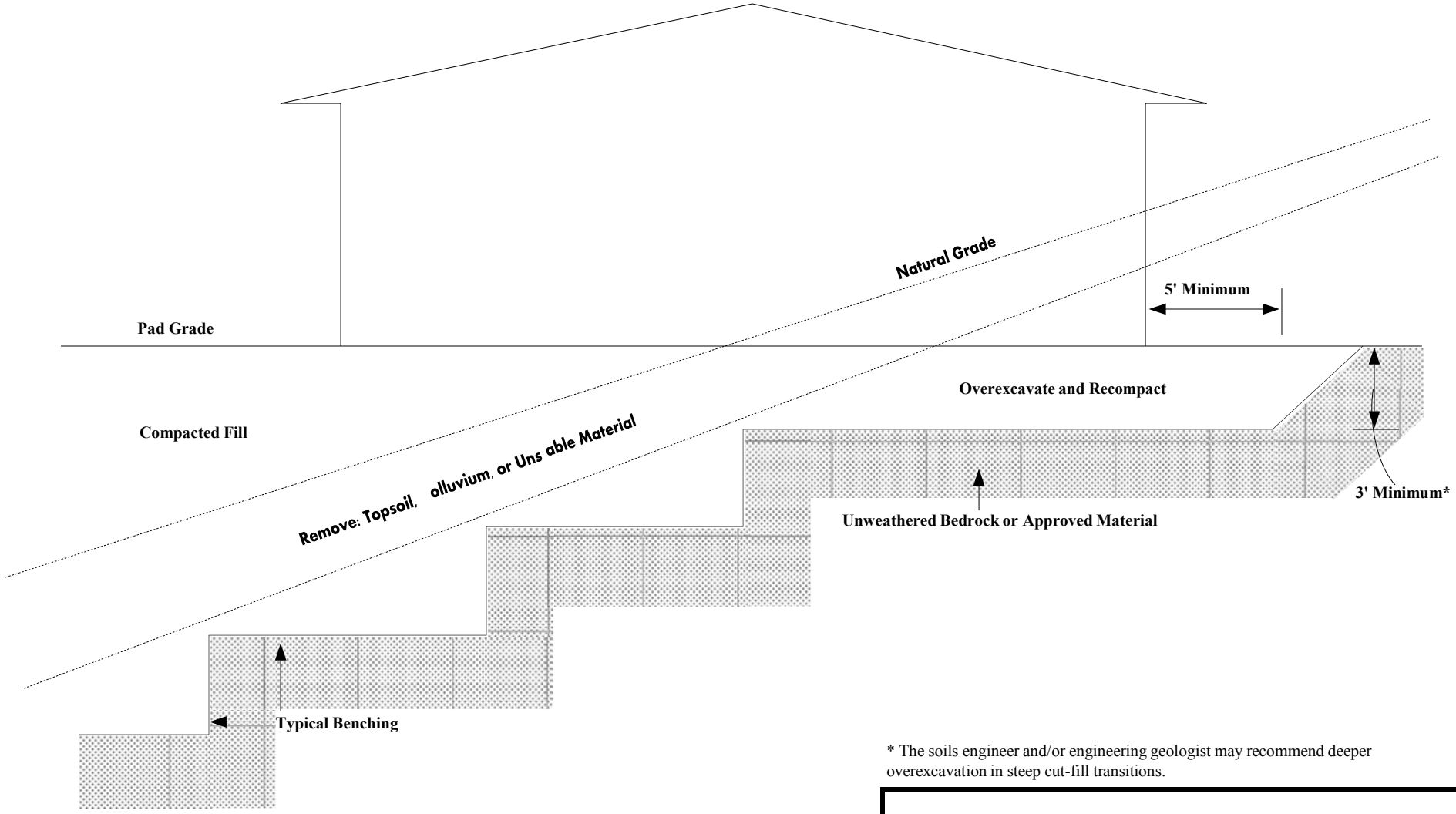
FIGURE A

TRANSITION LOT DETAIL
CUT – FILL – DAYLIGHT TRANSITION



* The soils engineer and/or engineering geologist may recommend deeper overexcavation in steep cut-fill transitions.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
TRANSITION LOT DETAIL
CUT – FILL – DAYLIGHT TRANSITION

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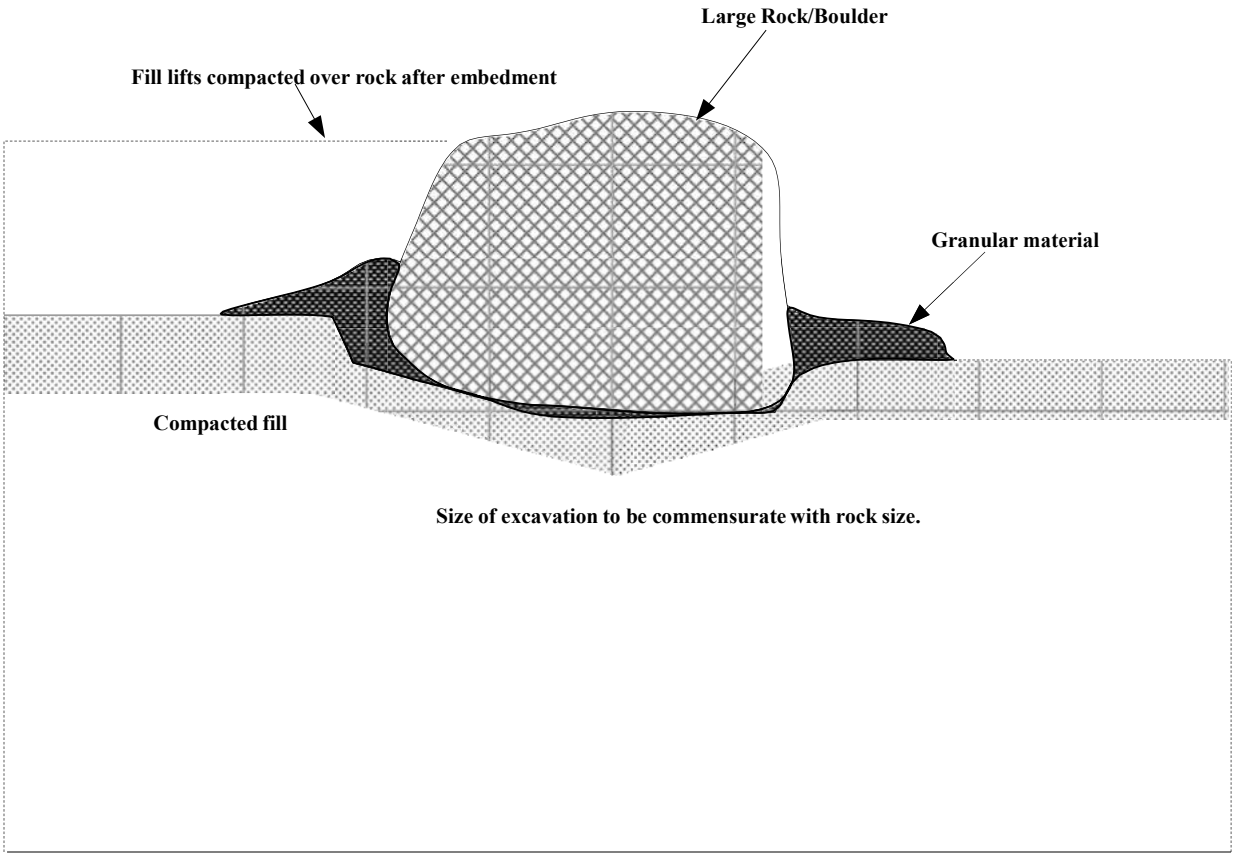
FIGURE B

ROCK DISPOSAL PITS



Note: (1) Large rock is defined as having a diameter larger than 3 feet in maximum size.
(2) Pit shall be excavated into compacted fill to a depth equal to half of the rock size.
(3) Granular soil shall be pushed into the pit and then flooded around the rock using a sheepsfoot to help with compaction.
(4) A minimum of 3 feet of compacted fill should be laid over each pit.
(5) Pits shall have at least 15 feet of separation between one another, horizontally.
(6) Pits shall be placed at least 20 feet from any fill slope.
(7) Pits shall be used only in deep fill areas.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
ROCK DISPOSAL PITS

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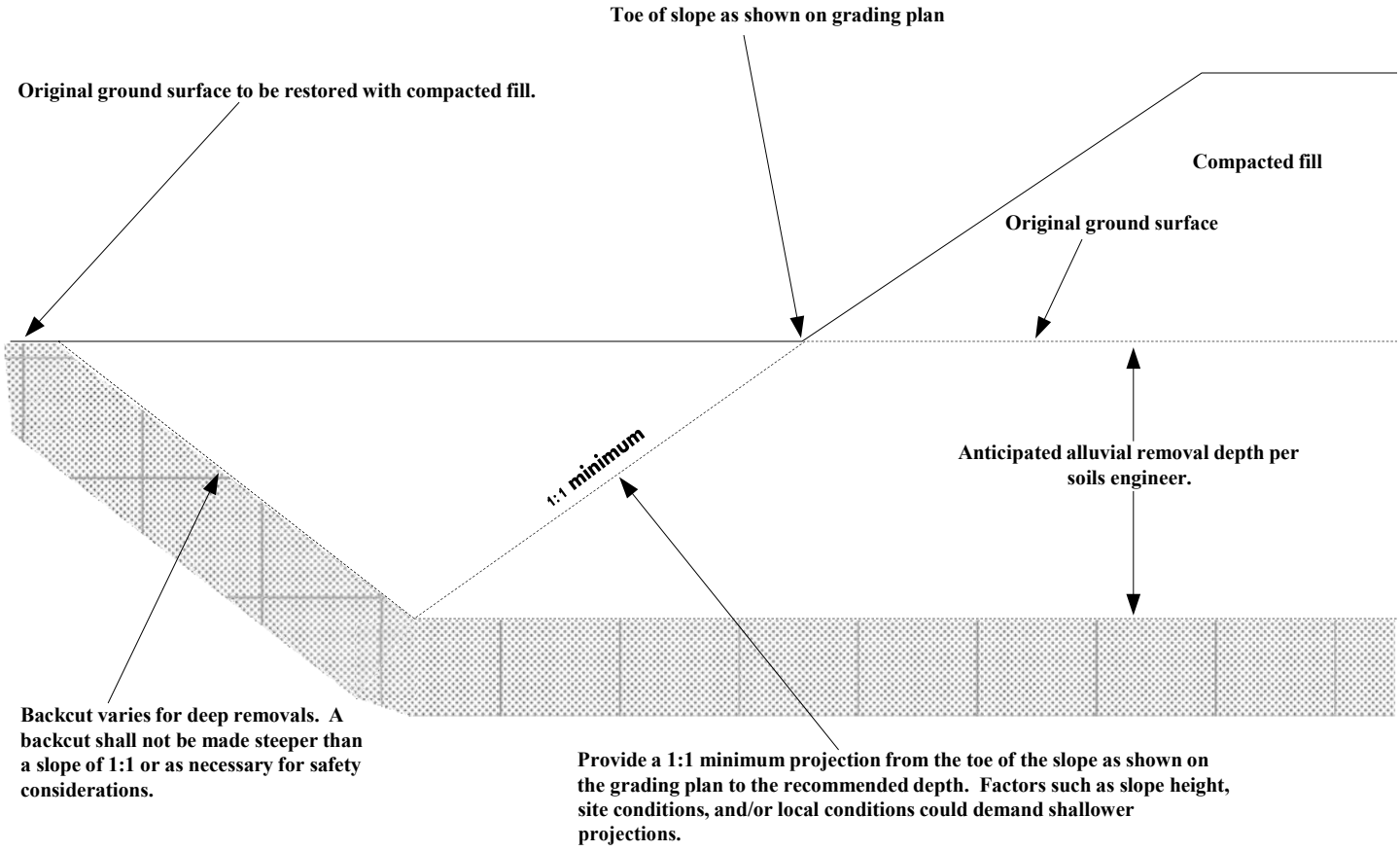
FIGURE C

DETAIL FOR FILL SLOPE TOEING OUT ON FLAT ALLUVIATED CANYON



Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
DETAIL FOR FILL SLOPE TOEING OUT ON A FLAT ALLUVIATED CANYON

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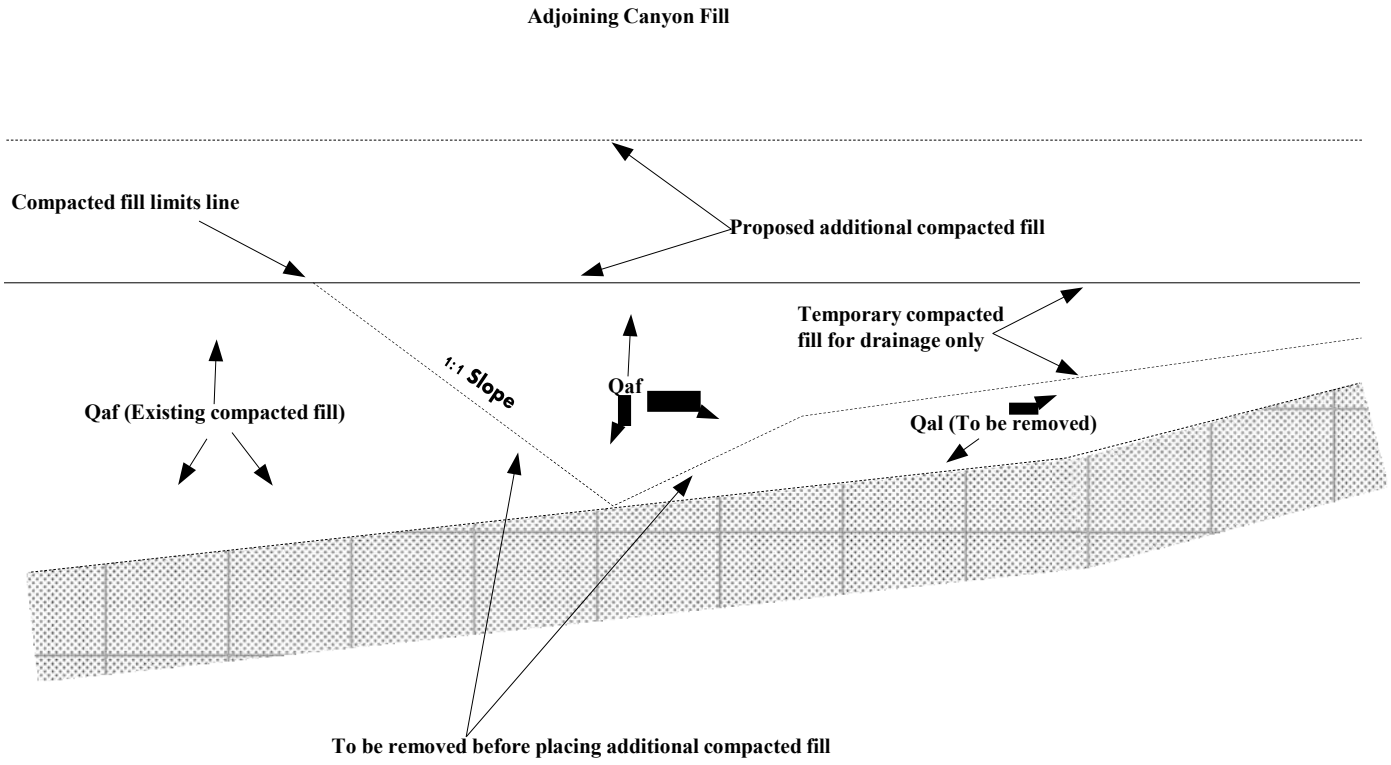
Engineering Solutions

FIGURE D

REMOVAL ADJACENT TO EXISTING FILL



Legend

Qaf - Artificial Fill

Qal - Alluvium

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
REMOVAL ADJACENT TO EXISTING FILL

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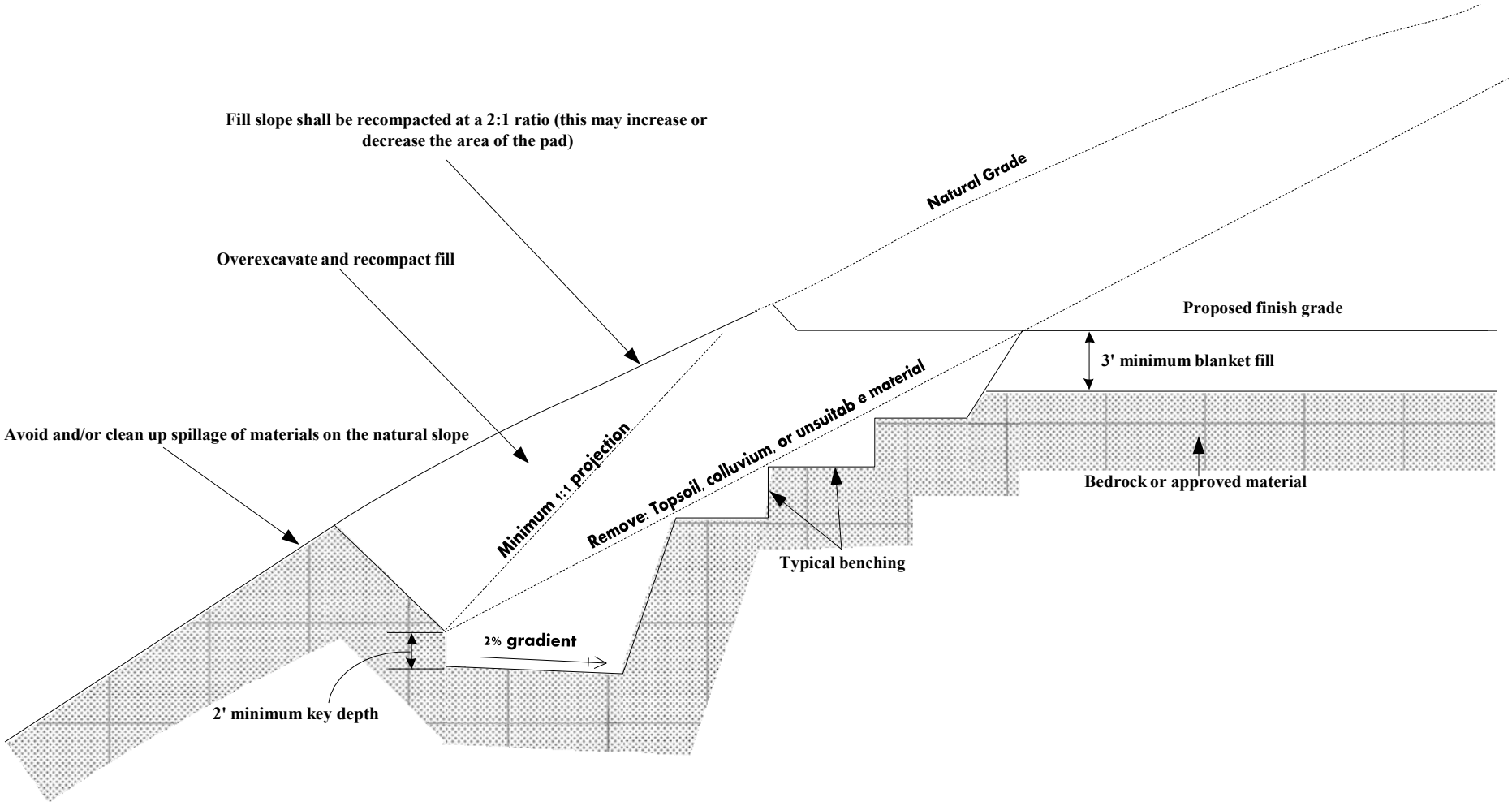
Engineering Solutions

FIGURE E

DAYLIGHT CUT LOT DETAIL



Note: (1) Subdrain and key width requirements shall be determined based on exposed subsurface conditions and the thickness of overburden.

(2) Pad overexcavation and recompaction shall be completed if determined as necessary by the soils engineer and/or engineering geologist.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
DAYLIGHT CUT LOT DETAIL

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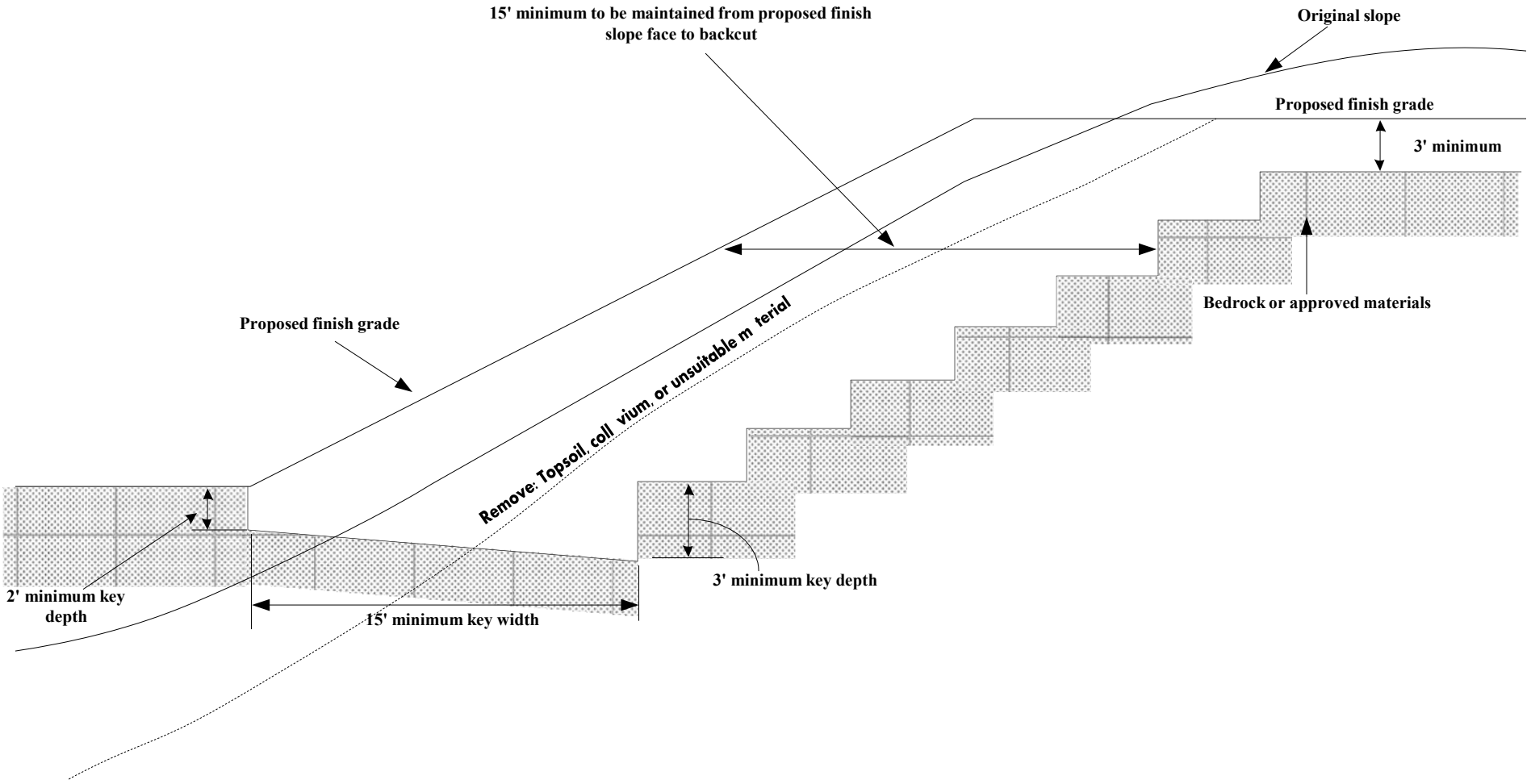
FIGURE F

SKIN FILL OF NATURAL GROUND



Note: (1) The need and disposition of drains will be determined by the soils engineer and/or engineering geologist based on site conditions.

(2) Pad overexcavation and recompaction shall be completed if determined as necessary by the soils engineer and/or engineering geologist.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
SKIN FILL OF NATURAL GROUND

EEI
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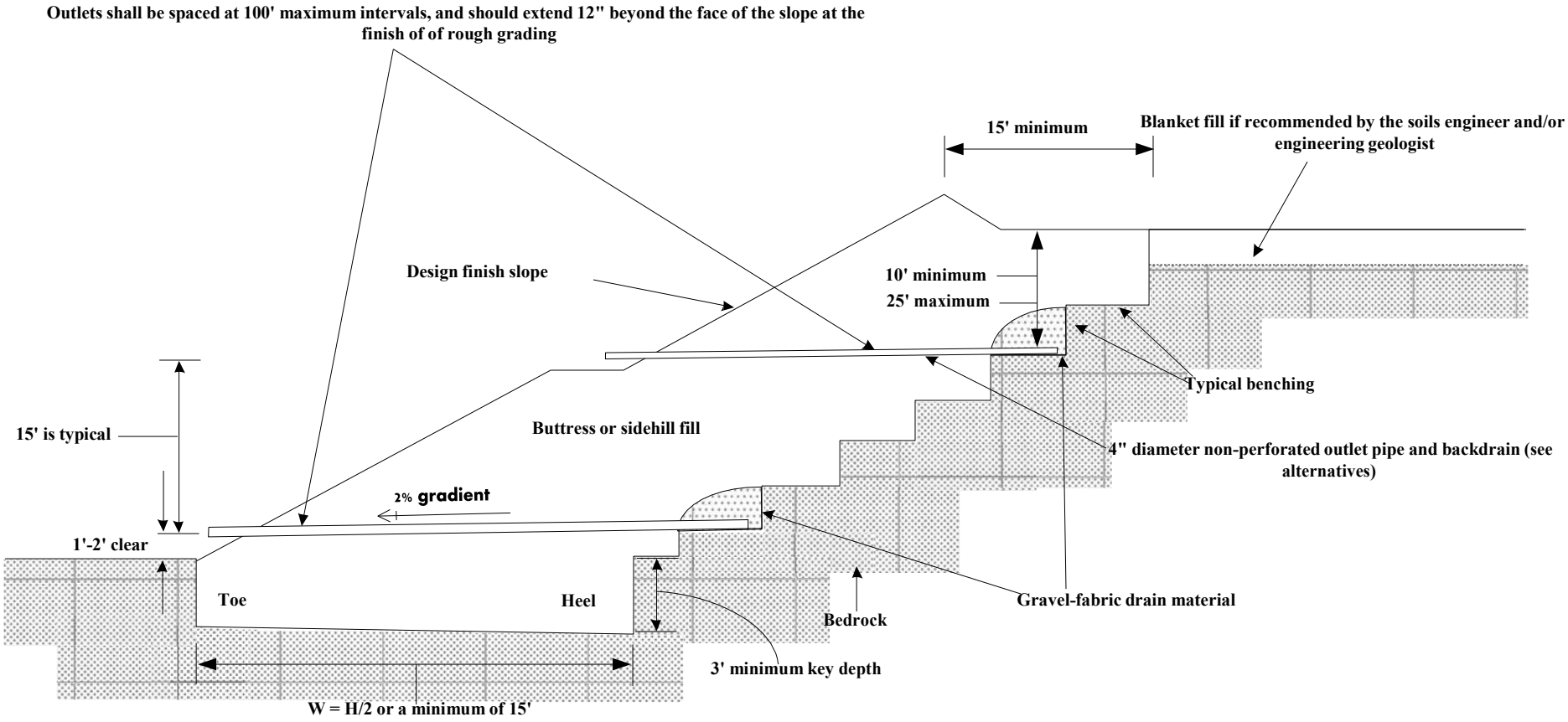
FIGURE G

TYPICAL STABILIZATION BUTTRESS FILL DESIGN



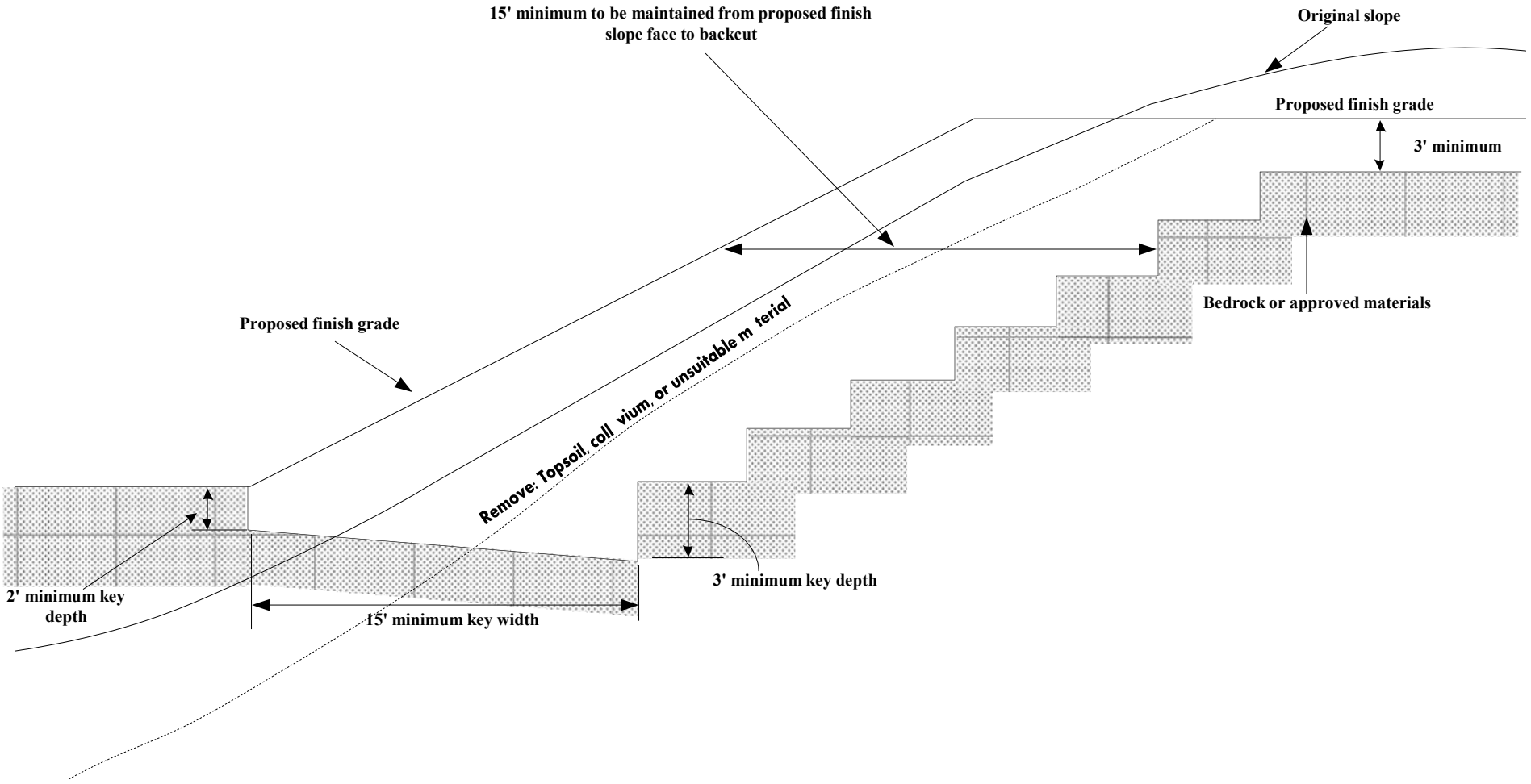
Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
TYPICAL STABILIZATION BUTTRESS FILL DESIGN

EEI
Engineering Solutions

FIGURE H

SKIN FILL OF NATURAL GROUND



Note: (1) The need and disposition of drains will be determined by the soils engineer and/or engineering geologist based on site conditions.

(2) Pad overexcavation and recompaction shall be completed if determined as necessary by the soils engineer and/or engineering geologist.

Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
SKIN FILL OF NATURAL GROUND

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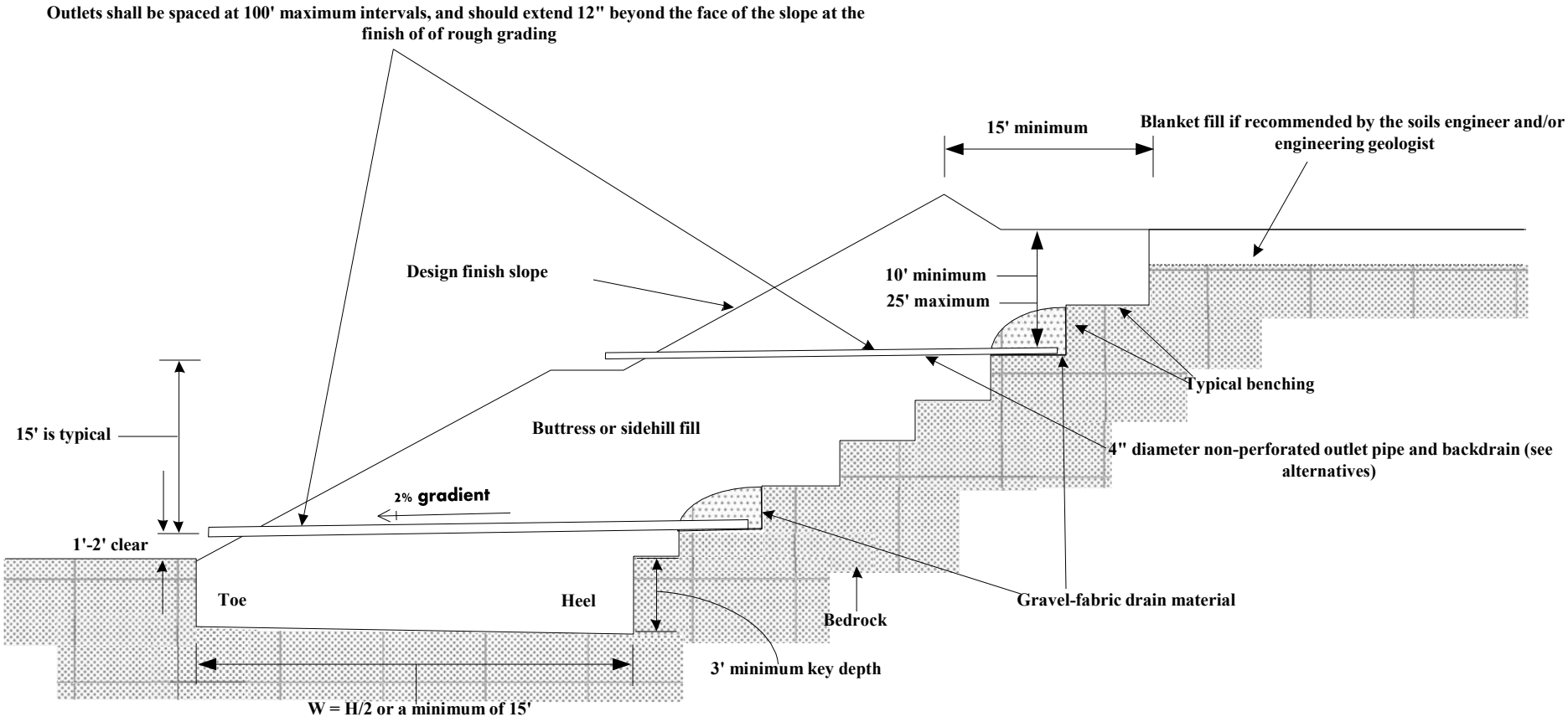
FIGURE G

TYPICAL STABILIZATION BUTTRESS FILL DESIGN



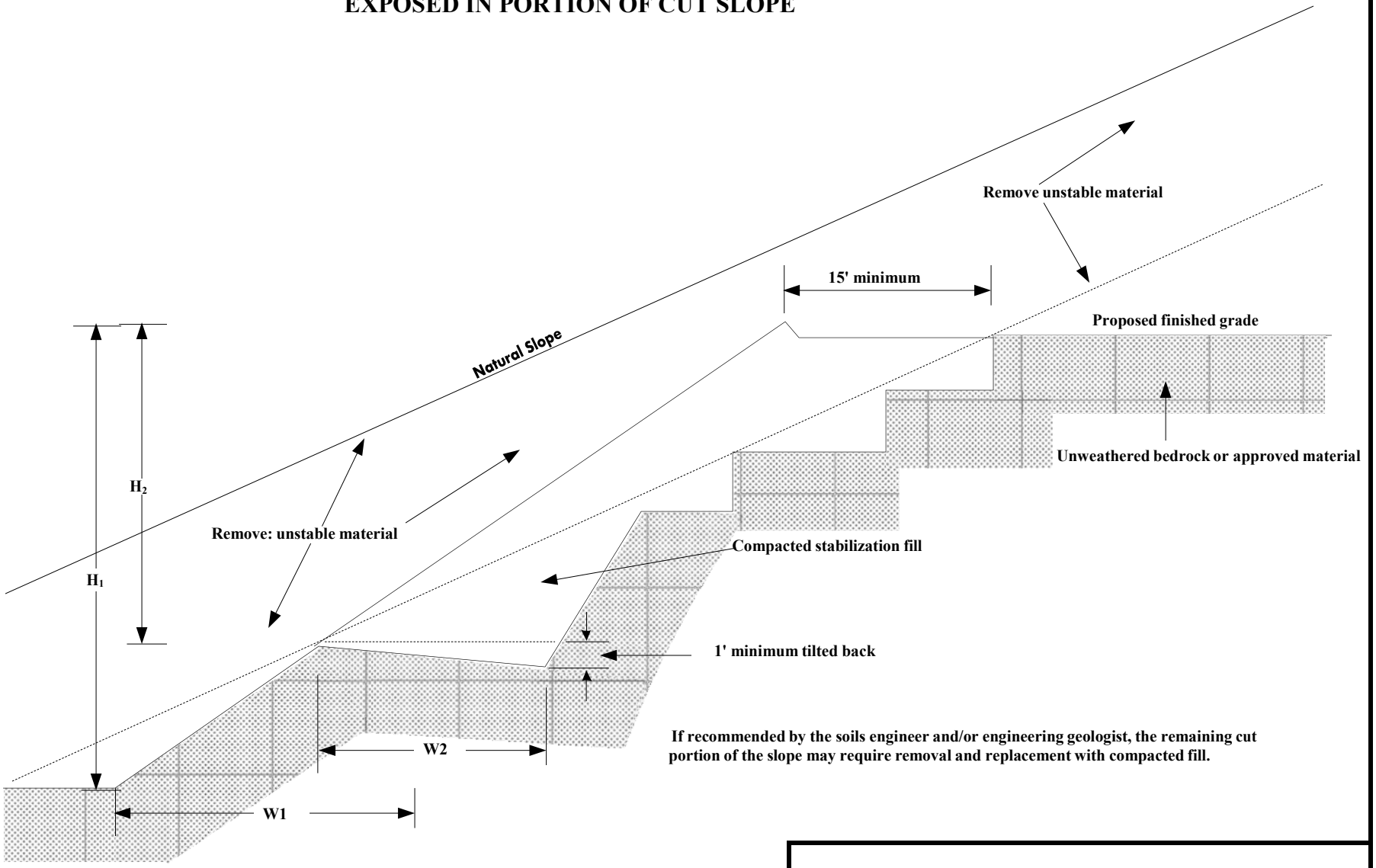
Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
TYPICAL STABILIZATION BUTTRESS FILL DESIGN

EEI Engineering Solutions

FIGURE H

STABILIZATION FILL FOR UNSTABLE MATERIAL EXPOSED IN PORTION OF CUT SLOPE



Note: (1) Subdrains are required only if specified by the soils engineer and/or engineering geologist.
(2) "W" shall be the equipment width (15') for slope heights less than 25 feet. For slopes greater than 25 feet "W" shall be determined by the project soils engineer and/or the engineering geologist. "W" shall never be less than H/2.

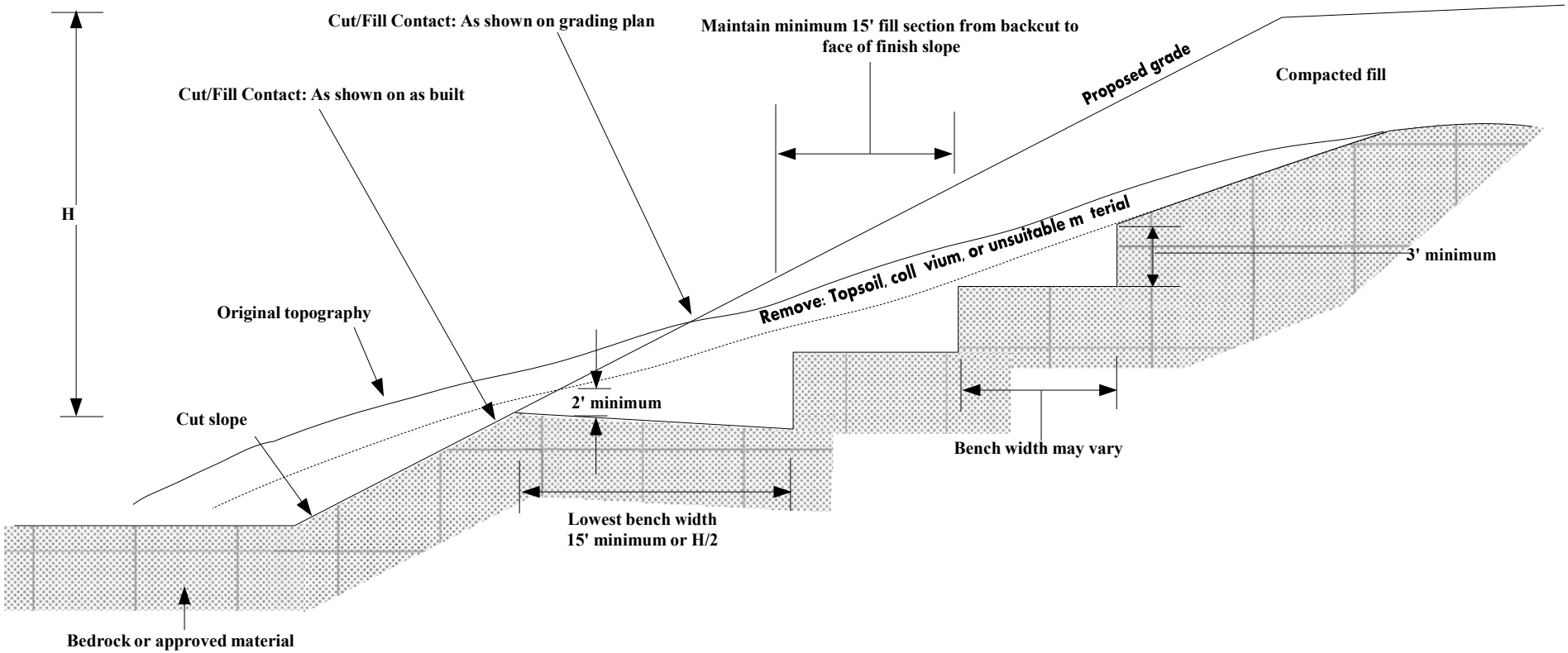
Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
STABILIZATION FILL FOR UNSTABLE MATERIAL EXPOSED IN PORTION OF CUT SLOPE

EEI
Engineering Solutions

FIGURE I

FILL OVER CUT DETAIL



Note: The cut sectioin shall be excavated and evaluated by the soils engineer/engineering geologist prior to constructing the fill portion.

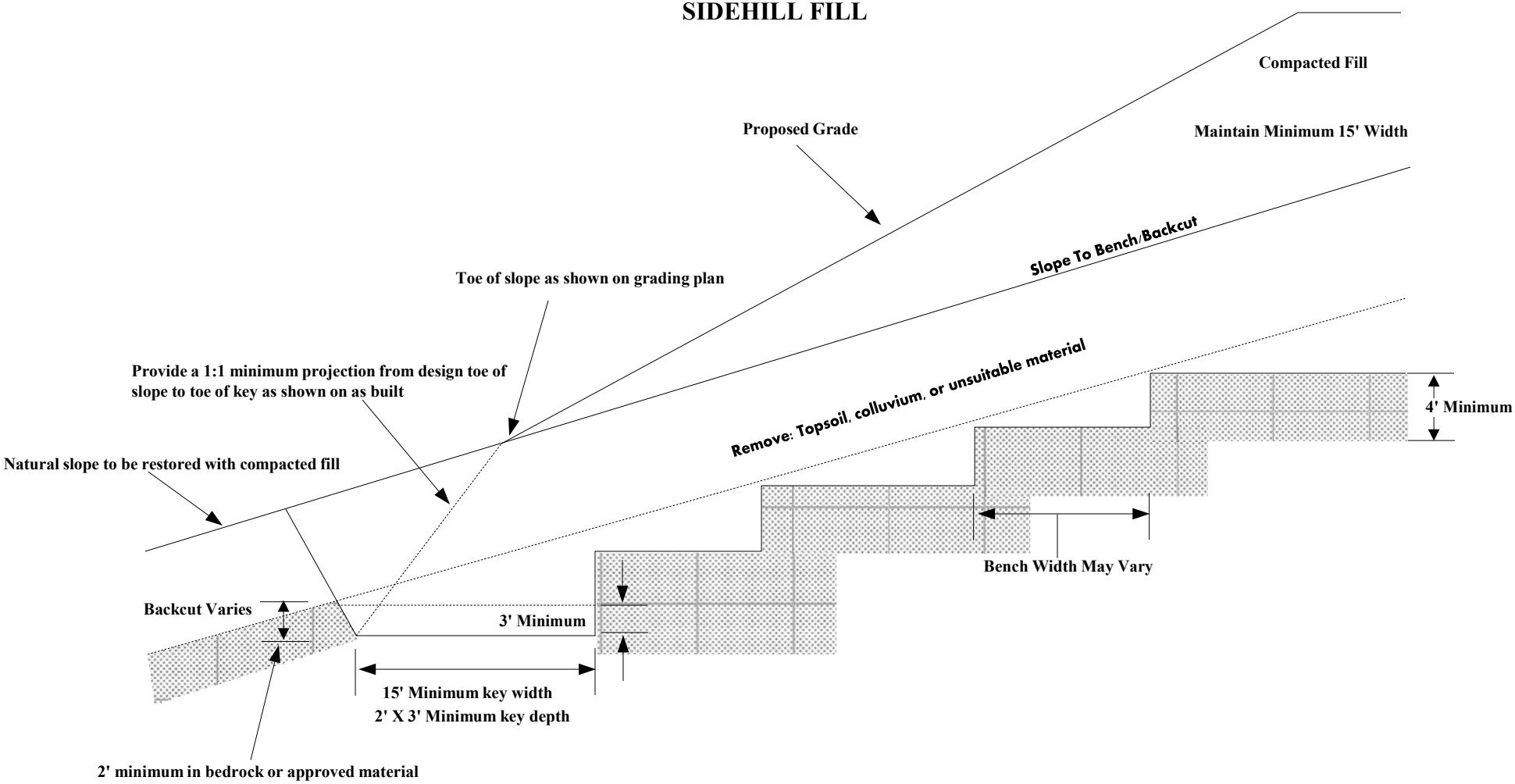
Note: Figure not to scale

EARTHWORK AND GRADING GUIDELINES
FILL OVER CUT DETAIL

EEI
Engineering Solutions

FIGURE J

FILL OVER NATURAL DETAIL
SIDEHILL FILL



Note: (1) Special recommendations shall be provided by the soils engineer/engineering geologist where the natural slope approaches or exceeds the design slope ratio.
(2) The need for and disposition of drains would be determined by the soils engineer/engineering geologist based upon exposed conditions.

Note: Figures not to scale

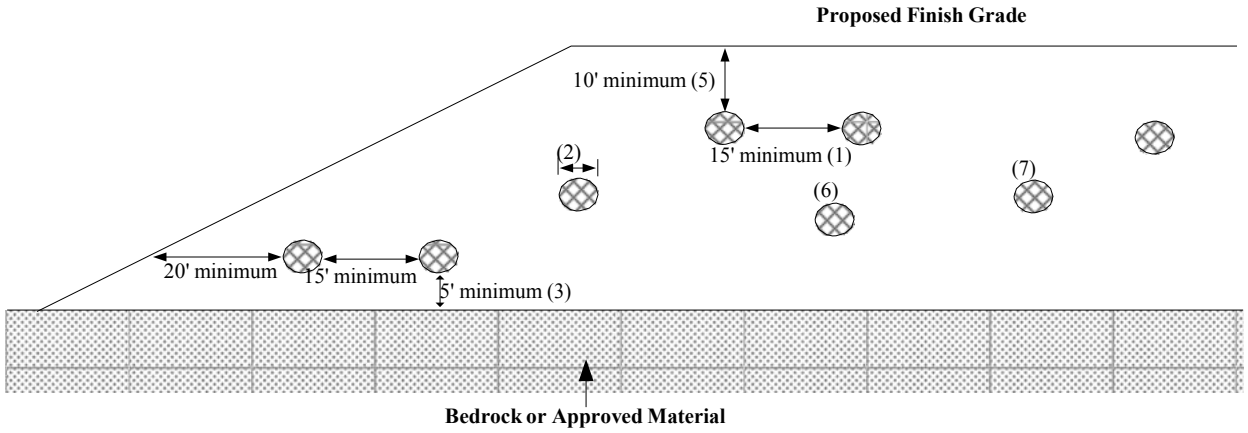
EARTHWORK AND GRADING GUIDELINES
FILL OVER NATURAL DETAIL SIDEHILL FILL

EEI
Engineering Solutions

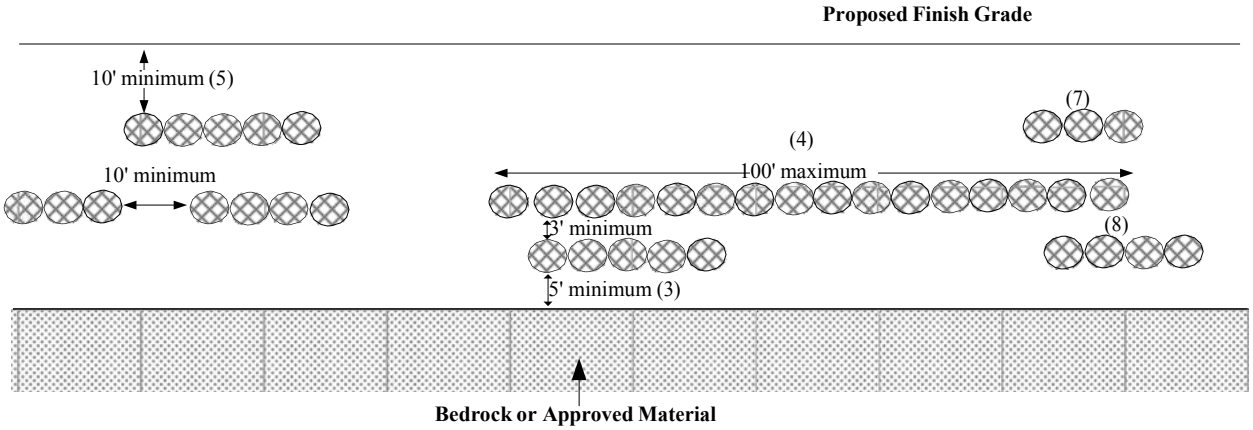
FIGURE K

OVERSIZE ROCK DISPOSAL

View Normal to Slope Face



View Parallel to Slope Face



Note:
(1) One Equipment width or a minimum of 15 feet.
(2) Height and width may vary depending on rock size and type of equipment used. Length of windrow shall be no greater than 100 feet maximum.
(3) If approved by the soils engineer and/or engineering geologist.
(4) Orientation of windrows may vary but shall be as recommended by the soils engineer and/or engineering geologist. Unless recommended staggering of windrows is not necessary.
(5) Areas shall be cleared for utility trenches, foundations, and swimming pools.
(6) Voids in windrows shall be filled by flooding granular soil into place. Granular soil shall be any soil which has a unified soil classification system (Universal Building Code (UBC) 29-1). Designation of SM, SP, SW, GP, or GW.
(7) After fill between windrows is placed and compacted with the lift of fill covering windrow, windrow shall be proof rolled with a D-9 dozer or equivalent.
(8) Oversized rock is defined as larger than 12", and less than 4 feet in size.

Approximate Scale: 1" = 30'

Note: All distances are approximate

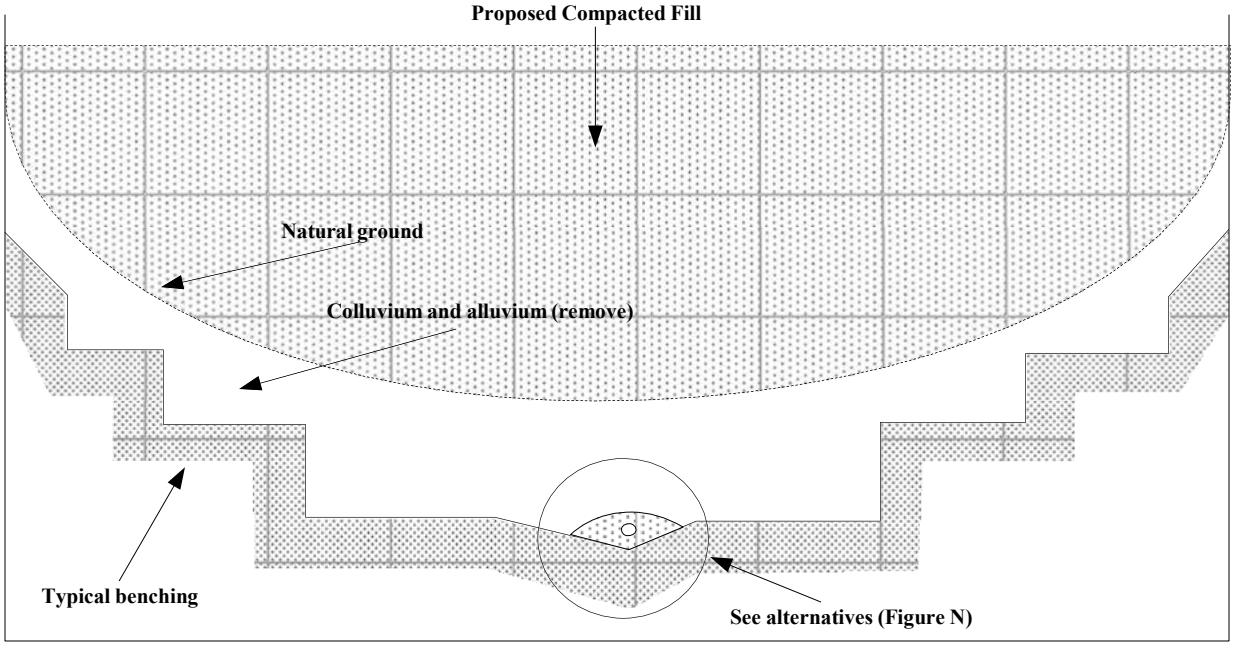
EARTHWORK AND GRADING GUIDELINES
OVERSIZE ROCK DISPOSAL

EEI
Engineering Solutions

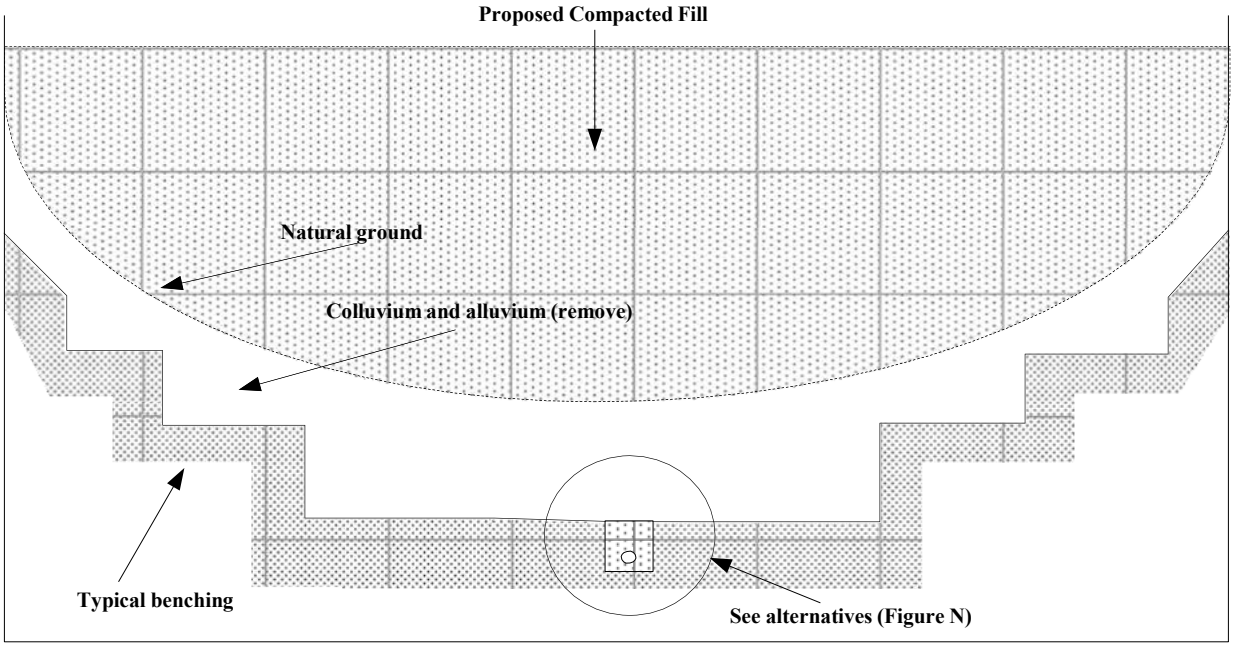
FIGURE L

CANYON SUBDRAIN DETAIL

Type A



Type B



Note: Alternatives, locations, and extent of subdrains should be determined by the soils engineer and/or engineering geologist during actual grading.

Note: Figures not to scale

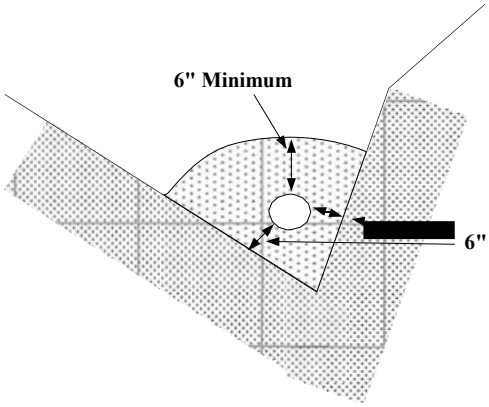
EARTHWORK AND GRADING GUIDELINES
CANYON SUBDRAIN DETAIL

EEI
Engineering Solutions

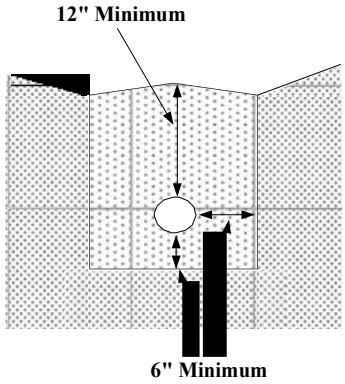
FIGURE M

CANYON SUBDRAIN ALTERNATE DETAILS

Alternate 1: Perforated Pipe and Filter Material



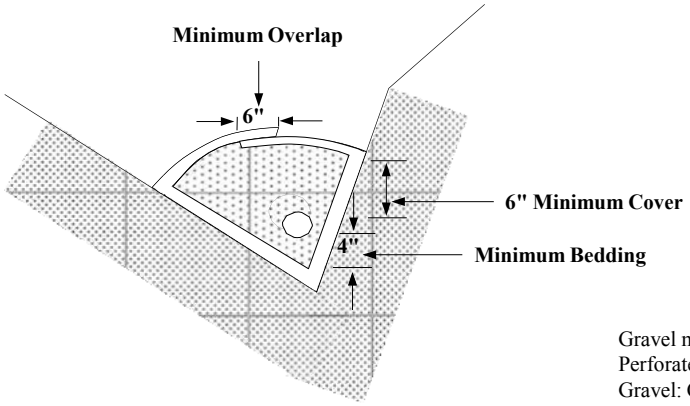
Filter material: Minimum volume of 9 feet^3/linear foot.
6" diameter ABS or PVC pipe or approved substitute with minimum 8 (¼" diameter) perforations per linear foot in bottom half of pipe.
ASTM D 2751, SDR 35 or ASTM D 1527, Schedule 40.
ASTM D 3034, SDR 35 or ASTM D 1785, Schedule 40.
For continuous run in excess of 500 feet use 8" diameter pipe.

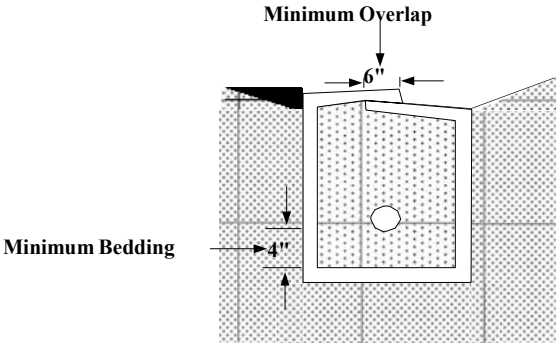


Filter Material

Sieve Size	Percent Passing
1"	100
¾"	90-100
3/8"	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3

Alternate 2: Perforated Pipe, Gravel and Filter Fabric





Gravel material 9 feet^3/linear foot.
Perforated pipe: see alternate 1.
Gravel: Clean ¾" rock or approved substitute.
Filter Fabric: Mirafi 140 or approved substitute.

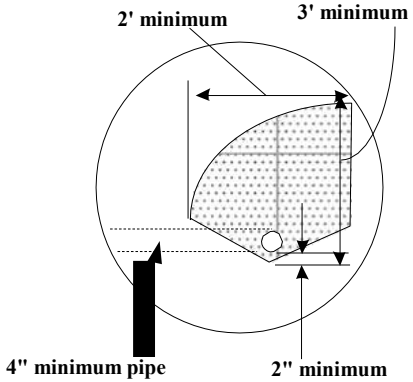
Note: Figures not to scale

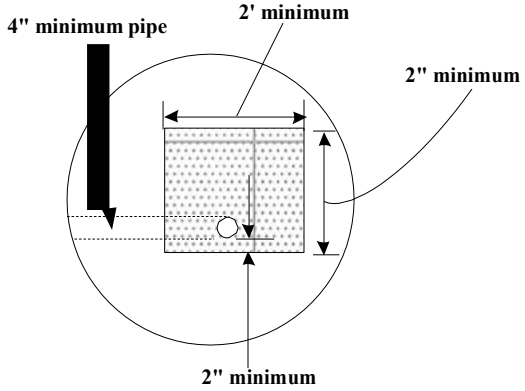
EARTHWORK AND GRADING GUIDELINES
CANYON SUBDRAIN ALTERNATE DETAILS

EEI
Engineering Solutions

FIGURE N

TYPICAL STABILIZATION BUTTRESS SUBDRAIN DETAIL





Filter Material: Minimum of 5 ft^3/linear foot of pipe or 4 ft^3/linear foot of pipe when placed in square cut trench.

Alternative In Lieu Of Filter Material: Gravel may be encased in approved filter fabric. Filter fabric shall be mirafi 140 or equivalent. Filter fabric shall be lapped a minimum of 12" on all joints.

Minimum 4" Diameter Pipe: ABS-ASTM D-2751, SDR 35 or ASTM D-1527 schedule 40 PVC-ASTM D-3034, SDR 35 or ASTM D-1785 schedule 40 with a crushing strength of 1,000 pounds minimum, and a minimum of 8 uniformly spaced perforations per foot of pipe installed with perforations at bottom of pipe. Provide cap at upstream end of pipe. Slope at 2% to outlet pipe. Outlet pipe shall be connected to the subdrain pipe with tee or elbow.

Note: (1) Trench for outlet pipes shall be backfilled with onsite soil.
(2) Backdrains and lateral drains shall be located at the elevation of every bench drain. First drain shall be located at the elevation just above the lower lot grade. Additional drains may be required at the discretion of the soils engineer and/or engineering geologist.

Filter Material – Shall be of the following specification or an approved equivalent:

Filter Material

Sieve Size	Percent Passing
1"	100
¾"	90-100
3/8"	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3

Gravel - Shall be of the following specification or an approved equivalent:

Filter Material

Sieve Size	Percent Passing
1½"	100
No. 4	50
No. 200	8

Sand equivalent: Minimum of 50

Note: Figures not to scale

EARTHWORK AND GRADING GUIDELINES
TYPICAL STABILIZATION BUTTRESS SUBDRAIN DETAIL

EEI
Engineering Solutions

FIGURE O

APPENDIX I
Greenhouse Gas Screening Letter

Ldn Consulting, Inc.
42428 Chisolm Trail, Murrieta CA 92562 phone 760-473-1253
www.ldnconsulting.net fax 760-689-4943

October 1, 2020

Hedy Levine
REC Consultants
2442 Second Avenue
San Diego, CA 92101

RE: CarMax Auto Store Development Greenhouse Gas Screening Letter - City of Oceanside

The purpose of this Greenhouse Gas (GHG) screening letter is to identify potential GHG impacts, if any, which may be created from the construction and operation of the proposed CarMax Auto Store located on the south side of the 4000 block of Plaza Drive west of the Oceanside DMV in Oceanside, California. The project site is south of State Route 78 and approximately 4 miles east of Interstate 5. Locally, the project site is located south of the intersection of Plaza Drive and Thunder Drive.

GHG Thresholds:

California State laws governing GHG emissions within the state are generally written to conform to both the Global Warming Solutions Act of 2006 (AB 32) and Senate Bill 32 (SB 32). These laws were written to reduce GHG emissions within the state to goals set forth within the laws therein. The current goals for the State are to reduce GHG emissions by 40 percent below 1990 levels by 2030. In order to meet the requirements of the State's laws, the City of Oceanside has adopted a screening threshold of 900 metric tons of GHG's per year or the utilization of an efficiency/service population thresholds (City of Oceanside, 2019) which are identified below:

- Projects that will be implemented prior to 2020 must show that GHG emissions related to both construction and operation will not exceed 4.0 MT CO_2e/service population per year.
- Projects that will not be implemented prior to 2020 must show that GHG emissions related to both construction and operations will not exceed 3.5 MT CO_2e/service population per year.

Construction Description

The Project construction dates were estimated based on a construction kickoff in 2021 with construction completed in 2022. Table 1 shows the expected timeframes for the construction processes for all the Proposed Project infrastructure, facilities, improvements and structures at

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the site, as well as the expected number of pieces of equipment have been verified by the applicants Project Engineer.

Table 1: Expected Construction Equipment

Equipment Identification	Proposed Start	Proposed Completion	Quantity
Site Preparation	1/1/2021	1/14/2021	
Rubber Tired Dozers			3
Tractors/Loaders/Backhoes			4
Grading	1/15/2021	2/11/2021	
Excavators			1
Graders			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			3
Paving	2/12/2021	3/11/2021	
Pavers			2
Paving Equipment			2
Rollers			2
Building Construction	3/12/2021	1/27/2022	
Cranes			1
Forklifts			3
Generator Sets			1
Tractors/Loaders/Backhoes			3
Welders			1
Architectural Coating	12/31/2021	1/27/2022	
Air Compressors			1
This equipment list is based upon equipment inventory within CALEEMOD 2016.3.2. The quantity and types are based upon assumptions from Projects of similar size and scope in the County of San Diego and the City of Oceanside.			

Operations

Once construction is completed the proposed project would generate air quality and GHG emissions from daily operations which would include sources such as Area, Energy, Mobile, Solid waste and Water uses. The proposed project is expected to be fully operational sometime in 2022 and would generate the first complete year of GHG emissions in 2023. The Project was estimated to generate 475 ADT which includes test drives as identified within the project traffic study (LOS Engineering, 2020). Based on this, it is expected that each customer would consist of one incoming trip and one outgoing trip or up to 237 customers daily.

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Modeling

The GHG emissions were calculated using the latest CalEEMod 2016.3.2 air quality model which was developed by Breeze Software for South Coast Air Quality Management District (SCAQMD). The City of Oceanside also recommends the use of CalEEMod 2016.3.2 which utilizes EMFAC 2014 to determine both short and long-term daily air quality emissions as well as GHG estimates. The modeling results are provided as an attachment to this letter.

Construction GHG Findings

The construction GHG emissions as calculated in CalEEMod are reported in pounds per day and are shown in Table 2 below. Total cumulative or combined construction emissions (from 2021 and 2022) are generated prior to operations though will ultimately contribute to yearly emission levels of the Project as a whole. Because of this, it is acceptable to average the total construction emission over a 30-year period (South Coast Air Quality Management District, 2014) which represents an average lifecycle of a project such as CarMax. GHGs related to construction are shown in Table 2. Based on this, it is expected that the 30 year average would be which would be 18.52 MT CO_2e per year.

Table 2: Expected Annual Construction CO_2e Emissions Summary MT/Year

Year	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
2021	0.00	514.14	514.14	0.09	0.00	516.46
2022	0.00	39.03	39.03	0.01	0.00	39.19
Total						555.65
Yearly Average Construction Emissions (MT CO_2e /year over 30 years)						**18.52**

Operational Air Quality Findings

As previously discussed, operational GHG emissions generated from Area, Energy, Mobile, Solid Waste and Water uses is also calculated within CalEEMod. Operational emissions from the proposed project would also include amortized construction emissions construction emissions from Table 2 above. Based on these findings, combined operational and construction GHG emissions will generate 308.36 Metric Tons of CO_2e each year during a typical operational year as can be seen in Table 3 below. Given this, the project would not exceed the City's 900 MT CO_2e screening threshold and would therefore generate less than significant GHG impacts.

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Table 3: Expected Operational Emissions Summary MT/Year

Year	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Area	0.00	0.01	0.01	0.00	0.00	0.01
Energy	0.00	59.94	59.94	0.00	0.00	60.16
Mobile	0.00	198.90	198.90	0.01	0.00	199.20
Waste	8.88	0.00	8.88	0.52	0.00	22.00
Water	0.34	6.98	7.32	0.04	0.00	8.47
Total Operations						289.84
Total Construction Emissions (Amortized over 30 Years from Table 5.1 above)						18.52
Total Cumulative Operations (Construction + Operations)						**308.36**
CarMax Customers Per Day						**237**
Emissions per SP						**1.30**

Furthermore, since the project would serve up to 237 customers per day, it is reasonable to assume that this would be the service population for the project. Given this, the project would generate roughly 1.3 MT/SP. Since the project would also generate less than 3.5 MT/SP, the project would generate less than significant GHG impacts. Based upon these findings, the proposed project would not generate significant greenhouse gas impacts under CEQA and would therefore not be required to implement any mitigation measures to move forward.

Sincerely Ldn Consulting,

Jeremy Louden

Attachment: CalEEMod Model Results

References:

City of Oceanside. (2019). *Planning Division Policy Directive 2018-01 (Revised), (CEQA GHG Impact Analysis: Thresholds of Significance).*

LOS Engineering. (2020). *CarMax Auto Dealership - Draft Traffic Impact Analysis.*

South Coast Air Quality Management District. (2014). *Greenhouse Gases CEQA Significance Thresholds*. Retrieved 2014, from http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds

CarMax Oceanside

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	476.00	Space	6.00	190,400.00	0
Automobile Care Center	11.45	1000sqft	4.98	11,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Area is 10.98 acres

Construction Phase -

Grading -

Architectural Coating - Rule 67 Paint

Vehicle Trips - Traffic Study indicates 475 ADT... trips rates updated to reflect this trip generation

Area Coating - Rule 67 Paint

Construction Off-road Equipment Mitigation - tier 4 mitigation

CarMax Oceanside - San Diego County, Annual

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_EF_Parking	250	100
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	20.00
tblConstructionPhase	NumDays	300.00	230.00
tblGrading	MaterialExported	0.00	10,700.00
tblLandUse	LotAcreage	4.28	6.00
tblLandUse	LotAcreage	0.26	4.98
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblVehicleTrips	ST_TR	23.72	41.48
tblVehicleTrips	SU_TR	11.88	41.48
tblVehicleTrips	WD_TR	23.72	41.48

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.3154	2.9744	2.5303	5.7200e-003	0.2654	0.1316	0.3970	0.1130	0.1232	0.2362	0.0000	514.1447	514.1447	0.0925	0.0000	516.4570
2022	0.0978	0.1943	0.2031	4.4000e-004	9.7800e-003	8.5700e-003	0.0184	2.6500e-003	8.1100e-003	0.0108	0.0000	39.0331	39.0331	6.2000e-003	0.0000	39.1881
Maximum	**0.3154**	**2.9744**	**2.5303**	**5.7200e-003**	**0.2654**	**0.1316**	**0.3970**	**0.1130**	**0.1232**	**0.2362**	**0.0000**	**514.1447**	**514.1447**	**0.0925**	**0.0000**	**516.4570**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1032	0.8293	2.6677	5.7200e-003	0.2654	7.2800e-003	0.2727	0.1130	7.1900e-003	0.1202	0.0000	514.1444	514.1444	0.0925	0.0000	516.4566
2022	0.0830	0.0551	0.2137	4.4000e-004	9.7800e-003	5.4000e-004	0.0103	2.6500e-003	5.3000e-004	3.1800e-003	0.0000	39.0331	39.0331	6.2000e-003	0.0000	39.1880
Maximum	**0.1032**	**0.8293**	**2.6677**	**5.7200e-003**	**0.2654**	**7.2800e-003**	**0.2727**	**0.1130**	**7.1900e-003**	**0.1202**	**0.0000**	**514.1444**	**514.1444**	**0.0925**	**0.0000**	**516.4566**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**54.93**	**72.09**	**-5.41**	**0.00**	**0.00**	**94.42**	**31.86**	**0.00**	**94.12**	**50.04**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	0.9890	0.2820
2	4-1-2021	6-30-2021	0.7564	0.2113
3	7-1-2021	9-30-2021	0.7647	0.2136
4	10-1-2021	12-31-2021	0.7701	0.2185
5	1-1-2022	3-31-2022	0.2966	0.1403
		Highest	0.9890	0.2820

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0654	4.0000e-005	4.4800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7100e-003	8.7100e-003	2.0000e-005	0.0000	9.2800e-003
Energy	7.1000e-004	6.4900e-003	5.4500e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	59.9376	59.9376	2.2600e-003	5.7000e-004	60.1640
Mobile	0.0902	0.3231	0.7549	2.1500e-003	0.1783	1.8100e-003	0.1801	0.0477	1.6900e-003	0.0494	0.0000	198.8963	198.8963	0.0120	0.0000	199.1969
Waste						0.0000	0.0000		0.0000	0.0000	8.8788	0.0000	8.8788	0.5247	0.0000	21.9969
Water						0.0000	0.0000		0.0000	0.0000	0.3418	6.9812	7.3230	0.0354	8.9000e-004	8.4719
Total	**0.1564**	**0.3297**	**0.7648**	**2.1900e-003**	**0.1783**	**2.3200e-003**	**0.1806**	**0.0477**	**2.2000e-003**	**0.0499**	**9.2206**	**265.8238**	**275.0444**	**0.5744**	**1.4600e-003**	**289.8389**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0654	4.0000e-005	4.4800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7100e-003	8.7100e-003	2.0000e-005	0.0000	9.2800e-003
Energy	7.1000e-004	6.4900e-003	5.4500e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	59.9376	59.9376	2.2600e-003	5.7000e-004	60.1640
Mobile	0.0902	0.3231	0.7549	2.1500e-003	0.1783	1.8100e-003	0.1801	0.0477	1.6900e-003	0.0494	0.0000	198.8963	198.8963	0.0120	0.0000	199.1969
Waste						0.0000	0.0000		0.0000	0.0000	8.8788	0.0000	8.8788	0.5247	0.0000	21.9969
Water						0.0000	0.0000		0.0000	0.0000	0.3418	6.9812	7.3230	0.0354	8.9000e-004	8.4719
Total	**0.1564**	**0.3297**	**0.7648**	**2.1900e-003**	**0.1783**	**2.3200e-003**	**0.1806**	**0.0477**	**2.2000e-003**	**0.0499**	**9.2206**	**265.8238**	**275.0444**	**0.5744**	**1.4600e-003**	**289.8389**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	1/14/2021	5	10	
2	Grading	Grading	1/15/2021	2/11/2021	5	20	
3	Paving	Paving	2/12/2021	3/11/2021	5	20	
4	Building Construction	Building Construction	3/12/2021	1/27/2022	5	230	
5	Architectural Coating	Architectural Coating	12/31/2021	1/27/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 6

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 17,175; Non-Residential Outdoor: 5,725; Striped Parking Area: 11,424 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	1,338.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	84.00	33.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530
Total	**0.0194**	**0.2025**	**0.1058**	**1.9000e-004**	**0.0903**	**0.0102**	**0.1006**	**0.0497**	**9.4000e-003**	**0.0591**	**0.0000**	**16.7179**	**16.7179**	**5.4100e-003**	**0.0000**	**16.8530**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.2000e-004	2.2500e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6305	0.6305	2.0000e-005	0.0000	0.6309
Total	**3.1000e-004**	**2.2000e-004**	**2.2500e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6305**	**0.6305**	**2.0000e-005**	**0.0000**	**0.6309**

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3300e-003	0.0101	0.1043	1.9000e-004		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530
Total	**2.3300e-003**	**0.0101**	**0.1043**	**1.9000e-004**	**0.0903**	**3.1000e-004**	**0.0906**	**0.0497**	**3.1000e-004**	**0.0500**	**0.0000**	**16.7178**	**16.7178**	**5.4100e-003**	**0.0000**	**16.8530**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.2000e-004	2.2500e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6305	0.6305	2.0000e-005	0.0000	0.6309
Total	**3.1000e-004**	**2.2000e-004**	**2.2500e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6305**	**0.6305**	**2.0000e-005**	**0.0000**	**0.6309**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0663	0.0000	0.0663	0.0338	0.0000	0.0338	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0229	0.2474	0.1586	3.0000e-004		0.0116	0.0116		0.0107	0.0107	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2644
Total	**0.0229**	**0.2474**	**0.1586**	**3.0000e-004**	**0.0663**	**0.0116**	**0.0779**	**0.0338**	**0.0107**	**0.0445**	**0.0000**	**26.0537**	**26.0537**	**8.4300e-003**	**0.0000**	**26.2644**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0200e-003	0.1747	0.0431	5.1000e-004	0.0115	5.3000e-004	0.0120	3.1400e-003	5.1000e-004	3.6500e-003	0.0000	50.9525	50.9525	4.6000e-003	0.0000	51.0674
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0508	1.0508	3.0000e-005	0.0000	1.0515
Total	**5.5400e-003**	**0.1751**	**0.0469**	**5.2000e-004**	**0.0127**	**5.4000e-004**	**0.0132**	**3.4600e-003**	**5.2000e-004**	**3.9800e-003**	**0.0000**	**52.0032**	**52.0032**	**4.6300e-003**	**0.0000**	**52.1190**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0663	0.0000	0.0663	0.0338	0.0000	0.0338	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6300e-003	0.0157	0.1775	3.0000e-004		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2643
Total	**3.6300e-003**	**0.0157**	**0.1775**	**3.0000e-004**	**0.0663**	**4.8000e-004**	**0.0668**	**0.0338**	**4.8000e-004**	**0.0343**	**0.0000**	**26.0537**	**26.0537**	**8.4300e-003**	**0.0000**	**26.2643**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0200e-003	0.1747	0.0431	5.1000e-004	0.0115	5.3000e-004	0.0120	3.1400e-003	5.1000e-004	3.6500e-003	0.0000	50.9525	50.9525	4.6000e-003	0.0000	51.0674
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0508	1.0508	3.0000e-005	0.0000	1.0515
Total	**5.5400e-003**	**0.1751**	**0.0469**	**5.2000e-004**	**0.0127**	**5.4000e-004**	**0.0132**	**3.4600e-003**	**5.2000e-004**	**3.9800e-003**	**0.0000**	**52.0032**	**52.0032**	**4.6300e-003**	**0.0000**	**52.1190**

3.4 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	7.8600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0204**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0508	1.0508	3.0000e-005	0.0000	1.0515
Total	**5.2000e-004**	**3.7000e-004**	**3.7500e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0508**	**1.0508**	**3.0000e-005**	**0.0000**	**1.0515**

3.4 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8000e-003	0.0122	0.1730	2.3000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	7.8600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0107**	**0.0122**	**0.1730**	**2.3000e-004**		**3.7000e-004**	**3.7000e-004**		**3.7000e-004**	**3.7000e-004**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0508	1.0508	3.0000e-005	0.0000	1.0515
Total	**5.2000e-004**	**3.7000e-004**	**3.7500e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0508**	**1.0508**	**3.0000e-005**	**0.0000**	**1.0515**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2006	1.8391	1.7487	2.8400e-003		0.1011	0.1011		0.0951	0.0951	0.0000	244.3773	244.3773	0.0590	0.0000	245.8513
Total	**0.2006**	**1.8391**	**1.7487**	**2.8400e-003**		**0.1011**	**0.1011**		**0.0951**	**0.0951**	**0.0000**	**244.3773**	**244.3773**	**0.0590**	**0.0000**	**245.8513**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0108	0.3578	0.0954	9.3000e-004	0.0231	7.6000e-004	0.0239	6.6700e-003	7.2000e-004	7.4000e-003	0.0000	91.0204	91.0204	6.7600e-003	0.0000	91.1892
Worker	0.0308	0.0220	0.2214	6.9000e-004	0.0711	5.0000e-004	0.0716	0.0189	4.6000e-004	0.0194	0.0000	62.0803	62.0803	1.7800e-003	0.0000	62.1248
Total	**0.0416**	**0.3798**	**0.3168**	**1.6200e-003**	**0.0942**	**1.2600e-003**	**0.0954**	**0.0256**	**1.1800e-003**	**0.0268**	**0.0000**	**153.1007**	**153.1007**	**8.5400e-003**	**0.0000**	**153.3140**

3.5 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0346	0.2358	1.8421	2.8400e-003		4.3000e-003	4.3000e-003		4.3000e-003	4.3000e-003	0.0000	244.3770	244.3770	0.0590	0.0000	245.8510
Total	**0.0346**	**0.2358**	**1.8421**	**2.8400e-003**		**4.3000e-003**	**4.3000e-003**		**4.3000e-003**	**4.3000e-003**	**0.0000**	**244.3770**	**244.3770**	**0.0590**	**0.0000**	**245.8510**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0108	0.3578	0.0954	9.3000e-004	0.0231	7.6000e-004	0.0239	6.6700e-003	7.2000e-004	7.4000e-003	0.0000	91.0204	91.0204	6.7600e-003	0.0000	91.1892
Worker	0.0308	0.0220	0.2214	6.9000e-004	0.0711	5.0000e-004	0.0716	0.0189	4.6000e-004	0.0194	0.0000	62.0803	62.0803	1.7800e-003	0.0000	62.1248
Total	**0.0416**	**0.3798**	**0.3168**	**1.6200e-003**	**0.0942**	**1.2600e-003**	**0.0954**	**0.0256**	**1.1800e-003**	**0.0268**	**0.0000**	**153.1007**	**153.1007**	**8.5400e-003**	**0.0000**	**153.3140**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0162	0.1484	0.1555	2.6000e-004		7.6900e-003	7.6900e-003		7.2300e-003	7.2300e-003	0.0000	22.0139	22.0139	5.2700e-003	0.0000	22.1458
Total	**0.0162**	**0.1484**	**0.1555**	**2.6000e-004**		**7.6900e-003**	**7.6900e-003**		**7.2300e-003**	**7.2300e-003**	**0.0000**	**22.0139**	**22.0139**	**5.2700e-003**	**0.0000**	**22.1458**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.0000e-004	0.0304	8.1300e-003	8.0000e-005	2.0800e-003	6.0000e-005	2.1400e-003	6.0000e-004	6.0000e-005	6.6000e-004	0.0000	8.1185	8.1185	5.9000e-004	0.0000	8.1333
Worker	2.6300e-003	1.8000e-003	0.0185	6.0000e-005	6.4000e-003	4.0000e-005	6.4400e-003	1.7000e-003	4.0000e-005	1.7400e-003	0.0000	5.3853	5.3853	1.5000e-004	0.0000	5.3889
Total	**3.5300e-003**	**0.0322**	**0.0266**	**1.4000e-004**	**8.4800e-003**	**1.0000e-004**	**8.5800e-003**	**2.3000e-003**	**1.0000e-004**	**2.4000e-003**	**0.0000**	**13.5038**	**13.5038**	**7.4000e-004**	**0.0000**	**13.5222**

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1100e-003	0.0212	0.1659	2.6000e-004		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	22.0139	22.0139	5.2700e-003	0.0000	22.1457
Total	**3.1100e-003**	**0.0212**	**0.1659**	**2.6000e-004**		**3.9000e-004**	**3.9000e-004**		**3.9000e-004**	**3.9000e-004**	**0.0000**	**22.0139**	**22.0139**	**5.2700e-003**	**0.0000**	**22.1457**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.0000e-004	0.0304	8.1300e-003	8.0000e-005	2.0800e-003	6.0000e-005	2.1400e-003	6.0000e-004	6.0000e-005	6.6000e-004	0.0000	8.1185	8.1185	5.9000e-004	0.0000	8.1333
Worker	2.6300e-003	1.8000e-003	0.0185	6.0000e-005	6.4000e-003	4.0000e-005	6.4400e-003	1.7000e-003	4.0000e-005	1.7400e-003	0.0000	5.3853	5.3853	1.5000e-004	0.0000	5.3889
Total	**3.5300e-003**	**0.0322**	**0.0266**	**1.4000e-004**	**8.4800e-003**	**1.0000e-004**	**8.5800e-003**	**2.3000e-003**	**1.0000e-004**	**2.4000e-003**	**0.0000**	**13.5038**	**13.5038**	**7.4000e-004**	**0.0000**	**13.5222**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.9800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1000e-004	7.6000e-004	9.1000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.1277	0.1277	1.0000e-005	0.0000	0.1279
Total	**4.0900e-003**	**7.6000e-004**	**9.1000e-004**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.1277**	**0.1277**	**1.0000e-005**	**0.0000**	**0.1279**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0595	0.0595	0.0000	0.0000	0.0596
Total	**3.0000e-005**	**2.0000e-005**	**2.1000e-004**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0595**	**0.0595**	**0.0000**	**0.0000**	**0.0596**

3.6 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.9800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0000e-005	6.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.1277	0.1277	1.0000e-005	0.0000	0.1279
Total	**3.9900e-003**	**6.0000e-005**	**9.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.1277**	**0.1277**	**1.0000e-005**	**0.0000**	**0.1279**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0595	0.0595	0.0000	0.0000	0.0596
Total	**3.0000e-005**	**2.0000e-005**	**2.1000e-004**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0595**	**0.0595**	**0.0000**	**0.0000**	**0.0596**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0756					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9400e-003	0.0134	0.0172	3.0000e-005		7.8000e-004	7.8000e-004		7.8000e-004	7.8000e-004	0.0000	2.4256	2.4256	1.6000e-004	0.0000	2.4295
Total	**0.0775**	**0.0134**	**0.0172**	**3.0000e-005**		**7.8000e-004**	**7.8000e-004**		**7.8000e-004**	**7.8000e-004**	**0.0000**	**2.4256**	**2.4256**	**1.6000e-004**	**0.0000**	**2.4295**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3000e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.0899	1.0899	3.0000e-005	0.0000	1.0906
Total	**5.3000e-004**	**3.7000e-004**	**3.7500e-003**	**1.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3000e-003**	**3.4000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.0899**	**1.0899**	**3.0000e-005**	**0.0000**	**1.0906**

3.6 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0756					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8000e-004	1.2200e-003	0.0174	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.4256	2.4256	1.6000e-004	0.0000	2.4295
Total	**0.0759**	**1.2200e-003**	**0.0174**	**3.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**2.4256**	**2.4256**	**1.6000e-004**	**0.0000**	**2.4295**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3000e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.0899	1.0899	3.0000e-005	0.0000	1.0906
Total	**5.3000e-004**	**3.7000e-004**	**3.7500e-003**	**1.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3000e-003**	**3.4000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.0899**	**1.0899**	**3.0000e-005**	**0.0000**	**1.0906**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0902	0.3231	0.7549	2.1500e-003	0.1783	1.8100e-003	0.1801	0.0477	1.6900e-003	0.0494	0.0000	198.8963	198.8963	0.0120	0.0000	199.1969
Unmitigated	0.0902	0.3231	0.7549	2.1500e-003	0.1783	1.8100e-003	0.1801	0.0477	1.6900e-003	0.0494	0.0000	198.8963	198.8963	0.0120	0.0000	199.1969

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	474.95	474.95	474.95	473,135	473,135
Parking Lot	0.00	0.00	0.00		
Total	474.95	474.95	474.95	473,135	473,135

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056
Parking Lot	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	52.8742	52.8742	2.1300e-003	4.4000e-004	53.0587
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	52.8742	52.8742	2.1300e-003	4.4000e-004	53.0587
NaturalGas Mitigated	7.1000e-004	6.4900e-003	5.4500e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	7.0633	7.0633	1.4000e-004	1.3000e-004	7.1053
NaturalGas Unmitigated	7.1000e-004	6.4900e-003	5.4500e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	7.0633	7.0633	1.4000e-004	1.3000e-004	7.1053

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	132362	7.1000e-004	6.4900e-003	5.4500e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	7.0633	7.0633	1.4000e-004	1.3000e-004	7.1053
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.1000e-004**	**6.4900e-003**	**5.4500e-003**	**4.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.9000e-004**	**4.9000e-004**	**0.0000**	**7.0633**	**7.0633**	**1.4000e-004**	**1.3000e-004**	**7.1053**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	132362	7.1000e-004	6.4900e-003	5.4500e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	7.0633	7.0633	1.4000e-004	1.3000e-004	7.1053
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.1000e-004**	**6.4900e-003**	**5.4500e-003**	**4.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.9000e-004**	**4.9000e-004**	**0.0000**	**7.0633**	**7.0633**	**1.4000e-004**	**1.3000e-004**	**7.1053**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	95149.5	31.0957	1.2500e-003	2.6000e-004	31.2042
Parking Lot	66640	21.7785	8.8000e-004	1.8000e-004	21.8545
Total		**52.8742**	**2.1300e-003**	**4.4000e-004**	**53.0587**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	95149.5	31.0957	1.2500e-003	2.6000e-004	31.2042
Parking Lot	66640	21.7785	8.8000e-004	1.8000e-004	21.8545
Total		**52.8742**	**2.1300e-003**	**4.4000e-004**	**53.0587**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0654	4.0000e-005	4.4800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7100e-003	8.7100e-003	2.0000e-005	0.0000	9.2800e-003
Unmitigated	0.0654	4.0000e-005	4.4800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7100e-003	8.7100e-003	2.0000e-005	0.0000	9.2800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.9500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0570					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.1000e-004	4.0000e-005	4.4800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7100e-003	8.7100e-003	2.0000e-005	0.0000	9.2800e-003
Total	**0.0654**	**4.0000e-005**	**4.4800e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.7100e-003**	**8.7100e-003**	**2.0000e-005**	**0.0000**	**9.2800e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.9500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0570					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.1000e-004	4.0000e-005	4.4800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7100e-003	8.7100e-003	2.0000e-005	0.0000	9.2800e-003
Total	**0.0654**	**4.0000e-005**	**4.4800e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.7100e-003**	**8.7100e-003**	**2.0000e-005**	**0.0000**	**9.2800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7.3230	0.0354	8.9000e-004	8.4719
Unmitigated	7.3230	0.0354	8.9000e-004	8.4719

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	1.07723 / 0.660237	7.3230	0.0354	8.9000e-004	8.4719
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**7.3230**	**0.0354**	**8.9000e-004**	**8.4719**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	1.07723 / 0.660237	7.3230	0.0354	8.9000e-004	8.4719
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**7.3230**	**0.0354**	**8.9000e-004**	**8.4719**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.8788	0.5247	0.0000	21.9969
Unmitigated	8.8788	0.5247	0.0000	21.9969

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	43.74	8.8788	0.5247	0.0000	21.9969
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**8.8788**	**0.5247**	**0.0000**	**21.9969**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	43.74	8.8788	0.5247	0.0000	21.9969
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**8.8788**	**0.5247**	**0.0000**	**21.9969**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX J
Drainage Study

DRAINAGE STUDY

For

CARMAX OCEANSIDE

Prepared for**:**

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CHAPTER 1 - EXECUTIVE SUMMARY

1.1 – Introduction

The Carmax project site is located near the southwest corner of Plaza Drive and Thunder Drive in the City of Oceanside, California.

Runoff from the existing site surface flows to four points of discharge, two of them on Plaza Drive, one on Thunder Drive and the one to Buena Vista Creek.

The study analyzes existing and developed conditions for 100-year peak flowrates from the development to the existing points of discharge.

The southern portion of the property lies within Zone X of the FEMA 100-year floodplain (FEMA FIRM Panel 06073C0758G effective 5/16/19) and riparian buffer. However, development of the property will not encroach on either of these boundaries. Therefore, no Map Revision will be required.

Treatment of storm water runoff from the site has been addressed in a separate report – the “Storm Water Quality Management Plan for Carmax Oceanside”, dated November 2019 by REC. Hydromodification (HMP) analysis has been addressed in a separate report titled “Technical Memorandum: SWMM Modeling for Carmax Oceanside” dated November 2019 by REC.

Per County of San Diego drainage criteria the Modified Rational Method is used to determine peak design flowrates when the contributing drainage area is less than one square mile. Since the total watershed area discharging from the site is less than one square mile, AES computer software was used to model the pre- and post- developed condition runoff response per the Modified Rational Method.

Methodology used for the computation of design rainfall events, runoff coefficients, and rainfall intensity values are consistent with criteria set forth in the “County of San Diego Drainage Design Manual”. A more detailed explanation of methodology used for this analysis is listed in Chapter 2 of this report.

Developed condition peak flows were calculated using AES. The corresponding hydrographs were generated using the RickRat Hydro program by Rick Engineering. Hyraulic Modified-Puls detention basin routing of the AES rational method hydrology was performed using the Army Corps of Engineers HEC-HMS 4.2.1 software.

1.2 – Summary of Existing Conditions

In existing conditions, the Carmax project site is a vacant, previously graded lot. The site is divided into “North” and “South” portions separated by Plaza Drive.

Existing runoff from the north site drains via overland flow to the southwest corner of the site where it sheet flows over the existing berm and onto Plaza Drive. Runoff from the existing south site drains south towards Buena Vista Creek with a small portion draining east over the sidewalk and curb and onto Thunder Drive.

Per NOAA Precipitation Frequency Data Server, the 100-year design rainfall depth for the project site is 3.02 inches. The project runoff coefficient was calculated using the Caltrans Highway Design Manual. Figure 819.2A of the Highway Design Manual determines runoff coefficients for undeveloped areas based on watershed type. This table was used to determine the runoff coefficient of the site, calculations are summarized hereon:

Relief:	10% steep – 0.32 90% Normal – 0.17 (0.1)(0.32) + (0.9)(0.17) = 0.185
Soil Infiltration:	Soil type-D – 0.12
Vegetal Cover:	8% fair to good – 0.07 92% poor to fair – 0.12 (0.08)(0.07) + (0.92)(0.12) = 0.116
Storage:	Negligible – 0.11
Total*:*	(0.185) + (0.12) + (0.116) + (0.11) = 0.531
‘C’ Modification for Q100:	(0.531) $\times$ (1.25) = *0.66*

Thus a site coefficient of 0.66 is used for pre-development conditions.

Table 1 on the following page summarizes the existing condition design 100-year peak flow from the project site.

Table 1 – SUMMARY OF EXISTING CONDITIONS FLOWS

Discharge Location	Drainage Area (Ac)	Runoff Coefficient (C)	100-Year Peak Flow (cfs)
POC-1	1.44	0.66	5.11
POC-2	0.21	0.66	0.82
POC-3	6.89	0.66	23.74
POC-4	0.27	0.66	1.07
TOTAL	**8.81**		

1.3 – Summary of Developed Conditions

The north site is constructed solely of permeable pavement, therefore, pre- and post-development runoff remains constant. Runoff from the south site is directed to a proprietary underground detention system near the southeast corner of the site. Mitigated peak flows are then drained from the detention facility via a 24" storm drain to POC-3, at the southwest corner of the site, where runoff ultimately meets existing Buena Vista Creek.

Per NOAA Precipitation Frequency Data Server the design 100-year rainfall depth for the project site is 3.02 inches. The project runoff coefficient was calculated using the Caltrans Highway Design Manual. Figure 819.2B of the Highway Design Manual determines runoff coefficients for developed areas. This table was used to determine the runoff coefficient of the site, calculations are summarized hereon:

Type of Drainage Area: Parking lot and building – 0.75
(applicable to roofs, business with high density, multi-units, streets)

'C' Modification for Q100: $(0.75) \times (1.25) = \underline{0.94}$

Thus a site coefficient of 0.94 is used for post-development conditions. The developed site has an approximate impervious footprint of 5.798 acres.

Table 2 summarizes the unmitigated developed condition design 100-year peak flow from the project site.

Table 2 – SUMMARY OF UNMITIGATED - DEVELOPED CONDITIONS FLOWS

Discharge Location	Drainage Area (Ac)	Runoff Coefficient (C)	100-Year Peak Flow (cfs)
POC-1	1.44	0.66	5.59
POC-2	0.35	0.94	2.15
POC-3	6.89	0.94	44.38
POC-4	0.13	0.94	1.05
TOTAL	**8.81**		

Prior to discharging from the project site, first flush runoff will be treated via a underground open bottom proprietary BMP in accordance with standards set forth by the Regional Water Quality Control Board and the County of San Diego's BMP Design Manual (see "Storm Water Quality Management Plan for Carmax Oceanside").

Runoff from the developed site drains to a single onsite underground detention system. Peak flows are mitigated via this facility prior to discharging to the proprietary underground water quality system. Once through the proprietary underground water quality system, runoff will discharge to POC-3, the existing point of discharge from the site.

A summary of the detention basin is provided in Table 3.

Table 3 – SUMMARY OF UNDERGROUND BMP DIMENSIONS

1st Outlet:
Diameter: 2.3125"
Number of Orifices: 2
Invert Elev: 0.0' (invert of the tanks is assumed to be 0.0).

2nd Outlet:
Slot Dimensions: 12" wide by 2.5" tall.
Number of Slots: 3
Invert Elev: 1.25'

3rd Outlet:
Slot Dimensions: 15" wide by 8" tall.
Number of Slots: 3
Invert Elev: 2.25'

4th Outlet (Overspill):
Weir Length: 12 ft (3' x 3' opening)
Invert Elev: 3.75'

Notes:
(1): It is assumed WQ volume is to be treated after storm water leaves underground detention system. All elevations measured from the invert of the underground detention system.
(2): Depth of ponding beneath structure emergency spillway.
(3): Overflow length, the internal length of the emergency spillway.
(4): Total depth of underground BMP from soffit to invert.

The developed condition peak flows were calculated using the Modified Rational Method. The corresponding hydrographs were generated using the RickRat Hydro program by Rick Engineering (a 5 minute time step was used to generate the hydrograph as HMS only has time step allowances for 1,2,3,4,5,6 and 10 minute increments). This hydrograph was then routed through the proposed on-site detention facility in HEC-HMS. The HMS Modified-Puls results are summarized in Table 4.

Rational method hydrographs, stage-storage, stage-discharge relationships, outlet structure configurations and HEC-HMS model output is provided in Chapter 5 of this report.

Table 4 summarizes the peak inflow and discharge from the detention facility.

Table 4 – SUMMARY OF DETENTION ROUTING

Detention Basin	100-Year Peak Inflow (cfs)	100-Year Peak Outflow (cfs)	Peak Water Surface Elevation[(1)] (ft)
BMP-1	43.78	23.84	3.75

Notes: (1) Elevation above the first surface inlet invert.

1.4 – Summary of Results

Table 5 summarizes developed and existing condition drainage areas and resultant 100-year peak flow rates at the receiving discharge location from the Carmax site. Per NOAA Precipitation Frequency Data Server, the design 100-year rainfall depth for the site area is 3.02 inches.

Table 5 – SUMMARY OF PEAK FLOWS

Discharge Location	Area (ac)			100 Year Peak Flow (cfs)		
	Existing	Developed	Difference	Existing	Developed	Difference
POC-1	1.44	1.44	0.00	5.11	5.59	0.48
POC-2	0.21	0.35	0.14	0.82	2.15	1.33
POC-3	6.89	6.89	0.00	23.74	22.42	-1.32
POC-4	0.27	0.13	-0.14	1.07	1.05	-0.02

As illustrated in Table 5, the proposed Carmax project site will reduce peak flows for the large majority of the site. POC-1 and POC-2 at Plaza Drive increase slightly due to the widening and expansion of Plaza Drive. Runoff discharging at these POC's will make its way west towards the intersection of Highway 78 and Plaza Drive where said runoff enters curb inlets on the north and south sides of Plaza Drive, respectively. At final engineering the downstream curb inlets and pipes on the north and south sides of Plaza Drive will be examined to ensure existing capacity is adequate for additional runoff resulting from Plaza Drive expansion.

POC-3 is reduced by 1.32 cfs. POC-4 decreases by 0.02 cfs. POC-3 and POC-4 ultimately confluence at POC-3 in Buena Vista Creek, therefore, the total net increase of 0.49 cfs is insignificant as it discharges directly to a receiving water body. There will be no impact to downstream storm drains of flood channels.

All developed runoff will receive water quality treatment in accordance with the site specific SWQMP, whether that be treatment via proprietary BMP or green streets.

Final design details will be provided at the final engineering phase of the development.

1.5 – Hydraulic Analysis

Detailed hydraulic analysis to be provided at final engineering.

1.6 – Conclusions

This report has been prepared in accordance with the County of San Diego Hydrology Manual. This report has evaluated and addressed the potential impacts and proposed mitigation measures. A summary of the facts and findings associated with this project and the measures addressed by this report is as follows:

- The project will not alter drainage patterns on the site or increase net runoff after development.
- The ultimate discharge points will not be changed.
- Graded areas and slopes will be hydroseeded to reduce or eliminate sediment discharge.
- Hydraulic analysis to be provided at final engineering

1.7 – References

"*County of San Diego Hydrology Manual*", June 2003

"Caltrans Highway Design Manual", November 2017

"*San Diego County Hydraulic Design Manual*", September 2014

"*Stormwater Quality Management Plan for Carmax Oceanside*", November 2019, REC Consultants.

1.8 – Declaration of Responsible Charge

THIS PRELIMINARY DRAINAGE STUDY HAS BEEN PREPARED UNDER THE DIRECTION OF THE FOLLOWING REGISTERED CIVIL ENGINEER. THE REGISTERED ENGINEER ATTESTS TO THE TECHNICAL INFORMATION CONTAINED HEREIN AND THE ENGINEERING DATA UPON WHICH RECOMMENDATIONS, CONCLUSIONS, AND DECISIONS ARE BASED.

Jonathan Raab Rydeen R.C.E. 64811

CHAPTER 2 - METHODOLOGY

2.1 – County of San Diego Design Criteria

SECTION 3
RATIONAL METHOD AND MODIFIED RATIONAL METHOD

3.1 THE RATIONAL METHOD

The Rational Method (RM) is a mathematical formula used to determine the maximum runoff rate from a given rainfall. It has particular application in urban storm drainage, where it is used to estimate peak runoff rates from small urban and rural watersheds for the design of storm drains and small drainage structures. The RM is recommended for analyzing the runoff response from drainage areas up to approximately 1 square mile in size. It should not be used in instances where there is a junction of independent drainage systems or for drainage areas greater than approximately 1 square mile in size. In these instances, the Modified Rational Method (MRM) should be used for junctions of independent drainage systems in watersheds up to approximately 1 square mile in size (see Section 3.4); or the NRCS Hydrologic Method should be used for watersheds greater than approximately 1 square mile in size (see Section 4).

The RM can be applied using any design storm frequency (e.g., 100-year, 50-year, 10-year, etc.). The local agency determines the design storm frequency that must be used based on the type of project and specific local requirements. A discussion of design storm frequency is provided in Section 2.3 of this manual. A procedure has been developed that converts the 6-hour and 24-hour precipitation isopluvial map data to an Intensity-Duration curve that can be used for the rainfall intensity in the RM formula as shown in Figure 3-1. The RM is applicable to a 6-hour storm duration because the procedure uses Intensity-Duration Design Charts that are based on a 6-hour storm duration.

3.1.1 Rational Method Formula

The RM formula estimates the peak rate of runoff at any location in a watershed as a function of the drainage area (A), runoff coefficient (C), and rainfall intensity (I) for a duration equal to the time of concentration (T_c), which is the time required for water to

2.2 – Design Rainfall Determination

2.2.1 – NOAA Project Location Maps

NOAA Atlas 14, Volume 6, Version 2
Location name: Oceanside, California, USA*
Latitude: 33.182°, Longitude: -117.2892°
Elevation: 201.38 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.130** (0.109-0.156)	**0.165** (0.138-0.198)	**0.213** (0.179-0.257)	**0.255** (0.212-0.310)	**0.317** (0.254-0.399)	**0.367** (0.288-0.473)	**0.422** (0.322-0.558)	**0.482** (0.357-0.657)	**0.570** (0.404-0.813)	**0.644** (0.440-0.952)
10-min	**0.186** (0.157-0.223)	**0.236** (0.198-0.283)	**0.306** (0.256-0.368)	**0.366** (0.304-0.445)	**0.454** (0.364-0.572)	**0.527** (0.413-0.679)	**0.605** (0.462-0.800)	**0.691** (0.512-0.942)	**0.817** (0.579-1.17)	**0.923** (0.631-1.37)
15-min	**0.225** (0.190-0.270)	**0.285** (0.240-0.343)	**0.369** (0.310-0.445)	**0.443** (0.368-0.538)	**0.549** (0.440-0.692)	**0.637** (0.499-0.821)	**0.732** (0.559-0.968)	**0.836** (0.619-1.14)	**0.988** (0.700-1.41)	**1.12** (0.763-1.65)
30-min	**0.319** (0.269-0.383)	**0.405** (0.340-0.486)	**0.524** (0.440-0.632)	**0.628** (0.522-0.763)	**0.779** (0.624-0.981)	**0.904** (0.708-1.16)	**1.04** (0.793-1.37)	**1.19** (0.879-1.62)	**1.40** (0.994-2.00)	**1.58** (1.08-2.34)
60-min	**0.450** (0.379-0.540)	**0.570** (0.479-0.684)	**0.738** (0.619-0.889)	**0.884** (0.735-1.07)	**1.10** (0.879-1.38)	**1.27** (0.997-1.64)	**1.46** (1.12-1.93)	**1.67** (1.24-2.28)	**1.97** (1.40-2.81)	**2.23** (1.52-3.30)
2-hr	**0.629** (0.530-0.754)	**0.785** (0.660-0.942)	**1.00** (0.840-1.21)	**1.19** (0.989-1.45)	**1.46** (1.17-1.84)	**1.69** (1.32-2.18)	**1.93** (1.48-2.56)	**2.20** (1.63-3.00)	**2.59** (1.84-3.70)	**2.92** (2.00-4.32)
3-hr	**0.756** (0.637-0.907)	**0.941** (0.791-1.13)	**1.20** (1.00-1.44)	**1.42** (1.18-1.72)	**1.74** (1.39-2.19)	**2.00** (1.57-2.58)	**2.28** (1.74-3.02)	**2.59** (1.92-3.53)	**3.04** (2.15-4.33)	**3.41** (2.33-5.04)
6-hr	**1.02** (0.857-1.22)	**1.27** (1.07-1.53)	**1.62** (1.35-1.95)	**1.91** (1.59-2.32)	**2.33** (1.87-2.93)	**2.66** (2.09-3.43)	**3.02** (2.31-4.00)	**3.41** (2.52-4.64)	**3.96** (2.80-5.64)	**4.41** (3.01-6.52)
12-hr	**1.33** (1.12-1.59)	**1.68** (1.41-2.02)	**2.15** (1.81-2.59)	**2.55** (2.12-3.09)	**3.09** (2.48-3.89)	**3.52** (2.76-4.53)	**3.96** (3.02-5.24)	**4.43** (3.28-6.04)	**5.08** (3.60-7.24)	**5.60** (3.83-8.29)
24-hr	**1.66** (1.46-1.91)	**2.13** (1.88-2.47)	**2.76** (2.43-3.21)	**3.27** (2.86-3.83)	**3.97** (3.35-4.79)	**4.50** (3.73-5.54)	**5.05** (4.09-6.36)	**5.62** (4.43-7.26)	**6.39** (4.85-8.60)	**7.00** (5.14-9.74)
2-day	**2.04** (1.80-2.36)	**2.66** (2.34-3.07)	**3.45** (3.04-4.01)	**4.10** (3.58-4.80)	**4.99** (4.22-6.02)	**5.67** (4.70-6.98)	**6.36** (5.16-8.02)	**7.08** (5.59-9.16)	**8.07** (6.12-10.9)	**8.84** (6.49-12.3)
3-day	**2.28** (2.01-2.64)	**2.97** (2.62-3.44)	**3.88** (3.41-4.50)	**4.62** (4.03-5.41)	**5.64** (4.77-6.80)	**6.43** (5.33-7.91)	**7.23** (5.86-9.11)	**8.07** (6.36-10.4)	**9.21** (6.99-12.4)	**10.1** (7.42-14.1)
4-day	**2.50** (2.20-2.89)	**3.27** (2.88-3.78)	**4.28** (3.76-4.96)	**5.11** (4.46-5.97)	**6.25** (5.28-7.54)	**7.13** (5.91-8.78)	**8.04** (6.51-10.1)	**8.98** (7.09-11.6)	**10.3** (7.79-13.8)	**11.3** (8.29-15.7)
7-day	**2.90** (2.56-3.35)	**3.83** (3.38-4.44)	**5.07** (4.45-5.88)	**6.08** (5.31-7.11)	**7.48** (6.32-9.02)	**8.57** (7.10-10.5)	**9.69** (7.85-12.2)	**10.9** (8.57-14.1)	**12.5** (9.47-16.8)	**13.8** (10.1-19.2)
10-day	**3.19** (2.81-3.68)	**4.25** (3.75-4.92)	**5.66** (4.98-6.57)	**6.82** (5.95-7.98)	**8.43** (7.12-10.2)	**9.68** (8.03-11.9)	**11.0** (8.90-13.8)	**12.4** (9.74-16.0)	**14.2** (10.8-19.2)	**15.8** (11.6-21.9)
20-day	**3.89** (3.43-4.49)	**5.24** (4.62-6.06)	**7.04** (6.19-8.17)	**8.54** (7.45-9.99)	**10.6** (9.00-12.8)	**12.3** (10.2-15.1)	**14.1** (11.4-17.7)	**15.9** (12.5-20.6)	**18.5** (14.0-24.9)	**20.6** (15.1-28.7)
30-day	**4.64** (4.10-5.37)	**6.27** (5.52-7.25)	**8.45** (7.43-9.81)	**10.3** (8.98-12.0)	**12.9** (10.9-15.5)	**15.0** (12.4-18.4)	**17.2** (13.9-21.6)	**19.5** (15.4-25.2)	**22.9** (17.4-30.8)	**25.6** (18.8-35.6)
45-day	**5.53** (4.88-6.40)	**7.42** (6.54-8.59)	**10.0** (8.80-11.6)	**12.2** (10.6-14.3)	**15.3** (13.0-18.5)	**17.9** (14.8-22.0)	**20.6** (16.7-26.0)	**23.6** (18.6-30.5)	**27.9** (21.1-37.5)	**31.4** (23.1-43.7)
60-day	**6.46** (5.70-7.47)	**8.59** (7.57-9.94)	**11.5** (10.1-13.4)	**14.1** (12.3-16.4)	**17.7** (15.0-21.4)	**20.7** (17.2-25.5)	**24.0** (19.4-30.2)	**27.6** (21.8-35.7)	**32.8** (24.9-44.2)	**37.3** (27.4-51.8)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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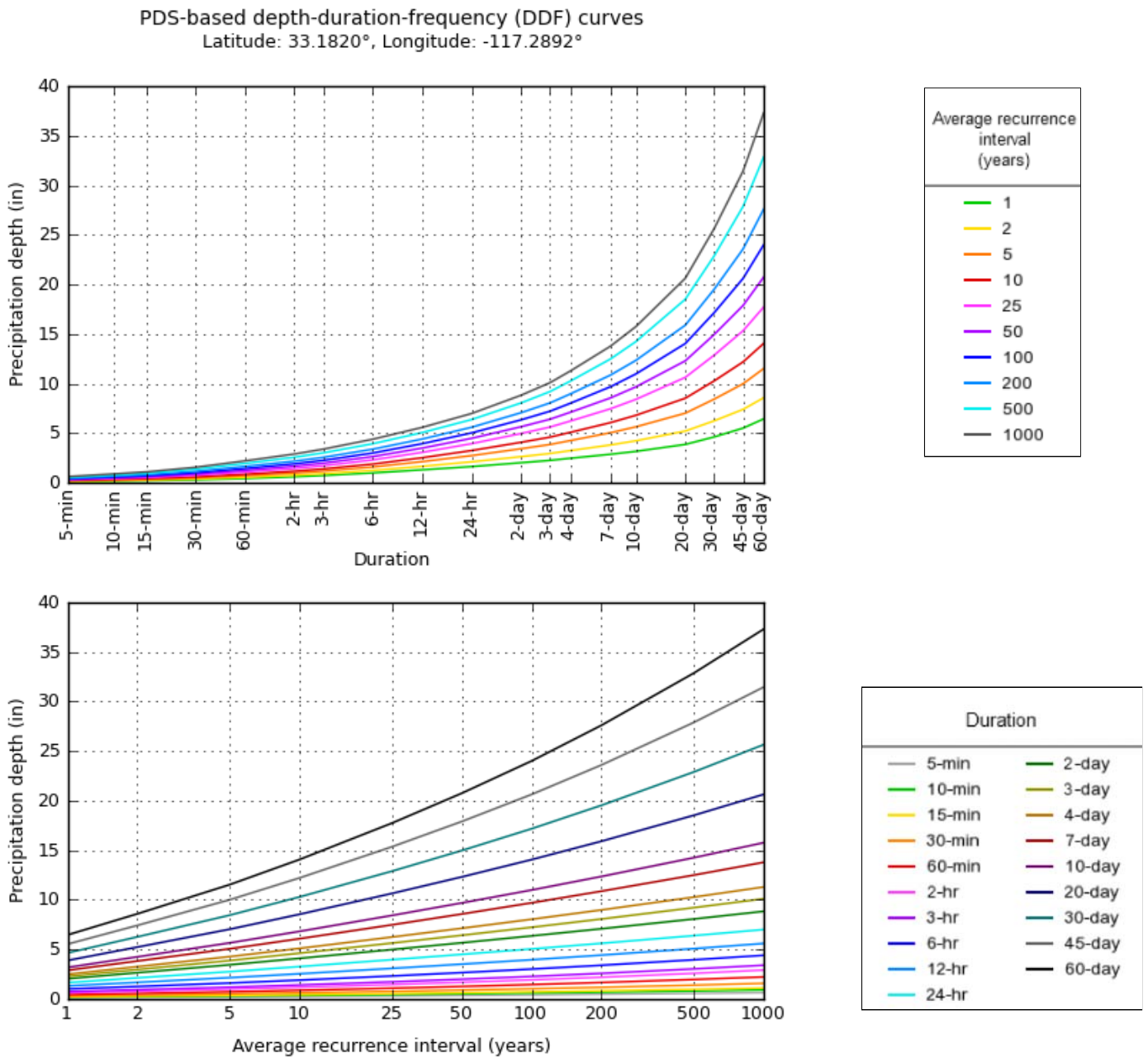
PF graphical



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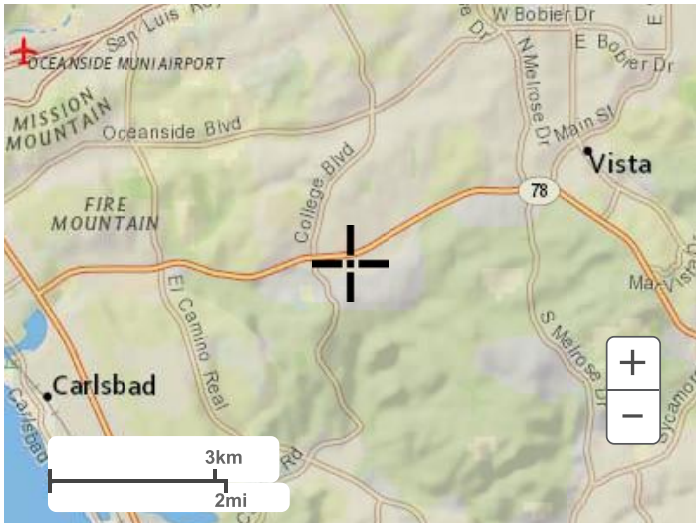
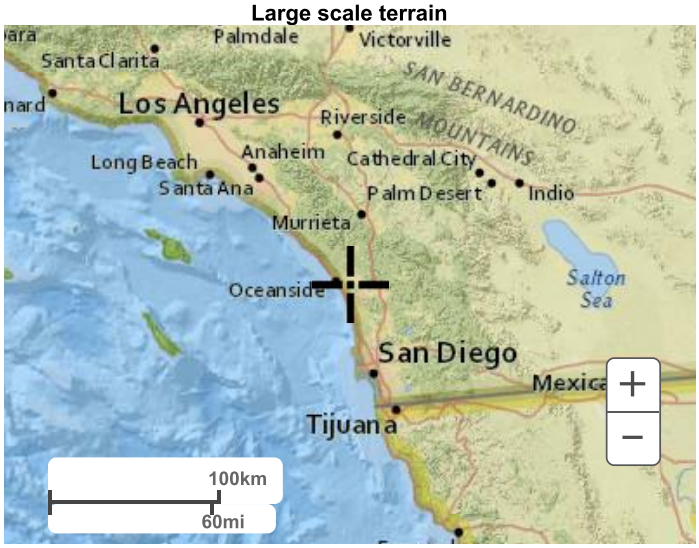
Maps & aerials

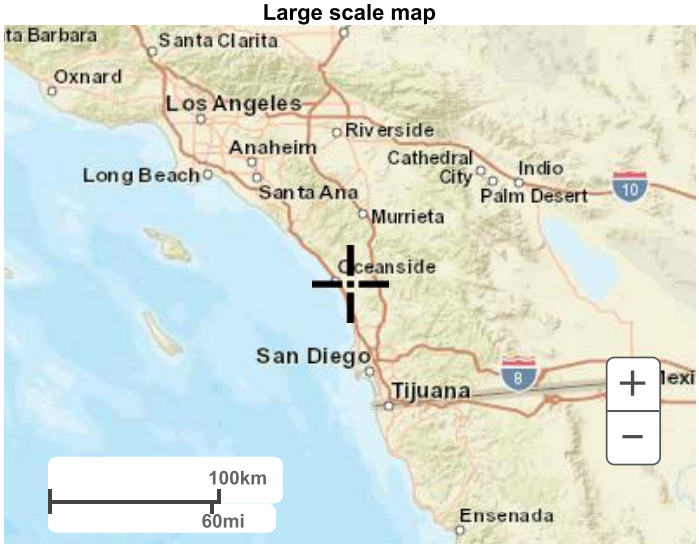
Small scale terrain



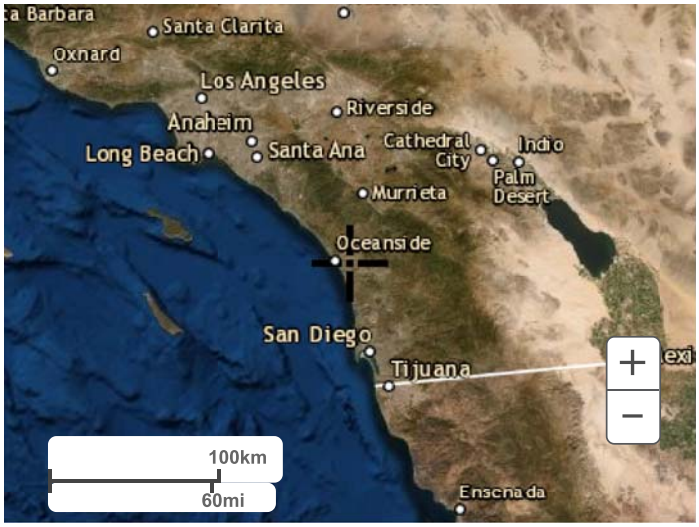
Large scale terrain



Large scale map



Large scale aerial



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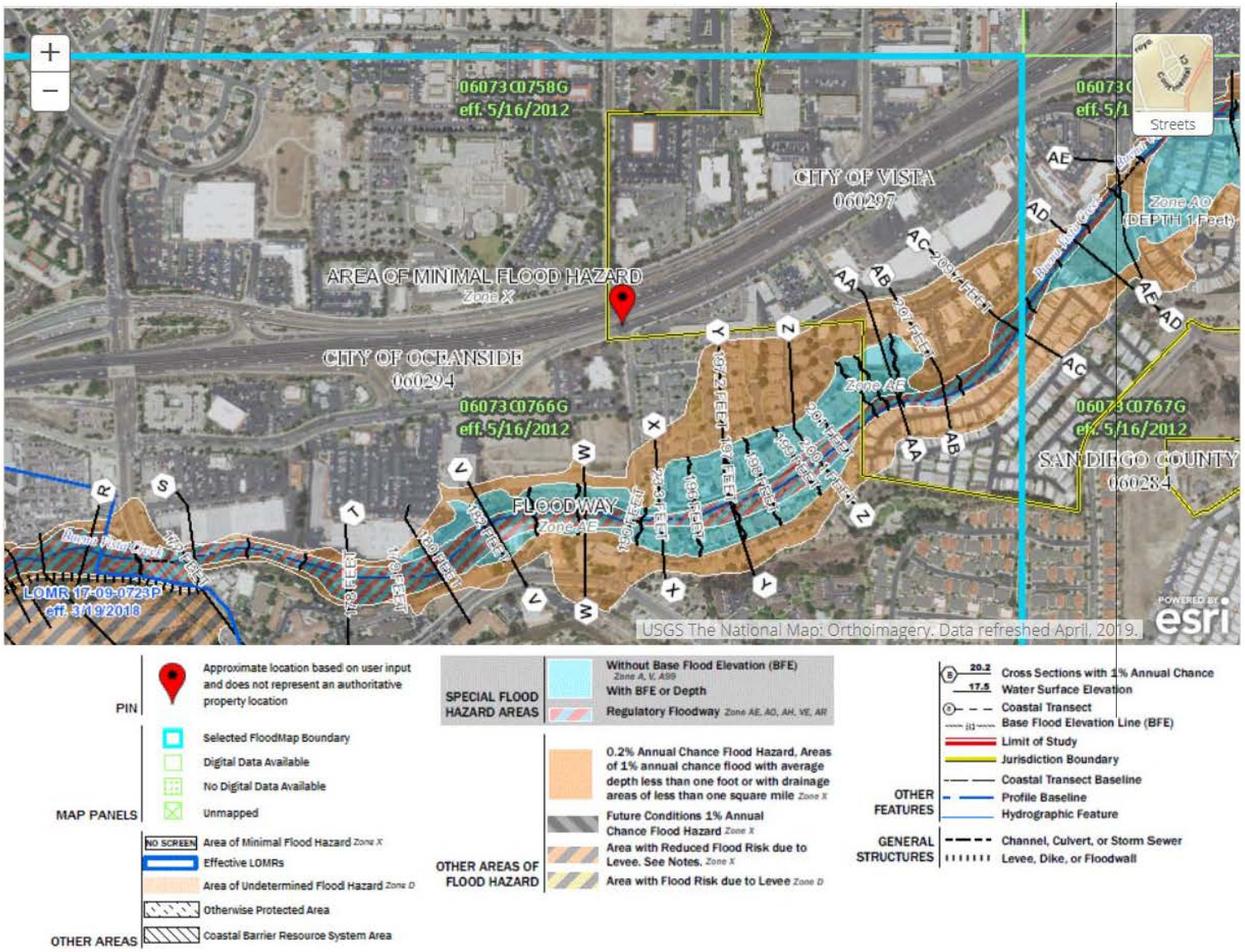
US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

2.3 – FEMA Flood Map

FEMA FLOOD MAP – CARMAX OCEANSIDE



2.4 – Runoff Coefficient Determination

the rainfall intensity, (i) in the equation expressed in inches per hour, requires that the storm duration and the time of concentration (t_c) be equal. Therefore, the first step in estimating (i) is to estimate (t_c). Methods for determining time of concentration are discussed under Index 816.6.

- Once the time of concentration, (t_c), is estimated, the rainfall intensity, (i), corresponding to a storm of equal duration, may be obtained from available sources such as intensity-duration-frequency (IDF) curves. For IDF curve generating software, see http://hdsc.nws.noaa.gov/hdsc/pfds/.

The runoff coefficients given in Figure 819.2A and Table 819.2B are applicable for storms of up to 5 or 10 year frequencies. Less frequent, higher intensity storms usually require modification of the coefficient because infiltration, detention, and other losses have a proportionally smaller effect on the total runoff volume. The adjustment of the rational method for use with major storms can be made by multiplying the coefficient by a frequency factor, C(f). Values of C(f) are given below. Under no circumstances should the product of C(f) times C exceed 1.0.

Frequency (yrs)	C(f)
25	1.1
50	1.2
100	1.25

(2) Regional Analysis Methods. Regional analysis methods utilize records for streams or drainage areas in the vicinity of the stream under consideration which would have similar characteristics to develop peak discharge estimates. These methods provide techniques for estimating annual peak stream discharge at any site, gaged or ungaged, for probability of recurrence from 50 percent (2 years) to 1 percent (100 years). Application of these methods is convenient, but the procedure is subject to some limitations.

Regional Flood - Frequency equations developed by the U.S. Geological Survey for use in California are given in Figure 819.2C and Table 819.7A. These equations are based on regional regression analysis of data from stream gauging stations. The equations in Figure 819.2C were derived from data gathered and analyzed through 2006, while the regions covered by Table 819.7A are reflective of a 1994 study of the Southwestern U.S, which has been supplemented by a more recent 2007 Study of California Desert Region Hydrology. Information on use and development of this method may be found in "Methods for Determining Magnitude and Frequency of Floods in California Based on Data through Water Year 2006" by the U.S. Department of the Interior, Geological Survey.

The Regional Flood-Frequency equations are applicable only to sites within the flood-frequency regions for which they were derived and on streams with virtually natural flows. The equations are not directly applicable to streams in urban areas affected substantially by urban development. In urban areas the equations may be used to estimate peak discharge values under natural conditions and then by use of the techniques described in the publication or HDS No. 2, adjust the discharge values to compensate for urbanization. A method for directly estimating design discharges for some gaged and ungaged streams is also provided in HDS No. 2. The method is applicable to streams on or nearby those for which study data are available.

(3) Flood Frequency Analysis

(a) If there are two gaged sites with similar watershed characteristics but one has a short record and the other has a longer record of peak flows, a two-station comparison analysis can be conducted to extend the equivalent length of record at the shorter gaged site.

(b) Flood-frequency relations at sites near gaged sites on the same stream (or in a similar watershed) can be estimated using a ratio of drainage area for the ungaged and gaged sites.

(c) At a gaged site, weighted estimates of peak discharges based on the station flood-frequency relation and the regional

Figure 819.2A

Runoff Coefficients for Undeveloped Areas

Watershed Types

	Extreme	High	Normal	Low
Relief	.28 -.35 Steep, rugged terrain with average slopes above 30%	.20 -.28 Hilly, with average slopes of 10 to 30%	.14 -.20 Rolling, with average slopes of 5 to 10%	.08 -.14 Relatively flat land, with average slopes of 0 to 5%
Soil Infiltration	.12 -.16 No effective soil cover, either rock or thin soil mantle of negligible infiltration capacity	.08 -.12 Slow to take up water, clay or shallow loam soils of low infiltration capacity, imperfectly or poorly drained	.06 -.08 Normal; well drained light or medium textured soils, sandy loams, silt and silt loams	.04 -.06 High; deep sand or other soil that takes up water readily, very light well drained soils
Vegetal Cover	.12 -.16 No effective plant cover, bare or very sparse cover	.08 -.12 Poor to fair; clean cultivation crops, or poor natural cover, less than 20% of drainage area over good cover	.06 -.08 Fair to good; about 50% of area in good grassland or woodland, not more than 50% of area in cultivated crops	.04 -.06 Good to excellent; about 90% of drainage area in good grassland, woodland or equivalent cover
Surface Storage	.10 -.12 Negligible surface depression few and shallow; drainageways steep and small, no marshes	.08 -.10 Low; well defined system of small drainageways; no ponds or marshes	.06 -.08 Normal; considerable surface depression storage; lakes and pond marshes	.04 -.06 High; surface storage, high; drainage system not sharply defined; large floodplain storage or large number of ponds or marshes
Given	An undeveloped watershed consisting of; 1) rolling terrain with average slopes of 5%, 2) clay type soils, 3) good grassland area, and 4) normal surface depressions.		Solution: Relief 0.14 Soil Infiltration 0.08 Vegetal Cover 0.04 Surface Storage 0.06 C = 0.32	
Find	The runoff coefficient, C, for the above watershed.			

Table 819.2B

Runoff Coefficients for Developed Areas (1)

Type of Drainage Area	Runoff Coefficient
Business:	
Downtown areas	0.70 - 0.95
Neighborhood areas	0.50 - 0.70
Residential:	
Single-family areas	0.30 - 0.50
Multi-units, detached	0.40 - 0.60
Multi-units, attached	0.60 - 0.75
Suburban	0.25 - 0.40
Apartment dwelling areas	0.50 - 0.70
Industrial:	
Light areas	0.50 - 0.80
Heavy areas	0.60 - 0.90
Parks, cemeteries:	0.10 - 0.25
Playgrounds:	0.20 - 0.40
Railroad yard areas:	0.20 - 0.40
Unimproved areas:	0.10 - 0.30
Lawns:	
Sandy soil, flat, 2%	0.05 - 0.10
Sandy soil, average, 2-7%	0.10 - 0.15
Sandy soil, steep, 7%	0.15 - 0.20
Heavy soil, flat, 2%	0.13 - 0.17
Heavy soil, average, 2-7%	0.18 - 0.22
Heavy soil, steep, 7%	0.25 - 0.35
Streets:	
Asphaltic	0.70 - 0.95
Concrete	0.80 - 0.95
Brick	0.70 - 0.85
Drives and walks	0.75 - 0.85
Roofs:	0.75 - 0.95

NOTES:
(1) From HDS No. 2.

regression equations are considered the best estimates of flood frequency and are used to reduce the time-sampling error that may occur in a station flood-frequency estimate.

(d) The flood-frequency flows and the maximum peak discharges at several stations in a region should be used whenever possible for comparison with the peak discharge estimated at an ungaged site using a rainfall-runoff approach or regional regression equation. The watershed characteristics at the ungaged and gaged sites should be similar.

(4) National Resources Conservation Service (NRCS) Methods. The Soil Conservation Service's SCS (former title) National Engineering Handbook, 1972, and their 1975, "Urban Hydrology for Small Watersheds", Technical Release 55 (TR-55), present a graphical method for estimating peak discharge. Most NRCS equations and curves provide results in terms of inches of runoff for unit hydrograph development and are not applicable to the estimation of a peak design discharge unless the design hydrograph is first developed in accordance with prescribed NRCS procedures. NRCS methods and procedures are applicable to drainage areas less than 3 square miles (approx. 2,000 acres) and result in a design hydrograph and design discharge that are functionally acceptable to form the basis for the design of highway drainage facilities.

819.3 Statistical Methods

Statistical methods of predicting stream discharge utilize numerical data to describe the process. Statistical methods, in general, do not require as much subjective judgment to apply as the previously described deterministic methods. They are usually well documented mathematical procedures which are applied to measured or observed data. The accuracy of statistical methods can also be measured quantitatively. However, to assure that statistical method results are valid, the method and procedures used should be verified by an experienced engineer with a thorough knowledge of engineering statistics.

2.5 – Urban Watershed Overland Time of Flow Nomograph

Note that the Initial Time of Concentration should be reflective of the general land-use at the upstream end of a drainage basin. A single lot with an area of two or less acres does not have a significant effect where the drainage basin area is 20 to 600 acres.

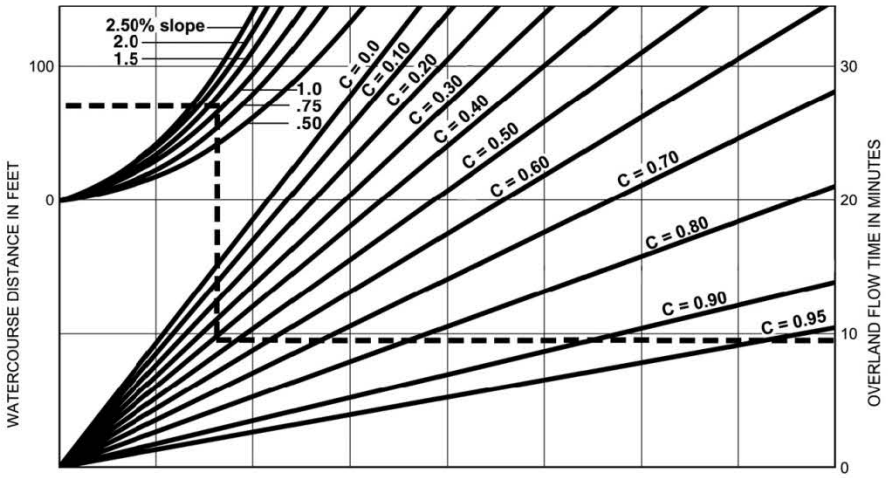
Table 3-2 provides limits of the length (Maximum Length (L_M)) of sheet flow to be used in hydrology studies. Initial T_i values based on average C values for the Land Use Element are also included. These values can be used in planning and design applications as described below. Exceptions may be approved by the "Regulating Agency" when submitted with a detailed study.

Table 3-2

MAXIMUM OVERLAND FLOW LENGTH (L_M)
& INITIAL TIME OF CONCENTRATION (T_i)

Element*	DU/ Acre	.5%		1%		2%		3%		5%		10%	
		L_M	T_i	L_M	T_i	L_M	T_i	L_M	T_i	L_M	T_i	L_M	T_i
Natural		50	13.2	70	12.5	85	10.9	100	10.3	100	8.7	100	6.9
LDR	1	50	12.2	70	11.5	85	10.0	100	9.5	100	8.0	100	6.4
LDR	2	50	11.3	70	10.5	85	9.2	100	8.8	100	7.4	100	5.8
LDR	2.9	50	10.7	70	10.0	85	8.8	95	8.1	100	7.0	100	5.6
MDR	4.3	50	10.2	70	9.6	80	8.1	95	7.8	100	6.7	100	5.3
MDR	7.3	50	9.2	65	8.4	80	7.4	95	7.0	100	6.0	100	4.8
MDR	10.9	50	8.7	65	7.9	80	6.9	90	6.4	100	5.7	100	4.5
MDR	14.5	50	8.2	65	7.4	80	6.5	90	6.0	100	5.4	100	4.3
HDR	24	50	6.7	65	6.1	75	5.1	90	4.9	95	4.3	100	3.5
HDR	43	50	5.3	65	4.7	75	4.0	85	3.8	95	3.4	100	2.7
N. Com		50	5.3	60	4.5	75	4.0	85	3.8	95	3.4	100	2.7
G. Com		50	4.7	60	4.1	75	3.6	85	3.4	90	2.9	100	2.4
O.P./Com		50	4.2	60	3.7	70	3.1	80	2.9	90	2.6	100	2.2
Limited I.		50	4.2	60	3.7	70	3.1	80	2.9	90	2.6	100	2.2
General I.		50	3.7	60	3.2	70	2.7	80	2.6	90	2.3	100	1.9

*See Table 3-1 for more detailed description



EXAMPLE:
Given: Watercourse Distance (D) = 70 Feet
Slope (s) = 1.3%
Runoff Coefficient (C) = 0.41
Overland Flow Time (T) = 9.5 Minutes

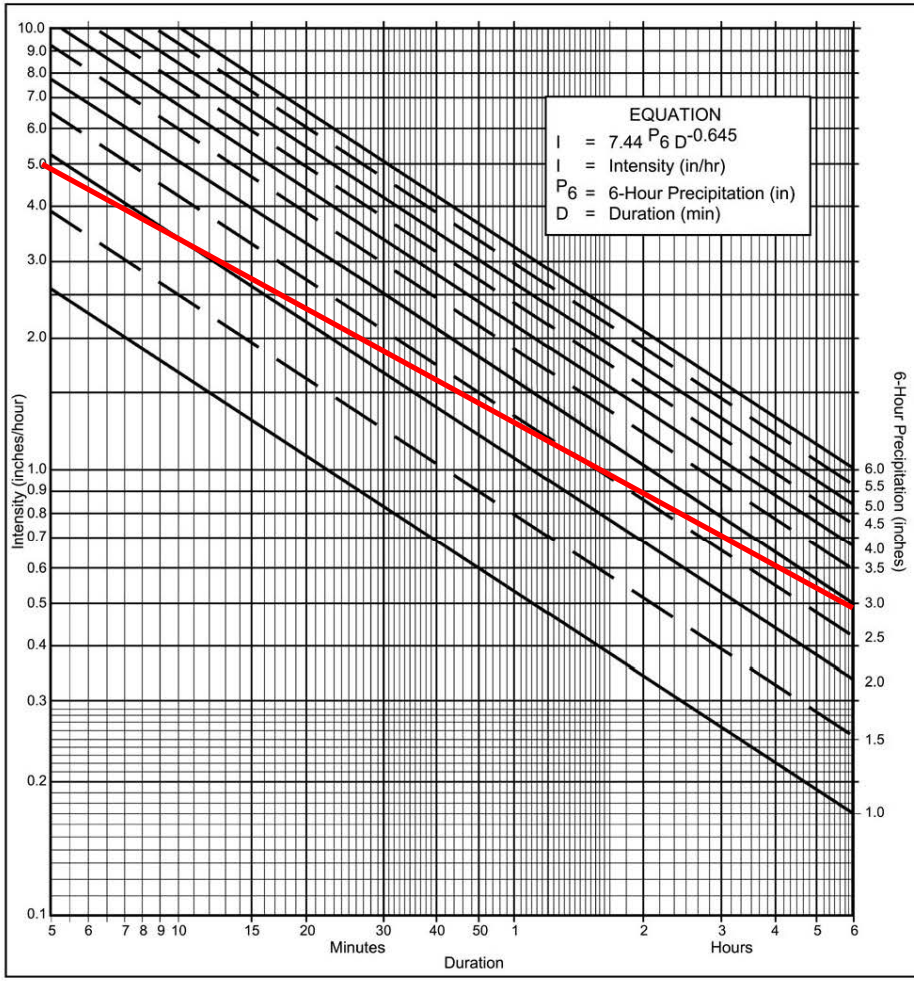
$$T = \frac{1.8\,(1.1-C)\sqrt{D}}{\sqrt[3]{s}}$$

SOURCE: Airport Drainage, Federal Aviation Administration, 1965

Rational Formula - Overland Time of Flow Nomograph

FIGURE
3-3

2.6 – County of San Diego Intensity- Duration Curve



Directions for Application:

(1) From precipitation maps determine 6 hr and 24 hr amounts for the selected frequency. These maps are included in the County Hydrology Manual (10, 50, and 100 yr maps included in the Design and Procedure Manual).

(2) Adjust 6 hr precipitation (if necessary) so that it is within the range of 45% to 65% of the 24 hr precipitation (not applicaple to Desert).

(3) Plot 6 hr precipitation on the right side of the chart.

(4) Draw a line through the point parallel to the plotted lines.

(5) This line is the intensity-duration curve for the location being analyzed.

Application Form:

(a) Selected frequency 100 year

(b) P_6 = 3.02 in., P_{24} = 5.05, $\frac{P_6}{P_{24}}$ = 59.8 %(2)

(c) Adjusted P_6(2) = _____ in.

(d) t_x = _____ min.

(e) I = _____ in./hr.

Note: This chart replaces the Intensity-Duration-Frequency curves used since 1965.

P6	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
Duration	I	I	I	I	I	I	I	I	I	I	I
5	2.63	3.95	5.27	6.59	7.90	9.22	10.54	11.86	13.17	14.49	15.81
7	2.12	3.18	4.24	5.30	6.36	7.42	8.48	9.54	10.60	11.66	12.72
10	1.68	2.53	3.37	4.21	5.05	5.90	6.74	7.58	8.42	9.27	10.11
15	1.30	1.95	2.59	3.24	3.89	4.54	5.19	5.84	6.49	7.13	7.78
20	1.08	1.62	2.15	2.69	3.23	3.77	4.31	4.85	5.39	5.93	6.46
25	0.93	1.40	1.87	2.33	2.80	3.27	3.73	4.20	4.67	5.13	5.60
30	0.83	1.24	1.66	2.07	2.49	2.90	3.32	3.73	4.15	4.56	4.98
40	0.69	1.03	1.38	1.72	2.07	2.41	2.76	3.10	3.45	3.79	4.13
50	0.60	0.90	1.19	1.49	1.79	2.09	2.39	2.69	2.98	3.28	3.58
60	0.53	0.80	1.06	1.33	1.59	1.86	2.12	2.39	2.65	2.92	3.18
90	0.41	0.61	0.82	1.02	1.23	1.43	1.63	1.84	2.04	2.25	2.45
120	0.34	0.51	0.68	0.85	1.02	1.19	1.36	1.53	1.70	1.87	2.04
150	0.29	0.44	0.59	0.73	0.88	1.03	1.18	1.32	1.47	1.62	1.76
180	0.26	0.39	0.52	0.65	0.78	0.91	1.04	1.18	1.31	1.44	1.57
240	0.22	0.33	0.43	0.54	0.65	0.76	0.87	0.98	1.08	1.19	1.30
300	0.19	0.28	0.38	0.47	0.56	0.66	0.75	0.85	0.94	1.03	1.13
360	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75	0.84	0.92	1.00

Intensity-Duration Design Chart - Template

FIGURE 3-1

2.7 – Model Development Summary (from County of San Diego Hydrology Manual)

3.2 DEVELOPING INPUT DATA FOR THE RATIONAL METHOD

This section describes the development of the necessary data to perform RM calculations. Section 3.3 describes the RM calculation process. Input data for calculating peak flows and T_c's with the RM should be developed as follows:

1. On a topographic base map, outline the overall drainage area boundary, showing adjacent drains, existing and proposed drains, and overland flow paths.

2. Verify the accuracy of the drainage map in the field.

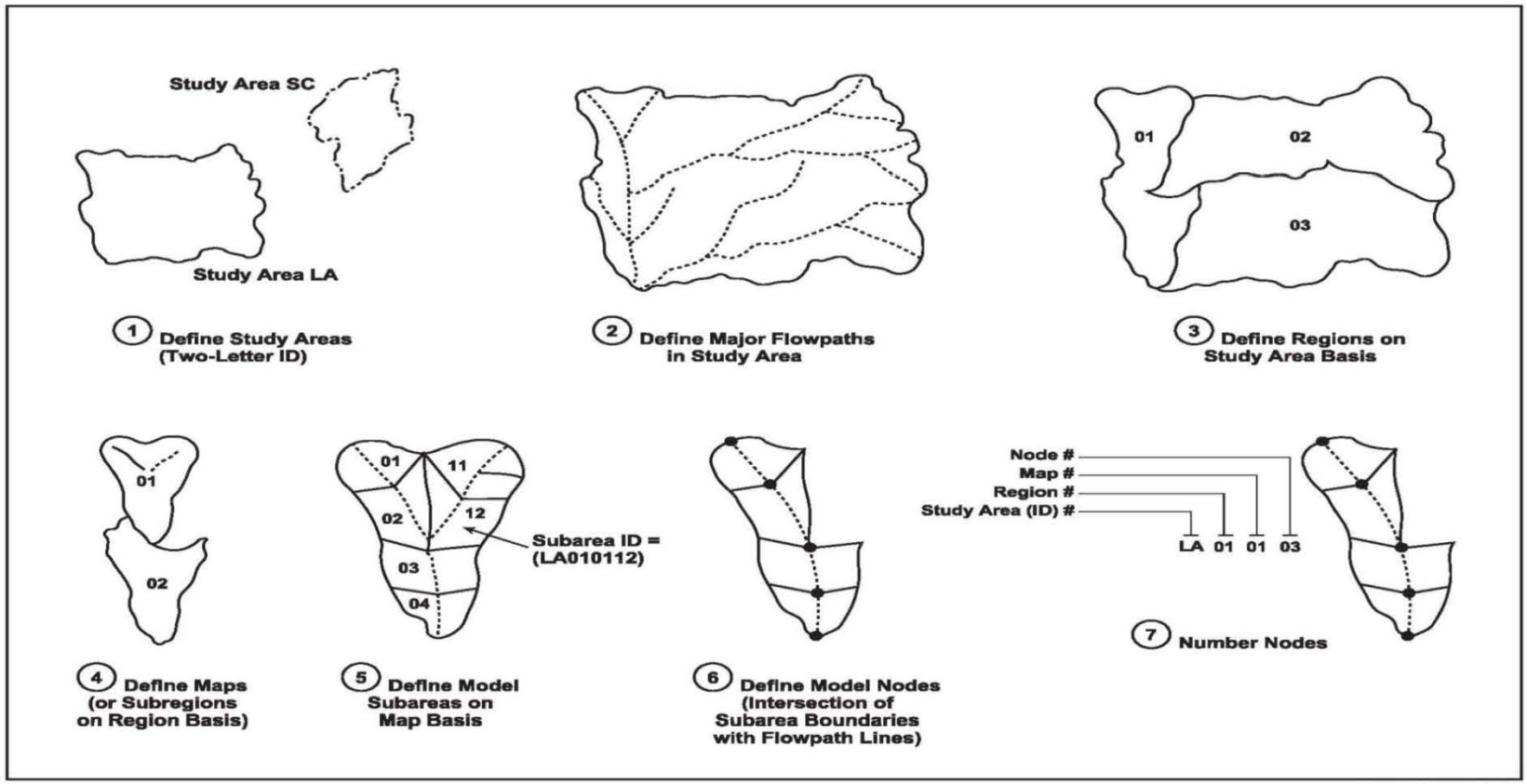
3. Divide the drainage area into subareas by locating significant points of interest. These divisions should be based on topography, soil type, and land use. Ensure that an appropriate first subarea is delineated. For natural areas, the first subarea flow path length should be less than or equal to 4,000 feet plus the overland flow length (Table 3-2). For developed areas, the initial subarea flow path length should be consistent with Table 3-2. The topography and slope within the initial subarea should be generally uniform.

4. Working from upstream to downstream, assign a number representing each subarea in the drainage system to each point of interest. Figure 3-8 provides guidelines for node numbers for geographic information system (GIS)-based studies.

5. Measure each subarea in the drainage area to determine its size in acres (A).

6. Determine the length and effective slope of the flow path in each subarea.

7. Identify the soil type for each subarea.



GIS/Hydrologic Model
Data Base Linkage Setup:
Nodes, Subareas, Links

FIGURE
3-8

8. Determine the runoff coefficient (C) for each subarea based on Table 3-1. If the subarea contains more than one type of development classification, use a proportionate average for C. In determining C for the subarea, use future land use taken from the applicable community plan, Multiple Species Conservation Plan, National Forest land use plan, etc.

9. Calculate the CA value for the subarea.

10. Calculate the Σ(CA) value(s) for the subareas upstream of the point(s) of interest.

11. Determine P_6 and P_{24} for the study using the isopluvial maps provided in Appendix B. If necessary, adjust the value for P_6 to be within 45% to 65% of the value for P_{24}.

See Section 3.3 for a description of the RM calculation process.

3.3 Performing Rational Method Calculations

This section describes the RM calculation process. Using the input data, calculation of peak flows and T_c's should be performed as follows:

1. Determine T_i for the first subarea. Use Table 3-2 or Figure 3-3 as discussed in Section 3.1.4. If the watershed is natural, the travel time to the downstream end of the first subarea can be added to T_i to obtain the T_c. Refer to paragraph 3.1.4.2 (a).

2. Determine I for the subarea using Figure 3-1. If T_i was less than 5 minutes, use the 5 minute time to determine intensity for calculating the flow.

3. Calculate the peak discharge flow rate for the subarea, where $Q_p = \Sigma(CA)\, I$.
In case that the downstream flow rate is less than the upstream flow rate, due to the long travel time that is not offset by the additional subarea runoff, use the upstream peak flow for design purposes until downstream flows increase again.

4. Estimate the T_t to the next point of interest.

5. Add the T_t to the previous T_c to obtain a new T_c.

6. Continue with step 2, above, until the final point of interest is reached.

Note: The MRM should be used to calculate the peak discharge when there is a junction from independent subareas into the drainage system.

3.4 MODIFIED RATIONAL METHOD (FOR JUNCTION ANALYSIS)

The purpose of this section is to describe the steps necessary to develop a hydrology report for a small watershed using the MRM. It is necessary to use the MRM if the watershed contains junctions of independent drainage systems. The process is based on the design manuals of the City/County of San Diego. The general process description for using this method, including an example of the application of this method, is described below.

The engineer should only use the MRM for drainage areas up to approximately 1 square mile in size. If the watershed will significantly exceed 1 square mile then the NRCS method described in Section 4 should be used. The engineer may choose to use either the RM or the MRM for calculations for up to an approximately 1-square-mile area and then transition the study to the NRCS method for additional downstream areas that exceed approximately 1 square mile. The transition process is described in Section 4.

3.4.1 Modified Rational Method General Process Description

The general process for the MRM differs from the RM only when a junction of independent drainage systems is reached. The peak Q, T_c, and I for each of the independent drainage systems at the point of the junction are calculated by the RM. The independent drainage systems are then combined using the MRM procedure described below. The peak Q, T_c, and I for each of the independent drainage systems at the point of the junction must be calculated prior to using the MRM procedure to combine the independent drainage systems, as these

values will be used for the MRM calculations. After the independent drainage systems have been combined, RM calculations are continued to the next point of interest.

3.4.2 Procedure for Combining Independent Drainage Systems at a Junction

Calculate the peak Q, T_c, and I for each of the independent drainage systems at the point of the junction. These values will be used for the MRM calculations.

At the junction of two or more independent drainage systems, the respective peak flows are combined to obtain the maximum flow out of the junction at T_c. Based on the approximation that total runoff increases directly in proportion to time, a general equation may be written to determine the maximum Q and its corresponding T_c using the peak Q, T_c, and I for each of the independent drainage systems at the point immediately before the junction. The general equation requires that contributing Q's be numbered in order of increasing T_c.

Let Q_1, T_1, and I_1 correspond to the tributary area with the shortest T_c. Likewise, let Q_2, T_2, and I_2 correspond to the tributary area with the next longer T_c; Q_3, T_3, and I_3 correspond to the tributary area with the next longer T_c; and so on. When only two independent drainage systems are combined, leave Q_3, T_3, and I_3 out of the equation. Combine the independent drainage systems using the junction equation below:

Junction Equation: $T_1 < T_2 < T_3$

$$Q_{T1} = Q_1 + \frac{T_1}{T_2} Q_2 + \frac{T_1}{T_3} Q_3$$

$$Q_{T2} = Q_2 + \frac{I_2}{I_1} Q_1 + \frac{T_2}{T_3} Q_3$$

$$Q_{T3} = Q_3 + \frac{I_3}{I_1} Q_1 + \frac{I_3}{I_2} Q_2$$

Calculate Q_{T1}, Q_{T2}, and Q_{T3}. Select the largest Q and use the T_c associated with that Q for further calculations (see the three Notes for options). If the largest calculated Q's are equal (e.g., $Q_{T1} = Q_{T2} > Q_{T3}$), use the shorter of the T_c's associated with that Q.

This equation may be expanded for a junction of more than three independent drainage systems using the same concept. The concept is that when Q from a selected subarea (e.g., Q_2) is combined with Q from another subarea with a shorter T_c (e.g., Q_1), the Q from the subarea with the shorter T_c is reduced by the ratio of the I's (I_2/I_1); and when Q from a selected subarea (e.g., Q_2) is combined with Q from another subarea with a longer T_c (e.g., Q_3), the Q from the subarea with the longer T_c is reduced by the ratio of the T_c's (T_2/T_3).

Note #1: At a junction of two independent drainage systems that have the same T_c, the tributary flows may be added to obtain the Q_p.

$$Q_p = Q_1 + Q_2 \text{; when } T_1 = T_2 \text{; and } T_c = T_1 = T_2$$

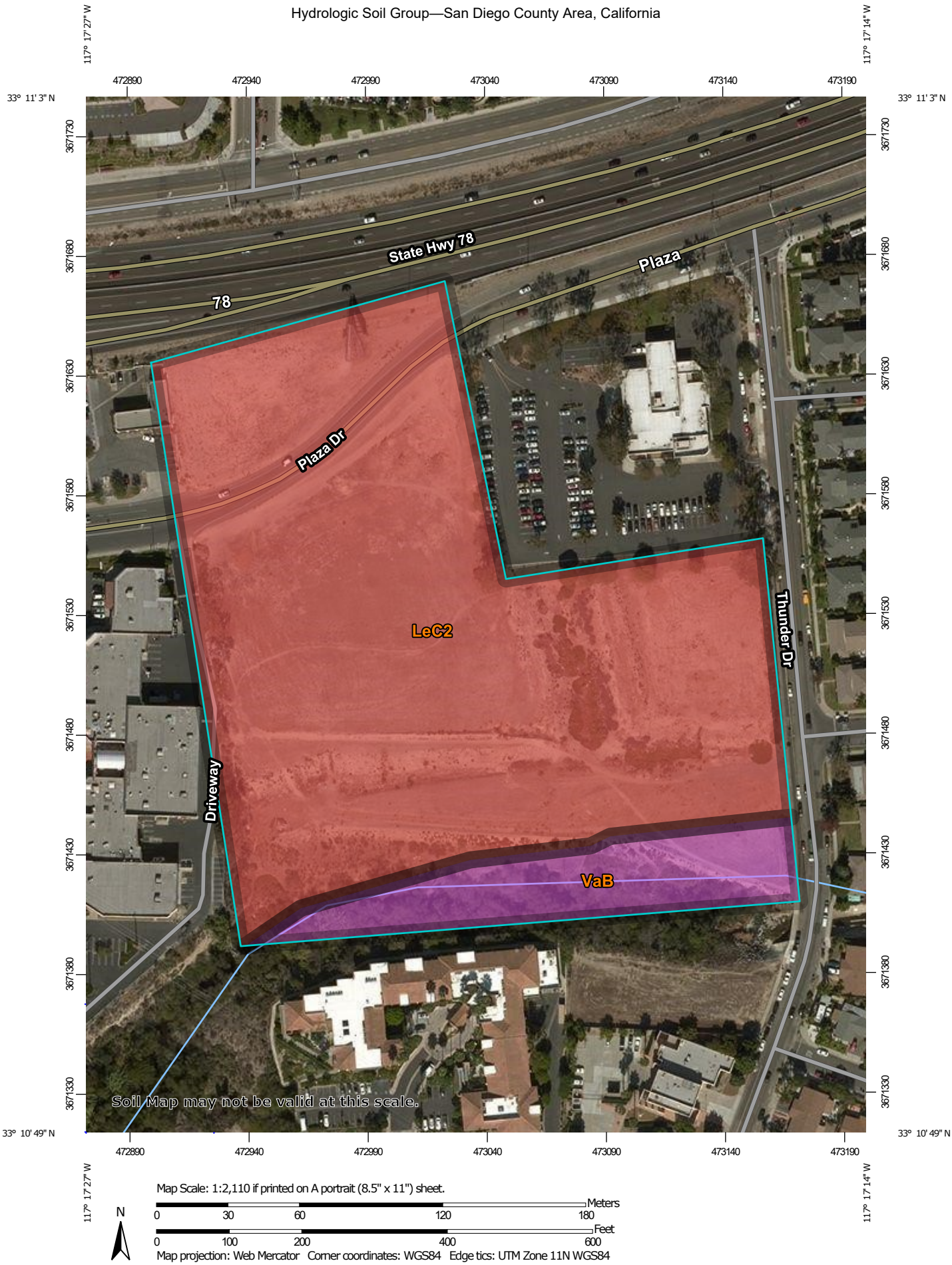
This can be verified by using the junction equation above. Let Q_3, T_3, and $I_3 = 0$. When T_1 and T_2 are the same, I_1 and I_2 are also the same, and T_1/T_2 and $I_2/I_1 = 1$. T_1/T_2 and I_2/I_1 are cancelled from the equations. At this point, $Q_{T1} = Q_{T2} = Q_1 + Q_2$.

Note #2: In the upstream part of a watershed, a conservative computation is acceptable. When the times of concentration (T_c's) are relatively close in magnitude (within 10%), use the shorter T_c for the intensity and the equation $Q = \Sigma(CA)I$.

Note #3: . An optional method of determining the T_c is to use the equation
$T_c = [(\Sigma (CA)7.44\ P_6)/Q]^{1.55}$

This equation is from $Q = \Sigma(CA)I = \Sigma(CA)(7.44\ P_6/T_c^{.645})$ and solving for T_c. The advantage in this option is that the T_c is consistent with the peak flow Q, and avoids inappropriate fluctuation in downstream flows in some cases.

2.8 – Soil Type Map



Map Scale: 1:2,110 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Diego County Area, California
Survey Area Data: Version 14, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 3, 2014—Nov 22, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
LeC2	Las Flores loamy fine sand, 5 to 9 percent slopes, eroded	D	10.9	87.8%
VaB	Visalia sandy loam, 2 to 5 percent slopes	A	1.5	12.2%
Totals for Area of Interest			**12.4**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

CHAPTER 3 - 100 YEAR HYDROLOGIC ANALYSIS FOR EXISTING CONDITIONS

```
******************************************************************************

            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            Reference: SAN DIEGO COUNTY FLOOD CONTROL DISTRICT
                         2003,1985,1981 HYDROLOGY MANUAL
          (c) Copyright 1982-2015 Advanced Engineering Software (aes)
              Ver. 22.0 Release Date: 07/01/2015  License ID 1643

                              Analysis prepared by:

                                   REC Consultants
                                   2442 Second St.
                                 San Diego, Ca 92101


 ************************* DESCRIPTION OF STUDY *************************
* EXISTING CONDITIONS HYDROLOGY                                         *
* 100 YEAR STORM                                                        *
* CARMAX OCEANSIDE                                                      *
 ************************************************************************

  FILE NAME: 1492PRE.DAT
  TIME/DATE OF STUDY: 12:52 02/27/2020
------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
------------------------------------------------------------------------
  2003 SAN DIEGO MANUAL CRITERIA

  USER SPECIFIED STORM EVENT(YEAR) = 100.00
  6-HOUR DURATION PRECIPITATION (INCHES) =   3.020
  SPECIFIED MINIMUM PIPE SIZE(INCH) =   6.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  SAN DIEGO HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: USE MODIFIED RATIONAL METHOD PROCEDURES FOR CONFLUENCE ANALYSIS
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

******************************************************************************
  FLOW PROCESS FROM NODE      1.00 TO NODE      2.00 IS CODE =  21
------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==============================================================================
  *USER SPECIFIED(SUBAREA):
  NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    219.53
  DOWNSTREAM ELEVATION(FEET) =    218.27
  ELEVATION DIFFERENCE(FEET) =      1.26
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    6.304
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
```

```
          THE MAXIMUM OVERLAND FLOW LENGTH =    73.90
          (Reference: Table 3-1B of Hydrology Manual)
          THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.852
 SUBAREA RUNOFF(CFS) =      0.41
 TOTAL AREA(ACRES) =      0.09   TOTAL RUNOFF(CFS) =      0.41

****************************************************************************
 FLOW PROCESS FROM NODE      2.00 TO NODE   1000.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    218.27  DOWNSTREAM(FEET) =    208.26
 CHANNEL LENGTH THRU SUBAREA(FEET) =   316.00   CHANNEL SLOPE =  0.0317
 CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   5.000
 MANNING'S FACTOR = 0.035   MAXIMUM DEPTH(FEET) =   2.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  5.373
 *USER SPECIFIED(SUBAREA):
 NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .6600
 S.C.S. CURVE NUMBER (AMC II) =   0
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       2.42
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   1.82
 AVERAGE FLOW DEPTH(FEET) =   0.12   TRAVEL TIME(MIN.) =   2.89
 Tc(MIN.) =    9.19
 SUBAREA AREA(ACRES) =     1.12       SUBAREA RUNOFF(CFS) =    3.97
 AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
 TOTAL AREA(ACRES) =        1.2         PEAK FLOW RATE(CFS) =       4.29

 END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) =  0.18   FLOW VELOCITY(FEET/SEC.) =   2.21
 LONGEST FLOWPATH FROM NODE      1.00 TO NODE   1000.00 =     416.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =    9.19
 RAINFALL INTENSITY(INCH/HR) =   5.37
 TOTAL STREAM AREA(ACRES) =     1.21
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      4.29

****************************************************************************
 FLOW PROCESS FROM NODE      3.00 TO NODE      4.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
 *USER SPECIFIED(SUBAREA):
 STREETS & ROADS (CURBS/STORM DRAINS) RUNOFF COEFFICIENT = .6600
 S.C.S. CURVE NUMBER (AMC II) =   0
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
 UPSTREAM ELEVATION(FEET) =    220.30
 DOWNSTREAM ELEVATION(FEET) =    219.53
 ELEVATION DIFFERENCE(FEET) =      0.77
 SUBAREA OVERLAND TIME OF FLOW(MIN.) =    6.432
 WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
          THE MAXIMUM OVERLAND FLOW LENGTH =    55.40
          (Reference: Table 3-1B of Hydrology Manual)
          THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.764
```

```
  SUBAREA RUNOFF(CFS) =      0.27
  TOTAL AREA(ACRES) =      0.06   TOTAL RUNOFF(CFS) =      0.27

****************************************************************************
  FLOW PROCESS FROM NODE      4.00 TO NODE   1000.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  219.53  DOWNSTREAM ELEVATION(FEET) =  208.26
  STREET LENGTH(FEET) =   358.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.60
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.85
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.76
  STREET FLOW TRAVEL TIME(MIN.) =   1.55   Tc(MIN.) =    7.98
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  5.885
  *USER SPECIFIED(SUBAREA):
  STREETS & ROADS (CURBS/STORM DRAINS) RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
  SUBAREA AREA(ACRES) =    0.17      SUBAREA RUNOFF(CFS) =    0.66
  TOTAL AREA(ACRES) =        0.2        PEAK FLOW RATE(CFS) =       0.89

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.20   HALFSTREET FLOOD WIDTH(FEET) =   2.00
  FLOW VELOCITY(FEET/SEC.) =  3.85   DEPTH*VELOCITY(FT*FT/SEC.) =   0.76
  LONGEST FLOWPATH FROM NODE      3.00 TO NODE   1000.00 =     458.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    7.98
  RAINFALL INTENSITY(INCH/HR) =   5.89
  TOTAL STREAM AREA(ACRES) =     0.23
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      0.89

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1        4.29     9.19        5.373          1.21
      2        0.89     7.98        5.885          0.23

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.
```

```
  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1        4.62     7.98       5.885
      2        5.11     9.19       5.373

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =       5.11   Tc(MIN.) =    9.19
  TOTAL AREA(ACRES) =        1.4
  LONGEST FLOWPATH FROM NODE      3.00 TO NODE   1000.00 =     458.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      3.00 TO NODE      5.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  STREETS & ROADS (CURBS/STORM DRAINS) RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    220.30
  DOWNSTREAM ELEVATION(FEET) =    219.40
  ELEVATION DIFFERENCE(FEET) =      0.90
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    6.247
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    58.00
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.892
  SUBAREA RUNOFF(CFS) =      0.23
  TOTAL AREA(ACRES) =      0.05   TOTAL RUNOFF(CFS) =      0.23

****************************************************************************
  FLOW PROCESS FROM NODE      5.00 TO NODE   2000.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  219.40  DOWNSTREAM ELEVATION(FEET) =  207.14
  STREET LENGTH(FEET) =   379.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.54
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.91
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.77
  STREET FLOW TRAVEL TIME(MIN.) =   1.62   Tc(MIN.) =    7.86
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  5.941
  *USER SPECIFIED(SUBAREA):
  STREETS & ROADS (CURBS/STORM DRAINS) RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
```

```
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
  SUBAREA AREA(ACRES) =    0.16      SUBAREA RUNOFF(CFS) =    0.63
  TOTAL AREA(ACRES) =        0.2        PEAK FLOW RATE(CFS) =       0.82

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.20   HALFSTREET FLOOD WIDTH(FEET) =   2.00
  FLOW VELOCITY(FEET/SEC.) =  3.91   DEPTH*VELOCITY(FT*FT/SEC.) =   0.77
  LONGEST FLOWPATH FROM NODE      3.00 TO NODE   2000.00 =     479.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      6.00 TO NODE      7.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    205.58
  DOWNSTREAM ELEVATION(FEET) =    202.68
  ELEVATION DIFFERENCE(FEET) =      2.90
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    5.512
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    98.50
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.472
  SUBAREA RUNOFF(CFS) =      0.99
  TOTAL AREA(ACRES) =      0.20   TOTAL RUNOFF(CFS) =      0.99

****************************************************************************
  FLOW PROCESS FROM NODE      7.00 TO NODE   3000.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    202.68  DOWNSTREAM(FEET) =    183.54
  CHANNEL LENGTH THRU SUBAREA(FEET) =   783.00   CHANNEL SLOPE =  0.0244
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   3.000
  MANNING'S FACTOR = 0.035   MAXIMUM DEPTH(FEET) =   2.00
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  5.221
  *USER SPECIFIED(SUBAREA):
  NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      12.83
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   3.18
  AVERAGE FLOW DEPTH(FEET) =   0.36   TRAVEL TIME(MIN.) =   4.10
  Tc(MIN.) =    9.61
  SUBAREA AREA(ACRES) =     6.69       SUBAREA RUNOFF(CFS) =   23.05
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
  TOTAL AREA(ACRES) =        6.9         PEAK FLOW RATE(CFS) =      23.74

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.52   FLOW VELOCITY(FEET/SEC.) =   3.92
  LONGEST FLOWPATH FROM NODE      6.00 TO NODE   3000.00 =     883.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      6.00 TO NODE      8.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .6600
```

```
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    205.58
  DOWNSTREAM ELEVATION(FEET) =    203.28
  ELEVATION DIFFERENCE(FEET) =      2.30
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    5.676
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    89.50
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.332
  SUBAREA RUNOFF(CFS) =      0.53
  TOTAL AREA(ACRES) =      0.11   TOTAL RUNOFF(CFS) =      0.53

****************************************************************************
  FLOW PROCESS FROM NODE      8.00 TO NODE   4000.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    203.28  DOWNSTREAM(FEET) =    197.78
  CHANNEL LENGTH THRU SUBAREA(FEET) =   155.00   CHANNEL SLOPE =  0.0355
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   3.000
  MANNING'S FACTOR = 0.035   MAXIMUM DEPTH(FEET) =   2.00
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.020
  *USER SPECIFIED(SUBAREA):
  NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.85
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   1.27
  AVERAGE FLOW DEPTH(FEET) =   0.07   TRAVEL TIME(MIN.) =   2.03
  Tc(MIN.) =    7.71
  SUBAREA AREA(ACRES) =     0.16       SUBAREA RUNOFF(CFS) =    0.64
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
  TOTAL AREA(ACRES) =        0.3         PEAK FLOW RATE(CFS) =       1.07

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.07   FLOW VELOCITY(FEET/SEC.) =   1.43
  LONGEST FLOWPATH FROM NODE      6.00 TO NODE   4000.00 =     255.00 FEET.
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        0.3  TC(MIN.) =      7.71
  PEAK FLOW RATE(CFS)   =       1.07
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

CHAPTER 4 - 100 YEAR HYDROLOGIC ANALYSIS FOR DEVELOPED CONDITIONS - UNMITIGATED

```
**************************************************************************

            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            Reference: SAN DIEGO COUNTY FLOOD CONTROL DISTRICT
                         2003,1985,1981 HYDROLOGY MANUAL
          (c) Copyright 1982-2015 Advanced Engineering Software (aes)
              Ver. 22.0 Release Date: 07/01/2015  License ID 1643

                            Analysis prepared by:


                                      ←


 ************************* DESCRIPTION OF STUDY *************************
* PROPOSED CONDITIONS - UNMITIGATED HYDROLOGY                            *
* 100 YEAR STORM                                                        *
* CARMAX OCEANSIDE                                                      *
 ************************************************************************

  FILE NAME: 1492PSTU.DAT
  TIME/DATE OF STUDY: 15:18 02/27/2020
------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
------------------------------------------------------------------------
  2003 SAN DIEGO MANUAL CRITERIA

  USER SPECIFIED STORM EVENT(YEAR) = 100.00
  6-HOUR DURATION PRECIPITATION (INCHES) =   3.020
  SPECIFIED MINIMUM PIPE SIZE(INCH) =   6.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  SAN DIEGO HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: USE MODIFIED RATIONAL METHOD PROCEDURES FOR CONFLUENCE ANALYSIS
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

+------------------------------------------------------------------------+
| NODES 1 TO 1000 REPRESENT TRIBUTARY FLOWS TO POC-1.                    |
|                                                                        |
|                                                                        |
+------------------------------------------------------------------------+

**************************************************************************
  FLOW PROCESS FROM NODE      1.00 TO NODE      2.00 IS CODE =  21
------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
========================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
```

```
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    216.88
  DOWNSTREAM ELEVATION(FEET) =    214.07
  ELEVATION DIFFERENCE(FEET) =      2.81
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    5.116
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    83.10
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.840
  SUBAREA RUNOFF(CFS) =      1.03
  TOTAL AREA(ACRES) =      0.20   TOTAL RUNOFF(CFS) =      1.03

****************************************************************************
  FLOW PROCESS FROM NODE      2.00 TO NODE      3.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  214.07  DOWNSTREAM ELEVATION(FEET) =  210.04
  STREET LENGTH(FEET) =   116.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       1.88
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.21
    HALFSTREET FLOOD WIDTH(FEET) =    2.66
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.67
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.77
  STREET FLOW TRAVEL TIME(MIN.) =   0.53   Tc(MIN.) =    5.64
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.359
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
  SUBAREA AREA(ACRES) =    0.35      SUBAREA RUNOFF(CFS) =    1.70
  TOTAL AREA(ACRES) =        0.6        PEAK FLOW RATE(CFS) =       2.67

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.25   HALFSTREET FLOOD WIDTH(FEET) =   4.72
  FLOW VELOCITY(FEET/SEC.) =  3.40   DEPTH*VELOCITY(FT*FT/SEC.) =   0.84
  LONGEST FLOWPATH FROM NODE      1.00 TO NODE      3.00 =     216.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      3.00 TO NODE   1000.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   210.04  DOWNSTREAM(FEET) =   208.26
  FLOW LENGTH(FEET) =    28.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN   9.0 INCH PIPE IS   5.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.81
  ESTIMATED PIPE DIAMETER(INCH) =   9.00    NUMBER OF PIPES =   1
```

```
  PIPE-FLOW(CFS) =       2.67
  PIPE TRAVEL TIME(MIN.) =   0.05    Tc(MIN.) =    5.69
  LONGEST FLOWPATH FROM NODE      1.00 TO NODE   1000.00 =     244.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  4
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    5.69
  RAINFALL INTENSITY(INCH/HR) =   7.32
  TOTAL STREAM AREA(ACRES) =     0.55
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      2.67

****************************************************************************
  FLOW PROCESS FROM NODE      5.00 TO NODE      7.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    218.65
  DOWNSTREAM ELEVATION(FEET) =    217.54
  ELEVATION DIFFERENCE(FEET) =      1.11
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    6.006
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    61.65
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.070
  SUBAREA RUNOFF(CFS) =      0.37
  TOTAL AREA(ACRES) =      0.08   TOTAL RUNOFF(CFS) =      0.37

****************************************************************************
  FLOW PROCESS FROM NODE      7.00 TO NODE   1000.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  217.54  DOWNSTREAM ELEVATION(FEET) =  208.26
  STREET LENGTH(FEET) =   448.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       1.34
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.12
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.62
  STREET FLOW TRAVEL TIME(MIN.) =   2.39   Tc(MIN.) =    8.40
```

```
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  5.696
 *USER SPECIFIED(SUBAREA):
 GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
 S.C.S. CURVE NUMBER (AMC II) =   0
 AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
 SUBAREA AREA(ACRES) =    0.53      SUBAREA RUNOFF(CFS) =    1.99
 TOTAL AREA(ACRES) =        0.6        PEAK FLOW RATE(CFS) =       2.29

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.26   HALFSTREET FLOOD WIDTH(FEET) =   5.22
 FLOW VELOCITY(FEET/SEC.) =  2.62   DEPTH*VELOCITY(FT*FT/SEC.) =   0.67
 LONGEST FLOWPATH FROM NODE      5.00 TO NODE   1000.00 =     548.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  4
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =    8.40
 RAINFALL INTENSITY(INCH/HR) =   5.70
 TOTAL STREAM AREA(ACRES) =     0.61
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      2.29

****************************************************************************
 FLOW PROCESS FROM NODE     50.00 TO NODE      8.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
 *USER SPECIFIED(SUBAREA):
 GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
 S.C.S. CURVE NUMBER (AMC II) =   0
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
 UPSTREAM ELEVATION(FEET) =    220.30
 DOWNSTREAM ELEVATION(FEET) =    219.54
 ELEVATION DIFFERENCE(FEET) =      0.76
 SUBAREA OVERLAND TIME OF FLOW(MIN.) =    6.448
 WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
          THE MAXIMUM OVERLAND FLOW LENGTH =    55.20
          (Reference: Table 3-1B of Hydrology Manual)
          THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.753
 SUBAREA RUNOFF(CFS) =      0.27
 TOTAL AREA(ACRES) =      0.06   TOTAL RUNOFF(CFS) =      0.27

****************************************************************************
 FLOW PROCESS FROM NODE      8.00 TO NODE   1000.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) =  219.54  DOWNSTREAM ELEVATION(FEET) =  208.26
 STREET LENGTH(FEET) =   264.00   CURB HEIGHT(INCHES) =  8.0
 STREET HALFWIDTH(FEET) = 30.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.018
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
```

```
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.70
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.49
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.89
  STREET FLOW TRAVEL TIME(MIN.) =   0.98   Tc(MIN.) =    7.43
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.164
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .8200
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.778
  SUBAREA AREA(ACRES) =    0.17      SUBAREA RUNOFF(CFS) =    0.86
  TOTAL AREA(ACRES) =        0.2        PEAK FLOW RATE(CFS) =       1.10

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.20   HALFSTREET FLOOD WIDTH(FEET) =   2.00
  FLOW VELOCITY(FEET/SEC.) =  4.49   DEPTH*VELOCITY(FT*FT/SEC.) =   0.89
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE   1000.00 =     364.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  4
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  3 ARE:
  TIME OF CONCENTRATION(MIN.) =    7.43
  RAINFALL INTENSITY(INCH/HR) =   6.16
  TOTAL STREAM AREA(ACRES) =     0.23
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      1.10

****************************************************************************
  FLOW PROCESS FROM NODE      5.00 TO NODE      6.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    218.65
  DOWNSTREAM ELEVATION(FEET) =    213.74
  ELEVATION DIFFERENCE(FEET) =      4.91
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    4.415
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    89.77
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      0.11
  TOTAL AREA(ACRES) =      0.02   TOTAL RUNOFF(CFS) =      0.11

****************************************************************************
  FLOW PROCESS FROM NODE      6.00 TO NODE   1000.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    213.74  DOWNSTREAM(FEET) =    208.26
```

```
  CHANNEL LENGTH THRU SUBAREA(FEET) =     0.03   CHANNEL SLOPE = *******
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.015   MAXIMUM DEPTH(FEET) =   1.00
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.18
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =  38.18
  AVERAGE FLOW DEPTH(FEET) =   0.00   TRAVEL TIME(MIN.) =   0.00
  Tc(MIN.) =    4.42
  SUBAREA AREA(ACRES) =     0.03       SUBAREA RUNOFF(CFS) =    0.16
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
  TOTAL AREA(ACRES) =        0.0         PEAK FLOW RATE(CFS) =       0.26

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.00   FLOW VELOCITY(FEET/SEC.) =  54.55
  LONGEST FLOWPATH FROM NODE      5.00 TO NODE   1000.00 =     100.03 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  4
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  4 ARE:
  TIME OF CONCENTRATION(MIN.) =    4.42
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     0.05
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      0.26

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1        2.67     5.69        7.319          0.55
      2        2.29     8.40        5.696          0.61
      3        1.10     7.43        6.164          0.23
      4        0.26     4.42        7.957          0.05

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  4 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1        4.20     4.42       7.957
      2        5.31     5.69       7.319
      3        5.59     7.43       6.164
      4        5.58     8.40       5.696

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =       5.59   Tc(MIN.) =    7.43
  TOTAL AREA(ACRES) =        1.4
  LONGEST FLOWPATH FROM NODE      5.00 TO NODE   1000.00 =     548.00 FEET.

+----------------------------------------------------------------------------+
| NODES 50 TO 2000 REPRESENT TRIBUTARY FLOWS TO POC-2.                       |
|                                                                            |
|                                                                            |
+----------------------------------------------------------------------------+
```

```
****************************************************************************
  FLOW PROCESS FROM NODE     50.00 TO NODE     51.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .8200
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =    83.00
  UPSTREAM ELEVATION(FEET) =    220.30
  DOWNSTREAM ELEVATION(FEET) =    219.26
  ELEVATION DIFFERENCE(FEET) =      1.04
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    3.734
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    63.80
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      0.39
  TOTAL AREA(ACRES) =      0.06   TOTAL RUNOFF(CFS) =      0.39

****************************************************************************
  FLOW PROCESS FROM NODE     51.00 TO NODE   2000.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  219.26  DOWNSTREAM ELEVATION(FEET) =  207.14
  STREET LENGTH(FEET) =   400.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       1.28
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.78
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.75
  STREET FLOW TRAVEL TIME(MIN.) =   1.76   Tc(MIN.) =    5.50
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.484
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .8200
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.820
  SUBAREA AREA(ACRES) =    0.29      SUBAREA RUNOFF(CFS) =    1.78
  TOTAL AREA(ACRES) =        0.3        PEAK FLOW RATE(CFS) =       2.15

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.23   HALFSTREET FLOOD WIDTH(FEET) =   4.03
  FLOW VELOCITY(FEET/SEC.) =  3.17   DEPTH*VELOCITY(FT*FT/SEC.) =   0.74
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE   2000.00 =     483.00 FEET.

+--------------------------------------------------------------------------+
| NODES 52 TO 3000 REPRESENT FLOWS TO POC-3.                               |
```

```
|                                                                            |
|                                                                            |
+----------------------------------------------------------------------------+

****************************************************************************
  FLOW PROCESS FROM NODE     52.00 TO NODE     53.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =    88.00
  UPSTREAM ELEVATION(FEET) =    220.18
  DOWNSTREAM ELEVATION(FEET) =    213.04
  ELEVATION DIFFERENCE(FEET) =      7.14
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.345
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      0.82
  TOTAL AREA(ACRES) =      0.11   TOTAL RUNOFF(CFS) =      0.82

****************************************************************************
  FLOW PROCESS FROM NODE     53.00 TO NODE     54.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  213.04  DOWNSTREAM ELEVATION(FEET) =  203.27
  STREET LENGTH(FEET) =   266.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       6.25
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.31
    HALFSTREET FLOOD WIDTH(FEET) =    8.22
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.92
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.21
  STREET FLOW TRAVEL TIME(MIN.) =   1.13   Tc(MIN.) =    2.48
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    1.45      SUBAREA RUNOFF(CFS) =   10.85
  TOTAL AREA(ACRES) =        1.6        PEAK FLOW RATE(CFS) =      11.67

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.36   HALFSTREET FLOOD WIDTH(FEET) =  11.21
  FLOW VELOCITY(FEET/SEC.) =  4.43   DEPTH*VELOCITY(FT*FT/SEC.) =   1.61
  LONGEST FLOWPATH FROM NODE     52.00 TO NODE     54.00 =     354.00 FEET.

****************************************************************************
```

```
  FLOW PROCESS FROM NODE     54.00 TO NODE     55.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   201.53  DOWNSTREAM(FEET) =   200.98
  FLOW LENGTH(FEET) =    32.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  18.0 INCH PIPE IS  13.0 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   8.55
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      11.67
  PIPE TRAVEL TIME(MIN.) =   0.06    Tc(MIN.) =    2.54
  LONGEST FLOWPATH FROM NODE     52.00 TO NODE     55.00 =     386.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     55.00 TO NODE     56.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   200.78  DOWNSTREAM(FEET) =   194.80
  FLOW LENGTH(FEET) =   220.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  18.0 INCH PIPE IS  11.0 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  10.31
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      11.67
  PIPE TRAVEL TIME(MIN.) =   0.36    Tc(MIN.) =    2.89
  LONGEST FLOWPATH FROM NODE     52.00 TO NODE     56.00 =     606.00 FEET.

+----------------------------------------------------------------------------+
| NODE 56 REPRESENTS BMP                                                     |
| FLOW 1 OF 3                                                                |
|                                                                            |
+----------------------------------------------------------------------------+

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE     59.00 TO NODE     60.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    210.07
  DOWNSTREAM ELEVATION(FEET) =    207.03
  ELEVATION DIFFERENCE(FEET) =      3.04
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.834
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    85.10
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      1.57
  TOTAL AREA(ACRES) =      0.21   TOTAL RUNOFF(CFS) =      1.57
```

```
****************************************************************************
  FLOW PROCESS FROM NODE     60.00 TO NODE     61.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  207.03  DOWNSTREAM ELEVATION(FEET) =  201.19
  STREET LENGTH(FEET) =   299.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       5.42
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.32
    HALFSTREET FLOOD WIDTH(FEET) =    9.03
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.94
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.95
  STREET FLOW TRAVEL TIME(MIN.) =   1.69   Tc(MIN.) =    3.53
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    1.03      SUBAREA RUNOFF(CFS) =    7.70
  TOTAL AREA(ACRES) =        1.2        PEAK FLOW RATE(CFS) =       9.27

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.37   HALFSTREET FLOOD WIDTH(FEET) =  11.68
  FLOW VELOCITY(FEET/SEC.) =  3.28   DEPTH*VELOCITY(FT*FT/SEC.) =   1.22
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     61.00 =     399.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     61.00 TO NODE     62.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   196.82  DOWNSTREAM(FEET) =   196.11
  FLOW LENGTH(FEET) =   128.70   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.25
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       9.27
  PIPE TRAVEL TIME(MIN.) =   0.41    Tc(MIN.) =    3.94
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     62.00 =     527.70 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     62.00 TO NODE     62.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
```

```
  TIME OF CONCENTRATION(MIN.) =    3.94
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     1.24
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      9.27

****************************************************************************
  FLOW PROCESS FROM NODE     63.00 TO NODE     64.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    204.24
  DOWNSTREAM ELEVATION(FEET) =    202.34
  ELEVATION DIFFERENCE(FEET) =      1.90
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.994
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    73.50
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      1.05
  TOTAL AREA(ACRES) =      0.14   TOTAL RUNOFF(CFS) =      1.05

****************************************************************************
  FLOW PROCESS FROM NODE     64.00 TO NODE     65.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  202.34  DOWNSTREAM ELEVATION(FEET) =  200.46
  STREET LENGTH(FEET) =   114.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       2.21
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.26
    HALFSTREET FLOOD WIDTH(FEET) =    5.53
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.36
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.62
  STREET FLOW TRAVEL TIME(MIN.) =   0.80   Tc(MIN.) =    2.80
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    0.31      SUBAREA RUNOFF(CFS) =    2.32
  TOTAL AREA(ACRES) =        0.4        PEAK FLOW RATE(CFS) =       3.37

  END OF SUBAREA STREET FLOW HYDRAULICS:
```

```
  DEPTH(FEET) = 0.29   HALFSTREET FLOOD WIDTH(FEET) =   7.28
  FLOW VELOCITY(FEET/SEC.) =  2.52   DEPTH*VELOCITY(FT*FT/SEC.) =   0.74
  LONGEST FLOWPATH FROM NODE     63.00 TO NODE     65.00 =     214.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     65.00 TO NODE     62.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   198.84  DOWNSTREAM(FEET) =   198.38
  FLOW LENGTH(FEET) =    92.80   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   4.29
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       3.37
  PIPE TRAVEL TIME(MIN.) =   0.36    Tc(MIN.) =    3.16
  LONGEST FLOWPATH FROM NODE     63.00 TO NODE     62.00 =     306.80 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     62.00 TO NODE     62.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    3.16
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     0.45
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      3.37

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1        9.27     3.94        7.957          1.24
      2        3.37     3.16        7.957          0.45

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       10.81     3.16       7.957
      2       12.64     3.94       7.957

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      12.64   Tc(MIN.) =    3.94
  TOTAL AREA(ACRES) =        1.7
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     62.00 =     527.70 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     62.00 TO NODE     66.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   198.38  DOWNSTREAM(FEET) =   197.39
  FLOW LENGTH(FEET) =   105.90   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.15
```

```
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      12.64
  PIPE TRAVEL TIME(MIN.) =   0.25    Tc(MIN.) =    4.18
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     66.00 =     633.60 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     66.00 TO NODE     66.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    4.18
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     1.69
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     12.64

****************************************************************************
  FLOW PROCESS FROM NODE     67.00 TO NODE     68.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    204.42
  DOWNSTREAM ELEVATION(FEET) =    203.78
  ELEVATION DIFFERENCE(FEET) =      0.64
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    2.428
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    52.80
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      2.02
  TOTAL AREA(ACRES) =      0.27   TOTAL RUNOFF(CFS) =      2.02

****************************************************************************
  FLOW PROCESS FROM NODE     68.00 TO NODE     69.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  203.78  DOWNSTREAM ELEVATION(FEET) =  201.26
  STREET LENGTH(FEET) =   100.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       2.99
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.27
    HALFSTREET FLOOD WIDTH(FEET) =    5.91
```

```
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.96
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.79
  STREET FLOW TRAVEL TIME(MIN.) =   0.56   Tc(MIN.) =    2.99
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    0.26      SUBAREA RUNOFF(CFS) =    1.94
  TOTAL AREA(ACRES) =        0.5        PEAK FLOW RATE(CFS) =       3.96

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.29   HALFSTREET FLOOD WIDTH(FEET) =   7.09
  FLOW VELOCITY(FEET/SEC.) =  3.08   DEPTH*VELOCITY(FT*FT/SEC.) =   0.89
  LONGEST FLOWPATH FROM NODE     67.00 TO NODE     69.00 =     200.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     69.00 TO NODE     66.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   198.57  DOWNSTREAM(FEET) =   197.39
  FLOW LENGTH(FEET) =    23.70   MANNING'S N =  0.013
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   6.1 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.92
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       3.96
  PIPE TRAVEL TIME(MIN.) =   0.04    Tc(MIN.) =    3.03
  LONGEST FLOWPATH FROM NODE     67.00 TO NODE     66.00 =     223.70 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     66.00 TO NODE     66.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    3.03
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     0.53
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      3.96

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       12.64     4.18        7.957          1.69
      2        3.96     3.03        7.957          0.53

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       16.60     3.03       7.957
      2       16.60     4.18       7.957

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      16.60   Tc(MIN.) =    4.18
  TOTAL AREA(ACRES) =        2.2
```

```
 LONGEST FLOWPATH FROM NODE     59.00 TO NODE     66.00 =     633.60 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     66.00 TO NODE     70.00 IS CODE =  41
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   197.39  DOWNSTREAM(FEET) =   196.10
 FLOW LENGTH(FEET) =   145.00   MANNING'S N =  0.013
 ASSUME FULL-FLOWING PIPELINE
 PIPE-FLOW VELOCITY(FEET/SEC.) =   9.40
 PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
 GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =      16.60
 PIPE TRAVEL TIME(MIN.) =   0.26    Tc(MIN.) =    4.44
 LONGEST FLOWPATH FROM NODE     59.00 TO NODE     70.00 =     778.60 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     70.00 TO NODE     57.00 IS CODE =  41
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   196.10  DOWNSTREAM(FEET) =   195.07
 FLOW LENGTH(FEET) =   193.00   MANNING'S N =  0.013
 ASSUME FULL-FLOWING PIPELINE
 PIPE-FLOW VELOCITY(FEET/SEC.) =   5.29
 PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
 GIVEN PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =      16.60
 PIPE TRAVEL TIME(MIN.) =   0.61    Tc(MIN.) =    5.05
 LONGEST FLOWPATH FROM NODE     59.00 TO NODE     57.00 =     971.60 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     57.00 TO NODE     56.00 IS CODE =  41
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   195.07  DOWNSTREAM(FEET) =   194.80
 FLOW LENGTH(FEET) =    51.80   MANNING'S N =  0.013
 ASSUME FULL-FLOWING PIPELINE
 PIPE-FLOW VELOCITY(FEET/SEC.) =   9.40
 PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
 GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =      16.60
 PIPE TRAVEL TIME(MIN.) =   0.09    Tc(MIN.) =    5.14
 LONGEST FLOWPATH FROM NODE     59.00 TO NODE     56.00 =    1023.40 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =    5.14
 RAINFALL INTENSITY(INCH/HR) =   7.81
 TOTAL STREAM AREA(ACRES) =     2.22
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     16.60

****************************************************************************
```

```
  FLOW PROCESS FROM NODE     55.00 TO NODE     58.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    204.25
  DOWNSTREAM ELEVATION(FEET) =    201.79
  ELEVATION DIFFERENCE(FEET) =      2.46
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.903
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    79.60
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      2.77
  TOTAL AREA(ACRES) =      0.37   TOTAL RUNOFF(CFS) =      2.77

****************************************************************************
  FLOW PROCESS FROM NODE     58.00 TO NODE     56.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  201.79  DOWNSTREAM ELEVATION(FEET) =  198.58
  STREET LENGTH(FEET) =   143.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       9.39
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.37
    HALFSTREET FLOOD WIDTH(FEET) =   11.37
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.48
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.27
  STREET FLOW TRAVEL TIME(MIN.) =   0.68   Tc(MIN.) =    2.59
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    1.77      SUBAREA RUNOFF(CFS) =   13.24
  TOTAL AREA(ACRES) =        2.1        PEAK FLOW RATE(CFS) =      16.01

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.42   HALFSTREET FLOOD WIDTH(FEET) =  14.34
  FLOW VELOCITY(FEET/SEC.) =  3.94   DEPTH*VELOCITY(FT*FT/SEC.) =   1.65
  LONGEST FLOWPATH FROM NODE     55.00 TO NODE     56.00 =     243.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =   1
```

```
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    2.59
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     2.14
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     16.01

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       16.60     5.14        7.814          2.22
      2       16.01     2.59        7.957          2.14

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       32.31     2.59       7.957
      2       32.32     5.14       7.814

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      32.32   Tc(MIN.) =    5.14
  TOTAL AREA(ACRES) =        4.4
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     56.00 =    1023.40 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
  STREAM     RUNOFF      Tc      INTENSITY     AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
      1       32.32     5.14       7.814        4.36
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     56.00 =    1023.40 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
  STREAM     RUNOFF      Tc      INTENSITY     AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
      1       11.67     2.89       7.957        1.56
  LONGEST FLOWPATH FROM NODE     52.00 TO NODE     56.00 =     606.00 FEET.

  ** PEAK FLOW RATE TABLE **
  STREAM    RUNOFF       Tc      INTENSITY
  NUMBER     (CFS)     (MIN.)   (INCH/HOUR)
      1      29.86       2.89        7.957
      2      43.78       5.14        7.814

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      43.78   Tc(MIN.) =    5.14
  TOTAL AREA(ACRES) =        5.9

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     71.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
```

```
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   191.80  DOWNSTREAM(FEET) =   189.57
  FLOW LENGTH(FEET) =    73.80   MANNING'S N =  0.013
  DEPTH OF FLOW IN  27.0 INCH PIPE IS  18.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  14.77
  ESTIMATED PIPE DIAMETER(INCH) =  27.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      43.78
  PIPE TRAVEL TIME(MIN.) =   0.08    Tc(MIN.) =    5.23
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     71.00 =    1097.20 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     71.00 TO NODE     72.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   189.37  DOWNSTREAM(FEET) =   188.25
  FLOW LENGTH(FEET) =   224.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  36.0 INCH PIPE IS  28.1 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.40
  ESTIMATED PIPE DIAMETER(INCH) =  36.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      43.78
  PIPE TRAVEL TIME(MIN.) =   0.50    Tc(MIN.) =    5.73
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     72.00 =    1321.20 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     72.00 TO NODE     73.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   188.05  DOWNSTREAM(FEET) =   185.48
  FLOW LENGTH(FEET) =   254.30   MANNING'S N =  0.013
  DEPTH OF FLOW IN  33.0 INCH PIPE IS  23.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.78
  ESTIMATED PIPE DIAMETER(INCH) =  33.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      43.78
  PIPE TRAVEL TIME(MIN.) =   0.43    Tc(MIN.) =    6.16
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     73.00 =    1575.50 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     73.00 TO NODE   3000.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   185.28  DOWNSTREAM(FEET) =   183.54
  FLOW LENGTH(FEET) =    93.20   MANNING'S N =  0.013
  DEPTH OF FLOW IN  30.0 INCH PIPE IS  20.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  12.37
  ESTIMATED PIPE DIAMETER(INCH) =  30.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      43.78
  PIPE TRAVEL TIME(MIN.) =   0.13    Tc(MIN.) =    6.29
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE   3000.00 =    1668.70 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     78.00 TO NODE   3000.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.863
  *USER SPECIFIED(SUBAREA):
```

```
  NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT = 0.9400
  SUBAREA AREA(ACRES) =    0.70   SUBAREA RUNOFF(CFS) =    4.52
  TOTAL AREA(ACRES) =        6.6   TOTAL RUNOFF(CFS) =      43.78
  TC(MIN.) =    6.29
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE     79.00 TO NODE   3000.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.863
  *USER SPECIFIED(SUBAREA):
  NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT = 0.9400
  SUBAREA AREA(ACRES) =    0.26   SUBAREA RUNOFF(CFS) =    1.68
  TOTAL AREA(ACRES) =        6.9   TOTAL RUNOFF(CFS) =      44.38
  TC(MIN.) =    6.29

+--------------------------------------------------------------------------+
| NODES 76 TO 4000 REPRESENT TRIBUTARY FLOWS TO POC-4.                     |
|                                                                          |
|                                                                          |
+--------------------------------------------------------------------------+

****************************************************************************
  FLOW PROCESS FROM NODE     76.00 TO NODE     77.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =    79.00
  UPSTREAM ELEVATION(FEET) =    205.25
  DOWNSTREAM ELEVATION(FEET) =    203.12
  ELEVATION DIFFERENCE(FEET) =      2.13
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.839
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      0.37
  TOTAL AREA(ACRES) =      0.05   TOTAL RUNOFF(CFS) =      0.37

****************************************************************************
  FLOW PROCESS FROM NODE     77.00 TO NODE   4000.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  203.12  DOWNSTREAM ELEVATION(FEET) =  197.78
  STREET LENGTH(FEET) =   175.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
```

```
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.71
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.79
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.75
  STREET FLOW TRAVEL TIME(MIN.) =   0.77   Tc(MIN.) =    2.61
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  STREETS & ROADS (CURBS/STORM DRAINS) RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    0.09      SUBAREA RUNOFF(CFS) =    0.67
  TOTAL AREA(ACRES) =        0.1        PEAK FLOW RATE(CFS) =       1.05

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.20   HALFSTREET FLOOD WIDTH(FEET) =   2.00
  FLOW VELOCITY(FEET/SEC.) =  3.79   DEPTH*VELOCITY(FT*FT/SEC.) =   0.75
  LONGEST FLOWPATH FROM NODE     76.00 TO NODE   4000.00 =     254.00 FEET.
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        0.1  TC(MIN.) =      2.61
  PEAK FLOW RATE(CFS)   =       1.05
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

100 YEAR HYDROLOGIC ANALYSIS FOR DEVELOPED CONDITIONS - MITIGATED

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            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            Reference: SAN DIEGO COUNTY FLOOD CONTROL DISTRICT
                         2003,1985,1981 HYDROLOGY MANUAL
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                           Analysis prepared by:


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 ************************* DESCRIPTION OF STUDY *************************
* PROPOSED CONDITIONS - MITIGATED HYDROLOGY                             *
* 100 YEAR STORM                                                       *
* CARMAX OCEANSIDE                                                     *
 ************************************************************************

  FILE NAME: 1492PSTM.DAT
  TIME/DATE OF STUDY: 15:05 03/06/2020
------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
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  2003 SAN DIEGO MANUAL CRITERIA

  USER SPECIFIED STORM EVENT(YEAR) = 100.00
  6-HOUR DURATION PRECIPITATION (INCHES) =   3.020
  SPECIFIED MINIMUM PIPE SIZE(INCH) =   6.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  SAN DIEGO HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: USE MODIFIED RATIONAL METHOD PROCEDURES FOR CONFLUENCE ANALYSIS
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

+------------------------------------------------------------------------+
| NODES 1 TO 1000 REPRESENT TRIBUTARY FLOWS TO POC-1                     |
|                                                                        |
|                                                                        |
+------------------------------------------------------------------------+

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  FLOW PROCESS FROM NODE      1.00 TO NODE      2.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
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  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    216.88
  DOWNSTREAM ELEVATION(FEET) =    214.07
  ELEVATION DIFFERENCE(FEET) =      2.81
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    5.116
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    83.10
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.840
  SUBAREA RUNOFF(CFS) =      1.03
  TOTAL AREA(ACRES) =      0.20   TOTAL RUNOFF(CFS) =      1.03

****************************************************************************
  FLOW PROCESS FROM NODE      2.00 TO NODE      3.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  214.07  DOWNSTREAM ELEVATION(FEET) =  210.04
  STREET LENGTH(FEET) =   116.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       1.88
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.21
    HALFSTREET FLOOD WIDTH(FEET) =    2.66
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.67
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.77
  STREET FLOW TRAVEL TIME(MIN.) =   0.53   Tc(MIN.) =    5.64
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.359
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
  SUBAREA AREA(ACRES) =    0.35      SUBAREA RUNOFF(CFS) =    1.70
  TOTAL AREA(ACRES) =        0.6        PEAK FLOW RATE(CFS) =       2.67

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.25   HALFSTREET FLOOD WIDTH(FEET) =   4.72
  FLOW VELOCITY(FEET/SEC.) =  3.40   DEPTH*VELOCITY(FT*FT/SEC.) =   0.84
  LONGEST FLOWPATH FROM NODE      1.00 TO NODE      3.00 =     216.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      3.00 TO NODE   1000.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   210.04  DOWNSTREAM(FEET) =   208.26
  FLOW LENGTH(FEET) =    28.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN   9.0 INCH PIPE IS   5.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.81
  ESTIMATED PIPE DIAMETER(INCH) =   9.00    NUMBER OF PIPES =   1
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  PIPE-FLOW(CFS) =       2.67
  PIPE TRAVEL TIME(MIN.) =   0.05    Tc(MIN.) =    5.69
  LONGEST FLOWPATH FROM NODE      1.00 TO NODE   1000.00 =     244.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  4
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    5.69
  RAINFALL INTENSITY(INCH/HR) =   7.32
  TOTAL STREAM AREA(ACRES) =     0.55
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      2.67

****************************************************************************
  FLOW PROCESS FROM NODE      5.00 TO NODE      7.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    218.65
  DOWNSTREAM ELEVATION(FEET) =    217.54
  ELEVATION DIFFERENCE(FEET) =      1.11
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    6.006
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    61.65
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.070
  SUBAREA RUNOFF(CFS) =      0.37
  TOTAL AREA(ACRES) =      0.08   TOTAL RUNOFF(CFS) =      0.37

****************************************************************************
  FLOW PROCESS FROM NODE      7.00 TO NODE   1000.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  217.54  DOWNSTREAM ELEVATION(FEET) =  208.26
  STREET LENGTH(FEET) =   448.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       1.34
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.12
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.62
  STREET FLOW TRAVEL TIME(MIN.) =   2.39   Tc(MIN.) =    8.40
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 100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  5.696
 *USER SPECIFIED(SUBAREA):
 GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
 S.C.S. CURVE NUMBER (AMC II) =   0
 AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
 SUBAREA AREA(ACRES) =    0.53      SUBAREA RUNOFF(CFS) =    1.99
 TOTAL AREA(ACRES) =        0.6        PEAK FLOW RATE(CFS) =       2.29

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.26   HALFSTREET FLOOD WIDTH(FEET) =   5.22
 FLOW VELOCITY(FEET/SEC.) =  2.62   DEPTH*VELOCITY(FT*FT/SEC.) =   0.67
 LONGEST FLOWPATH FROM NODE      5.00 TO NODE   1000.00 =     548.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  4
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =    8.40
 RAINFALL INTENSITY(INCH/HR) =   5.70
 TOTAL STREAM AREA(ACRES) =     0.61
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      2.29

****************************************************************************
 FLOW PROCESS FROM NODE     50.00 TO NODE      8.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
 *USER SPECIFIED(SUBAREA):
 GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
 S.C.S. CURVE NUMBER (AMC II) =   0
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
 UPSTREAM ELEVATION(FEET) =    220.30
 DOWNSTREAM ELEVATION(FEET) =    219.54
 ELEVATION DIFFERENCE(FEET) =      0.76
 SUBAREA OVERLAND TIME OF FLOW(MIN.) =    6.448
 WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
          THE MAXIMUM OVERLAND FLOW LENGTH =    55.20
          (Reference: Table 3-1B of Hydrology Manual)
          THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.753
 SUBAREA RUNOFF(CFS) =      0.27
 TOTAL AREA(ACRES) =      0.06   TOTAL RUNOFF(CFS) =      0.27

****************************************************************************
 FLOW PROCESS FROM NODE      8.00 TO NODE   1000.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) =  219.54  DOWNSTREAM ELEVATION(FEET) =  208.26
 STREET LENGTH(FEET) =   264.00   CURB HEIGHT(INCHES) =  8.0
 STREET HALFWIDTH(FEET) = 30.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.018
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
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  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.70
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.49
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.89
  STREET FLOW TRAVEL TIME(MIN.) =   0.98   Tc(MIN.) =    7.43
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.164
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .8200
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.778
  SUBAREA AREA(ACRES) =    0.17      SUBAREA RUNOFF(CFS) =    0.86
  TOTAL AREA(ACRES) =        0.2        PEAK FLOW RATE(CFS) =       1.10

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.20   HALFSTREET FLOOD WIDTH(FEET) =   2.00
  FLOW VELOCITY(FEET/SEC.) =  4.49   DEPTH*VELOCITY(FT*FT/SEC.) =   0.89
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE   1000.00 =     364.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  4
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  3 ARE:
  TIME OF CONCENTRATION(MIN.) =    7.43
  RAINFALL INTENSITY(INCH/HR) =   6.16
  TOTAL STREAM AREA(ACRES) =     0.23
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      1.10

****************************************************************************
  FLOW PROCESS FROM NODE      5.00 TO NODE      6.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    218.65
  DOWNSTREAM ELEVATION(FEET) =    213.74
  ELEVATION DIFFERENCE(FEET) =      4.91
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    4.415
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    89.77
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      0.11
  TOTAL AREA(ACRES) =      0.02   TOTAL RUNOFF(CFS) =      0.11

****************************************************************************
  FLOW PROCESS FROM NODE      6.00 TO NODE   1000.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    213.74  DOWNSTREAM(FEET) =    208.26
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  CHANNEL LENGTH THRU SUBAREA(FEET) =     0.03   CHANNEL SLOPE = *******
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.015   MAXIMUM DEPTH(FEET) =   1.00
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.18
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =  38.18
  AVERAGE FLOW DEPTH(FEET) =   0.00   TRAVEL TIME(MIN.) =   0.00
  Tc(MIN.) =    4.42
  SUBAREA AREA(ACRES) =     0.03       SUBAREA RUNOFF(CFS) =    0.16
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
  TOTAL AREA(ACRES) =        0.0         PEAK FLOW RATE(CFS) =       0.26

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.00   FLOW VELOCITY(FEET/SEC.) =  54.55
  LONGEST FLOWPATH FROM NODE      5.00 TO NODE   1000.00 =     100.03 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  4
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  4 ARE:
  TIME OF CONCENTRATION(MIN.) =    4.42
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     0.05
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      0.26

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1        2.67     5.69        7.319          0.55
      2        2.29     8.40        5.696          0.61
      3        1.10     7.43        6.164          0.23
      4        0.26     4.42        7.957          0.05

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  4 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1        4.20     4.42       7.957
      2        5.31     5.69       7.319
      3        5.59     7.43       6.164
      4        5.58     8.40       5.696

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =       5.59   Tc(MIN.) =    7.43
  TOTAL AREA(ACRES) =        1.4
  LONGEST FLOWPATH FROM NODE      5.00 TO NODE   1000.00 =     548.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     50.00 TO NODE     51.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
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  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .8200
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =    83.00
  UPSTREAM ELEVATION(FEET) =    220.30
  DOWNSTREAM ELEVATION(FEET) =    219.26
  ELEVATION DIFFERENCE(FEET) =      1.04
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    3.734
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    63.80
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      0.39
  TOTAL AREA(ACRES) =      0.06   TOTAL RUNOFF(CFS) =      0.39

****************************************************************************
  FLOW PROCESS FROM NODE     51.00 TO NODE   2000.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  219.26  DOWNSTREAM ELEVATION(FEET) =  207.14
  STREET LENGTH(FEET) =   400.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       1.28
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.78
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.75
  STREET FLOW TRAVEL TIME(MIN.) =   1.76   Tc(MIN.) =    5.50
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.484
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .8200
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.820
  SUBAREA AREA(ACRES) =    0.29      SUBAREA RUNOFF(CFS) =    1.78
  TOTAL AREA(ACRES) =        0.3        PEAK FLOW RATE(CFS) =       2.15

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.23   HALFSTREET FLOOD WIDTH(FEET) =   4.03
  FLOW VELOCITY(FEET/SEC.) =  3.17   DEPTH*VELOCITY(FT*FT/SEC.) =   0.74
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE   2000.00 =     483.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     52.00 TO NODE     53.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
```

```
  INITIAL SUBAREA FLOW-LENGTH(FEET) =    88.00
  UPSTREAM ELEVATION(FEET) =    220.18
  DOWNSTREAM ELEVATION(FEET) =    213.04
  ELEVATION DIFFERENCE(FEET) =      7.14
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.345
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      0.82
  TOTAL AREA(ACRES) =      0.11   TOTAL RUNOFF(CFS) =      0.82

****************************************************************************
  FLOW PROCESS FROM NODE     53.00 TO NODE     54.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  213.04  DOWNSTREAM ELEVATION(FEET) =  203.27
  STREET LENGTH(FEET) =   266.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       6.25
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.31
    HALFSTREET FLOOD WIDTH(FEET) =    8.22
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.92
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.21
  STREET FLOW TRAVEL TIME(MIN.) =   1.13   Tc(MIN.) =    2.48
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    1.45      SUBAREA RUNOFF(CFS) =   10.85
  TOTAL AREA(ACRES) =        1.6        PEAK FLOW RATE(CFS) =      11.67

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.36   HALFSTREET FLOOD WIDTH(FEET) =  11.21
  FLOW VELOCITY(FEET/SEC.) =  4.43   DEPTH*VELOCITY(FT*FT/SEC.) =   1.61
  LONGEST FLOWPATH FROM NODE     52.00 TO NODE     54.00 =     354.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     54.00 TO NODE     55.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   201.53  DOWNSTREAM(FEET) =   200.98
  FLOW LENGTH(FEET) =    32.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  18.0 INCH PIPE IS  13.0 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   8.55
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      11.67
  PIPE TRAVEL TIME(MIN.) =   0.06    Tc(MIN.) =    2.54
```

```
 LONGEST FLOWPATH FROM NODE     52.00 TO NODE     55.00 =     386.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     55.00 TO NODE     56.00 IS CODE =  41
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   200.78  DOWNSTREAM(FEET) =   194.80
 FLOW LENGTH(FEET) =   220.00   MANNING'S N =  0.013
 DEPTH OF FLOW IN  18.0 INCH PIPE IS  11.0 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =  10.31
 GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =      11.67
 PIPE TRAVEL TIME(MIN.) =   0.36    Tc(MIN.) =    2.89
 LONGEST FLOWPATH FROM NODE     52.00 TO NODE     56.00 =     606.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =  10
----------------------------------------------------------------------------
 >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
 FLOW PROCESS FROM NODE     59.00 TO NODE     60.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
 *USER SPECIFIED(SUBAREA):
 GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
 S.C.S. CURVE NUMBER (AMC II) =   0
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
 UPSTREAM ELEVATION(FEET) =    210.07
 DOWNSTREAM ELEVATION(FEET) =    207.03
 ELEVATION DIFFERENCE(FEET) =      3.04
 SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.834
 WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
          THE MAXIMUM OVERLAND FLOW LENGTH =    85.10
          (Reference: Table 3-1B of Hydrology Manual)
          THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
 NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
 SUBAREA RUNOFF(CFS) =      1.57
 TOTAL AREA(ACRES) =      0.21   TOTAL RUNOFF(CFS) =      1.57

****************************************************************************
 FLOW PROCESS FROM NODE     60.00 TO NODE     61.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) =  207.03  DOWNSTREAM ELEVATION(FEET) =  201.19
 STREET LENGTH(FEET) =   299.00   CURB HEIGHT(INCHES) =  8.0
 STREET HALFWIDTH(FEET) = 30.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.018
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200
```

```
    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       5.42
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.32
    HALFSTREET FLOOD WIDTH(FEET) =    9.03
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.94
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.95
  STREET FLOW TRAVEL TIME(MIN.) =   1.69   Tc(MIN.) =    3.53
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    1.03      SUBAREA RUNOFF(CFS) =    7.70
  TOTAL AREA(ACRES) =        1.2        PEAK FLOW RATE(CFS) =       9.27

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.37   HALFSTREET FLOOD WIDTH(FEET) =  11.68
  FLOW VELOCITY(FEET/SEC.) =  3.28   DEPTH*VELOCITY(FT*FT/SEC.) =   1.22
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     61.00 =     399.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     61.00 TO NODE     62.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   196.82  DOWNSTREAM(FEET) =   196.11
  FLOW LENGTH(FEET) =   128.70   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.25
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       9.27
  PIPE TRAVEL TIME(MIN.) =   0.41    Tc(MIN.) =    3.94
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     62.00 =     527.70 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     62.00 TO NODE     62.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    3.94
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     1.24
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      9.27

****************************************************************************
  FLOW PROCESS FROM NODE     63.00 TO NODE     64.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    204.24
  DOWNSTREAM ELEVATION(FEET) =    202.34
  ELEVATION DIFFERENCE(FEET) =      1.90
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.994
```

```
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    73.50
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      1.05
  TOTAL AREA(ACRES) =      0.14   TOTAL RUNOFF(CFS) =      1.05

****************************************************************************
  FLOW PROCESS FROM NODE     64.00 TO NODE     65.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  202.34  DOWNSTREAM ELEVATION(FEET) =  200.46
  STREET LENGTH(FEET) =   114.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       2.21
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.26
    HALFSTREET FLOOD WIDTH(FEET) =    5.53
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.36
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.62
  STREET FLOW TRAVEL TIME(MIN.) =   0.80   Tc(MIN.) =    2.80
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    0.31      SUBAREA RUNOFF(CFS) =    2.32
  TOTAL AREA(ACRES) =        0.4        PEAK FLOW RATE(CFS) =       3.37

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.29   HALFSTREET FLOOD WIDTH(FEET) =   7.28
  FLOW VELOCITY(FEET/SEC.) =  2.52   DEPTH*VELOCITY(FT*FT/SEC.) =   0.74
  LONGEST FLOWPATH FROM NODE     63.00 TO NODE     65.00 =     214.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     65.00 TO NODE     62.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   198.84  DOWNSTREAM(FEET) =   198.38
  FLOW LENGTH(FEET) =    92.80   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   4.29
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       3.37
  PIPE TRAVEL TIME(MIN.) =   0.36    Tc(MIN.) =    3.16
```

```
  LONGEST FLOWPATH FROM NODE     63.00 TO NODE     62.00 =     306.80 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     62.00 TO NODE     62.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    3.16
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     0.45
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      3.37

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1        9.27     3.94        7.957          1.24
      2        3.37     3.16        7.957          0.45

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       10.81     3.16       7.957
      2       12.64     3.94       7.957

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      12.64   Tc(MIN.) =    3.94
  TOTAL AREA(ACRES) =        1.7
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     62.00 =     527.70 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     62.00 TO NODE     66.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   198.38  DOWNSTREAM(FEET) =   197.39
  FLOW LENGTH(FEET) =   105.90   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.15
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      12.64
  PIPE TRAVEL TIME(MIN.) =   0.25    Tc(MIN.) =    4.18
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     66.00 =     633.60 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     66.00 TO NODE     66.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    4.18
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     1.69
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     12.64
```

```
****************************************************************************
  FLOW PROCESS FROM NODE     67.00 TO NODE     68.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    204.42
  DOWNSTREAM ELEVATION(FEET) =    203.78
  ELEVATION DIFFERENCE(FEET) =      0.64
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    2.428
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    52.80
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      2.02
  TOTAL AREA(ACRES) =      0.27   TOTAL RUNOFF(CFS) =      2.02

****************************************************************************
  FLOW PROCESS FROM NODE     68.00 TO NODE     69.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  203.78  DOWNSTREAM ELEVATION(FEET) =  201.26
  STREET LENGTH(FEET) =   100.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       2.99
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.27
    HALFSTREET FLOOD WIDTH(FEET) =    5.91
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.96
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.79
  STREET FLOW TRAVEL TIME(MIN.) =   0.56   Tc(MIN.) =    2.99
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    0.26      SUBAREA RUNOFF(CFS) =    1.94
  TOTAL AREA(ACRES) =       0.5        PEAK FLOW RATE(CFS) =       3.96

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.29   HALFSTREET FLOOD WIDTH(FEET) =   7.09
  FLOW VELOCITY(FEET/SEC.) =  3.08   DEPTH*VELOCITY(FT*FT/SEC.) =   0.89
  LONGEST FLOWPATH FROM NODE     67.00 TO NODE     69.00 =     200.00 FEET.

****************************************************************************
```

```
  FLOW PROCESS FROM NODE     69.00 TO NODE     66.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   198.57  DOWNSTREAM(FEET) =   197.39
  FLOW LENGTH(FEET) =    23.70   MANNING'S N =  0.013
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   6.1 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.92
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       3.96
  PIPE TRAVEL TIME(MIN.) =   0.04    Tc(MIN.) =    3.03
  LONGEST FLOWPATH FROM NODE     67.00 TO NODE     66.00 =     223.70 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     66.00 TO NODE     66.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    3.03
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     0.53
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      3.96

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       12.64     4.18        7.957          1.69
      2        3.96     3.03        7.957          0.53

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       16.60     3.03       7.957
      2       16.60     4.18       7.957

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      16.60   Tc(MIN.) =    4.18
  TOTAL AREA(ACRES) =        2.2
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     66.00 =     633.60 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     66.00 TO NODE     70.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   197.39  DOWNSTREAM(FEET) =   196.10
  FLOW LENGTH(FEET) =   145.00   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.40
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      16.60
  PIPE TRAVEL TIME(MIN.) =   0.26    Tc(MIN.) =    4.44
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     70.00 =     778.60 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE     70.00 TO NODE     57.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   196.10  DOWNSTREAM(FEET) =   195.07
  FLOW LENGTH(FEET) =   193.00   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.29
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      16.60
  PIPE TRAVEL TIME(MIN.) =   0.61    Tc(MIN.) =    5.05
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     57.00 =     971.60 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     57.00 TO NODE     56.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   195.07  DOWNSTREAM(FEET) =   194.80
  FLOW LENGTH(FEET) =    51.80   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.40
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      16.60
  PIPE TRAVEL TIME(MIN.) =   0.09    Tc(MIN.) =    5.14
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     56.00 =    1023.40 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    5.14
  RAINFALL INTENSITY(INCH/HR) =   7.81
  TOTAL STREAM AREA(ACRES) =     2.22
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     16.60

****************************************************************************
  FLOW PROCESS FROM NODE     55.00 TO NODE     58.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    204.25
  DOWNSTREAM ELEVATION(FEET) =    201.79
  ELEVATION DIFFERENCE(FEET) =      2.46
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.903
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    79.60
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
```

```
  SUBAREA RUNOFF(CFS) =      2.77
  TOTAL AREA(ACRES) =      0.37   TOTAL RUNOFF(CFS) =      2.77

****************************************************************************
  FLOW PROCESS FROM NODE     58.00 TO NODE     56.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  201.79  DOWNSTREAM ELEVATION(FEET) =  198.58
  STREET LENGTH(FEET) =   143.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       9.39
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.37
    HALFSTREET FLOOD WIDTH(FEET) =   11.37
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.48
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.27
  STREET FLOW TRAVEL TIME(MIN.) =   0.68   Tc(MIN.) =    2.59
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    1.77      SUBAREA RUNOFF(CFS) =   13.24
  TOTAL AREA(ACRES) =        2.1        PEAK FLOW RATE(CFS) =      16.01

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.42   HALFSTREET FLOOD WIDTH(FEET) =  14.34
  FLOW VELOCITY(FEET/SEC.) =  3.94   DEPTH*VELOCITY(FT*FT/SEC.) =   1.65
  LONGEST FLOWPATH FROM NODE     55.00 TO NODE     56.00 =     243.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    2.59
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     2.14
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     16.01

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       16.60     5.14        7.814          2.22
      2       16.01     2.59        7.957          2.14

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
```

```
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       32.31     2.59       7.957
      2       32.32     5.14       7.814

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      32.32   Tc(MIN.) =    5.14
  TOTAL AREA(ACRES) =        4.4
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     56.00 =    1023.40 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
  STREAM     RUNOFF      Tc      INTENSITY     AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
      1       32.32     5.14       7.814        4.36
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     56.00 =    1023.40 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
  STREAM     RUNOFF      Tc      INTENSITY     AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
      1       11.67     2.89       7.957        1.56
  LONGEST FLOWPATH FROM NODE     52.00 TO NODE     56.00 =     606.00 FEET.

  ** PEAK FLOW RATE TABLE **
  STREAM    RUNOFF       Tc      INTENSITY
  NUMBER     (CFS)     (MIN.)   (INCH/HOUR)
      1      29.86       2.89       7.957
      2      43.78       5.14       7.814

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      43.78   Tc(MIN.) =    5.14
  TOTAL AREA(ACRES) =        5.9

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>USER SPECIFIED HYDROLOGY INFORMATION AT NODE<<<<<
============================================================================
  USER-SPECIFIED VALUES ARE AS FOLLOWS:
  TC(MIN) =   8.00   RAIN INTENSITY(INCH/HOUR) =  5.88
  TOTAL AREA(ACRES) =     5.90   TOTAL RUNOFF(CFS) =     21.13

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     71.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   191.80  DOWNSTREAM(FEET) =   189.57
  FLOW LENGTH(FEET) =    73.80   MANNING'S N =  0.013
  DEPTH OF FLOW IN  21.0 INCH PIPE IS  14.0 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  12.36
  ESTIMATED PIPE DIAMETER(INCH) =  21.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      21.13
  PIPE TRAVEL TIME(MIN.) =   0.10    Tc(MIN.) =    8.10
```

```
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     71.00 =    1097.20 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     71.00 TO NODE     72.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   189.37  DOWNSTREAM(FEET) =   188.25
  FLOW LENGTH(FEET) =   224.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  27.0 INCH PIPE IS  21.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.12
  ESTIMATED PIPE DIAMETER(INCH) =  27.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      21.13
  PIPE TRAVEL TIME(MIN.) =   0.61    Tc(MIN.) =    8.71
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     72.00 =    1321.20 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     72.00 TO NODE     73.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   188.05  DOWNSTREAM(FEET) =   185.48
  FLOW LENGTH(FEET) =   254.30   MANNING'S N =  0.013
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  18.7 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   8.03
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      21.13
  PIPE TRAVEL TIME(MIN.) =   0.53    Tc(MIN.) =    9.24
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     73.00 =    1575.50 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     73.00 TO NODE   3000.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   185.28  DOWNSTREAM(FEET) =   183.54
  FLOW LENGTH(FEET) =    93.20   MANNING'S N =  0.013
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  14.8 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  10.38
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      21.13
  PIPE TRAVEL TIME(MIN.) =   0.15    Tc(MIN.) =    9.39
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE   3000.00 =    1668.70 FEET.

+--------------------------------------------------------------------------+
| DISCHARGE FROM DETENTION BASIN CONFLUENCING WITH LANDSCAPED BYPASS AREA  |
| - CODE 8                                                                 |
|                                                                          |
+--------------------------------------------------------------------------+

****************************************************************************
  FLOW PROCESS FROM NODE     78.00 TO NODE   3000.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  5.300
  *USER SPECIFIED(SUBAREA):
  NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT = 0.6148
```

```
  SUBAREA AREA(ACRES) =    0.70   SUBAREA RUNOFF(CFS) =    2.45
  TOTAL AREA(ACRES) =        6.6   TOTAL RUNOFF(CFS) =      21.51
  TC(MIN.) =    9.39

****************************************************************************
  FLOW PROCESS FROM NODE     79.00 TO NODE   3000.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  5.300
  *USER SPECIFIED(SUBAREA):
  NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT = 0.6166
  SUBAREA AREA(ACRES) =    0.26   SUBAREA RUNOFF(CFS) =    0.91
  TOTAL AREA(ACRES) =        6.9   TOTAL RUNOFF(CFS) =      22.42
  TC(MIN.) =    9.39

****************************************************************************
  FLOW PROCESS FROM NODE     76.00 TO NODE     77.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =    79.00
  UPSTREAM ELEVATION(FEET) =    205.25
  DOWNSTREAM ELEVATION(FEET) =    203.12
  ELEVATION DIFFERENCE(FEET) =      2.13
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.839
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      0.37
  TOTAL AREA(ACRES) =      0.05   TOTAL RUNOFF(CFS) =      0.37

****************************************************************************
  FLOW PROCESS FROM NODE     77.00 TO NODE   4000.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  203.12  DOWNSTREAM ELEVATION(FEET) =  197.78
  STREET LENGTH(FEET) =   175.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.71
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.79
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.75
  STREET FLOW TRAVEL TIME(MIN.) =   0.77   Tc(MIN.) =    2.61
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
```

```
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  STREETS & ROADS (CURBS/STORM DRAINS) RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    0.09      SUBAREA RUNOFF(CFS) =    0.67
  TOTAL AREA(ACRES) =        0.1        PEAK FLOW RATE(CFS) =       1.05

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.20   HALFSTREET FLOOD WIDTH(FEET) =   2.00
  FLOW VELOCITY(FEET/SEC.) =  3.79   DEPTH*VELOCITY(FT*FT/SEC.) =   0.75
  LONGEST FLOWPATH FROM NODE     76.00 TO NODE   4000.00 =     254.00 FEET.
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        0.1  TC(MIN.) =      2.61
  PEAK FLOW RATE(CFS)   =       1.05
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

CHAPTER 5 - MODIFIED-PULS DETENTION ROUTING

5.1 – Rational Method Hydrograph

RATIONAL METHOD HYDROGRAPH PROGRAM
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RUN DATE 2/27/2020
HYDROGRAPH FILE NAME Text1
TIME OF CONCENTRATION 5 MIN.
6 HOUR RAINFALL 3.02 INCHES
BASIN AREA 5.9 ACRES
RUNOFF COEFFICIENT 0.94
PEAK DISCHARGE 43.78 CFS

TIME (MIN) = 0	DISCHARGE (CFS) = 0
TIME (MIN) = 5	DISCHARGE (CFS) = 1
TIME (MIN) = 10	DISCHARGE (CFS) = 1
TIME (MIN) = 15	DISCHARGE (CFS) = 1
TIME (MIN) = 20	DISCHARGE (CFS) = 1
TIME (MIN) = 25	DISCHARGE (CFS) = 1.1
TIME (MIN) = 30	DISCHARGE (CFS) = 1.1
TIME (MIN) = 35	DISCHARGE (CFS) = 1.1
TIME (MIN) = 40	DISCHARGE (CFS) = 1.1
TIME (MIN) = 45	DISCHARGE (CFS) = 1.1
TIME (MIN) = 50	DISCHARGE (CFS) = 1.1
TIME (MIN) = 55	DISCHARGE (CFS) = 1.2
TIME (MIN) = 60	DISCHARGE (CFS) = 1.2
TIME (MIN) = 65	DISCHARGE (CFS) = 1.2
TIME (MIN) = 70	DISCHARGE (CFS) = 1.2
TIME (MIN) = 75	DISCHARGE (CFS) = 1.2
TIME (MIN) = 80	DISCHARGE (CFS) = 1.3
TIME (MIN) = 85	DISCHARGE (CFS) = 1.3
TIME (MIN) = 90	DISCHARGE (CFS) = 1.3
TIME (MIN) = 95	DISCHARGE (CFS) = 1.4
TIME (MIN) = 100	DISCHARGE (CFS) = 1.4
TIME (MIN) = 105	DISCHARGE (CFS) = 1.4
TIME (MIN) = 110	DISCHARGE (CFS) = 1.4
TIME (MIN) = 115	DISCHARGE (CFS) = 1.5
TIME (MIN) = 120	DISCHARGE (CFS) = 1.5
TIME (MIN) = 125	DISCHARGE (CFS) = 1.6
TIME (MIN) = 130	DISCHARGE (CFS) = 1.6
TIME (MIN) = 135	DISCHARGE (CFS) = 1.7
TIME (MIN) = 140	DISCHARGE (CFS) = 1.7
TIME (MIN) = 145	DISCHARGE (CFS) = 1.8
TIME (MIN) = 150	DISCHARGE (CFS) = 1.8
TIME (MIN) = 155	DISCHARGE (CFS) = 1.9
TIME (MIN) = 160	DISCHARGE (CFS) = 1.9
TIME (MIN) = 165	DISCHARGE (CFS) = 2
TIME (MIN) = 170	DISCHARGE (CFS) = 2.1
TIME (MIN) = 175	DISCHARGE (CFS) = 2.2
TIME (MIN) = 180	DISCHARGE (CFS) = 2.3
TIME (MIN) = 185	DISCHARGE (CFS) = 2.5
TIME (MIN) = 190	DISCHARGE (CFS) = 2.6
TIME (MIN) = 195	DISCHARGE (CFS) = 2.8
TIME (MIN) = 200	DISCHARGE (CFS) = 2.9
TIME (MIN) = 205	DISCHARGE (CFS) = 3.2
TIME (MIN) = 210	DISCHARGE (CFS) = 3.4
TIME (MIN) = 215	DISCHARGE (CFS) = 3.9
TIME (MIN) = 220	DISCHARGE (CFS) = 4.3
TIME (MIN) = 225	DISCHARGE (CFS) = 5.2
TIME (MIN) = 230	DISCHARGE (CFS) = 6
TIME (MIN) = 235	DISCHARGE (CFS) = 8.7
TIME (MIN) = 240	DISCHARGE (CFS) = 12.7
TIME (MIN) = 245	DISCHARGE (CFS) = 43.78
TIME (MIN) = 250	DISCHARGE (CFS) = 7
TIME (MIN) = 255	DISCHARGE (CFS) = 4.7
TIME (MIN) = 260	DISCHARGE (CFS) = 3.7
TIME (MIN) = 265	DISCHARGE (CFS) = 3.1
TIME (MIN) = 270	DISCHARGE (CFS) = 2.7
TIME (MIN) = 275	DISCHARGE (CFS) = 2.4
TIME (MIN) = 280	DISCHARGE (CFS) = 2.2
TIME (MIN) = 285	DISCHARGE (CFS) = 2
TIME (MIN) = 290	DISCHARGE (CFS) = 1.8
TIME (MIN) = 295	DISCHARGE (CFS) = 1.7
TIME (MIN) = 300	DISCHARGE (CFS) = 1.6
TIME (MIN) = 305	DISCHARGE (CFS) = 1.5
TIME (MIN) = 310	DISCHARGE (CFS) = 1.5
TIME (MIN) = 315	DISCHARGE (CFS) = 1.4
TIME (MIN) = 320	DISCHARGE (CFS) = 1.3
TIME (MIN) = 325	DISCHARGE (CFS) = 1.3
TIME (MIN) = 330	DISCHARGE (CFS) = 1.2
TIME (MIN) = 335	DISCHARGE (CFS) = 1.2
TIME (MIN) = 340	DISCHARGE (CFS) = 1.1
TIME (MIN) = 345	DISCHARGE (CFS) = 1.1
TIME (MIN) = 350	DISCHARGE (CFS) = 1.1
TIME (MIN) = 355	DISCHARGE (CFS) = 1
TIME (MIN) = 360	DISCHARGE (CFS) = 1
TIME (MIN) = 365	DISCHARGE (CFS) = 0

5.2 – Stage-Storage & Stage-Discharge Relationships

Stage- Storage Calculations

ELEVATION	AREA (SF)	VOLUME (FT^3)	VOLUME (AC)
0	6090	0	0
1	6090	6090	0.140
2	6090	12180	0.280
3	6090	18270	0.419
4	6090	24360	0.559

Outlet structure for Discharge of Detention Basin 1

(note: 0' elevation is assumed as surface invert of 6-inch gravel layer)

Low orifice:	2.3125 "	Lower slot		Emergency Weir			
Number:	2	Invert:	1.25 ft	Invert:	3.750 ft		
Cg-low:	0.62	B	3.00 ft	B:	12 ft		
Middle orifice:	1 "	h	0.208 ft				
number of orif:	0	Upper slot					
Cg-middle:	0.62	Invert:	2.25 ft	45.00			
invert elev:	0.75 ft	B:	3.75 ft				
		h	0.670 ft				

h (ft)	H/D-low -	H/D-mid -	Qlow-orif (cfs)	Qlow-weir (cfs)	Qtot-low (cfs)	Qmid-orif (cfs)	Qmid-weir (cfs)	Qtot-med (cfs)	Qslot-low (cfs)	Qslot-upp (cfs)	Qemer (cfs)	Qtot (cfs)	Total H (ft)	Total Q (cfs)	Flow + LID (cfs)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.100	0.519	0.000	0.018	0.027	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.027	0.100	0.027	0.027
0.200	1.038	0.000	0.093	0.090	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.200	0.090	0.090
0.300	1.557	0.000	0.131	0.159	0.131	0.000	0.000	0.000	0.000	0.000	0.000	0.131	0.300	0.131	0.131
0.400	2.076	0.000	0.160	0.209	0.160	0.000	0.000	0.000	0.000	0.000	0.000	0.160	0.400	0.160	0.160
0.500	2.595	0.000	0.184	0.228	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.184	0.500	0.184	0.184
0.600	3.114	0.000	0.206	0.232	0.206	0.000	0.000	0.000	0.000	0.000	0.000	0.206	0.600	0.206	0.206
0.700	3.632	0.000	0.226	0.275	0.226	0.000	0.000	0.000	0.000	0.000	0.000	0.226	0.700	0.226	0.226
0.800	4.151	0.600	0.243	0.463	0.243	0.000	0.000	0.000	0.000	0.000	0.000	0.243	0.800	0.243	0.243
0.900	4.670	1.800	0.260	0.964	0.260	0.000	0.000	0.000	0.000	0.000	0.000	0.260	0.900	0.260	0.260
1.000	5.189	3.000	0.276	2.020	0.276	0.000	0.000	0.000	0.000	0.000	0.000	0.276	1.000	0.276	0.276
1.100	5.708	4.200	0.291	2.908	0.291	0.000	0.000	0.000	0.000	0.000	0.000	0.291	1.100	0.291	0.291
1.200	6.227	5.400	0.305	3.049	0.305	0.000	0.000	0.000	0.000	0.000	0.000	0.305	1.200	0.305	0.305
1.300	6.746	6.600	0.318	3.184	0.318	0.000	0.000	0.000	0.104	0.000	0.000	0.422	1.300	0.422	0.422
1.400	7.265	7.800	0.331	3.314	0.331	0.000	0.000	0.000	0.540	0.000	0.000	0.872	1.400	0.872	0.872
1.500	7.784	9.000	0.344	3.439	0.344	0.000	0.000	0.000	1.163	0.000	0.000	1.506	1.500	1.506	1.506
1.600	8.303	10.200	0.356	3.559	0.356	0.000	0.000	0.000	1.517	0.000	0.000	1.873	1.600	1.873	1.873
1.700	8.822	11.400	0.368	3.675	0.368	0.000	0.000	0.000	1.799	0.000	0.000	2.167	1.700	2.167	2.167
1.800	9.341	12.600	0.379	3.788	0.379	0.000	0.000	0.000	2.043	0.000	0.000	2.422	1.800	2.422	2.422
1.900	9.859	13.800	0.390	3.898	0.390	0.000	0.000	0.000	2.260	0.000	0.000	2.650	1.900	2.650	2.650
2.000	10.378	15.000	0.400	4.005	0.400	0.000	0.000	0.000	2.459	0.000	0.000	2.859	2.000	2.859	2.859
2.100	10.897	16.200	0.411	4.108	0.411	0.000	0.000	0.000	2.642	0.000	0.000	3.053	2.100	3.053	3.053
2.200	11.416	17.400	0.421	4.210	0.421	0.000	0.000	0.000	2.814	0.000	0.000	3.235	2.200	3.235	3.235
2.300	11.935	18.600	0.431	4.309	0.431	0.000	0.000	0.000	2.976	0.130	0.000	3.536	2.300	3.536	3.536
2.400	12.454	19.800	0.441	4.405	0.441	0.000	0.000	0.000	3.129	0.675	0.000	4.245	2.400	4.245	4.245
2.500	12.973	21.000	0.450	4.500	0.450	0.000	0.000	0.000	3.275	1.453	0.000	5.178	2.500	5.178	5.178
2.600	13.492	22.200	0.459	4.592	0.459	0.000	0.000	0.000	3.415	2.407	0.000	6.281	2.600	6.281	6.281
2.700	14.011	23.400	0.468	4.683	0.468	0.000	0.000	0.000	3.549	3.509	0.000	7.527	2.700	7.527	7.527
2.800	14.530	24.600	0.477	4.772	0.477	0.000	0.000	0.000	3.679	4.742	0.000	8.898	2.800	8.898	8.898
2.900	15.049	25.800	0.486	4.860	0.486	0.000	0.000	0.000	3.804	6.092	0.000	10.382	2.900	10.382	10.382
3.000	15.568	27.000	0.495	4.946	0.495	0.000	0.000	0.000	3.925	7.551	0.000	11.970	3.000	11.970	11.970
3.100	16.086	28.200	0.503	5.030	0.503	0.000	0.000	0.000	4.043	8.826	0.000	13.372	3.100	13.372	13.372
3.200	16.605	29.400	0.511	5.113	0.511	0.000	0.000	0.000	4.157	9.645	0.000	14.313	3.200	14.313	14.313
3.300	17.124	30.600	0.519	5.195	0.519	0.000	0.000	0.000	4.268	10.400	0.000	15.187	3.300	15.187	15.187
3.400	17.643	31.800	0.528	5.275	0.528	0.000	0.000	0.000	4.376	11.103	0.000	16.007	3.400	16.007	16.007
3.500	18.162	33.000	0.535	5.355	0.535	0.000	0.000	0.000	4.482	11.765	0.000	16.782	3.500	16.782	16.782
3.600	18.681	34.200	0.543	5.433	0.543	0.000	0.000	0.000	4.585	12.391	0.000	17.519	3.600	17.519	17.519
3.750	19.459	36.000	0.555	5.548	0.555	0.000	0.000	0.000	4.736	13.275	0.000	18.566	3.750	18.566	18.566
3.800	19.719	36.600	0.559	5.586	0.559	0.000	0.000	0.000	4.785	13.557	0.416	19.316	3.800	19.316	19.316
3.900	20.238	37.800	0.566	5.661	0.566	0.000	0.000	0.000	4.882	14.104	2.161	21.713	3.900	21.713	21.713
4.000	20.757	39.000	0.573	5.734	0.573	0.000	0.000	0.000	4.977	14.630	4.650	24.830	4.000	24.830	24.830

5.3 – HEC-HMS Modified-Puls Routing Results

Project: Detention2 Simulation Run: Run 1

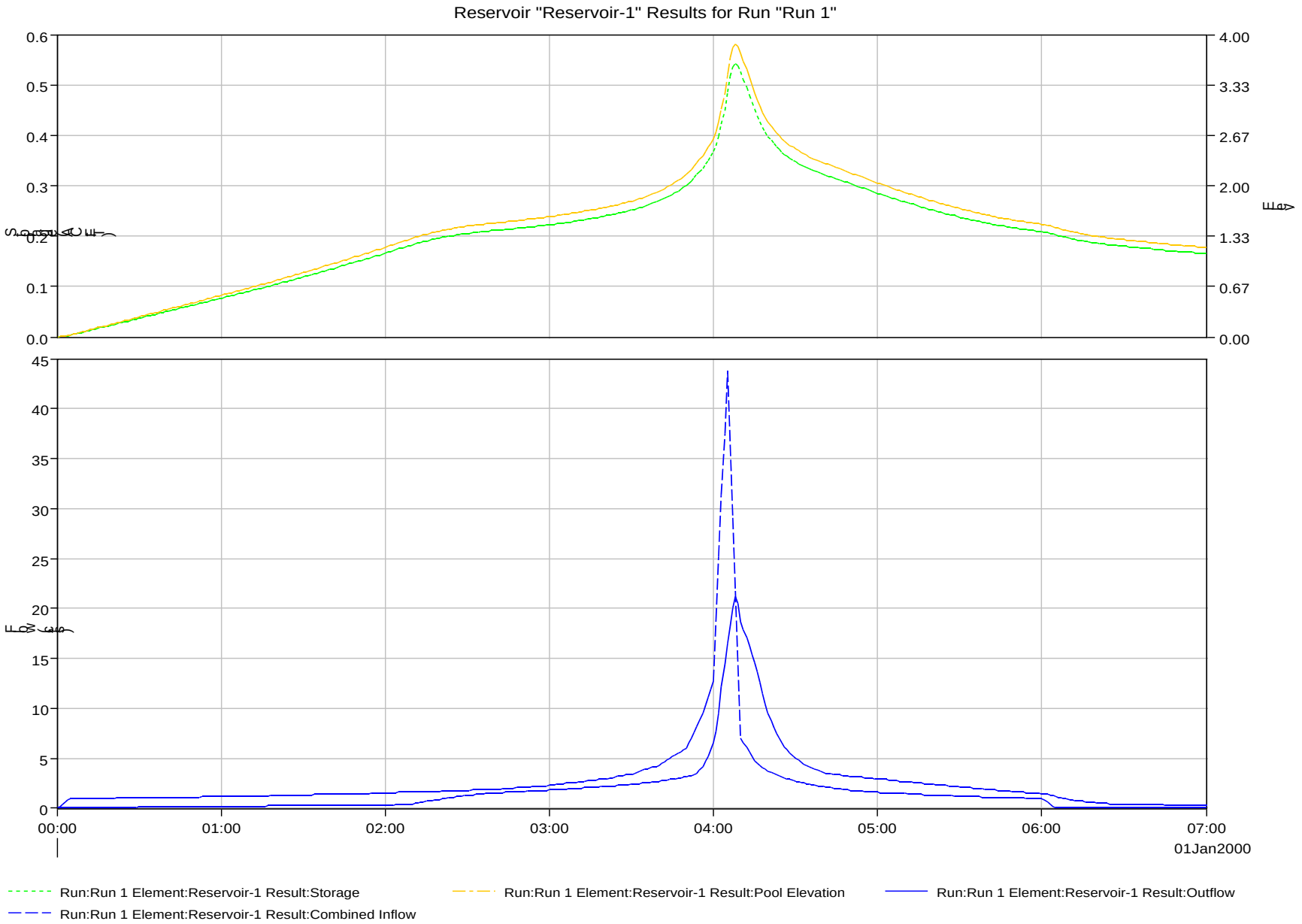
Reservoir: Reservoir-1

Start of Run:	01Jan2000, 00:00	Basin Model:	Basin 1
End of Run:	01Jan2000, 07:00	Meteorologic Model:	Met 1
Compute Time:	27Feb2020, 16:20:51	Control Specifications:	Control 1

Volume Units: IN

Computed Results

Peak Inflow:	43.7800 (CFS)	Date/Time of Peak Inflow:	01Jan2000, 04:05
Peak Discharge:	21.1334 (CFS)	Date/Time of Peak Discharge	01Jan2000, 04:08
Inflow Volume:	n/a	Peak Storage:	0.5418 (AC-FT)
Discharge Volume	n/a	Peak Elevation:	3.8712 (FT)


Reservoir "Reservoir-1" Results for Run "Run 1"
0.6
0.5
0.4
0.3
0.2
0.1
0.0
4.00
3.33
2.67
2.00
1.33
0.67
0.00
45
40
35
30
25
20
15
10
5
0
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
01Jan2000
Run:Run 1 Element:Reservoir-1 Result:Storage
Run:Run 1 Element:Reservoir-1 Result:Pool Elevation
Run:Run 1 Element:Reservoir-1 Result:Outflow
Run:Run 1 Element:Reservoir-1 Result:Combined Inflow

Project: Detention2 Simulation Run: Run 1
Reservoir: Reservoir-1

Start of Run: 01Jan2000, 00:00 Basin Model: Basin 1
End of Run: 01Jan2000, 07:00 Meteorologic Model: Met 1
Compute Time: 27Feb2020, 16:20:51 Control Specifications: Control 1

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	00:00	0.0000	0.0000	0.0000	0.0000
01Jan2000	00:01	0.2000	0.0001	0.0010	0.0003
01Jan2000	00:02	0.4000	0.0005	0.0039	0.0011
01Jan2000	00:03	0.6000	0.0012	0.0088	0.0024
01Jan2000	00:04	0.8000	0.0022	0.0157	0.0042
01Jan2000	00:05	1.0000	0.0034	0.0245	0.0066
01Jan2000	00:06	1.0000	0.0048	0.0342	0.0093
01Jan2000	00:07	1.0000	0.0062	0.0440	0.0119
01Jan2000	00:08	1.0000	0.0075	0.0537	0.0145
01Jan2000	00:09	1.0000	0.0089	0.0634	0.0171
01Jan2000	00:10	1.0000	0.0102	0.0730	0.0197
01Jan2000	00:11	1.0000	0.0116	0.0827	0.0224
01Jan2000	00:12	1.0000	0.0129	0.0923	0.0249
01Jan2000	00:13	1.0000	0.0143	0.1018	0.0283
01Jan2000	00:14	1.0000	0.0156	0.1114	0.0343
01Jan2000	00:15	1.0000	0.0169	0.1208	0.0402
01Jan2000	00:16	1.0000	0.0182	0.1303	0.0462
01Jan2000	00:17	1.0000	0.0195	0.1396	0.0521
01Jan2000	00:18	1.0000	0.0208	0.1489	0.0579
01Jan2000	00:19	1.0000	0.0221	0.1582	0.0638
01Jan2000	00:20	1.0000	0.0234	0.1673	0.0696
01Jan2000	00:21	1.0200	0.0247	0.1766	0.0754
01Jan2000	00:22	1.0400	0.0260	0.1859	0.0813
01Jan2000	00:23	1.0600	0.0274	0.1954	0.0873
01Jan2000	00:24	1.0800	0.0287	0.2051	0.0922
01Jan2000	00:25	1.1000	0.0301	0.2149	0.0962

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	00:26	1.1000	0.0315	0.2247	0.1003
01Jan2000	00:27	1.1000	0.0328	0.2345	0.1043
01Jan2000	00:28	1.1000	0.0342	0.2443	0.1083
01Jan2000	00:29	1.1000	0.0356	0.2541	0.1123
01Jan2000	00:30	1.1000	0.0369	0.2637	0.1163
01Jan2000	00:31	1.1000	0.0383	0.2734	0.1203
01Jan2000	00:32	1.1000	0.0396	0.2830	0.1242
01Jan2000	00:33	1.1000	0.0410	0.2926	0.1281
01Jan2000	00:34	1.1000	0.0423	0.3022	0.1317
01Jan2000	00:35	1.1000	0.0436	0.3117	0.1345
01Jan2000	00:36	1.1000	0.0450	0.3212	0.1373
01Jan2000	00:37	1.1000	0.0463	0.3306	0.1400
01Jan2000	00:38	1.1000	0.0476	0.3400	0.1428
01Jan2000	00:39	1.1000	0.0489	0.3494	0.1455
01Jan2000	00:40	1.1000	0.0502	0.3588	0.1482
01Jan2000	00:41	1.1000	0.0515	0.3682	0.1509
01Jan2000	00:42	1.1000	0.0528	0.3775	0.1536
01Jan2000	00:43	1.1000	0.0542	0.3868	0.1563
01Jan2000	00:44	1.1000	0.0554	0.3961	0.1590
01Jan2000	00:45	1.1000	0.0567	0.4053	0.1614
01Jan2000	00:46	1.1000	0.0580	0.4145	0.1636
01Jan2000	00:47	1.1000	0.0593	0.4237	0.1658
01Jan2000	00:48	1.1000	0.0606	0.4329	0.1680
01Jan2000	00:49	1.1000	0.0619	0.4421	0.1703
01Jan2000	00:50	1.1000	0.0632	0.4512	0.1724
01Jan2000	00:51	1.1200	0.0645	0.4604	0.1747
01Jan2000	00:52	1.1400	0.0658	0.4698	0.1769
01Jan2000	00:53	1.1600	0.0671	0.4794	0.1792
01Jan2000	00:54	1.1800	0.0685	0.4891	0.1816
01Jan2000	00:55	1.2000	0.0699	0.4990	0.1839
01Jan2000	00:56	1.2000	0.0713	0.5090	0.1861

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	00:57	1.2000	0.0727	0.5190	0.1883
01Jan2000	00:58	1.2000	0.0740	0.5289	0.1905
01Jan2000	00:59	1.2000	0.0754	0.5388	0.1927
01Jan2000	01:00	1.2000	0.0768	0.5487	0.1949
01Jan2000	01:01	1.2000	0.0782	0.5586	0.1971
01Jan2000	01:02	1.2000	0.0796	0.5685	0.1992
01Jan2000	01:03	1.2000	0.0810	0.5783	0.2014
01Jan2000	01:04	1.2000	0.0823	0.5881	0.2036
01Jan2000	01:05	1.2000	0.0837	0.5979	0.2057
01Jan2000	01:06	1.2000	0.0851	0.6077	0.2077
01Jan2000	01:07	1.2000	0.0864	0.6174	0.2097
01Jan2000	01:08	1.2000	0.0878	0.6272	0.2116
01Jan2000	01:09	1.2000	0.0892	0.6369	0.2136
01Jan2000	01:10	1.2000	0.0905	0.6466	0.2155
01Jan2000	01:11	1.2000	0.0919	0.6563	0.2174
01Jan2000	01:12	1.2000	0.0932	0.6659	0.2194
01Jan2000	01:13	1.2000	0.0946	0.6756	0.2213
01Jan2000	01:14	1.2000	0.0959	0.6852	0.2232
01Jan2000	01:15	1.2000	0.0973	0.6948	0.2252
01Jan2000	01:16	1.2200	0.0986	0.7045	0.2269
01Jan2000	01:17	1.2400	0.1000	0.7143	0.2286
01Jan2000	01:18	1.2600	0.1014	0.7244	0.2303
01Jan2000	01:19	1.2800	0.1028	0.7346	0.2321
01Jan2000	01:20	1.3000	0.1043	0.7450	0.2338
01Jan2000	01:21	1.3000	0.1058	0.7555	0.2356
01Jan2000	01:22	1.3000	0.1072	0.7659	0.2374
01Jan2000	01:23	1.3000	0.1087	0.7764	0.2392
01Jan2000	01:24	1.3000	0.1102	0.7868	0.2409
01Jan2000	01:25	1.3000	0.1116	0.7972	0.2427
01Jan2000	01:26	1.3000	0.1131	0.8076	0.2445
01Jan2000	01:27	1.3000	0.1145	0.8180	0.2463

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	01:28	1.3000	0.1160	0.8283	0.2480
01Jan2000	01:29	1.3000	0.1174	0.8387	0.2498
01Jan2000	01:30	1.3000	0.1189	0.8490	0.2515
01Jan2000	01:31	1.3200	0.1203	0.8594	0.2533
01Jan2000	01:32	1.3400	0.1218	0.8700	0.2551
01Jan2000	01:33	1.3600	0.1233	0.8808	0.2569
01Jan2000	01:34	1.3800	0.1248	0.8917	0.2588
01Jan2000	01:35	1.4000	0.1264	0.9028	0.2607
01Jan2000	01:36	1.4000	0.1280	0.9140	0.2625
01Jan2000	01:37	1.4000	0.1295	0.9252	0.2642
01Jan2000	01:38	1.4000	0.1311	0.9364	0.2660
01Jan2000	01:39	1.4000	0.1327	0.9475	0.2678
01Jan2000	01:40	1.4000	0.1342	0.9586	0.2696
01Jan2000	01:41	1.4000	0.1358	0.9698	0.2714
01Jan2000	01:42	1.4000	0.1373	0.9809	0.2732
01Jan2000	01:43	1.4000	0.1389	0.9919	0.2749
01Jan2000	01:44	1.4000	0.1404	1.0030	0.2767
01Jan2000	01:45	1.4000	0.1420	1.0140	0.2783
01Jan2000	01:46	1.4000	0.1435	1.0251	0.2800
01Jan2000	01:47	1.4000	0.1451	1.0361	0.2816
01Jan2000	01:48	1.4000	0.1466	1.0471	0.2833
01Jan2000	01:49	1.4000	0.1481	1.0581	0.2849
01Jan2000	01:50	1.4000	0.1497	1.0690	0.2866
01Jan2000	01:51	1.4200	0.1512	1.0801	0.2882
01Jan2000	01:52	1.4400	0.1528	1.0913	0.2899
01Jan2000	01:53	1.4600	0.1544	1.1027	0.2916
01Jan2000	01:54	1.4800	0.1560	1.1143	0.2932
01Jan2000	01:55	1.5000	0.1576	1.1260	0.2949
01Jan2000	01:56	1.5000	0.1593	1.1379	0.2965
01Jan2000	01:57	1.5000	0.1610	1.1497	0.2982
01Jan2000	01:58	1.5000	0.1626	1.1615	0.2998

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	01:59	1.5000	0.1643	1.1733	0.3015
01Jan2000	02:00	1.5000	0.1659	1.1851	0.3032
01Jan2000	02:01	1.5200	0.1676	1.1970	0.3048
01Jan2000	02:02	1.5400	0.1693	1.2090	0.3175
01Jan2000	02:03	1.5600	0.1709	1.2210	0.3317
01Jan2000	02:04	1.5800	0.1726	1.2331	0.3458
01Jan2000	02:05	1.6000	0.1743	1.2453	0.3601
01Jan2000	02:06	1.6000	0.1760	1.2574	0.3743
01Jan2000	02:07	1.6000	0.1777	1.2694	0.3884
01Jan2000	02:08	1.6000	0.1794	1.2813	0.4023
01Jan2000	02:09	1.6000	0.1810	1.2930	0.4160
01Jan2000	02:10	1.6000	0.1826	1.3045	0.4506
01Jan2000	02:11	1.6200	0.1842	1.3156	0.5009
01Jan2000	02:12	1.6400	0.1857	1.3265	0.5499
01Jan2000	02:13	1.6600	0.1872	1.3371	0.5976
01Jan2000	02:14	1.6800	0.1886	1.3474	0.6441
01Jan2000	02:15	1.7000	0.1900	1.3575	0.6895
01Jan2000	02:16	1.7000	0.1914	1.3672	0.7333
01Jan2000	02:17	1.7000	0.1927	1.3765	0.7752
01Jan2000	02:18	1.7000	0.1940	1.3854	0.8153
01Jan2000	02:19	1.7000	0.1952	1.3939	0.8537
01Jan2000	02:20	1.7000	0.1963	1.4021	0.8977
01Jan2000	02:21	1.7200	0.1974	1.4098	0.9469
01Jan2000	02:22	1.7400	0.1984	1.4173	0.9944
01Jan2000	02:23	1.7600	0.1994	1.4245	1.0401
01Jan2000	02:24	1.7800	0.2004	1.4314	1.0843
01Jan2000	02:25	1.8000	0.2013	1.4382	1.1271
01Jan2000	02:26	1.8000	0.2022	1.4446	1.1678
01Jan2000	02:27	1.8000	0.2031	1.4506	1.2061
01Jan2000	02:28	1.8000	0.2039	1.4563	1.2421
01Jan2000	02:29	1.8000	0.2046	1.4616	1.2759

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	02:30	1.8000	0.2053	1.4666	1.3077
01Jan2000	02:31	1.8200	0.2060	1.4714	1.3381
01Jan2000	02:32	1.8400	0.2067	1.4761	1.3679
01Jan2000	02:33	1.8600	0.2073	1.4807	1.3971
01Jan2000	02:34	1.8800	0.2079	1.4852	1.4257
01Jan2000	02:35	1.9000	0.2086	1.4896	1.4539
01Jan2000	02:36	1.9000	0.2091	1.4939	1.4809
01Jan2000	02:37	1.9000	0.2097	1.4979	1.5062
01Jan2000	02:38	1.9000	0.2102	1.5017	1.5201
01Jan2000	02:39	1.9000	0.2108	1.5054	1.5336
01Jan2000	02:40	1.9000	0.2112	1.5089	1.5466
01Jan2000	02:41	1.9200	0.2117	1.5124	1.5596
01Jan2000	02:42	1.9400	0.2122	1.5160	1.5727
01Jan2000	02:43	1.9600	0.2128	1.5197	1.5861
01Jan2000	02:44	1.9800	0.2133	1.5234	1.5997
01Jan2000	02:45	2.0000	0.2138	1.5271	1.6136
01Jan2000	02:46	2.0200	0.2143	1.5310	1.6277
01Jan2000	02:47	2.0400	0.2149	1.5349	1.6420
01Jan2000	02:48	2.0600	0.2154	1.5388	1.6565
01Jan2000	02:49	2.0800	0.2160	1.5428	1.6712
01Jan2000	02:50	2.1000	0.2166	1.5468	1.6860
01Jan2000	02:51	2.1200	0.2171	1.5509	1.7011
01Jan2000	02:52	2.1400	0.2177	1.5551	1.7163
01Jan2000	02:53	2.1600	0.2183	1.5593	1.7317
01Jan2000	02:54	2.1800	0.2189	1.5635	1.7473
01Jan2000	02:55	2.2000	0.2195	1.5678	1.7630
01Jan2000	02:56	2.2200	0.2201	1.5721	1.7789
01Jan2000	02:57	2.2400	0.2207	1.5765	1.7949
01Jan2000	02:58	2.2600	0.2213	1.5809	1.8111
01Jan2000	02:59	2.2800	0.2219	1.5853	1.8274
01Jan2000	03:00	2.3000	0.2226	1.5898	1.8438

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	03:01	2.3400	0.2232	1.5944	1.8607
01Jan2000	03:02	2.3800	0.2239	1.5992	1.8774
01Jan2000	03:03	2.4200	0.2246	1.6043	1.8923
01Jan2000	03:04	2.4600	0.2253	1.6096	1.9079
01Jan2000	03:05	2.5000	0.2261	1.6151	1.9243
01Jan2000	03:06	2.5200	0.2269	1.6208	1.9410
01Jan2000	03:07	2.5400	0.2277	1.6265	1.9578
01Jan2000	03:08	2.5600	0.2285	1.6323	1.9747
01Jan2000	03:09	2.5800	0.2293	1.6380	1.9917
01Jan2000	03:10	2.6000	0.2301	1.6438	2.0088
01Jan2000	03:11	2.6400	0.2310	1.6498	2.0263
01Jan2000	03:12	2.6800	0.2318	1.6559	2.0444
01Jan2000	03:13	2.7200	0.2327	1.6623	2.0631
01Jan2000	03:14	2.7600	0.2336	1.6688	2.0824
01Jan2000	03:15	2.8000	0.2346	1.6756	2.1023
01Jan2000	03:16	2.8200	0.2355	1.6825	2.1225
01Jan2000	03:17	2.8400	0.2365	1.6893	2.1427
01Jan2000	03:18	2.8600	0.2375	1.6962	2.1629
01Jan2000	03:19	2.8800	0.2384	1.7031	2.1810
01Jan2000	03:20	2.9000	0.2394	1.7099	2.1986
01Jan2000	03:21	2.9600	0.2404	1.7171	2.2167
01Jan2000	03:22	3.0200	0.2414	1.7246	2.2359
01Jan2000	03:23	3.0800	0.2425	1.7325	2.2561
01Jan2000	03:24	3.1400	0.2437	1.7408	2.2773
01Jan2000	03:25	3.2000	0.2449	1.7494	2.2995
01Jan2000	03:26	3.2400	0.2462	1.7584	2.3223
01Jan2000	03:27	3.2800	0.2475	1.7675	2.3456
01Jan2000	03:28	3.3200	0.2487	1.7768	2.3693
01Jan2000	03:29	3.3600	0.2501	1.7862	2.3933
01Jan2000	03:30	3.4000	0.2514	1.7958	2.4178
01Jan2000	03:31	3.5000	0.2528	1.8058	2.4412

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	03:32	3.6000	0.2543	1.8166	2.4658
01Jan2000	03:33	3.7000	0.2559	1.8281	2.4921
01Jan2000	03:34	3.8000	0.2577	1.8404	2.5201
01Jan2000	03:35	3.9000	0.2595	1.8533	2.5496
01Jan2000	03:36	3.9800	0.2614	1.8668	2.5805
01Jan2000	03:37	4.0600	0.2633	1.8809	2.6125
01Jan2000	03:38	4.1400	0.2653	1.8953	2.6455
01Jan2000	03:39	4.2200	0.2674	1.9103	2.6772
01Jan2000	03:40	4.3000	0.2696	1.9257	2.7094
01Jan2000	03:41	4.4800	0.2719	1.9420	2.7437
01Jan2000	03:42	4.6600	0.2744	1.9598	2.7809
01Jan2000	03:43	4.8400	0.2771	1.9790	2.8210
01Jan2000	03:44	5.0200	0.2799	1.9996	2.8637
01Jan2000	03:45	5.2000	0.2830	2.0216	2.9062
01Jan2000	03:46	5.3600	0.2862	2.0449	2.9511
01Jan2000	03:47	5.5200	0.2896	2.0693	2.9983
01Jan2000	03:48	5.6800	0.2932	2.0949	3.0475
01Jan2000	03:49	5.8400	0.2969	2.1215	3.0961
01Jan2000	03:50	6.0000	0.3007	2.1492	3.1463
01Jan2000	03:51	6.5400	0.3050	2.1799	3.2018
01Jan2000	03:52	7.0800	0.3099	2.2153	3.2858
01Jan2000	03:53	7.6200	0.3154	2.2549	3.4046
01Jan2000	03:54	8.1600	0.3215	2.2987	3.5357
01Jan2000	03:55	8.7000	0.3280	2.3456	3.8656
01Jan2000	03:56	9.5000	0.3350	2.3957	4.2189
01Jan2000	03:57	10.3000	0.3425	2.4496	4.7103
01Jan2000	03:58	11.1000	0.3504	2.5063	5.2469
01Jan2000	03:59	11.9000	0.3585	2.5651	5.8914
01Jan2000	04:00	12.7000	0.3669	2.6251	6.5851
01Jan2000	04:01	18.9160	0.3789	2.7112	7.6636
01Jan2000	04:02	25.1320	0.3974	2.8442	9.5254

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	04:03	31.3480	0.4213	3.0164	12.1618
01Jan2000	04:04	37.5640	0.4504	3.2228	14.5036
01Jan2000	04:05	43.7800	0.4850	3.4684	16.5462
01Jan2000	04:06	36.4240	0.5164	3.6906	18.1727
01Jan2000	04:07	29.0680	0.5352	3.8241	19.9935
01Jan2000	04:08	21.7120	0.5418	3.8712	21.1334
01Jan2000	04:09	14.3560	0.5380	3.8441	20.4787
01Jan2000	04:10	7.0000	0.5257	3.7569	18.7248
01Jan2000	04:11	6.5400	0.5099	3.6444	17.8479
01Jan2000	04:12	6.0800	0.4945	3.5356	17.0571
01Jan2000	04:13	5.6200	0.4796	3.4301	16.2465
01Jan2000	04:14	5.1600	0.4653	3.3281	15.4168
01Jan2000	04:15	4.7000	0.4514	3.2298	14.5656
01Jan2000	04:16	4.5000	0.4383	3.1367	13.7010
01Jan2000	04:17	4.3000	0.4262	3.0509	12.6500
01Jan2000	04:18	4.1000	0.4153	2.9736	11.5075
01Jan2000	04:19	3.9000	0.4057	2.9046	10.4181
01Jan2000	04:20	3.7000	0.3972	2.8435	9.5142
01Jan2000	04:21	3.5800	0.3897	2.7892	8.7269
01Jan2000	04:22	3.4600	0.3830	2.7408	8.0681
01Jan2000	04:23	3.3400	0.3770	2.6975	7.4817
01Jan2000	04:24	3.2200	0.3715	2.6583	6.9957
01Jan2000	04:25	3.1000	0.3665	2.6225	6.5520
01Jan2000	04:26	3.0200	0.3620	2.5898	6.1626
01Jan2000	04:27	2.9400	0.3578	2.5599	5.8345
01Jan2000	04:28	2.8600	0.3540	2.5323	5.5321
01Jan2000	04:29	2.7800	0.3504	2.5068	5.2525
01Jan2000	04:30	2.7000	0.3471	2.4830	5.0207
01Jan2000	04:31	2.6400	0.3440	2.4608	4.8141
01Jan2000	04:32	2.5800	0.3411	2.4399	4.6204
01Jan2000	04:33	2.5200	0.3384	2.4203	4.4385

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	04:34	2.4600	0.3359	2.4018	4.2672
01Jan2000	04:35	2.4000	0.3334	2.3843	4.1380
01Jan2000	04:36	2.3600	0.3311	2.3674	4.0194
01Jan2000	04:37	2.3200	0.3288	2.3513	3.9060
01Jan2000	04:38	2.2800	0.3267	2.3360	3.7976
01Jan2000	04:39	2.2400	0.3247	2.3212	3.6938
01Jan2000	04:40	2.2000	0.3227	2.3071	3.5944
01Jan2000	04:41	2.1600	0.3208	2.2935	3.5199
01Jan2000	04:42	2.1200	0.3189	2.2800	3.4796
01Jan2000	04:43	2.0800	0.3170	2.2665	3.4393
01Jan2000	04:44	2.0400	0.3152	2.2531	3.3990
01Jan2000	04:45	2.0000	0.3133	2.2396	3.3587
01Jan2000	04:46	1.9600	0.3114	2.2261	3.3184
01Jan2000	04:47	1.9200	0.3096	2.2127	3.2781
01Jan2000	04:48	1.8800	0.3077	2.1992	3.2378
01Jan2000	04:49	1.8400	0.3058	2.1857	3.2122
01Jan2000	04:50	1.8000	0.3039	2.1720	3.1875
01Jan2000	04:51	1.7800	0.3020	2.1583	3.1627
01Jan2000	04:52	1.7600	0.3001	2.1446	3.1379
01Jan2000	04:53	1.7400	0.2982	2.1310	3.1132
01Jan2000	04:54	1.7200	0.2963	2.1174	3.0887
01Jan2000	04:55	1.7000	0.2944	2.1039	3.0642
01Jan2000	04:56	1.6800	0.2926	2.0904	3.0389
01Jan2000	04:57	1.6600	0.2907	2.0769	3.0129
01Jan2000	04:58	1.6400	0.2888	2.0636	2.9871
01Jan2000	04:59	1.6200	0.2870	2.0502	2.9614
01Jan2000	05:00	1.6000	0.2851	2.0370	2.9359
01Jan2000	05:01	1.5800	0.2833	2.0238	2.9104
01Jan2000	05:02	1.5600	0.2815	2.0106	2.8850
01Jan2000	05:03	1.5400	0.2797	1.9975	2.8597
01Jan2000	05:04	1.5200	0.2778	1.9846	2.8327

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	05:05	1.5000	0.2760	1.9717	2.8057
01Jan2000	05:06	1.5000	0.2743	1.9590	2.7791
01Jan2000	05:07	1.5000	0.2725	1.9465	2.7530
01Jan2000	05:08	1.5000	0.2708	1.9343	2.7275
01Jan2000	05:09	1.5000	0.2691	1.9224	2.7025
01Jan2000	05:10	1.5000	0.2675	1.9106	2.6780
01Jan2000	05:11	1.4800	0.2659	1.8991	2.6538
01Jan2000	05:12	1.4600	0.2643	1.8876	2.6278
01Jan2000	05:13	1.4400	0.2627	1.8761	2.6016
01Jan2000	05:14	1.4200	0.2611	1.8647	2.5756
01Jan2000	05:15	1.4000	0.2595	1.8534	2.5497
01Jan2000	05:16	1.3800	0.2579	1.8421	2.5239
01Jan2000	05:17	1.3600	0.2563	1.8309	2.4983
01Jan2000	05:18	1.3400	0.2548	1.8197	2.4728
01Jan2000	05:19	1.3200	0.2532	1.8086	2.4474
01Jan2000	05:20	1.3000	0.2516	1.7975	2.4221
01Jan2000	05:21	1.3000	0.2501	1.7866	2.3943
01Jan2000	05:22	1.3000	0.2486	1.7760	2.3672
01Jan2000	05:23	1.3000	0.2472	1.7656	2.3407
01Jan2000	05:24	1.3000	0.2458	1.7555	2.3149
01Jan2000	05:25	1.3000	0.2444	1.7456	2.2897
01Jan2000	05:26	1.2800	0.2430	1.7359	2.2649
01Jan2000	05:27	1.2600	0.2417	1.7262	2.2402
01Jan2000	05:28	1.2400	0.2403	1.7166	2.2156
01Jan2000	05:29	1.2200	0.2390	1.7070	2.1912
01Jan2000	05:30	1.2000	0.2377	1.6975	2.1668
01Jan2000	05:31	1.2000	0.2363	1.6881	2.1392
01Jan2000	05:32	1.2000	0.2351	1.6790	2.1124
01Jan2000	05:33	1.2000	0.2338	1.6702	2.0863
01Jan2000	05:34	1.2000	0.2326	1.6616	2.0610
01Jan2000	05:35	1.2000	0.2315	1.6532	2.0364

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	05:36	1.1800	0.2303	1.6450	2.0123
01Jan2000	05:37	1.1600	0.2292	1.6368	1.9882
01Jan2000	05:38	1.1400	0.2280	1.6287	1.9643
01Jan2000	05:39	1.1200	0.2269	1.6206	1.9405
01Jan2000	05:40	1.1000	0.2258	1.6126	1.9167
01Jan2000	05:41	1.1000	0.2247	1.6047	1.8934
01Jan2000	05:42	1.1000	0.2236	1.5970	1.8702
01Jan2000	05:43	1.1000	0.2225	1.5895	1.8429
01Jan2000	05:44	1.1000	0.2215	1.5823	1.8165
01Jan2000	05:45	1.1000	0.2206	1.5754	1.7910
01Jan2000	05:46	1.1000	0.2196	1.5687	1.7665
01Jan2000	05:47	1.1000	0.2187	1.5623	1.7428
01Jan2000	05:48	1.1000	0.2179	1.5561	1.7200
01Jan2000	05:49	1.1000	0.2170	1.5501	1.6980
01Jan2000	05:50	1.1000	0.2162	1.5443	1.6767
01Jan2000	05:51	1.0800	0.2154	1.5386	1.6559
01Jan2000	05:52	1.0600	0.2146	1.5330	1.6351
01Jan2000	05:53	1.0400	0.2138	1.5273	1.6143
01Jan2000	05:54	1.0200	0.2130	1.5217	1.5935
01Jan2000	05:55	1.0000	0.2122	1.5160	1.5728
01Jan2000	05:56	1.0000	0.2115	1.5105	1.5525
01Jan2000	05:57	1.0000	0.2107	1.5052	1.5329
01Jan2000	05:58	1.0000	0.2100	1.5000	1.5139
01Jan2000	05:59	1.0000	0.2093	1.4951	1.4884
01Jan2000	06:00	1.0000	0.2087	1.4904	1.4588
01Jan2000	06:01	0.8000	0.2079	1.4851	1.4250
01Jan2000	06:02	0.6000	0.2069	1.4782	1.3810
01Jan2000	06:03	0.4000	0.2058	1.4698	1.3277
01Jan2000	06:04	0.2000	0.2044	1.4600	1.2654
01Jan2000	06:05	0.0000	0.2028	1.4488	1.1948
01Jan2000	06:06	0.0000	0.2012	1.4374	1.1225

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	06:07	0.0000	0.1997	1.4267	1.0545
01Jan2000	06:08	0.0000	0.1983	1.4167	0.9906
01Jan2000	06:09	0.0000	0.1970	1.4072	0.9306
01Jan2000	06:10	0.0000	0.1958	1.3983	0.8742
01Jan2000	06:11	0.0000	0.1946	1.3899	0.8357
01Jan2000	06:12	0.0000	0.1935	1.3819	0.7994
01Jan2000	06:13	0.0000	0.1924	1.3742	0.7647
01Jan2000	06:14	0.0000	0.1914	1.3668	0.7316
01Jan2000	06:15	0.0000	0.1904	1.3598	0.6998
01Jan2000	06:16	0.0000	0.1894	1.3531	0.6695
01Jan2000	06:17	0.0000	0.1885	1.3466	0.6404
01Jan2000	06:18	0.0000	0.1877	1.3405	0.6127
01Jan2000	06:19	0.0000	0.1868	1.3346	0.5861
01Jan2000	06:20	0.0000	0.1860	1.3289	0.5607
01Jan2000	06:21	0.0000	0.1853	1.3235	0.5363
01Jan2000	06:22	0.0000	0.1846	1.3184	0.5131
01Jan2000	06:23	0.0000	0.1839	1.3134	0.4908
01Jan2000	06:24	0.0000	0.1832	1.3087	0.4695
01Jan2000	06:25	0.0000	0.1826	1.3042	0.4492
01Jan2000	06:26	0.0000	0.1820	1.2998	0.4297
01Jan2000	06:27	0.0000	0.1814	1.2957	0.4191
01Jan2000	06:28	0.0000	0.1808	1.2916	0.4143
01Jan2000	06:29	0.0000	0.1803	1.2875	0.4096
01Jan2000	06:30	0.0000	0.1797	1.2835	0.4049
01Jan2000	06:31	0.0000	0.1791	1.2796	0.4002
01Jan2000	06:32	0.0000	0.1786	1.2756	0.3956
01Jan2000	06:33	0.0000	0.1780	1.2718	0.3911
01Jan2000	06:34	0.0000	0.1775	1.2679	0.3866
01Jan2000	06:35	0.0000	0.1770	1.2642	0.3822
01Jan2000	06:36	0.0000	0.1765	1.2604	0.3778
01Jan2000	06:37	0.0000	0.1759	1.2567	0.3735

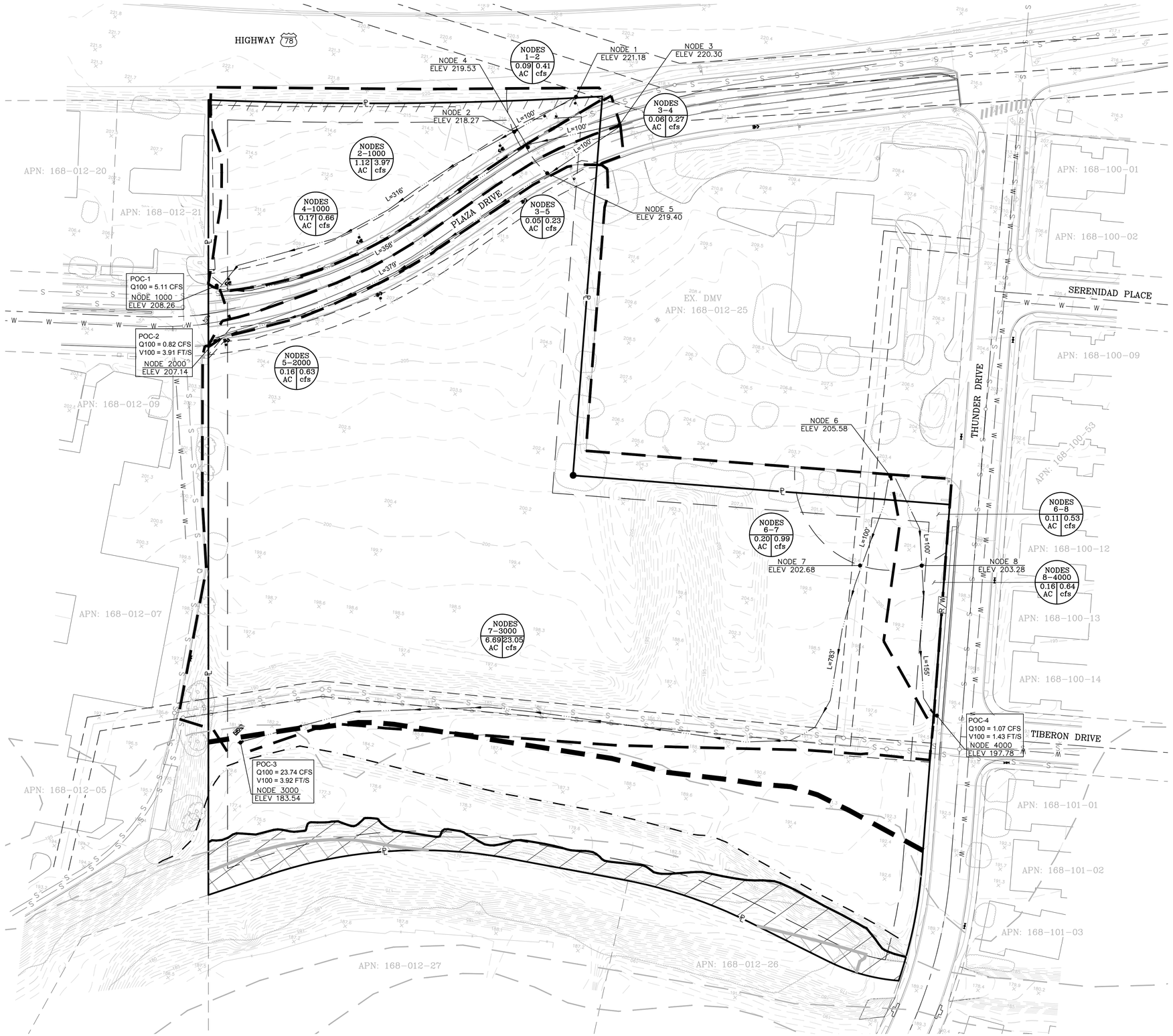
Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	06:38	0.0000	0.1754	1.2531	0.3692
01Jan2000	06:39	0.0000	0.1749	1.2495	0.3650
01Jan2000	06:40	0.0000	0.1744	1.2459	0.3608
01Jan2000	06:41	0.0000	0.1739	1.2424	0.3566
01Jan2000	06:42	0.0000	0.1734	1.2389	0.3526
01Jan2000	06:43	0.0000	0.1730	1.2354	0.3485
01Jan2000	06:44	0.0000	0.1725	1.2320	0.3445
01Jan2000	06:45	0.0000	0.1720	1.2286	0.3406
01Jan2000	06:46	0.0000	0.1715	1.2253	0.3367
01Jan2000	06:47	0.0000	0.1711	1.2220	0.3328
01Jan2000	06:48	0.0000	0.1706	1.2188	0.3290
01Jan2000	06:49	0.0000	0.1702	1.2155	0.3252
01Jan2000	06:50	0.0000	0.1697	1.2124	0.3215
01Jan2000	06:51	0.0000	0.1693	1.2092	0.3178
01Jan2000	06:52	0.0000	0.1689	1.2061	0.3142
01Jan2000	06:53	0.0000	0.1684	1.2030	0.3106
01Jan2000	06:54	0.0000	0.1680	1.2000	0.3070
01Jan2000	06:55	0.0000	0.1676	1.1970	0.3048
01Jan2000	06:56	0.0000	0.1672	1.1940	0.3044
01Jan2000	06:57	0.0000	0.1667	1.1910	0.3040
01Jan2000	06:58	0.0000	0.1663	1.1880	0.3036
01Jan2000	06:59	0.0000	0.1659	1.1850	0.3031
01Jan2000	07:00	0.0000	0.1655	1.1820	0.3027

CHAPTER 6 – WSPG HYDRAULIC ANALYSIS

Carmax Oceanside
Drainage Study

To be provided at final engineering.

CHAPTER 7 - HYDROLOGY MAPS



LEGEND

BASIN INFO — NODE TO NODE; AREA (AC); Q (CFS)

BASIN LIMITS

PROJECT BOUNDARY

FLOW–LINE L=100'

NODE INFO — NODE # / ELEVATION

50 25 0 50 100 150

SCALE: 1" = 50'

NO.	DESCRIPTION	DATE	APP'D
	REVISIONS		

Civil Engineering · Environmental
Land Surveying

2442 Second Avenue
San Diego, CA 92101
(619)232–9200 (619)232–9210 Fax

R·E·C
Consultants, Inc.

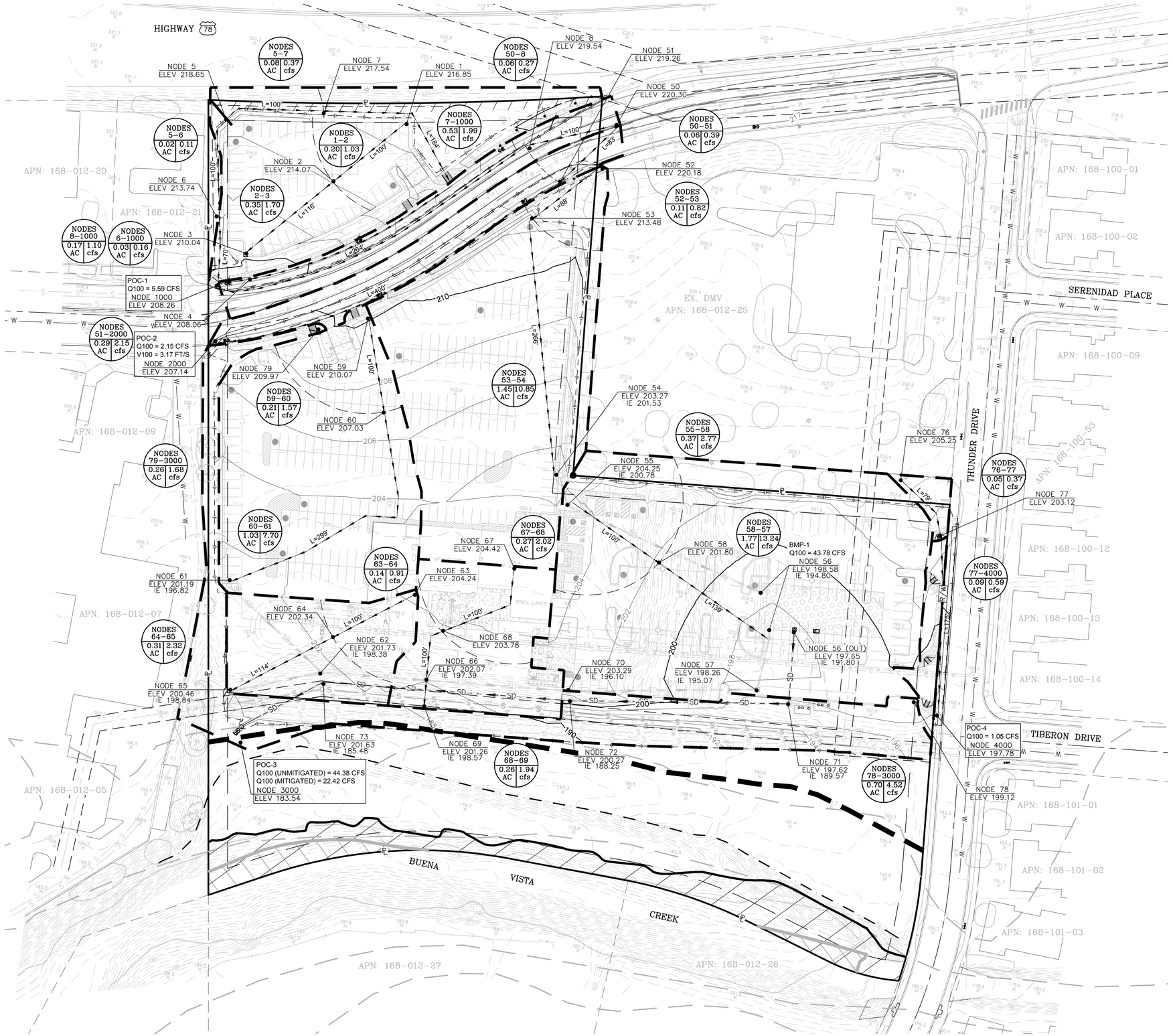
DATE: 10/25/19
SCALE: 1" = 50'
DRAWN: A.O.
CHECKED: J.R.R.

SHEET TITLE: DRAINAGE EXHIBIT - EXISTING CONDITIONS

PROJECT: CARMAX OCEANSIDE
PLAZA DRIVE & THUNDER DRIVE
OCEANSIDE, CA 92056

SHEET 1 OF 1 SHEETS

SAVE DATE: 3/6/2020 ~ PLOT DATE: 3/6/2020 ~ FILE NAME: P:\Accel\1492 CarMax Oceanside\Reports\Drainage Study\Drainage Exhibits.dwg



LEGEND

BASIN INFO — NODE TO NODE / AREA (AC) / Q (CFS)

BASIN LIMITS

PROJECT BOUNDARY

FLOW-LINE — L=100'

NODE INFO — NODE # / ELEVATION

NO.	DESCRIPTION	DATE	APP'D
	REVISIONS		

R·E·C Consultants, Inc.
Civil Engineering · Environmental
Land Surveying
2442 Second Avenue
San Diego, CA 92101
(619)232-9200 (619)232-9210 Fax

DATE: 10/25/19
SCALE: 1" = 50'
DRAWN: A.O.
CHECKED: J.R.R.

SHEET TITLE: DRAINAGE EXHIBIT - PROPOSED CONDITIONS

PROJECT: CARMAX OCEANSIDE
PLAZA DRIVE & THUNDER DRIVE
OCEANSIDE, CA 92056

SHEET 1 OF 1 SHEETS

SAVE DATE: 3/6/2020 ~ PLOT DATE: 3/6/2020 ~ FILE NAME: P:\Accel\1492 CarMax Oceanside\Reports\Drainage Study\Drainage Exhibits.dwg

APPENDIX K
Storm Water Quality Management Plan

(D19-00021; CUP19-00029)

CITY OF OCEANSIDE
ENGINEERING DIVISION

PRIORITY DEVELOPMENT PROJECT

STORM WATER QUALITY MANAGEMENT PLAN

FOR

CarMax Oceanside

ENGINEER OF WORK

_____

Jonathan Raab Rvdeen – RCE 64811

PREPARED FOR:

Centerpoint Integrated Solutions

1240 Bergen Parkway, Suite A-250

Evergreen, CO 80439

(303) 679-6977

PREPARED BY:

REC Consultants

2442 2nd Ave.

San Diego, CA 92101

(619) 232-9200

How to Use This Template

This template, assembled by GHD Inc. on behalf of the City of Oceanside, is for the development of Storm Water Quality Management Plans (SWQMPs) for Priority Development Projects (PDPs) proposed within Oceanside, CA. It is based on requirements set forth in the Regional Water Quality Control Board's National Pollutant Discharge Elimination System MS4 Permit that covers the San Diego Region (Order No. R9-2013-0001).

All references within the template refer to the City of Oceanside BMP Design Manual dated February 2016 (Manual). Use of this template in conjunction with the Manual is intended to help a project applicant develop a SWQMP compliant with City of Oceanside and MS4 Permit requirements.

Template Date: February 16, 2016

Assembled By:

Quick Reference Guide

Item	Project Information
Project Name	CarMax Oceanside
Application Number(s)	Click here to enter text.
Project Address	SWC Plaza Drive & Thunder Drive, Oceanside, CA
Total Parcel Area	478,210 sq. ft.
Project Description	The site is divided into "North" and "South" portions separated by Plaza Drive. The "North" site is bound to the north by Highway 78 and to the south by Plaza Drive. The "South" side is bound to the north by Plaza Drive and to the south by Buena Vista Creek. The existing site is vacant with sparse vegetation. The preliminary soils report determined the existing site has been previously filled. The existing and proposed use is "Community Commercial District." The project proposes a 5.9 acre Carmax dealership, service center, sales floor, and carwash on existing 10.98 acre site. Proposed dealership will include 502 asphalt concrete parking spaces on both north and south sides of Plaza Drive. Offsite surface improvements include the full width improvements and dedication of Plaza Drive to an 84' right-of-way width. Offsite utility improvements include the extension of the existing water main at Plaza Drive from the NWC of the project site to the intersection of Plaza Drive and Thunder Drive as well as the replacement and relocation of existing City of Oceanside and City of Vista sewer trunk lines along the southern portion of the project site.
Proposed Disturbed Area	383,838 sq. ft.
Created or Replaced Impervious	252,548 sq. ft.
Project Hydrologic Unit Watershed	☐ Santa Maria ☐ San Luis Rey ☒ Carlsbad
Required to implement HMP	☒ Yes ☐ No

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CERTIFICATION PAGE

Project Name: Carmax Oceanside
Permit Application Number: [D19-00021; CUP19-00029]

I hereby declare that I am the Engineer in Responsible Charge of design of storm water BMPs for this project, and that I have exercised responsible charge over the design of the project as defined in Section 6703 of the Business and Professions Code, and that the design is consistent with the requirements of the City of Oceanside BMP Design Manual, which is based on the requirements of San Diego Regional Water Quality Control Board Order No. R9-2013-0001 (MS4 Permit).

I have read and understand that the City has adopted minimum requirements for managing urban runoff, including storm water, from land development activities, as described in the BMP Design Manual. I certify that this SWQMP has been completed to the best of my ability and accurately reflects the project being proposed and the applicable source control and site design BMPs proposed to minimize the potentially negative impacts of this project's land development activities on water quality. I understand and acknowledge that the plan check review of this SWQMP by City staff is confined to a review and does not relieve me, as the Engineer in Responsible Charge of design of storm water BMPs for this project, of my responsibilities for project design.

As Engineer of Work, I agree to indemnify, defend, and hold harmless the City of Oceanside, its officers, agents, and employees from any and all liability, claims, damages, or injuries to any person or property which might arise from the negligent acts, errors, or omissions of the Engineer of Work, my employees, agents or consultants.

_____

Engineer of Work's Signature, PE Number & Expiration Date

Jonathan Raab Rydeen

Print Name

REC Consultants

Company

12/19/19

Date

Engineer's Seal:

SUBMITTAL RECORD

Use this Table to keep a record of submittals of this SWQMP. Each time the SWQMP is re-submitted, provide the date and status of the project. In last column indicate changes that have been made or indicate if response to plancheck comments is included. When applicable, insert response to plancheck comments behind this page.

Submittal Number	Date	Project Status	Changes
1	12/19/19]	☒ Preliminary Design/ Planning/ CEQA ☐ Final Design	Initial Submittal
2	[02/28/20]	☒ Preliminary Design/ Planning/ CEQA ☐ Final Design	2nd Submittal
3	[MM/DD/YY]	☐ Preliminary Design/ Planning/ CEQA ☐ Final Design	Click here to enter text.
4	[MM/DD/YY]	☐ Preliminary Design/ Planning/ CEQA ☐ Final Design	Click here to enter text.

Project Vicinity Map

Applicability of Permanent, Post-Construction Storm Water BMP Requirements (Storm Water Intake Form for all Development Permit Applications)	Form I-1

Project Identification

Project Name: Carmax Oceanside	
Permit Application Number: D19-00021; CUP19-00029	Date: 02/28/20

Determination of Requirements

The purpose of this form is to identify permanent, post-construction requirements that apply to the project. This form serves as a short summary of applicable requirements, in some cases referencing separate forms that will serve as the backup for the determination of requirements.

Answer each step below, starting with Step 1 and progressing through each step until reaching "Stop".
Refer to the manual sections and/or separate forms referenced in each step below.

Step	Answer	Progression
Step 1: Is the project a "development project"? See Section 1.3 of the manual for guidance.	☒Yes	Go to Step 2.
	☐No	Stop. Permanent BMP requirements do not apply. No SWQMP will be required. Provide discussion below.
Discussion / justification if the project is not a "development project" (e.g., the project includes *only* interior remodels within an existing building):		
Step 2: Is the project a Standard Project, PDP, or exception to PDP definitions? To answer this item, see Section 1.4 of the manual *in its entirety* for guidance, AND complete Form I-2, Project Type Determination.	☐Standard Project	Stop. Standard Project requirements apply, including Standard Project SWQMP.
	☒PDP	PDP requirements apply, including PDP SWQMP. Go to Step 3.
	☐ Exception to PDP definitions	Stop. Standard Project requirements apply. Provide discussion and list any additional requirements below. Prepare Standard Project SWQMP.
Discussion / justification, and additional requirements for exceptions to PDP definitions, if applicable:		

Form I-1 Page 2 of 2		
Step	**Answer**	**Progression**
Step 3. Is the project subject to earlier PDP requirements due to a prior lawful approval? See Section 1.10 of the manual for guidance.	☐Yes	Consult the [City Engineer] to determine requirements. Provide discussion and identify requirements below. Go to Step 4.
	☒No	BMP Design Manual PDP requirements apply. Go to Step 4.
Discussion / justification of prior lawful approval, and identify requirements (*not required if prior lawful approval does not apply*):		
Step 4. Do hydromodification control requirements apply? See Section 1.6 of the manual for guidance.	☒Yes	PDP structural BMPs required for pollutant control (Chapter 5) and hydromodification control (Chapter 6). Go to Step 5.
	☐No	Stop. PDP structural BMPs required for pollutant control (Chapter 5) only. Provide brief discussion of exemption to hydromodification control below.
Discussion / justification if hydromodification control requirements do <u>not</u> apply:		
Step 5. Does protection of critical coarse sediment yield areas apply? See Section 6.2 of the manual for guidance.	☐Yes	Management measures required for protection of critical coarse sediment yield areas (Chapter 6.2). Stop.
	☒No	Management measures not required for protection of critical coarse sediment yield areas. Provide brief discussion below. Stop.
Discussion / justification if protection of critical coarse sediment yield areas does <u>not</u> apply: Project will not impact any potential critical coarse sediment yield areas according to the WMAA map.		

Project Type Determination Checklist			Form I-2
Project Information			
Project Name: Carmax Oceanside			
Permit Application Number: D19-00021; CUP19-00029			
Project Type Determination: Standard Project or PDP			
The project is (select one): × New Development ☐ Redevelopment			
The total proposed newly created or replaced impervious area is: 252,548 ft² (5.798 acres)			
Is the project in any of the following categories, (a) through (f)?			
Yes ☒	No ☐	(a)	New development projects that create 10,000 square feet or more of impervious surfaces (collectively over the entire project site). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.
Yes ☒	No ☐	(b)	Redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project site on an existing site of 10,000 square feet or more of impervious surfaces). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.
Yes ☒	No ☐	(c)	New and redevelopment projects that create 5,000 square feet or more of impervious surface (collectively over the entire project site), and support one or more of the following uses: (i) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption SIC code 5812). (ii) Hillside development projects. This category includes development on any natural slope that is twenty-five percent or greater. (iii) Parking lots. This category is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce. (iv) Streets, roads, highways, freeways, and driveways. This category is defined as any paved impervious surface used for the transportation of automobiles, trucks, motorcycles, and other vehicles.

Form I-2 Page 2 of 2			
Yes ☒	No ☐	(d)	New or redevelopment projects that create or replace 2,500 square feet or more of impervious surface (collectively over the entire project site), and discharging directly to an Environmentally Sensitive Area (ESA). "Discharging directly to" includes flow that is conveyed overland a distance of 200 feet or less from the project to the ESA, or conveyed in a pipe or open channel any distance as an isolated flow from the project to the ESA (i.e. not commingled with flows from adjacent lands). Note: ESAs are areas that include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Board and SDRWQCB; State Water Quality Protected Areas; water bodies designated with the RARE beneficial use by the State Water Board and SDRWQCB; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees. See manual Section 1.4.2 for additional guidance.
Yes ☒	No ☐	(e)	New development projects that support one or more of the following uses: (i) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following SIC codes: 5013, 5014, 5541, 7532-7534, or 7536-7539. (ii) Retail gasoline outlets. This category includes retail gasoline outlets that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic of 100 or more vehicles per day.
Yes ☒	No ☐	(f)	New or redevelopment projects that result in the disturbance of one or more acres of land and are expected to generate pollutants post construction. *Note: See manual Section 1.4.2 for additional guidance.*

Does the project meet the definition of one or more of the PDP categories (a) through (f) listed above?

☐ No – the project is not a PDP (Standard Project).

☒ Yes – the project is a PDP.

The following is for redevelopment PDPs only:

The area of existing (pre-project) impervious area at the project site is: _____ ft² (A)
The total proposed newly created or replaced impervious area is: _____ ft² (B)
Percent impervious surface created or replaced (A/B)*100: _____%
The percent impervious surface created or replaced is (select one based on the above calculation):

☐ less than or equal to fifty percent (50%) – only new impervious areas are considered PDP

OR

☐ greater than fifty percent (50%) – the entire project site is a PDP

Site Information Checklist For PDPs	Form I-3B (PDPs)
Project Summary Information	
Project Name	Carmax Oceanside
Project Address	SWC of Plaza Drive and Thunder Drive
Assessor's Parcel Number(s)	168-012-42, 43
Permit Application Number	D19-00021; CUP19-00029
Project Watershed (Hydrologic Unit)	Select One: ☐Santa Margarita 902 ☐San Luis Rey 903 ☒Carlsbad 904
Parcel Area (total area of Assessor's Parcel(s) associated with the project)	10.98 Acres (478,210 Square Feet)
Area to be disturbed by the project (Project Area)	8.81 Acres (383,838 Square Feet)
Project Proposed Impervious Area (subset of Project Area)	5.798 Acres (252,548 Square Feet)
Project Proposed Pervious Area (subset of Project Area)	3.01 Acres (131,291 Square Feet)
Note: Proposed Impervious Area + Proposed Pervious Area = Area to be Disturbed by the Project. This may be less than the Parcel Area.	

Hydrologic Unit	Hydrologic Area	Hydrologic Sub-Area
Santa Margarita 902.00	☐ Ysidora 902.10	☐ Lower Ysidora 902.11
San Luis Rey 903.00	☐ Lower San Luis 903.10	☐ Mission 903.11
		☐ Bonsall 903.12
Carlsbad 904.00	☐ Loma Alta 904.10	Not Applicable
	☒ Buena Vista Creek 904.20	☐ El Salto 904.21
		☒ Vista 904.22
	☐ Agua Hedionda 4.30	☐ Los Monos 904.31

Form I-3B Page 2 of 10
Description of Existing Site Condition and Drainage Patterns
Current Status of the Site (select all that apply): ☐Existing development ☒Previously graded but not built out ☐Agricultural or other non-impervious use ☒Vacant, undeveloped/natural Description / Additional Information: The site has been previously graded and backfilled to varying depths of 2'-12' across the site. The site has been left vacant and undeveloped since approximately the 1990's. Disturbed native vegetation exists on-site.
Existing Land Cover Includes (select all that apply): ☒Vegetative Cover ☒Non-Vegetated Pervious Areas ☐Impervious Areas Description / Additional Information: The majority of the site is non-vegetated pervious area. A small portion of the site to the south and southeast of the site contains disturbed vegetation.
Underlying Soil belongs to Hydrologic Soil Group (select all that apply): ☐NRCS Type A ☐NRCS Type B ☐NRCS Type C ☒NRCS Type D
Approximate Depth to Groundwater: ☐Groundwater Depth < 5 feet ☐5 feet < Groundwater Depth < 10 feet ☐10 feet < Groundwater Depth < 20 feet ☒Groundwater Depth > 20 feet

Description of Existing Site Topography and Drainage [How is storm water runoff conveyed from the site? At a minimum, this description should answer (1) whether existing drainage conveyance is natural or urban; (2) describe existing constructed storm water conveyance systems, if applicable; and (3) is runoff from offsite conveyed through the site? If so, describe]:

The site is divided into a "North" and "South" portions separated by Plaza Drive. The "North" site is bound to the north by Highway 78 and to the south by Plaza Drive. This portion of the site surface flows to the southwest corner of the site where it eventually makes its way onto Plaza Drive. Plaza Drive drainage flows west towards the intersection of Highway 78 and Plaza Drive where it enters a curb inlet which will ultimately drain to Buena Vista Creek.

The "South" site is bound to the north by Plaza Drive, to the south by Buena Vista Creek, to the west by an existing shopping center and to the east by Thunder Drive. This portion of the site surface flows in a southwesterly general direction. The south site sheet flows directly into Buena Vista Creek.

The neighboring DMV parking lot slopes down towards the project site at an approximate slope of 2:1. This permeable slope area consists of approximately 12,546 SF. This areas drainage is conveyed through the project site via surface flow and ultimately drains into Buena Vista Creek at the southwest corner of the site.

Description of Proposed Site Development and Drainage Patterns

Project Description / Proposed Land Use and/or Activities:

Project proposes a 5.789 acre Carmax dealership, service center, sales floor, and carwash on existing 10.98 acre site. Proposed dealership will include 502 asphalt concrete parking spaces on both north and south sides of Plaza Drive. Offsite surface improvements include the full width improvements and dedication of Plaza Drive to an 84' right-of-way width. The full width improvements will include an additional travel lane as well as curb, gutter and sidewalk on both north and south sides of Plaza Drive. The "north" side will be constructed solely of permeable materials therefore; no storm water mitigation or water quality is necessary.

The "south" side storm water runoff will be conveyed through underground pipes from various parts of the site to an underground partial infiltration proprietary bio-filtration system. This partial infiltration proprietary bio-filtration system consists of 58 proprietary underground vaults. The vaults will be open bottom and will sit on a 6" gravel layer. The proprietary partial infiltration bio-filtration system will take care of 14% of the site DCV as shown in the bio-filtration retention calculations attached as well as address Q100 and hydromodification concerns. The remaining 86% of the site DCV will then enter a proprietary water quality modular wetland. Once the DCV has been treated it will exit the modular wetland at the southwest corner of the site and enter Buena Vista Creek (POC-3) as it does in existing conditions.

The Plaza Drive expansion on both the north and south sides will be treated via tree wells. The design calls for (4) 30' trees on each side to treat the proposed road expansion for hydromodification and water quality. The (4) 30' trees will also treat the existing road area for water quality purposes. The County spreadsheet detailing these calculations is attached to this report.

List/describe proposed impervious features of the project (e.g., buildings, roadways, parking lots, courtyards, athletic courts, other impervious features):

Impervious features on the "south" side consist of parking lots, sales floor building, carwash, and service center. Offsite impervious features consist of Plaza Drive road widening and curb, gutter and sidewalk improvements.

List/describe proposed pervious features of the project (e.g., landscape areas):

The "north" side will be constructed solely of permeable material. On the "south" side proposed pervious features include landscape islands within parking lot. Offsite pervious features include parkway landscape areas on Plaza Drive and Thunder Drive as well as 12' DG sewer easement and access road to the south of the site. The site will not be developed south of the 12' DG sewer easement and therefore will remain pervious, see DMA exhibit for reference. Existing slope area north of the site between the existing DMV and the proposed parking lot will also remain as permeable landscaped areas.

Does the project include grading and changes to site topography?

☒Yes

☐No

Description / Additional Information:

The site will be graded to allow for a shallower slope from existing conditions. The site is designed to be a balanced site and will ultimately require 13,000 CY of earthwork. The proposed site grading will generally slope south, in the same direction as existing conditions. The site will create various low points throughout that will ultimately discharge at the same location as existing conditions.

Does the project include changes to site drainage (e.g., installation of new storm water conveyance systems)?

☒Yes

☐No

Description / Additional Information:

The "north" side will drain in the same manner as existing conditions. The site will be constructed using permeable materials that will outlet via an under sidewalk drain at POC-1. The "south" side will drain via a series of on-site storm drain inlets. All inlets will direct storm water to the proprietary underground bio-filtration system that will ultimately outlet at POC-3.

Form I-3B Page 5 of 10

Identify whether any of the following features, activities, and/or pollutant source areas will be present (select all that apply):

☒Onsite storm drain inlets

☒Interior floor drains and elevator shaft sump pumps

☐Interior parking garages

☒Need for future indoor & structural pest control

☒Landscape/outdoor pesticide use

☒Pools, spas, ponds, decorative fountains, and other water features

☐Food service

☒Refuse areas

☐Industrial processes

☐Outdoor storage of equipment or materials

☒Vehicle and equipment cleaning

☒Vehicle/equipment repair and maintenance

☒Fuel dispensing areas

☐Loading docks

☐Fire sprinkler test water

☒Miscellaneous drain or wash water

☒Plazas, sidewalks, and parking lots

Form I-3B Page 6 of 10		
Identification of Receiving Water Pollutants of Concern		
Describe path of storm water from the project site to the Pacific Ocean (or bay, lagoon, lake or reservoir, as applicable): Runoff from the "north" site will be discharged via under sidewalk drain onto Plaza Drive. The discharge will flow west and enter a curb inlet just east of the intersection of Plaza Drive and Highway 78. The discharge will then flow via a series of underground pipes into Buena Vista Creek. Buena Vista creek flows west and ultimately contributes to Buena Vista Lagoon. Buena Vista Lagoon then discharges into the Pacific Ocean. The "south" side will flow into a proprietary underground bio-filtration system that will be discharged into Buena Vista Creek and then will follow the flow path of the north side development towards Buena Vista Creek and ultimately into the Pacific Ocean.		
List any 303(d) impaired water bodies within the path of storm water from the project site to the Pacific Ocean (or bay, lagoon, lake or reservoir, as applicable), identify the pollutant(s)/stressor(s) causing impairment, and identify any TMDLs for the impaired water bodies:		
303(d) Impaired Water Body	**Pollutant(s)/Stressor(s)**	**TMDLs**
Buena Vista Creek	Benthic Community Effects – hydromodification, illicit connections, urban runoff Selenium – Source Unknown	N/A
Buena Vista Lagoon	Indicator Bacteria – Source unknown Nutrients – Source unknown Sedimentation/Siltation – Source unknown	N/A
Pacific Ocean Shoreline, Buena Vista Creek HA, at Buena Vista Lagoon Outlet	Indicator bacteria – Trash Nutrients – Source unknown Sedimentation/Siltation – Source unknown	N/A

Form I-3B Page 7 of 10			
Identification of Project Site Pollutants* ***Identification of project site pollutants is only required if flow-thru treatment BMPs are implemented onsite in lieu of retention or biofiltration BMPs (note the project must also participate in an alternative compliance program unless prior lawful approval to meet earlier PDP requirements is demonstrated)**			
Identify pollutants expected from the project site based on all proposed use(s) of the site (see manual Appendix B.6):			
Pollutant	**Not Applicable to the Project Site**	**Expected from the Project Site**	**Also a Receiving Water Pollutant of Concern**
Sediment		X	X
Nutrients		X	X
Heavy Metals		X	X
Organic Compounds	X		X
Trash & Debris		X	X
Oxygen Demanding Substances		X	X
Oil & Grease		X	X
Bacteria & Viruses		X	X
Pesticides		X	X

Note: Indicator Bacteria shall be addressed as a Pollutant of Concern (POC) for projects located in the Lower San Luis Hydrologic Area and for projects that discharge to the Pacific Ocean Shoreline within the boundaries of the City of Oceanside.

Note: Nutrients shall be addressed as a Pollutant of Concern (POC) for projects located in the Loma Alta Hydrologic Area.

Hydromodification Management Requirements

Do hydromodification management requirements apply (see Section 1.6 of the manual)?

☒Yes, hydromodification management flow control structural BMPs required.

☐No, the project will discharge runoff directly to existing underground storm drains discharging directly to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean.

☐No, the project will discharge runoff directly to conveyance channels whose bed and bank are concrete-lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean.

☐No, the project will discharge runoff directly to an area identified as appropriate for an exemption by the WMAA for the watershed in which the project resides.

Description / Additional Information (to be provided if a 'No' answer has been selected above):

Critical Coarse Sediment Yield Areas*

***This Section only required if hydromodification management requirements apply**

Based on the maps provided within the WMAA, do potential critical coarse sediment yield areas exist within the project drainage boundaries?

☐Yes

☒No, no critical coarse sediment yield areas to be protected based on WMAA maps

If yes, have any of the optional analyses presented in Section 6.2 of the manual been performed?

☐6.2.1 Verification of GLUs Onsite

☐6.2.2 Downstream Systems Sensitivity to Coarse Sediment

☐6.2.3 Optional Additional Analysis of Potential Critical Coarse Sediment Yield Areas Onsite

☐No optional analyses performed, the project will avoid critical coarse sediment yield areas identified based on WMAA maps

If optional analyses were performed, what is the final result?

☐No critical coarse sediment yield areas to be protected based on verification of GLUs onsite.

☐Critical coarse sediment yield areas exist but additional analysis has determined that protection is not required. Documentation attached in Attachment 8 of the SWQMP.

☐Critical coarse sediment yield areas exist and require protection. The project will implement management measures described in Sections 6.2.4 and 6.2.5 as applicable, and the areas are identified on the SWQMP Exhibit.

Discussion / Additional Information:

Flow Control for Post-Project Runoff*

***This Section only required if hydromodification management requirements apply**

List and describe point(s) of compliance (POCs) for flow control for hydromodification management (see Section 6.3.1). For each POC, provide a POC identification name or number correlating to the project's HMP Exhibit and a receiving channel identification name or number correlating to the project's HMP Exhibit.

The site will discharge to four different POC's. The northerly site, DMA-1A, B, and C, will drain to POC-1 via permeable pavement materials and then to an under sidewalk drain that will outlet at the existing POC on Plaza Drive known as POC-1. POC-2 located on Plaza Drive will discharge runoff from the existing Plaza Drive street section as well as the additional Plaza Drive improvements. POC-3 near the southwesterly corner of the project site will drain the majority of the project site via storm drain and headwall. The existing POC-4 drains a small portion of the proposed driveways on Thunder Drive. Storm water flowing through POC-4 will make its way into a downstream curb inlet and into Buena Vista Creek.

Has a geomorphic assessment been performed for the receiving channel(s)?

☒No, the low flow threshold is 0.1Q2 (default low flow threshold)

☐Yes, the result is the low flow threshold is 0.1Q2

☐Yes, the result is the low flow threshold is 0.3Q2

☐Yes, the result is the low flow threshold is 0.5Q2

If a geomorphic assessment has been performed, provide title, date, and preparer:

Discussion / Additional Information: (optional)

Form I-3B Page 10 of 10
Other Site Requirements and Constraints
When applicable, list other site requirements or constraints that will influence storm water management design, such as zoning requirements including setbacks and open space, or local codes governing minimum street width, sidewalk construction, allowable pavement types, and drainage requirements. The north side of the site will be constructed of fully permeable materials and outlet at POC-1 in post-construction. The south side of the site is constrained by a wetland buffer to Buena Vista Creek. Therefore all water quality treatment and storage must remain on the north side of the wetland buffer. The existing Plaza Drive will be expanded to a full right-of-way width of 84'. This expansion will include an additional travel lane in each direction, a center turning lane, curb, gutter and sidewalk on north and south sides of Plaza Drive. Expansion of Plaza Drive will require storm water treatment. Plaza Drive expansion will be treated via tree wells with under sidewalk drains. The tree wells are sized to treat the existing road for water quality purposes and treat the Plaza Drive expansion for water quality and hydromodification.
Optional Additional Information or Continuation of Previous Sections As Needed

This space provided for additional information or continuation of information from previous sections as needed.

Source Control BMP Checklist for All Development Projects (Standard Projects and PDPs)	Form I-4

Project Identification

Project Name: Carmax Oceanside

Permit Application Number: D19-00021; CUP19-00029

Source Control BMPs

All development projects must implement source control BMPs SC-1 through SC-6 where applicable and feasible. See Chapter 4 and Appendix E of the manual for information to implement source control BMPs shown in this checklist.

Answer each category below pursuant to the following.

- "Yes" means the project will implement the source control BMP as described in Chapter 4 and/or Appendix E of the manual. Discussion / justification is not required.
- "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided.
- "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project has no outdoor materials storage areas). Discussion / justification may be provided.

Source Control Requirement	Implemented?		
SC-1 Prevention of Illicit Discharges into the MS4	☒ Yes	☐ No	☐ N/A
Discussion / justification if SC-1 not implemented:			
SC-2 Storm Drain Stenciling or Signage	☒ Yes	☐ No	☐ N/A
Discussion / justification if SC-2 not implemented:			
SC-3 Protect Outdoor Materials Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☐ Yes	☐ No	☒ N/A
Discussion / justification if SC-3 not implemented:			

Form I-4 Page 2 of 3			
Source Control Requirement	**Implemented?**		
SC-4 Protect Materials Stored in Outdoor Work Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☐ Yes	☐ No	☒ N/A
Discussion / justification if SC-4 not implemented:			
SC-5 Protect Trash Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☒ Yes	☐ No	☐ N/A
Discussion / justification if SC-5 not implemented:			

Form I-4 Page 3 of 3			
SC-6 Additional BMPs Based on Potential Sources of Runoff Pollutants (must answer for each source listed below)	**Implemented?**		
Onsite storm drain inlets	☒ Yes	☐ No	☐ N/A
Interior floor drains and elevator shaft sump pumps	☒ Yes	☐ No	☐ N/A
Interior parking garages	☐ Yes	☐ No	☒ N/A
Need for future indoor & structural pest control	☒ Yes	☐ No	☐ N/A
Landscape/outdoor pesticide use	☒ Yes	☐ No	☐ N/A
Pools, spas, ponds, decorative fountains, and other water features	☐ Yes	☐ No	☒ N/A
Food service	☐ Yes	☐ No	☒ N/A
Refuse area	☒ Yes	☐ No	☐ N/A
Industrial processes	☐ Yes	☐ No	☒ N/A
Outdoor storage of equipment or materials	☐ Yes	☐ No	☒ N/A
Vehicle and equipment cleaning	☒ Yes	☐ No	☐ N/A
Vehicle/equipment repair and maintenance	☒ Yes	☐ No	☐ N/A
Fuel dispensing areas	☒ Yes	☐ No	☐ N/A
Loading docks	☐ Yes	☐ No	☒ N/A
Fire sprinkler test water	☒ Yes	☐ No	☐ N/A
Miscellaneous drain or wash water	☒ Yes	☐ No	☐ N/A
Plazas, sidewalks, and parking lots	☒ Yes	☐ No	☐ N/A

Discussion / justification if SC-6 not implemented. Clearly identify which sources of runoff pollutants are discussed. Justification must be provided for all "No" answers shown above.

Onsite Storm Drain Inlets

- Mark all inlets with the words "No Dumping! Flows to Ocean" or similar
- Maintain and periodically repair or replace inlet markings
- Provide storm water pollution prevention information to new site owners, lessees, or operators

Interior Floor Drains and Elevator Shaft Sump Pumps

- Interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer
- Inspect and maintain drains to prevent blockages and overflow

Need for Future Indoor & Structural Pest Control

- Note building design features that discourage entry of pests.
- Provide integrated pest management information to owners, lessees, and operators

Landscape/ Outdoor Pesticide Use

- Preserve existing drought tolerant trees, shrubs, and ground cover to the maximum extent possible
- Design landscaping to minimize irrigation and runoff, propose surface infiltration where appropriate, and minimize the use of fertilizers and pesticides that can contribute to storm water pollution.
- Where landscape areas are used to retain or detail storm water, specify plants that are tolerant of periodic saturated soil conditions.
- Consider using pest-resistant plans, especially adjacent to hardscape
- To ensure successful establishment, select plans appropriate to site soils, slopes, climate, sun, wind, rain, land use, air, movement, ecological consistency, and plant interactions
- Maintain landscaping using minimum or no pesticides
- See applicable operational BMP's in Fact Sheet SC-41 "Building and Grounds Maintenance", in CASQA Storm Water Quality Handbooks
- Provide IPM information to new owners, lessees, and operators.

Refuse Areas

- Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post "No hazardous materials" signs. Inspect and pick-up litter daily and clean up spills immediately. Keep spill control materials available on-site. See fact sheet SC-34, "Waste Handling and Disposal" in the CASQA Storm Water Quality Handbooks.

Fire Sprinkler Test Water

- Provide means to drain fire sprinkler test water to sanitary sewer.

Miscellaneous Drain or Wash Water

- Boiler drain lines must be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system.
- Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system.
- Rooftop mounted equipment with potential to produce pollutants must be roofed and/or have secondary containment.
- Any drainage sumps onsite must feature a sediment sump to reduce the quantity of sediment in pumped water.
- Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff.

Plazas, Sidewalks, and Parking Lots

- Plazas, sidewalks and parking lots must be swept regularly to prevent the accumulation of litter and debris.
- Debris from pressure washing must be collected to prevent entry into the storm drain system. Wash water containing any cleaning agent or degreaser must be collected and discharged to the sanitary sewer system and not discharged to a storm drain.

The following activities and/or features are not part of proposed commercial development: interior parking garages, pools, spas, ponds, decorative fountains, and other water features, industrial processes, and loading docks. The following outdoor activities are discouraged: storage of equipment or materials, vehicle/ equipment cleaning, repair, and/or maintenance.

Site Design BMP Checklist for All Development Projects (Standard Projects and PDPs)	Form I-5

Project Identification

Project Name: Carmax Oceanside

Permit Application Number: D19-00021; CUP19-00029

Site Design BMPs

All development projects must implement site design BMPs SD-1 through SD-8 where applicable and feasible. See Chapter 4 and Appendix E of the manual for information to implement site design BMPs shown in this checklist.

Answer each category below pursuant to the following.

- "Yes" means the project will implement the site design BMP as described in Chapter 4 and/or Appendix E of the manual. Discussion / justification is not required.
- "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided.
- "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project site has no existing natural areas to conserve). Discussion / justification may be provided.

Site Design Requirement	Applied?		
SD-1 Maintain Natural Drainage Pathways and Hydrologic Features	☒ Yes	☐ No	☐ N/A
Discussion / justification if SD-1 not implemented:			
SD-2 Conserve Natural Areas, Soils, and Vegetation	☒ Yes	☐ No	☐ N/A
Discussion / justification if SD-2 not implemented:			
SD-3 Minimize Impervious Area	☒ Yes	☐ No	☐ N/A
Discussion / justification if SD-3 not implemented:			
SD-4 Minimize Soil Compaction	☒ Yes	☐ No	☐ N/A
Discussion / justification if SD-4 not implemented:			

Form I-5 Page 2 of 2			
Site Design Requirement	**Applied?**		
SD-5 Impervious Area Dispersion	☒ Yes	☐ No	☐ N/A
Discussion / justification if SD-5 not implemented:			
SD-6 Runoff Collection	☐ Yes	☐ No	☒ N/A
Discussion / justification if SD-6 not implemented: Runoff collection is infeasible. Runoff will be directed to underground detention system before release into Buena Vista Creek.			
SD-7 Landscaping with Native or Drought Tolerant Species	☒ Yes	☐ No	☐ N/A
Discussion / justification if SD-7 not implemented:			
SD-8 Harvesting and Using Precipitation	☐ Yes	☐ No	☒ N/A
Discussion / justification if SD-8 not implemented: Harvest and reuse of precipitation is infeasible, all runoff will be directed towards an underground detention system. The use of rain barrels is infeasible due to restrictions in available space to include them. The project proposes approximately 502 parking spaces, sales office space, service center, and car wash. In order for the project to be profitable there are a minimum amount of parking spaces required and because of southerly site constraints the project cannot be expanded, therefore rain harvesting space is infeasible.			

Summary of PDP Structural BMPs	Form I-6 (PDPs)
Project Identification	
Project Name: Carmax Oceanside	
Permit Application Number: D19-00021; CUP19-00029	
PDP Structural BMPs	
All PDPs must implement structural BMPs for storm water pollutant control (see Chapter 5 of the manual). Selection of PDP structural BMPs for storm water pollutant control must be based on the selection process described in Chapter 5. PDPs subject to hydromodification management requirements must also implement structural BMPs for flow control for hydromodification management (see Chapter 6 of the manual). Both storm water pollutant control and flow control for hydromodification management can be achieved within the same structural BMP(s). PDP structural BMPs must be verified by the local jurisdiction at the completion of construction. This may include requiring the project owner or project owner's representative to certify construction of the structural BMPs (see Section 1.12 of the manual). PDP structural BMPs must be maintained into perpetuity, and the local jurisdiction must confirm the maintenance (see Section 7 of the manual). Use this form to provide narrative description of the general strategy for structural BMP implementation at the project site in the box below. Then complete the PDP structural BMP summary information sheet (page 3 of this form) for each structural BMP within the project (copy the BMP summary information page as many times as needed to provide summary information for each individual structural BMP).	

Describe the general strategy for structural BMP implementation at the site. This information must describe how the steps for selecting and designing storm water pollutant control BMPs presented in Section 5.1 of the manual were followed, and the results (type of BMPs selected). For projects requiring hydromodification flow control BMPs, indicate whether pollutant control and flow control BMPs are integrated or separate.

The proposed project site was delineated in different DMA's per Section 3.3.3 of the City of Oceanside BMP Design Manual. There are a total of eight DMA areas and four POC's.

There are a total of three DMA areas contributing to POC-1. DMA-1A is comprised of permeable pavement and therefore is self-retaining. DMA-1B is the proposed Plaza Drive street expansion and DMA-1C is the northerly half of existing Plaza Drive. Water quality for this area will be addressed tree wells along the Plaza Drive right-of-way (ROW). Detailed calculations will be included as part of the Plaza Drive improvement plan submittal.

Two DMA areas contribute to POC-2. DMA-2A is the southerly half of the existing Plaza Drive while DMA-2B is the proposed southerly expansion of Plaza Drive. Water quality for these areas will be provided via tree wells. Detailed calculations to be provided as part of the Plaza Drive improvement plan submittal.

DMA-3A and 3B contribute to POC-3. DMA-3A is made up of the majority of the proposed Carmax site. The area will drain to an underground proprietary bio-filtration system comprised of concrete vaults with an open bottom. According to the Preliminary Percolation Evaluation report provided by EEI Engineering Solutions dated October 25, 2019 partial infiltration is feasible. Infiltration will be achieved via the open-bottom proprietary underground system which will sit over a 6" layer of gravel. The open-bottom tanks will also retain 14% of the DMA-3A's DCV as well as address Q100 and hydromodification concerns. The DCV was calculated using the City's Design Capture volume spreadsheet most adequate for proprietary BMP's. Retention calculations are also attached in Appendix 1. The remaining 86% of the DCV will then flow from the underground retention system into a proprietary bio-filtration system, also known as a modular wetland. The modular wetland will then treat the remaining DCV before ultimately discharging into Buena Vista Creek at the southwest corner of the site (POC-3). DMA-3B is solely permeable area and is classified as a bypass area. The area drains in a southwesterly direction towards POC-3; due to its permeability it is self-treating and therefore does not require water quality treatment.

Runoff from DMA-4 will contribute to POC-4. Runoff will bypass treatment as this is a driveway entrance to the site and is topographically unable to be treated. The area is classified as de-minimus. Storm water runoff will leave the site via curb and gutter and flow south towards a curb inlet on Thunder Drive. Water will then enter Buena Vista Creek and ultimately confluence at POC-3.

(Continue on page 2 as necessary.)

(Page reserved for continuation of description of general strategy for structural BMP implementation at the site)

(Continued from page 1)

Form I-6 Page 3 of 4 (Copy as many as needed)	
Structural BMP Summary Information **(Copy this page as needed to provide information for each individual proposed structural BMP)**	
Structural BMP ID No. : BMP-1	
Construction Plan Sheet No. C-4	
Type of structural BMP: ☐Retention by harvest and use (HU-1) ☐Retention by infiltration basin (INF-1) ☐Retention by bioretention (INF-2) ☐Retention by permeable pavement (INF-3) ☒Partial retention by biofiltration with partial retention (PR-1) ☐Biofiltration (BF-1) ☐Flow-thru treatment control with prior lawful approval to meet earlier PDP requirements (provide BMP type/description in discussion section below) ☐Flow-thru treatment control included as pre-treatment/forebay for an onsite retention or biofiltration BMP (provide BMP type/description and indicate which onsite retention or biofiltration BMP it serves in discussion section below) ☐Flow-thru treatment control with alternative compliance (provide BMP type/description in discussion section below) ☒Detention pond or vault for hydromodification management ☒Other (describe in discussion section below) The structural BMP provided are underground concrete storage vaults with an open bottom in combination with a proprietary bio-filtration device. Together these provide the retention and water quality treatment required for the site.	
Purpose: ☐Pollutant control only ☐Hydromodification control only ☒Combined pollutant control and hydromodification control ☐Pre-treatment/forebay for another structural BMP ☒Other (describe in discussion section below) The structural BMP provided are underground concrete storage vaults with an open bottom in combination with a proprietary bio-filtration device. Together these provide the retention and water quality treatment required for the site.	
Who will certify construction of this BMP? Provide name and contact information for the party responsible to sign BMP verification forms if required by the [City Engineer] (See Section 1.12 of the manual)	REC Consultants, Inc. 2442 2nd Ave. San Diego, CA 92101 (619) 232-9200
Who will be the final owner of this BMP?	Carmax 12800 Tuckahoe Creek Pkwy. Richmond, VA 23238

Who will maintain this BMP into perpetuity?	Carmax 12800 Tuckahoe Creek Pkwy. Richmond, VA 23238
What is the funding mechanism for maintenance?	Carmax 12800 Tuckahoe Creek Pkwy. Richmond, VA 23238

Form I-6 Page 4 of 4 (Copy as many needed)

Structural BMP Summary Information

(Copy this page as needed to provide information for each individual proposed structural BMP)

Discussion (as needed):

The structural BMP provided are underground concrete storage vaults (58 Old Castle Stormcapture tanks size 7x15x4) with an open bottom in combination with a proprietary bio-filtration device (Two (2) Modular Wetlands, model MWS-L-8-16). Together these provide the retention and water quality treatment required for the site.

	City of Oceanside 300 N Coast Highway Oceanside, CA 92054	**Permanent BMP Construction** **Self Certification Form**	February 2016

Date Prepared: 11/04/2019	Project No.: D19-00021; CUP19-00029
Project Applicant: Centerpoint Integrated Solutions	Phone: (303) 679-6975
Project Address: SWC Plaza Drive & Thunder Drive	
Project Engineer: REC Consultants, Inc.	Phone: (619) 232-9200

The purpose of this form is to verify that the site improvements for the project, identified above, have been constructed in conformance with the approved Storm Water Quality Management Plan (SWQMP) documents and drawings.

This form must be completed by the engineer and installing contractor and submitted prior to final inspection of the construction permit. Completion and submittal of this form is required for all new development and redevelopment projects in order to comply with the City's Storm Water ordinances and NDPES Permit Order No. R9-2013-0001. Final inspection for occupancy and/or release of grading or public improvement bonds may be delayed if this form is not submitted and approved by the City of Oceanside.

ENGINEER'S CERTIFICATION:

As the professional in responsible charge for the design of the above project, I certify that I have inspected all constructed Low Impact Development (LID) site design, source control and treatment control BMP's required per the approved SWQMP and Construction Permit No. Click here to enter text.; and that said BMP's have been constructed in compliance with the approved plans and all applicable specifications, permits, ordinances and Order No. R9-2013-0001 of the San Diego Regional Water Quality Control Board.

I understand that this BMP certification statement does not constitute an operation and maintenance verification.

Signature: _____

Date of Signature: _ Click here to enter text.__

Printed Name: _ Jonathan Raab Rydeen_____

Title: _ Director of Water Quality_____

Phone No. _ (619) 326-6026 _____

Engineer's Stamp

CONTRACTOR'S CERTIFICATION:

As the professional in responsible charge for construction of the above project, I certify that all constructed Low Impact Development (LID) site design, source control and treatment control BMP's required per the approved SWQMP and Construction Permit No. Click here to enter text.; have been constructed in compliance with the approved plans and all applicable specifications, permits, and ordinances.

I understand that this BMP certification statement does not constitute an operation and maintenance verification.

Signature: _____

Date of Signature: _ Click here to enter text.__

Printed Name: _ Click here to enter text._____

Title: _ Click here to enter text._____

Phone No. _ Click here to enter text. _____

ATTACHMENT 1

BACKUP FOR PDP POLLUTANT CONTROL BMPS

This is the cover sheet for Attachment 1.

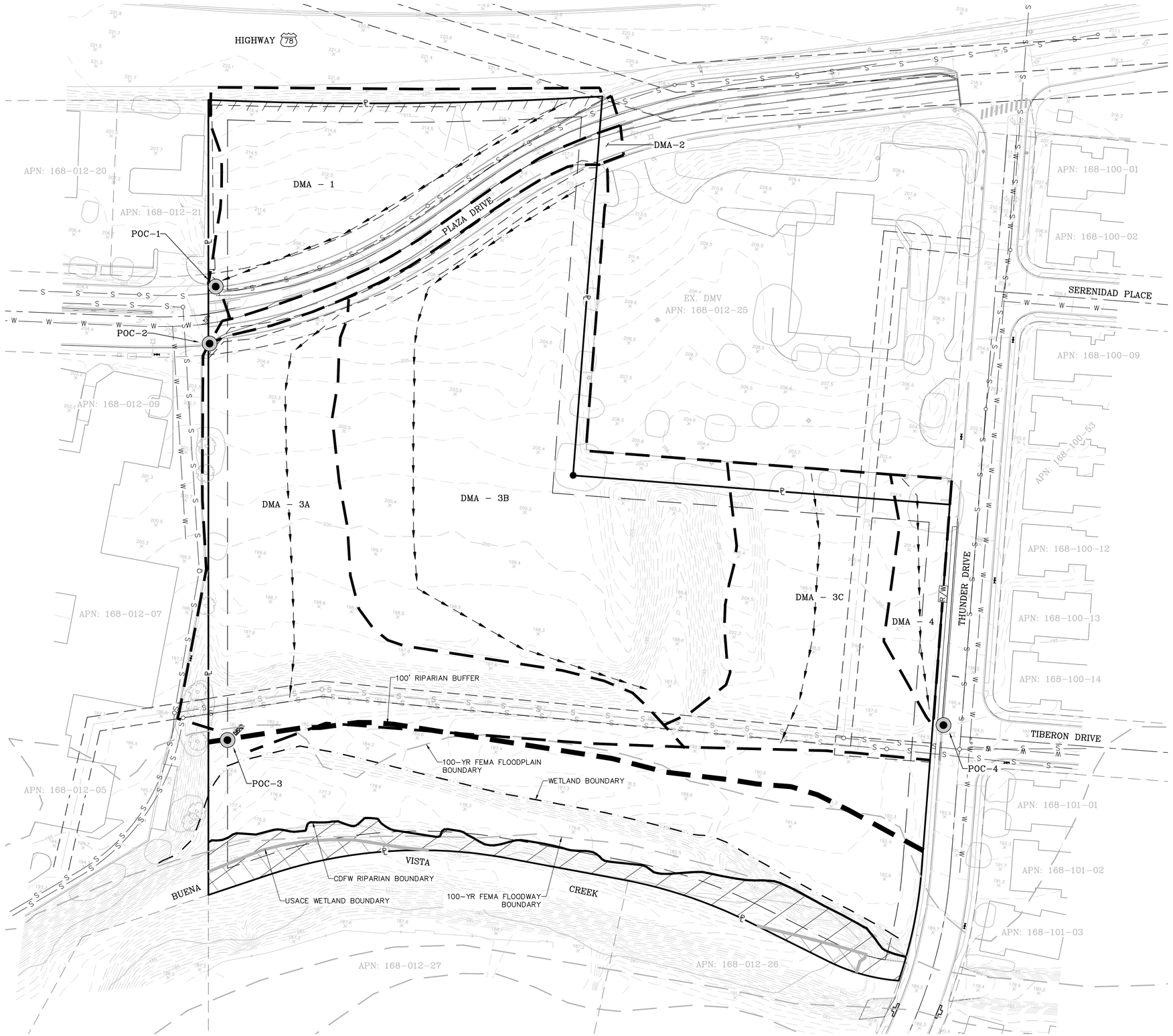
Indicate which Items are Included:

Attachment Sequence	Contents	Checklist
Attachment 1a	DMA Exhibit (Required) See DMA Exhibit Checklist.	☒Included
Attachment 1b	Tabular Summary of DMAs Showing DMA ID matching DMA Exhibit, DMA Area, and DMA Type (Required)* *Provide table in this Attachment OR on DMA Exhibit in Attachment 1a	☒Included on DMA Exhibit in Attachment 1a ☐Included as Attachment 1b, separate from DMA Exhibit
Attachment 1c	Design Capture Volume Worksheet	☒Included
Attachment 1d	Form I-7, Harvest and Use Feasibility Screening Checklist (Required unless the entire project will use infiltration BMPs) Refer to Appendix B.3-1 of the BMP Design Manual to complete Form I-7.	☒Included ☐Not included because the entire project will use infiltration BMPs
Attachment 1e	Form I-8, Categorization of Infiltration Feasibility Condition (Required unless the project will use harvest and use BMPs) Refer to Appendices C and D of the BMP Design Manual to complete Form I-8.	☒Included ☐Not included because the entire project will use harvest and use BMPs
Attachment 1f	Pollutant Control BMP Design Worksheets / Calculations (Required) Refer to Appendices B and E of the BMP Design Manual for structural pollutant control BMP design guidelines	☒Included

Use this checklist to ensure the required information has been included on the DMA Exhibit:

The DMA Exhibit must identify:

☒Underlying hydrologic soil group
☒Approximate depth to groundwater
☒Existing natural hydrologic features (watercourses, seeps, springs, wetlands)
☒Critical coarse sediment yield areas to be protected
☒Existing topography and impervious areas
☒Existing and proposed site drainage network and connections to drainage offsite
☒Proposed grading
☒Proposed impervious features
☒Proposed design features and surface treatments used to minimize imperviousness
☒Drainage management area (DMA) boundaries, DMA ID numbers, and DMA areas (square footage or acreage), and DMA type (i.e., drains to BMP, self-retaining, or self-mitigating)
☒Potential pollutant source areas and corresponding required source controls (see Chapter 4, Appendix E.1, and Form I-3B)
☒Structural BMPs (identify location, type of BMP, and size/detail)



LEGEND:

- EX. PROPERTY BOUNDARY
- DMA BOUNDARY
- POC
- ABUTTERS RIGHTS OF ACCESS RELINQUISHED
- EX. MINOR CONTOUR
- EX. MAJOR CONTOUR

NOTES:

- NO CCYSA'S TO PROTECT
- UNDERLYING SOIL 'TYPE –D'
- DEPTH TO NATURAL GROUNDWATER >20'

EXISTING CONDITIONS				
DMA	DRAINS TO	HARDSCAPE	LANDSCAPE	TOTAL
DMA-1	POC-1	9,667	52,734	62,401
DMA-2	POC-2	9,430	0	9,430
DMA-3A	POC-3	-	90,838	90,838
DMA-3B		-	153,335	153,335
DMA-3C			55,733	55,733
DMA-4	POC-4	-	12,105	12,105
TOTAL				**383,842**

NO.	DESCRIPTION	DATE	APP'D
REVISIONS			

R·E·C Consultants, Inc.
Civil Engineering · Environmental
Land Surveying
2442 Second Avenue
San Diego, CA 92101
(619)232-9200 (619)232-9210 Fax

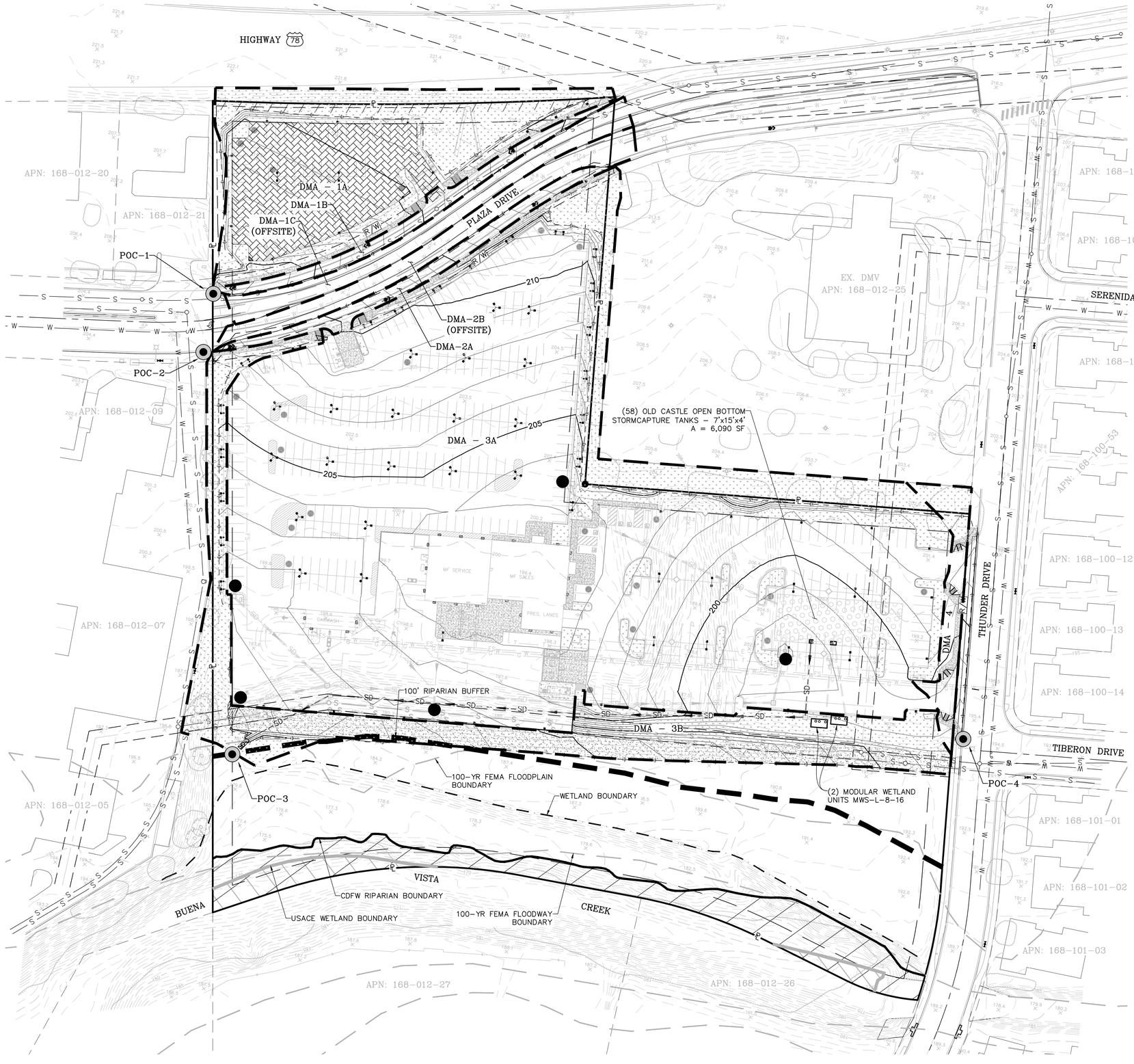
DATE: 10/25/19
SCALE: 1" = 50'
DRAWN: A.O.
CHECKED: J.R.R.

SHEET TITLE: DMA/HMP EXHIBIT - EXISTING CONDITIONS

PROJECT: CARMAX OCEANSIDE
PLAZA DRIVE & THUNDER DRIVE
OCEANSIDE, CA 92056

SHEET 1 OF 1 SHEETS

SAVE DATE: 3/6/2020 ~ PLOT DATE: 3/6/2020 ~ FILE NAME: P:\Xcad\1492 CarMax Oceanside\Reports\SWQMP\DMA Exhibits.dwg



LEGEND:

- EX. PROPERTY BOUNDARY
- DMA BOUNDARY
- POC
- ABUTTERS RIGHTS OF ACCESS RELINQUISHED
- EX. MINOR CONTOUR
- EX. MAJOR CONTOUR
- PROPOSED UNDERGROUND DETENTION
- LANDSCAPE/PERVIOUS AREAS
- PERVIOUS PAVEMENT
- PROPOSED HARDSCAPE AREAS
- PROPOSED ASPHALT IMPERVIOUS AREAS
- MODULAR WETLAND
- PROHIBITIVE SIGNANGE

DMA PROPERTIES

UNDERLYING HYDROLOGIC SOIL GROUP: D
APPROXIMATE DEPTH TO GROUNDWATER: > 20'
EXISTING NATURAL HYDROLOGIC FEATURES:EXISTING BUENA VISTA CREEK ALONG SOUTHERN EDGE OF SITE.
CRITICAL COARSE SEDIMENT YIELD AREAS: NONE

NO DUMPING DRAINS TO OCEAN

SAMPLE PROHIBITIVE SIGNAGE

NTS

PROPOSED CONDITIONS					
DMA	DRAINS TO	IMPERVIOUS	PERVIOUS	TOTAL	TYPE OF STRUCTURAL BMP
DMA-1A	POC-1	0	47,133	47,133	SELF-RETAINING (PERMEABLE PAVEMENT)
DMA-1B		5,601	0	5,601	GREEN STREET (PLAZA DRIVE EXPANSION- NORTH)
DMA-1C		9,667	0	9,667	EXISTING STREET OFFSITE AREA
DMA-2A	POC-2	5,899	0	5,899	GREEN STREET (PLAZA DRIVE EXPANSION- SOUTH)
DMA-2B		9,430	0	9,430	EXISTING STREET OFFSITE AREA
DMA-3A	POC-3	218,927	37,896	256,823	PROPRIETARY RETENTION & BIO-FILTRATION
DMA-3B		-	43,234	43,234	BYPASS
DMA-4	POC-4	3,024	3,028	6,051	DE-MINIMUS (DRIVEWAY AREA)
TOTAL				**383,838**	

50 25 0 50 100 150

SCALE: 1" = 50'

NO.	DESCRIPTION	DATE	APP'D
	REVISIONS		

Civil Engineering · Environmental
Land Surveying
2442 Second Avenue
San Diego, CA 92101
(619)232-9200 (619)232-9210 Fax
R·E·C Consultants, Inc.

DATE: 10/25/19
SCALE: 1" = 50'
DRAWN: A.O.
CHECKED: J.R.R.

SHEET TITLE: DMA EXHIBIT - PROPOSED

PROJECT: CARMAX OCEANSIDE
PLAZA DRIVE & THUNDER DRIVE
OCEANSIDE, CA 92056

SHEET 1 OF 2 SHEETS

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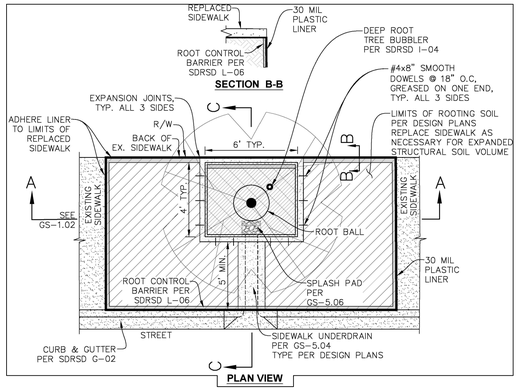
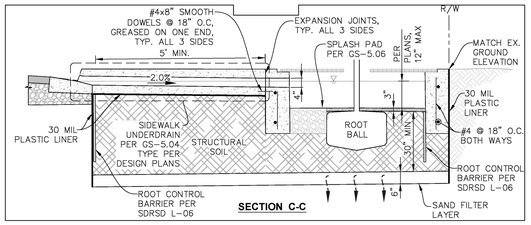
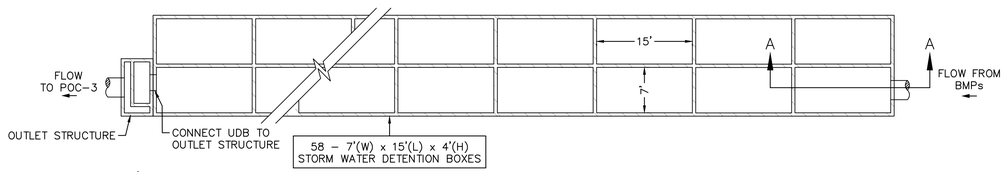




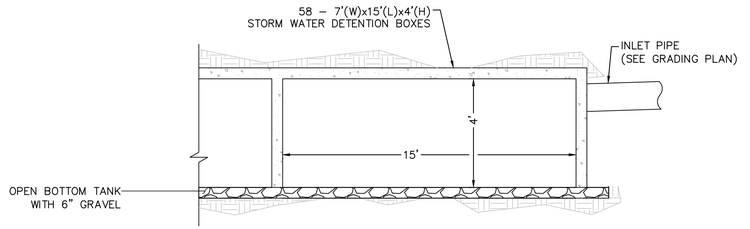
TREE WELL DETAIL

NTS



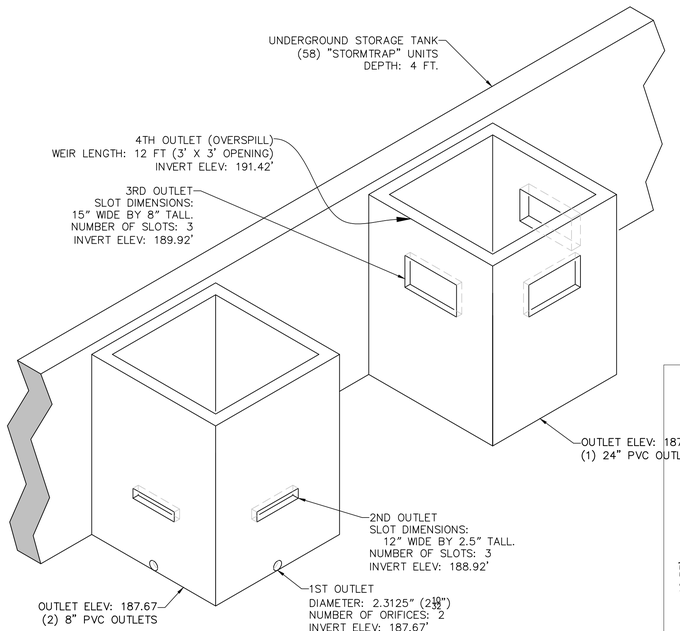
UNDERGROUND DETENTION BASIN (UDB)

NTS



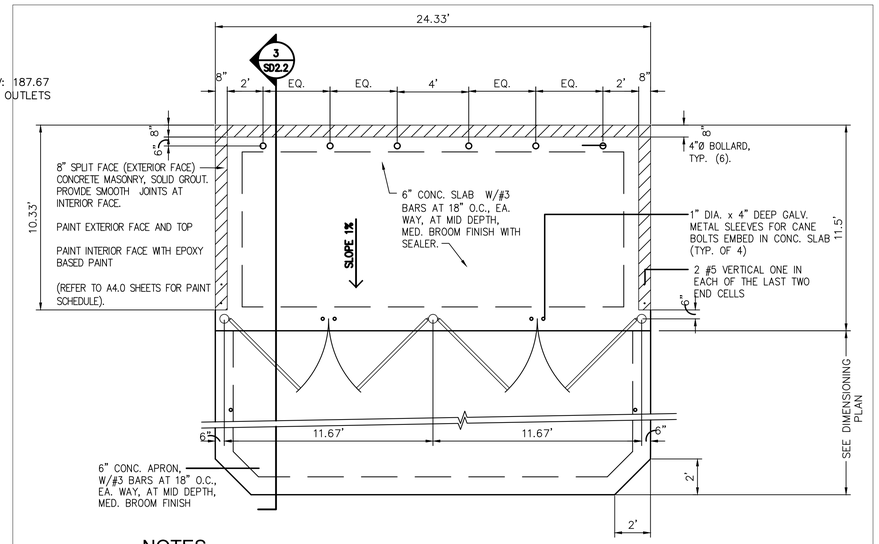
SECTION A-A: UNDERGROUND DETENTION BASIN

NTS



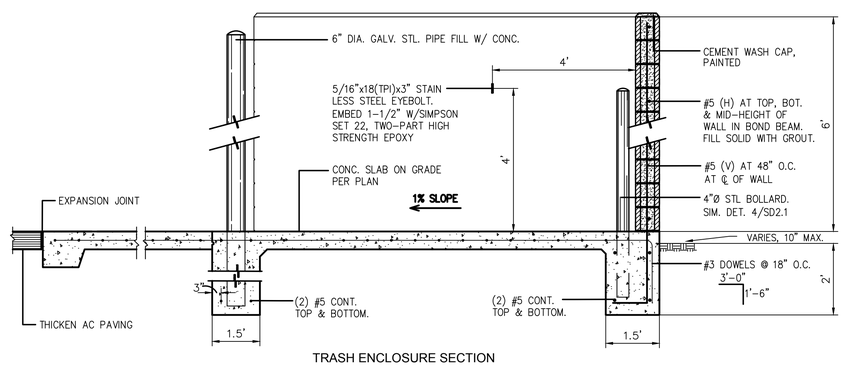
TANK OUTLET STRUCTURES

NOT TO SCALE



NOTES

1. ALL CONC. BLOCK MORTAR JOINTS SHALL BE FLUSH & SMOOTH AT INSIDE FACE.
2. SEE SITE PLAN FOR LOCATION OF TRASH ENCLOSURE.
3. THE TRASH ENCLOSURE PAD SHALL BE SEALED WITH A "NON-PIGMENTED" CLEAR CONCRETE SEALER.



TRASH ENCLOSURE SECTION

SOURCE CONTROL

BMP ID #	BMP TYPE	SYMBOL	CASQA NO.	QUANTITY	INSPECTION FREQUENCY	MAINTENANCE FREQUENCY	MAINTENANCE ACTIVITY
(1)	TRASH ENCLOSURE		SD-32	2	MONTHLY	AS NEEDED	INSPECT REGULARLY. CLEAR TRASH & DEBRIS. REPLACE LEAKING BINS. CLEAN STORAGE AREAS REGULARLY. POST SIGNS INFORMING TO NOT DISPOSE OF LIQUIDS & TO KEEP BIN LIDS CLOSED.
(2)	STENCILS	NO DUMPING	SD-13, SC-2	1 EA	MONTHLY	AS NEEDED	INSPECT AND MAINTAIN/REPLACE AS NEEDED.

BMP ID #	BMP TYPE	INSPECTION FREQUENCY	FREQUENCY MAINTENANCE	MAINTENANCE ACTIVITY
SC-1	PREVENTION OF ILLICIT DISCHARGES INTO MS4	CONTINUOUS	-	A GREASE TRAP HAS BEEN INCOPORATED INTO UTILITY PLAN AND DUMPING OF GREASE DOWN THE STROM DRAIN IS PROHIBITED OTHER GOOD HOUSEKEEPING PRACTICES WILL BE IMPLEMENTED TO DISCOURAGE DISCHARGES OF NON-STORM WATER POLLUTANTS, INCLUDING COLLECTION/RECYCLING USED COOKING OIL, CLEAN UP FOOD AND GREASE WITH ABDORBENTS/DISCARD IN TRASH AND ROUTINE MAINTANACE OF GREASE TRAP.
SC-2	STORM DRAIN STENCILING OR SIGNAGE	CONTINUOUS	REGULARLY	LABELING SHALL BE PROVIDED FOR ALL STORM WATER CONVEYANCE SYSTEM INLETS AND CATCH BASINS WITHIN THE PROJECT AREA. STORM DRAIN PLACARDS SHALL BE USED FOR SIGANGE (STENCILING IS PROHIBITED BY CITY OF OCEANSIDE). INSPECT AND MAINTAIN PLACARDS AS NEEDED.
SC-5	PROTECT TRASH STORAGE AREAS FROM RAINFALL, RUN-ON, RUNOFF, AND WIND DISPERSAL	REGULARLY	REGULARLY	ENSURE TRASH ENCLOSURE AREAS ARE FULLY CONTAINED (THREE WALLS, DOOR, ROOF). PROVIDE ATTACHED LIDS ON ALL TRASH CONTAINERS. KEEP CONTAINERS AWAY FROM STORM DRAIN VICINITY. POST SIGNS ON ALL ENCLOSURES AND/OR DUMPSTERS INFORMING USERS TO KEEP LID CLOSED AND NOT TO DISPOSE OF LIQUIDS OR HAZARDOUS MATERIALS. INSPECT TRASH STORAGE AREAS TO ENSURE INTEGRITY OF CONTAINERS AND THAT AREA IS KEPT CLEAN. REPLACE LEAKING BINS. CLEAN TRASH STORAGE AREAS REGULARLY
SC-6 A THROUGH H	ADDITIONAL BMPS BASED ON POTENTIAL SOURCES OF RUNOFF POLLUTANTS	REGULARLY OR AS DETERMINED NECESSARY	REGULARLY OR AS DETERMINED NECESSARY	SC-A ON-SITE STORM DRAIN INLETS: ON-SITE INLETS SHALL BE PROTECTED FROM ANY ILLICIT DISCHARGES AND DEBRIS. INLETS SHALL HAVE PROHIBITIVE SIGNS. MARK ALL INLETS WITH THE WORDS "NO DUMPING! DISCHARGES TO BAY" OR SIMILAR. INLET MARKINGS SHALL BE MAINTAINED AND PERIODICALLY REPAINTED. MAINTAIN ON A REGULAR BASIS TO REMOVE POLLUTANTS. ENSURE PROPER HYDRAULIC FUNCTION TO PREVENT FLOODING. CLEAN INLETS REGULARLY AND REMOVE SEDIMENTS AND DEBRIS, ESPECIALLY BEFORE START AND END OF WET SEASON. STORE WASTES COLLECTED FROM CLEANING ACTIVITIES OF DRAINAGE SYSTEM IN APPROPRIATE CONTAINERS OF TEMPORARY STORAGE SITES IN A MANNER THAT PREVENTS DISCHARGE TO THE STORM DRAIN. KEEP A RECORD OF CLEANING AND DISPOSAL ACTIVITIES. SC-C INTERIOR PARKING GARAGES: INTERIOR PARKING GARAGE WILL HAVE AN INTERIOR DRAIN THAT IS CONNECTED TO THE STORM DRAIN SYSTEM TO REMOVE NUISANCE WATER. SC-D1 NEED FOR FUTURE INDOOR & STRUCTURAL PEST CONTROL: FUTURE INDOOR & STRUCTURAL PEST CONTROL: BUILDING INCLUDES DOORS AND WINDOWS WITH SEALING THAT DISCOURAGES ENTRY OF PESTS. ANY PESTICIDES SHALL BE APPLIED MINIMALLY IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND CITY/STATE REQUIREMENTS SC-D2 LANDSCAPE/OUTDOOR PESTICIDE USE (SC-41): FINAL LANDSCAPE PLANS WILL PRESERVE EXISTING DROUGHT TOLERANT TREES, SHRUBS, AND GROUND COVER TO THE MAXIMUM EXTENT POSSIBLE, AND INCLUDE LANDSCAPING TO MINIMIZE IRRIGATION AND RUNOFF, TO PROMOTE SURFACE INFILTRATION WHERE APPROPRIATE, AND TO MINIMIZE THE USE OF FERTILIZERS AND PESTICIDES THAT CAN CONTRIBUTE TO STORM WATER POLLUTION. THE LANDSCAPED AREAS THAT WILL BE USED TO DETAIN STORMWATER, WILL HAVE PLANTS TOLERANT OF PERIODIC SATURATED SOIL CONDITIONS. FINAL LANDSCAPE PLANS HAVE BEEN DESIGNED TO ENSURE SUCCESSFUL ESTABLISHMENT, INCLUDING SELECTION OF PLANTS APPROPRIATE TO SITE SOILS, SLOPES, CLIMATE, SUN, WIND, RAIN, LAND USE, AIR MOVEMENT, ECOLOGICAL CONSISTENCY, AND PLANT INTERACTIONS. SC-N FIRE SPRINKLER TEST WATER: FIRE SPRINKLER TEST WATER SHALL BE DRAINED TO SANITARY SEWER SYSTEM. DURING A FIRE SPRINKLER TEST, THE FIRE RISER DISCHARGE SHALL BE CONNECTED BY A HOSE TO THE SEWER CLEANOUT. SC-O MISCELLANEOUS DRAIN OR WASHWATER: BOILER DRAINS SHALL BE DIRECTLY OR INDIRECTLY CONNECTED TO THE SANITARY SEWER SYSTEM AND MAY NOT DISCHARGE TO THE STORM DRAIN. ROOFTOP MOUNTED EQUIPMENT WITH POTENTIAL TO PRODUCE POLLUTANTS SHALL BE ROOFED AND/OR HAVE SECONDARY CONTAINMENT. ANY DRAINAGE SUMPS ONSITE SHALL FEATURE A SEDIMENT SUMP TO REDUCE THE QUANTITY OF SEDIMENT PUMPED WATER. COPPER BASED ROOFING, GUTTERS AND TRIM MATERIALS SHOULD BE AVOIDED. SC-P PLAZAS, SIDEWALKS, AND PARKING LOTS: SWEEP REGULARLY TO PREVENT ACCUMULATION OF LITTER AND DEBRIS, DEBRIS FROM PRESSURE WASHING MUST BE COLLECTED TO PREVENT ENTRY INTO STORM DRAIN SYSTEM. WASHWATER CONTAINING ANY CLEANING AGENT OR DEGREASER MUST BE COLLECTED AND DISCHARGED TO THE SANITARY SEWER AND NOT DISCHARGED TO A STORM DRAIN. CLEAN ALL PAVEMENT AT LEAST ONCE A YEAR.

REVISIONS

NO.	DESCRIPTION	DATE	APP'D

Civil Engineering · Environmental
Land Surveying
2442 Second Avenue
San Diego, CA 92101
(619)232-9200 (619)232-9210 Fax
R·E·C Consultants, Inc.

DATE: 10/25/19
SCALE: 1" = 50'
DRAWN: A.O.
CHECKED: J.R.R.

SHEET TITLE: DMA EXHIBIT - PROPOSED
PROJECT: CARMAX OCEANSIDE
PLAZA DRIVE & THUNDER DRIVE
OCEANSIDE, CA 92056

SHEET 2 OF 2 SHEETS

SAVE DATE: 3/6/2020 ~ PLOT DATE: 3/6/2020 ~ FILE NAME: P:\Acad\1492 CarMax Oceanside\Reports\SWQMP\DMA Exhibits.dwg

Placeholder – **Tabular Summary of DMAs (if separate from DMA Exhibit)**

Leave placeholder intact if not applicable.

☒Not Applicable – Tabular Summary included on DMA Exhibit

DMA-3A Design Capture Volume		Worksheet B-2.1		
1	85th percentile 24-hr storm depth from Figure B.1-1	d=	0.62	inches
2	Area tributary to BMP (s)	A=	5.9	acres
3	Area weighted runoff factor (estimate using Appendix B.1.1 and B.2.1)(1)	C=	0.78	Unitless(1)
4	Street trees volume reduction	TCV=	0	cubic-feet
5	Rain barrels volume reduction	RCV=	0	cubic-feet
6	Calculate DCV = (3630 x C x d x A) – TCV - RCV	DCV=	10,357	cubic-feet

(1): Soil type D

Impervious area = 218,927 SF (5.026 acres) at C = 0.9

Pervious area = 37,896 SF (0.869 acres) at C = 0.1.

Weighted C: (5.026 x 0.9 + 0.869 x 0.1)/(5.026+0.869) = 0.78

Harvest and Use Feasibility Checklist	Form I-7

1. Is there a demand for harvested water (check all that apply) at the project site that is reliably present during the wet season?

■ Toilet and urinal flushing
■ Landscape irrigation
☐ Other:_____

2. If there is a demand; estimate the anticipated average wet season demand over a period of 36 hours. Guidance for planning level demand calculations for toilet/urinal flushing and landscape irrigation is provided in Section B.3.2.

Modified ETWU= $ET_{OWet} \times [[\Sigma(PF \times HA)/IE] + SLA] \times 0.015$

Modified ETWU= $2.8 \times [(0.3 \times 300{,}560)/0.90] \times 0.015$

Modified ETWU= 4,208

3. Calculate the DCV using worksheet B-2.1.

DCV = 10,560 (cubic feet)

3a. Is the 36 hour demand greater than or equal to the DCV?	3b. Is the 36 hour demand greater than 0.25DCV but less than the full DCV?	3c. Is the 36 hour demand less than 0.25DCV?
☐ Yes / ☒ No ⇨ ⇩	☐ Yes / ☒ No ⇨ ⇩	☒ Yes ⇩
Harvest and use appears to be feasible. Conduct more detailed evaluation and sizing calculations to confirm that DCV can be used at an adequate rate to meet drawdown criteria.	Harvest and use may be feasible. Conduct more detailed evaluation and sizing calculations to determine feasibility. Harvest and use may only be able to be used for a portion of the site, or (optionally) the storage may need to be upsized to meet long term capture targets while draining in longer than 36 hours.	Harvest and use is considered to be infeasible.

Is harvest and use feasible based on further evaluation?

☐ Yes, refer to Appendix E to select and size harvest and use BMPs.

☒ No, select alternate BMPs.

Categorization of Infiltration Feasibility Condition	Form I-8

Part 1 - Full Infiltration Feasibility Screening Criteria

Would infiltration of the full design volume be feasible from a physical perspective without any undesirable consequences that cannot be reasonably mitigated?

Criteria	Screening Question	Yes	No
1	**Is the estimated reliable infiltration rate below proposed facility locations greater than 0.5 inches per hour?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.	☐	☒

Provide basis:

Per EEI Engineering Solutions Preliminary Percolation Evaluation dated October 25, 2019 a maximum design infiltration rate of 0.265 in/hr is to be used. This design infiltration rate is calculated using the average of borings P-4 and P-5 divided by a factor of safety of 2.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.

2	**Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.	☐	☒

Provide basis:

Per EEI Engineering Solutions Preliminary Percolation Evaluation dated October 25, 2019 a maximum design infiltration rate of 0.265 in/hr is to be used. This design infiltration rate is calculated using the average of borings P-4 and P-5 divided by a factor of safety of 2.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.

Form I-8 Page 2 of 4			
Criteria	Screening Question	**Yes**	**No**
3	**Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of groundwater contamination (shallow water table, storm water pollutants or other factors) that cannot be mitigated to an acceptable level?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	☐	☒
Provide basis: Per EEI Engineering Solutions Preliminary Percolation Evaluation dated October 25, 2019 a maximum design infiltration rate of 0.265 in/hr is to be used. This design infiltration rate is calculated using the average of borings P-4 and P-5 divided by a factor of safety of 2. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
4	**Can infiltration greater than 0.5 inches per hour be allowed without causing potential water balance issues such as change of seasonality of ephemeral streams or increased discharge of contaminated groundwater to surface waters?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	☐	☒
Provide basis: Per EEI Engineering Solutions Preliminary Percolation Evaluation dated October 25, 2019 a maximum design infiltration rate of 0.265 in/hr is to be used. This design infiltration rate is calculated using the average of borings P-4 and P-5 divided by a factor of safety of 2. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
Part 1 Result *	If all answers to rows 1 - 4 are "**Yes**" a full infiltration design is potentially feasible. The feasibility screening category is **Full Infiltration** If any answer from row 1-4 is "**No**", infiltration may be possible to some extent but would not generally be feasible or desirable to achieve a "full infiltration" design. Proceed to Part 2	☐Full Infiltration ☒No	

*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by Agency/Jurisdictions to substantiate findings

Form I-8 Page 3 of 4

Part 2 – Partial Infiltration vs. No Infiltration Feasibility Screening Criteria

Would infiltration of water in any appreciable amount be physically feasible without any negative consequences that cannot be reasonably mitigated?

Criteria	Screening Question	Yes	No
5	**Do soil and geologic conditions allow for infiltration in any appreciable rate or volume?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.	☒	☐

Provide basis:

Per EEI Engineering Solutions Preliminary Percolation Evaluation dated October 25, 2019 partial infiltration is allowable.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.

6	**Can Infiltration in any appreciable quantity be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level**? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.	☒	☐

Provide basis:

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.

Form I-8 Page 4 of 4			
Criteria	Screening Question	**Yes**	**No**
7	**Can Infiltration in any appreciable quantity be allowed without posing significant risk for groundwater related concerns (shallow water table, storm water pollutants or other factors)?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	☒	☐
Provide basis: Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			
8	**Can infiltration be allowed without violating downstream water rights**? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	☒	☐
Provide basis: Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			
Part 2 Result*	If all answers from row 1-4 are yes then partial infiltration design is potentially feasible. The feasibility screening category is **Partial Infiltration.** If any answer from row 5-8 is no, then infiltration of any volume is considered to be **infeasible** within the drainage area. The feasibility screening category is **No Infiltration.**	☒Partial Infiltration ☐No Infiltration	

*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by Agency/Jurisdictions to substantiate findings

DCV:	10,357	cu-ft		
85 th percentile:		0.62	inches	
Basic infiltration:		0.53	in/hr	
SF:		2		
Design Infiltration Rate:		0.265	in/hr	(with SF = 2)

Ave Annual Runoff Ret Req: **33%** (per Appendix B, Figure B.2-1 of County Manual)

Draw-down (hr)	F-DCV (%)	h-water (inches)	h-gravel (inches)	vol in voids (cu-ft)	% DCV
6	9%	1.59	3.98	984	9%
9.1	11.0%	2.4	**6**	1485	14%
12	13%	3.18	7.95	1967	19%
24	21%	6.36	15.90	3935	38%
36	26%	9.54	23.85	5902	57%
48	29%	12.72	31.80	7869	76%
72	34%	19.08	47.70	11804	114%
96	39%	25.44	63.60	15739	152%
120	42%	31.80	79.50	19674	190%

A:	6090	sq-ft	(open portion)
Ag:	7424	sq-ft	(gravel portion area)

Worksheet B.6-1: Flow-Thru Design Flows

Remove worksheet from SWQMP if not applicable.

Flow-thru Design Flows		Worksheet B.6-1		
1	DCV	DCV	10,357	cubic-feet
2	DCV retained	$DCV_{retained}$	1,450	cubic-feet
3	DCV biofiltered	$DCV_{biofiltered}$	0	cubic-feet
4	DCV requiring flow-thru (Line 1 – Line 2 – 0.67*Line 3)	$DCV_{flow-thru}$	8,907	cubic-feet
5	Adjustment factor (Line 4 / Line 1)*	AF=	0.86	unitless
6	Design rainfall intensity	i=	0.20	in/hr
7	Area tributary to BMP (s)	A=	5.89	acres
8	Area-weighted runoff factor (estimate using Appendix B.2)	C=	0.78	unitless
9	Calculate Flow Rate = AF x (C x i x A)	Q=	0.790	cfs

1) Adjustment factor shall be estimated considering only retention and biofiltration BMPs located upstream of flow-thru BMPs. That is, if the flow-thru BMP is upstream of the project's retention and biofiltration BMPs then the flow-thru BMP shall be sized using an adjustment factor of 1.
2) Volume based (e.g., dry extended detention basin) flow-thru treatment control BMPs shall be sized to the volume in Line 4 and flow based (e.g., vegetated swales) shall be sized to flow rate in Line 9. Sand filter and media filter can be designed either by volume in Line 4 or flow rate in Line 9.
3) Proprietary BMPs, if used, shall provide certified treatment capacity equal to or greater than the calculated flow rate in Line 9; certified treatment capacity per unit shall be consistent with third party certifications.
4)

NOTE:

$DVC_{PROJECT}$ = 10,357 CFS

$DCV_{RETAINED}$(IN UNDERGROUND STORAGE TANKS)=(0.14)(10,357 CFS) = 1,450 CF

$DCV_{REMAINING}$(TO BE TREATED) = 10,357 CFS – 1,450 CFS = 8,907 CFS

2 Modular Wetlands, model MWS-L-8-16 will be used to treat the flow as their total capacity according to the specifications attached to this SWQMP is larger than required (0.462 x 2 = 0.924 cfs > 0.790 cfs).

Bio Clean

A Forterra Company

Modular Wetlands® System Linear

A Stormwater Biofiltration Solution

SPECIFICATIONS

FLOW-BASED DESIGNS

The Modular Wetlands® System Linear can be used in stand-alone applications to meet treatment flow requirements. Since the Modular Wetlands® is the only biofiltration system that can accept inflow pipes several feet below the surface, it can be used not only in decentralized design applications but also as a large central end-of-the-line application for maximum feasibility.

MODEL #	DIMENSIONS	WETLANDMEDIA SURFACE AREA (sq. ft.)	TREATMENT FLOW RATE (cfs)
MWS-L-4-4	4′ x 4′	23	0.052
MWS-L-4-6	4′ x 6′	32	0.073
MWS-L-4-8	4′ x 8′	50	0.115
MWS-L-4-13	4′ x 13′	63	0.144
MWS-L-4-15	4′ x 15′	76	0.175
MWS-L-4-17	4′ x 17′	90	0.206
MWS-L-4-19	4′ x 19′	103	0.237
MWS-L-4-21	4′ x 21′	117	0.268
MWS-L-6-8	7′ x 9′	64	0.147
MWS-L-8-8	8′ x 8′	100	0.230
MWS-L-8-12	8′ x 12′	151	0.346
MWS-L-8-16	8′ x 16′	201	0.462
MWS-L-8-20	9′ x 21′	252	0.577
MWS-L-8-24	9′ x 25′	302	0.693
MWS-L-10-20	10' x 20'	302	0.693

Automated Worksheet B.1: Calculation of Design Capture Volume (V2.0)

Category	#	Description	*i*	*ii*	*iii*	*iv*	Units
Standard Drainage Basin Inputs	1	Drainage Basin ID or Name	DMA 1-TW (WQ & HMP)	DMA 1--TW (WQ only, EX. A)	DMA 2-TW (WQ & HMP)	DMA 2--TW (WQ only, EX. A)	unitless
	2	85th Percentile 24-hr Storm Depth	1.97	0.62	1.97	0.62	inches
	3	Impervious Surfaces Not Directed to Dispersion Area (C=0.90)	7,262	9,667	7,817	9,460	sq-ft
	4	Semi-Pervious Surfaces Not Serving as Dispersion Area (C=0.30)					sq-ft
	5	Engineered Pervious Surfaces Not Serving as Dispersion Area (C=0.10)					sq-ft
	6	Natural Type A Soil Not Serving as Dispersion Area (C=0.10)					sq-ft
	7	Natural Type B Soil Not Serving as Dispersion Area (C=0.14)					sq-ft
	8	Natural Type C Soil Not Serving as Dispersion Area (C=0.23)					sq-ft
	9	Natural Type D Soil Not Serving as Dispersion Area (C=0.30)	1,300		1,700		sq-ft
Dispersion Area, Tree Well & Rain Barrel Inputs (Optional)	10	Does Tributary Incorporate Dispersion, Tree Wells, and/or Rain Barrels?	Yes	Yes	Yes	Yes	yes/no
	11	Impervious Surfaces **Directed to Dispersion Area** per SD-B (Ci=0.90)					sq-ft
	12	Semi-Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.30)					sq-ft
	13	Engineered Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.10)					sq-ft
	14	Natural Type A Soil **Serving as Dispersion Area** per SD-B (Ci=0.10)					sq-ft
	15	Natural Type B Soil **Serving as Dispersion Area** per SD-B (Ci=0.14)					sq-ft
	16	Natural Type C Soil **Serving as Dispersion Area** per SD-B (Ci=0.23)					sq-ft
	17	Natural Type D Soil **Serving as Dispersion Area** per SD-B (Ci=0.30)					sq-ft
	18	Number of Tree Wells Proposed per SD-A	3	1	3	1	#
	19	Average Mature Tree Canopy Diameter	30	30	30	30	ft
	20	Number of Rain Barrels Proposed per SD-E					#
	21	Average Rain Barrel Size					gal
Initial Runoff Factor Calculation	22	Total Tributary Area	8,562	9,667	9,517	9,460	sq-ft
	23	Initial Runoff Factor for Standard Drainage Areas	0.81	0.90	0.79	0.90	unitless
	24	Initial Runoff Factor for Dispersed & Dispersion Areas	0.00	0.00	0.00	0.00	unitless
	25	Initial Weighted Runoff Factor	0.81	0.90	0.79	0.90	unitless
	26	Initial Design Capture Volume	1,136	450	1,231	440	cubic-feet
Dispersion Area Adjustments	27	Total Impervious Area Dispersed to Pervious Surface	0	0	0	0	sq-ft
	28	Total Pervious Dispersion Area	0	0	0	0	sq-ft
	29	Ratio of Dispersed Impervious Area to Pervious Dispersion Area	n/a	n/a	n/a	n/a	ratio
	30	Adjustment Factor for Dispersed & Dispersion Areas	1.00	1.00	1.00	1.00	ratio
	31	Runoff Factor After Dispersion Techniques	0.81	0.90	0.79	0.90	unitless
	32	Design Capture Volume After Dispersion Techniques	1,136	450	1,231	440	cubic-feet
Tree & Barrel Adjustments	33	Total Tree Well Volume Reduction	1,260	420	1,260	420	cubic-feet
	34	Total Rain Barrel Volume Reduction	0	0	0	0	cubic-feet
Results	35	Final Adjusted Runoff Factor	0.00	0.06	0.00	0.04	unitless
	36	Final Effective Tributary Area	0	580	0	378	sq-ft
	37	Initial Design Capture Volume Retained by Site Design Elements	1,260	420	1,260	420	cubic-feet
	38	Final Design Capture Volume Tributary to BMP	0	30	0	20	cubic-feet

No Warning Messages

ATTACHMENT 2
BACKUP FOR PDP HYDROMODIFICATION CONTROL MEASURES

This is the cover sheet for Attachment 2.

☐Mark this box if this attachment is empty because the project is exempt from PDP hydromodification management requirements.

Indicate which Items are Included:

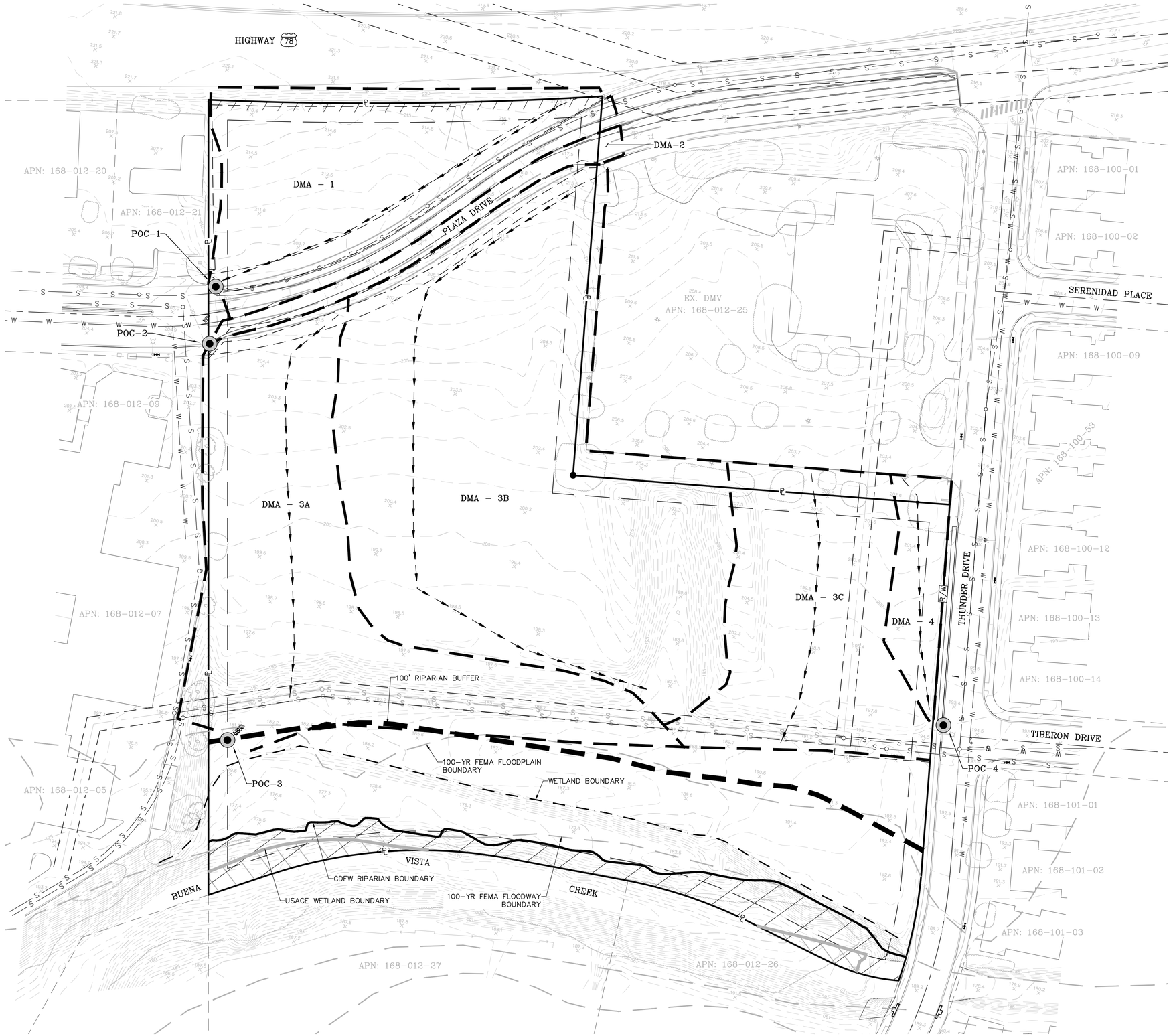
Attachment Sequence	Contents	Checklist
Attachment 2a	1. Hydromodification Management Exhibit (Required)	☒Included See Hydromodification Management Exhibit Checklist.
Attachment 2b	Management of Critical Coarse Sediment Yield Areas (WMAA Exhibit is required, additional analyses are optional) See Section 6.2 of the BMP Design Manual.	☒Exhibit showing project drainage boundaries marked on WMAA Critical Coarse Sediment Yield Area Map (Required) Optional analyses for Critical Coarse Sediment Yield Area Determination ☐6.2.1 Verification of Geomorphic Landscape Units Onsite ☐6.2.2 Downstream Systems Sensitivity to Coarse Sediment ☐6.2.3 Optional Additional Analysis of Potential Critical Coarse Sediment Yield Areas Onsite
Attachment 2c	Geomorphic Assessment of Receiving Channels (Optional) See Section 6.3.4 of the BMP Design Manual.	☒Not performed ☐Included ☐Submitted as separate stand-alone document
Attachment 2d	Flow Control Facility Design and Structural BMP Drawdown Calculations (Required) Overflow Design Summary for each structural BMP See Chapter 6 and Appendix G of the BMP Design Manual	☐Included ☒Submitted as separate stand-alone document
Attachment 2e	Vector Control Plan (Required when structural BMPs will not drain in 96 hours)	☐Included ☒Not required because BMPs will drain in less than 96 hours

Use this checklist to ensure the required information has been included on the Hydromodification Management Exhibit:

The Hydromodification Management Exhibit must identify:

☒Underlying hydrologic soil group
☒Approximate depth to groundwater
☒Existing natural hydrologic features (watercourses, seeps, springs, wetlands)
☒Critical coarse sediment yield areas to be protected
☒Existing topography
☒Existing and proposed site drainage network and connections to drainage offsite
☒Proposed grading
☒Proposed impervious features
☒Proposed design features and surface treatments used to minimize imperviousness
☒Point(s) of Compliance (POC) for Hydromodification Management
☒Existing and proposed drainage boundary and drainage area to each POC (when necessary, create separate exhibits for pre-development and post-project conditions)
☒Structural BMPs for hydromodification management (identify location, type of BMP, and size/detail)

Please provide the Exhibit in 24”x36” format with map pocket, wet date, and stamp.



LEGEND:

- EX. PROPERTY BOUNDARY
- DMA BOUNDARY
- POC
- ABUTTERS RIGHTS OF ACCESS RELINQUISHED
- EX. MINOR CONTOUR
- EX. MAJOR CONTOUR

NOTES:

- NO CCYSA'S TO PROTECT
- UNDERLYING SOIL 'TYPE –D'
- DEPTH TO NATURAL GROUNDWATER >20'

EXISTING CONDITIONS				
DMA	DRAINS TO	HARDSCAPE	LANDSCAPE	TOTAL
DMA-1	POC-1	9,667	52,734	62,401
DMA-2	POC-2	9,430	0	9,430
DMA-3A	POC-3	-	90,838	90,838
DMA-3B		-	153,335	153,335
DMA-3C			55,733	55,733
DMA-4	POC-4	-	12,105	12,105
TOTAL				**383,842**

NO.	DESCRIPTION	DATE	APP'D
REVISIONS			

R·E·C Consultants, Inc.
Civil Engineering · Environmental
Land Surveying
2442 Second Avenue
San Diego, CA 92101
(619)232-9200 (619)232-9210 Fax

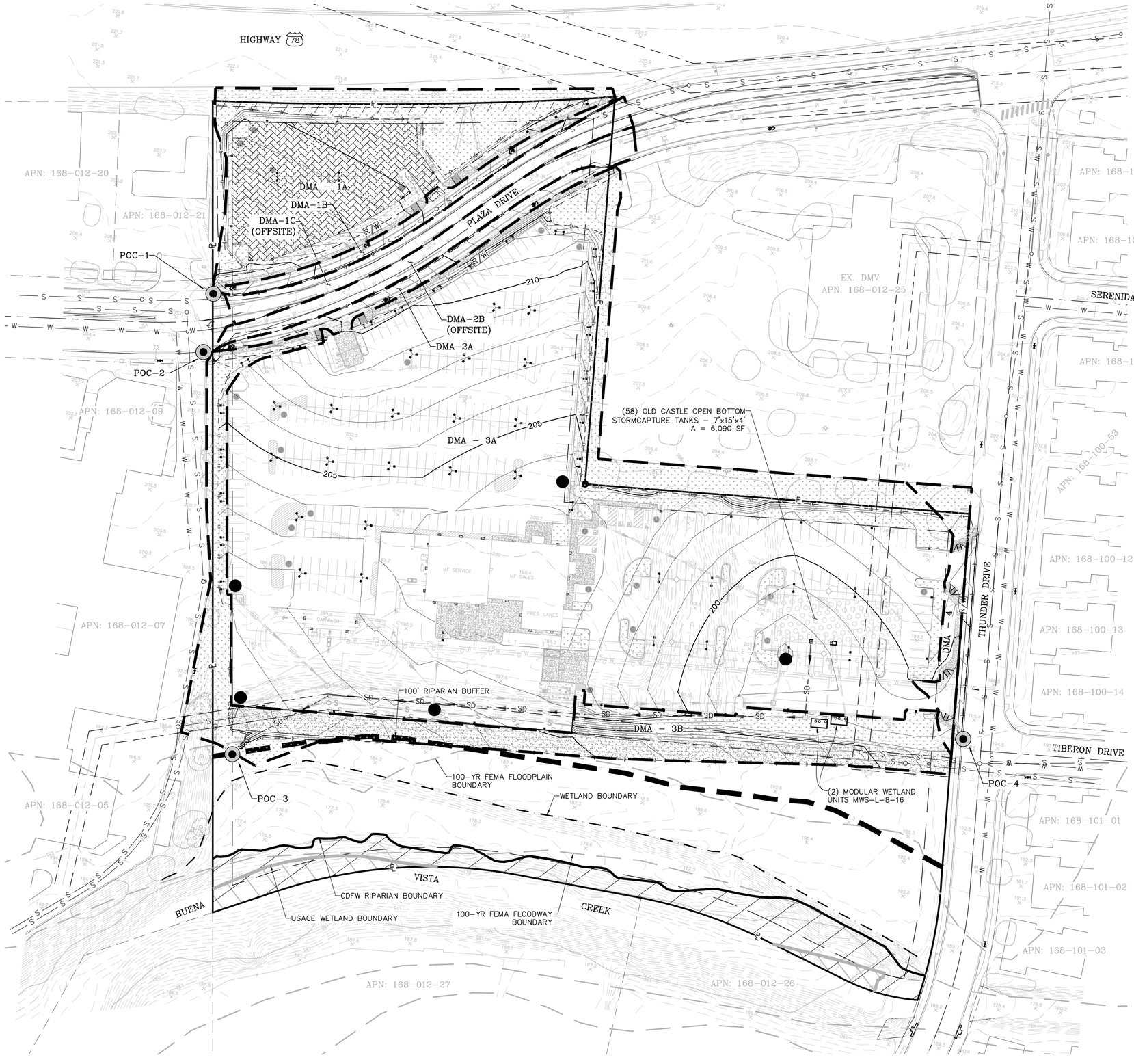
DATE: 10/25/19
SCALE: 1" = 50'
DRAWN: A.O.
CHECKED: J.R.R.

SHEET TITLE: DMA/HMP EXHIBIT - EXISTING CONDITIONS

PROJECT: CARMAX OCEANSIDE
PLAZA DRIVE & THUNDER DRIVE
OCEANSIDE, CA 92056

SHEET 1 OF 1 SHEETS

SAVE DATE: 3/6/2020 ~ PLOT DATE: 3/6/2020 ~ FILE NAME: P:\Xcad\1492 CarMax Oceanside\Reports\SWQMP\DMA Exhibits.dwg



LEGEND:

- EX. PROPERTY BOUNDARY
- DMA BOUNDARY
- POC
- ABUTTERS RIGHTS OF ACCESS RELINQUISHED
- EX. MINOR CONTOUR
- EX. MAJOR CONTOUR
- PROPOSED UNDERGROUND DETENTION
- LANDSCAPE/PERVIOUS AREAS
- PERVIOUS PAVEMENT
- PROPOSED HARDSCAPE AREAS
- PROPOSED ASPHALT IMPERVIOUS AREAS
- MODULAR WETLAND
- PROHIBITIVE SIGNANGE

DMA PROPERTIES

UNDERLYING HYDROLOGIC SOIL GROUP: D
APPROXIMATE DEPTH TO GROUNDWATER: > 20'
EXISTING NATURAL HYDROLOGIC FEATURES:EXISTING BUENA VISTA CREEK ALONG SOUTHERN EDGE OF SITE.
CRITICAL COARSE SEDIMENT YIELD AREAS: NONE

NO DUMPING DRAINS TO OCEAN

SAMPLE PROHIBITIVE SIGNAGE

NTS

PROPOSED CONDITIONS					
DMA	DRAINS TO	IMPERVIOUS	PERVIOUS	TOTAL	TYPE OF STRUCTURAL BMP
DMA-1A	POC-1	0	47,133	47,133	SELF-RETAINING (PERMEABLE PAVEMENT)
DMA-1B		5,601	0	5,601	GREEN STREET (PLAZA DRIVE EXPANSION- NORTH)
DMA-1C		9,667	0	9,667	EXISTING STREET OFFSITE AREA
DMA-2A	POC-2	5,899	0	5,899	GREEN STREET (PLAZA DRIVE EXPANSION- SOUTH)
DMA-2B		9,430	0	9,430	EXISTING STREET OFFSITE AREA
DMA-3A	POC-3	218,927	37,896	256,823	PROPRIETARY RETENTION & BIO-FILTRATION
DMA-3B		-	43,234	43,234	BYPASS
DMA-4	POC-4	3,024	3,028	6,051	DE-MINIMUS (DRIVEWAY AREA)
TOTAL				**383,838**	

50 25 0 50 100 150

SCALE: 1" = 50'

NO.	DESCRIPTION	DATE	APP'D
	REVISIONS		

Civil Engineering · Environmental
Land Surveying
2442 Second Avenue
San Diego, CA 92101
(619)232-9200 (619)232-9210 Fax
R·E·C Consultants, Inc.

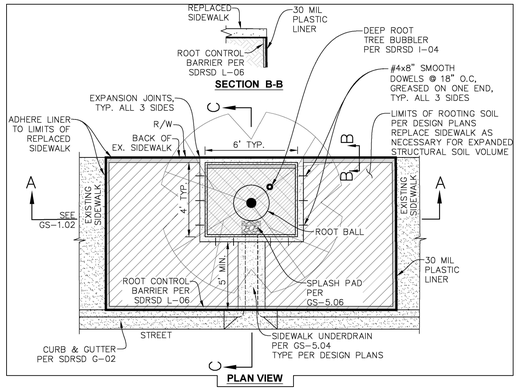
DATE: 10/25/19
SCALE: 1" = 50'
DRAWN: A.O.
CHECKED: J.R.R.

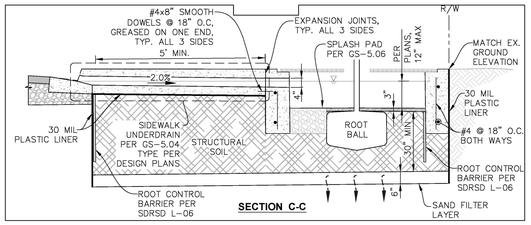
SHEET TITLE: DMA EXHIBIT - PROPOSED

PROJECT: CARMAX OCEANSIDE
PLAZA DRIVE & THUNDER DRIVE
OCEANSIDE, CA 92056

SHEET 1 OF 2 SHEETS

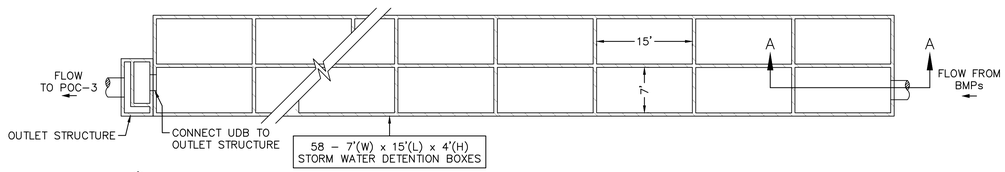
SAVE DATE: 3/6/2020 ~ PLOT DATE: 3/6/2020 ~ FILE NAME: P:\Acad\1492 CarMax Oceanside\Reports\SWQMP\DMA Exhibits.dwg





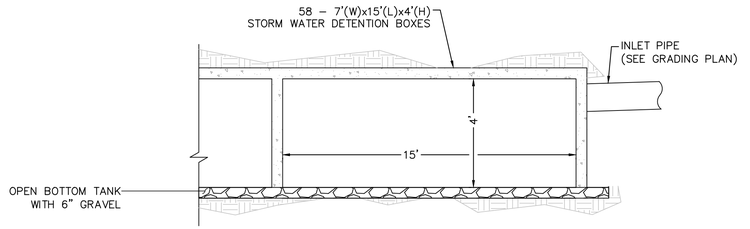
TREE WELL DETAIL

NTS



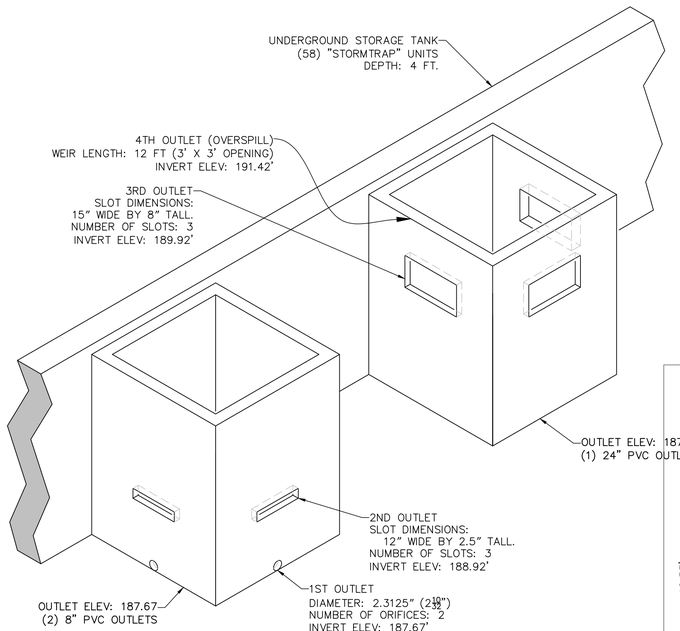
UNDERGROUND DETENTION BASIN (UDB)

NTS



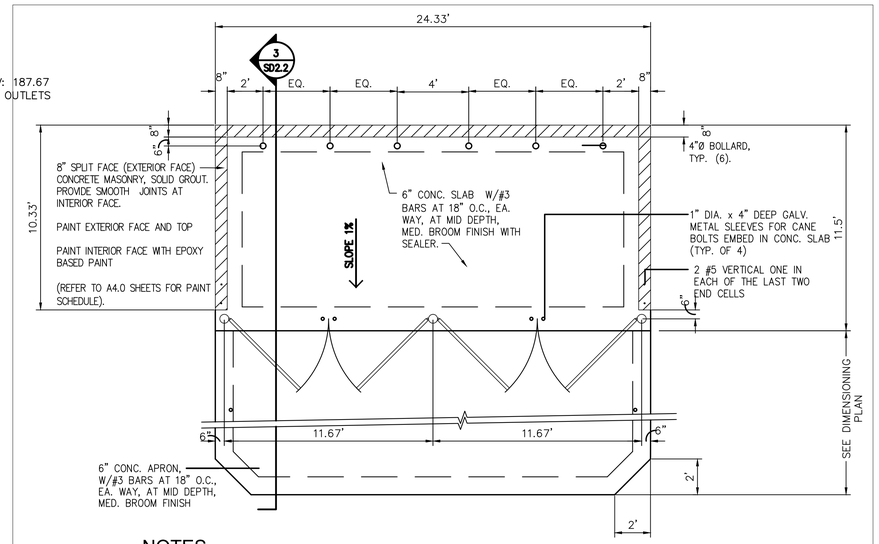
SECTION A-A: UNDERGROUND DETENTION BASIN

NTS



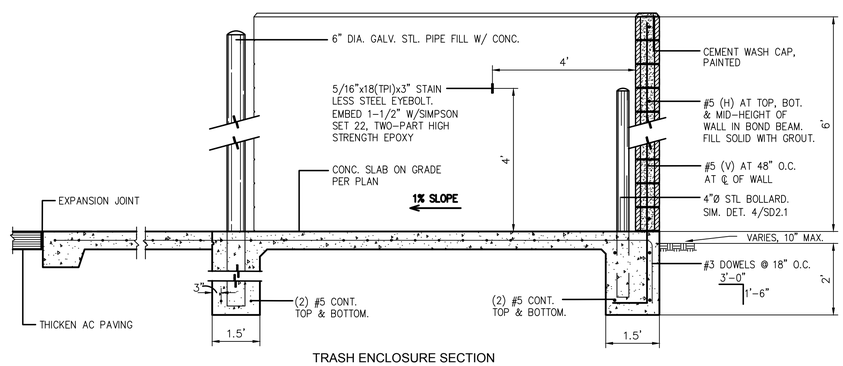
TANK OUTLET STRUCTURES

NOT TO SCALE



NOTES

1. ALL CONC. BLOCK MORTAR JOINTS SHALL BE FLUSH & SMOOTH AT INSIDE FACE.
2. SEE SITE PLAN FOR LOCATION OF TRASH ENCLOSURE.
3. THE TRASH ENCLOSURE PAD SHALL BE SEALED WITH A "NON-PIGMENTED" CLEAR CONCRETE SEALER.



TRASH ENCLOSURE SECTION

SOURCE CONTROL

BMP ID #	BMP TYPE	SYMBOL	CASQA NO.	QUANTITY	INSPECTION FREQUENCY	MAINTENANCE FREQUENCY	MAINTENANCE ACTIVITY
(1)	TRASH ENCLOSURE		SD-32	2	MONTHLY	AS NEEDED	INSPECT REGULARLY. CLEAR TRASH & DEBRIS. REPLACE LEAKING BINS. CLEAN STORAGE AREAS REGULARLY. POST SIGNS INFORMING TO NOT DISPOSE OF LIQUIDS & TO KEEP BIN LIDS CLOSED.
(2)	STENCILS	NO DUMPING	SD-13, SC-2	1 EA	MONTHLY	AS NEEDED	INSPECT AND MAINTAIN/REPLACE AS NEEDED.

BMP ID #	BMP TYPE	INSPECTION FREQUENCY	FREQUENCY MAINTENANCE	MAINTENANCE ACTIVITY
SC-1	PREVENTION OF ILLICIT DISCHARGES INTO MS4	CONTINUOUS	-	A GREASE TRAP HAS BEEN INCOPORATED INTO UTILITY PLAN AND DUMPING OF GREASE DOWN THE STROM DRAIN IS PROHIBITED OTHER GOOD HOUSEKEEPING PRACTICES WILL BE IMPLEMENTED TO DISCOURAGE DISCHARGES OF NON-STORM WATER POLLUTANTS, INCLUDING COLLECTION/RECYCLING USED COOKING OIL, CLEAN UP FOOD AND GREASE WITH ABDORBENTS/DISCARD IN TRASH AND ROUTINE MAINTANACE OF GREASE TRAP.
SC-2	STORM DRAIN STENCILING OR SIGNAGE	CONTINUOUS	REGULARLY	LABELING SHALL BE PROVIDED FOR ALL STORM WATER CONVEYANCE SYSTEM INLETS AND CATCH BASINS WITHIN THE PROJECT AREA. STORM DRAIN PLACARDS SHALL BE USED FOR SIGANGE (STENCILING IS PROHIBITED BY CITY OF OCEANSIDE). INSPECT AND MAINTAIN PLACARDS AS NEEDED.
SC-5	PROTECT TRASH STORAGE AREAS FROM RAINFALL, RUN-ON, RUNOFF, AND WIND DISPERSAL	REGULARLY	REGULARLY	ENSURE TRASH ENCLOSURE AREAS ARE FULLY CONTAINED (THREE WALLS, DOOR, ROOF). PROVIDE ATTACHED LIDS ON ALL TRASH CONTAINERS. KEEP CONTAINERS AWAY FROM STORM DRAIN VICINITY. POST SIGNS ON ALL ENCLOSURES AND/OR DUMPSTERS INFORMING USERS TO KEEP LID CLOSED AND NOT TO DISPOSE OF LIQUIDS OR HAZARDOUS MATERIALS. INSPECT TRASH STORAGE AREAS TO ENSURE INTEGRITY OF CONTAINERS AND THAT AREA IS KEPT CLEAN. REPLACE LEAKING BINS. CLEAN TRASH STORAGE AREAS REGULARLY
SC-6 A THROUGH H	ADDITIONAL BMPS BASED ON POTENTIAL SOURCES OF RUNOFF POLLUTANTS	REGULARLY OR AS DETERMINED NECESSARY	REGULARLY OR AS DETERMINED NECESSARY	SC-A ON-SITE STORM DRAIN INLETS: ON-SITE INLETS SHALL BE PROTECTED FROM ANY ILLICIT DISCHARGES AND DEBRIS. INLETS SHALL HAVE PROHIBITIVE SIGNS. MARK ALL INLETS WITH THE WORDS "NO DUMPING! DISCHARGES TO BAY" OR SIMILAR. INLET MARKINGS SHALL BE MAINTAINED AND PERIODICALLY REPAINTED. MAINTAIN ON A REGULAR BASIS TO REMOVE POLLUTANTS. ENSURE PROPER HYDRAULIC FUNCTION TO PREVENT FLOODING. CLEAN INLETS REGULARLY AND REMOVE SEDIMENTS AND DEBRIS, ESPECIALLY BEFORE START AND END OF WET SEASON. STORE WASTES COLLECTED FROM CLEANING ACTIVITIES OF DRAINAGE SYSTEM IN APPROPRIATE CONTAINERS OF TEMPORARY STORAGE SITES IN A MANNER THAT PREVENTS DISCHARGE TO THE STORM DRAIN. KEEP A RECORD OF CLEANING AND DISPOSAL ACTIVITIES. SC-C INTERIOR PARKING GARAGES: INTERIOR PARKING GARAGE WILL HAVE AN INTERIOR DRAIN THAT IS CONNECTED TO THE STORM DRAIN SYSTEM TO REMOVE NUISANCE WATER. SC-D1 NEED FOR FUTURE INDOOR & STRUCTURAL PEST CONTROL: FUTURE INDOOR & STRUCTURAL PEST CONTROL: BUILDING INCLUDES DOORS AND WINDOWS WITH SEALING THAT DISCOURAGES ENTRY OF PESTS. ANY PESTICIDES SHALL BE APPLIED MINIMALLY IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND CITY/STATE REQUIREMENTS SC-D2 LANDSCAPE/OUTDOOR PESTICIDE USE (SC-41): FINAL LANDSCAPE PLANS WILL PRESERVE EXISTING DROUGHT TOLERANT TREES, SHRUBS, AND GROUND COVER TO THE MAXIMUM EXTENT POSSIBLE, AND INCLUDE LANDSCAPING TO MINIMIZE IRRIGATION AND RUNOFF, TO PROMOTE SURFACE INFILTRATION WHERE APPROPRIATE, AND TO MINIMIZE THE USE OF FERTILIZERS AND PESTICIDES THAT CAN CONTRIBUTE TO STORM WATER POLLUTION. THE LANDSCAPED AREAS THAT WILL BE USED TO DETAIN STORMWATER, WILL HAVE PLANTS TOLERANT OF PERIODIC SATURATED SOIL CONDITIONS. FINAL LANDSCAPE PLANS HAVE BEEN DESIGNED TO ENSURE SUCCESSFUL ESTABLISHMENT, INCLUDING SELECTION OF PLANTS APPROPRIATE TO SITE SOILS, SLOPES, CLIMATE, SUN, WIND, RAIN, LAND USE, AIR MOVEMENT, ECOLOGICAL CONSISTENCY, AND PLANT INTERACTIONS. SC-N FIRE SPRINKLER TEST WATER: FIRE SPRINKLER TEST WATER SHALL BE DRAINED TO SANITARY SEWER SYSTEM. DURING A FIRE SPRINKLER TEST, THE FIRE RISER DISCHARGE SHALL BE CONNECTED BY A HOSE TO THE SEWER CLEANOUT. SC-O MISCELLANEOUS DRAIN OR WASHWATER: BOILER DRAINS SHALL BE DIRECTLY OR INDIRECTLY CONNECTED TO THE SANITARY SEWER SYSTEM AND MAY NOT DISCHARGE TO THE STORM DRAIN. ROOFTOP MOUNTED EQUIPMENT WITH POTENTIAL TO PRODUCE POLLUTANTS SHALL BE ROOFED AND/OR HAVE SECONDARY CONTAINMENT. ANY DRAINAGE SUMPS ONSITE SHALL FEATURE A SEDIMENT SUMP TO REDUCE THE QUANTITY OF SEDIMENT PUMPED WATER. COPPER BASED ROOFING, GUTTERS AND TRIM MATERIALS SHOULD BE AVOIDED. SC-P PLAZAS, SIDEWALKS, AND PARKING LOTS: SWEEP REGULARLY TO PREVENT ACCUMULATION OF LITTER AND DEBRIS, DEBRIS FROM PRESSURE WASHING MUST BE COLLECTED TO PREVENT ENTRY INTO STORM DRAIN SYSTEM. WASHWATER CONTAINING ANY CLEANING AGENT OR DEGREASER MUST BE COLLECTED AND DISCHARGED TO THE SANITARY SEWER AND NOT DISCHARGED TO A STORM DRAIN. CLEAN ALL PAVEMENT AT LEAST ONCE A YEAR.

REVISIONS

NO.	DESCRIPTION	DATE	APP'D

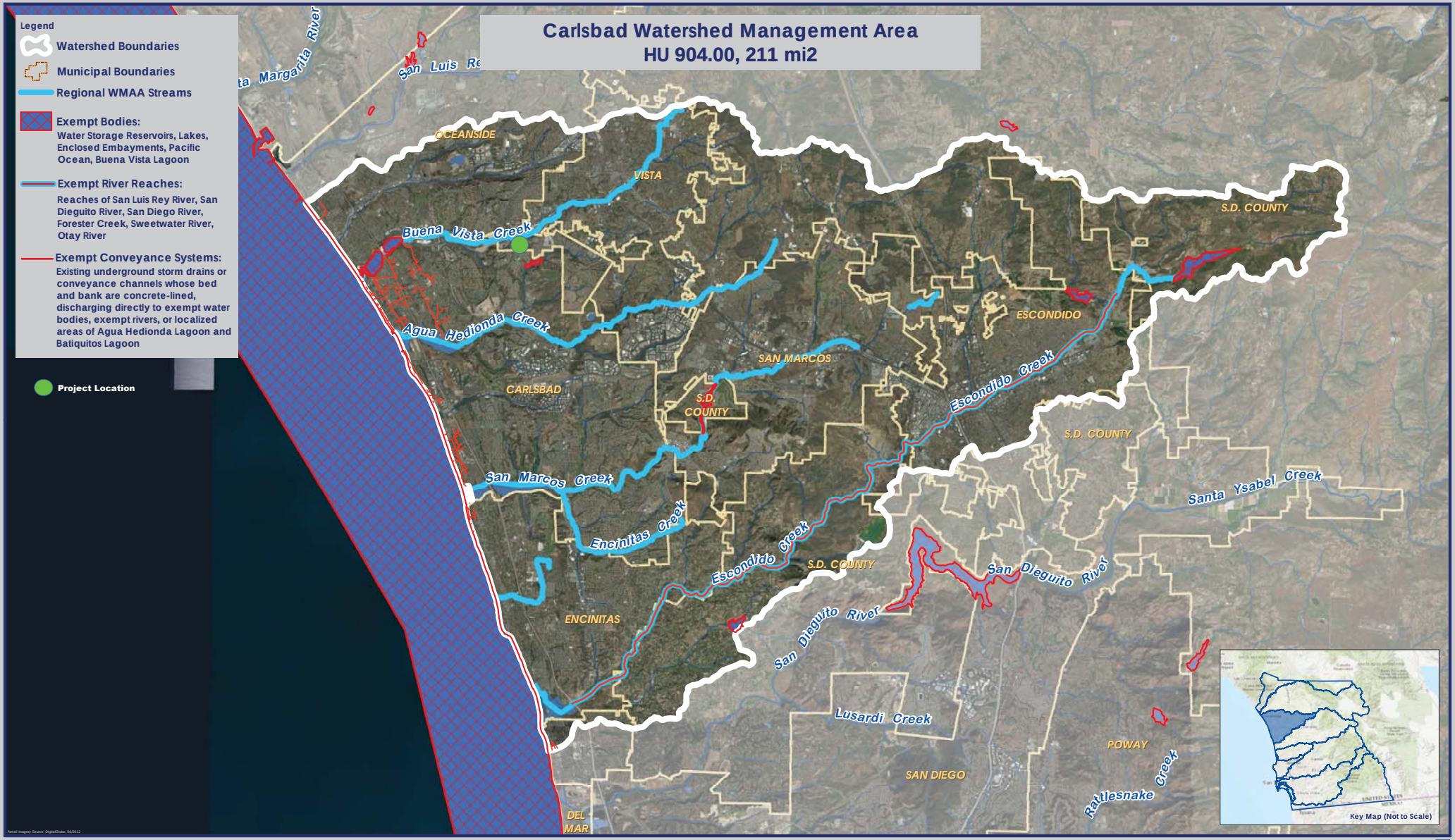
Civil Engineering · Environmental
Land Surveying
2442 Second Avenue
San Diego, CA 92101
(619)232-9200 (619)232-9210 Fax
R·E·C Consultants, Inc.

DATE: 10/25/19
SCALE: 1" = 50'
DRAWN: A.O.
CHECKED: J.R.R.

SHEET TITLE: DMA EXHIBIT - PROPOSED
PROJECT: CARMAX OCEANSIDE
PLAZA DRIVE & THUNDER DRIVE
OCEANSIDE, CA 92056

SHEET 2 OF 2 SHEETS

SAVE DATE: 3/6/2020 ~ PLOT DATE: 3/6/2020 ~ FILE NAME: P:\Acad\1492 CarMax Oceanside\Reports\SWQMP\DMA Exhibits.dwg



Receiving Waters and Conveyance Systems Exempt from Hydromodification Management Requirements

Exhibit Date: Sept. 8, 2014
Revised Date: Sept. 6, 2018

Geosyntec consultants

RICK ENGINEERING COMPANY

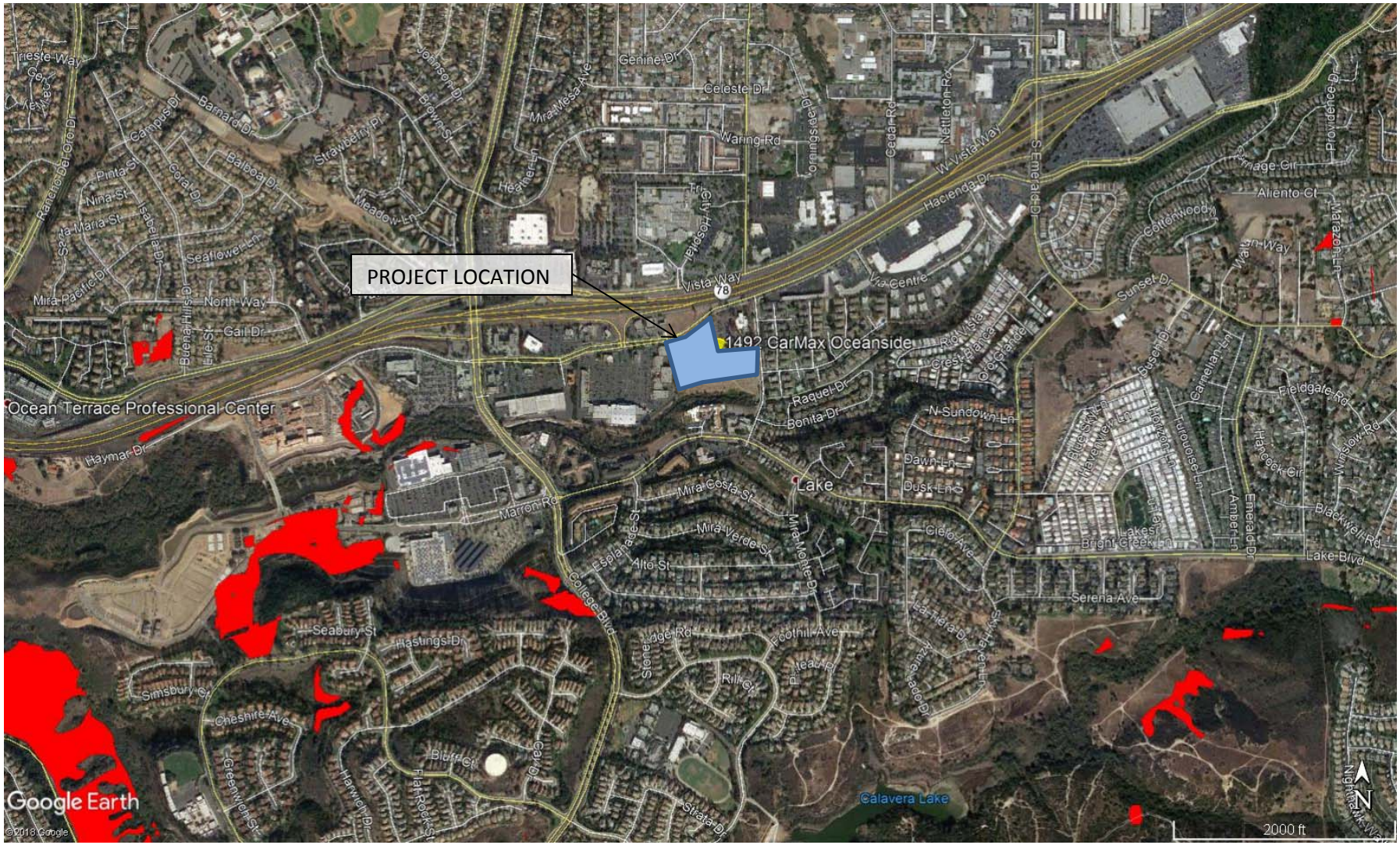
Watershed Management Area Streams by Reach Type

Carlsbad Watershed - HU 904.00, 211 mi2

Exhibit Date: Sept. 8, 2014

Geosyntec consultants | RICK Engineering Company

CCSYA – CARMAX OCEANSIDE



Downstream Systems Sensitivity to Course Sediment		Form I-10	
When it has been determined that potential critical coarse sediment yield areas exist within the project site, the next step is to determine whether downstream systems would be sensitive to reduction of coarse sediment yield from the project site. Use this form to document the evaluation of downstream systems requirements for preservation of coarse sediment supply.			
Project Name: Carmax Oceanside			
Project Tracking Number / Permit Application Number: D19-00021; CUP19-00029			
1	Will the project discharge runoff to a hardened MS4 system (pipe or lined channel) or an un-lined channel?	☐ Hardened MS4 system	Go to 2
		X Un-lined channel	Go to 4
2	Will the hardened MS4 system convey sediment (e.g., a concrete-lined channel with steep slope and cleansing velocity) or sink sediment (e.g., flat slopes, constrictions, treatment BMPs, or ponds with restricted outlets within the system will trap sediment and not allow conveyance of coarse sediment from the project site to an un-lined system).	☐ Convey	Go to 3
		☐ Sink	Go to 7
3	What kind of receiving water will the hardened MS4 system convey the sediment to?	☐ Un-lined channel	Go to 4
		☐ Lake ☐ Reservoir ☐ Bay	Go to 7
		☐ Lagoon ☐ Ocean	Go to 6
4	Is the un-lined channel impacted by deposition of sediment? This condition must be documented by the local agency.	☐ Yes	Go to 7
		X No	Go to 5

Form I-10 Page 2 of 2	
5	End – Preserve coarse sediment supply to protect un-lined channels from accelerated erosion due to reduction of coarse sediment yield from the project site unless further investigation determines the sediment is not critical to the receiving stream. Sediment that is critical to receiving streams is the sediment that is a significant source of bed material to the receiving stream (bed sediment supply) (see Section 6.2.3 and Appendix H.2 of the manual).
6	End – Provide management measures for preservation of coarse sediment supply (protect beach sand supply).
7	End – Downstream system does not warrant preservation of coarse sediment supply, no measures for protection of critical coarse sediment yield areas onsite are necessary. Use the space below to describe the basis for this finding for the project.

Placeholder – **6.2.3 Additional Analysis of Potential Critical Coarse Sediment Yield Areas Onsite** (Optional)

Replace placeholder with required calculations/documentation.

Leave placeholder intact if not applicable.

X Not Applicable

Placeholder – **6.3.4 Geomorphic Assessment of Receiving Channels** (Optional)

Replace placeholder with required calculations/documentation.

Leave placeholder intact if not applicable.

X Not Applicable

Placeholder - **Flow Control Facility Design and Structural BMP Drawdown Calculations**

Replace placeholder with required calculations/documentation.

See Chapter 6 and Appendix G of the BMP Design Manual

Placeholder – **Vector Control Plan** (required when structural BMPs will drain in 96 hours)

Replace placeholder with required documentation.

Leave placeholder intact if not applicable.

X Not Applicable

ATTACHMENT 3
STRUCTURAL BMP MAINTENANCE INFORMATION

This is the cover sheet for Attachment 3.

Indicate which Items are Included:

Attachment Sequence	Contents	Checklist
Attachment 3a	Structural BMP Maintenance Thresholds and Actions (Required)	☒Included See Structural BMP Maintenance Information Checklist.
Attachment 3b	Draft Maintenance Agreement (when applicable)	☒Included ☐Not Applicable

Use this checklist to ensure the required information has been included in the Structural BMP Maintenance Information Attachment:

Preliminary Design / Planning / CEQA level submittal:

- Attachment 3a must identify:

☒Typical maintenance indicators and actions for proposed structural BMP(s) based on Section 7.7 of the BMP Design Manual

- Attachment 3b is not required for preliminary design / planning / CEQA level submittal.

Final Design level submittal:

Attachment 3a must identify:

☒Specific maintenance indicators and actions for proposed structural BMP(s). This shall be based on Section 7.7 of the BMP Design Manual and enhanced to reflect actual proposed components of the structural BMP(s)
☒How to access the structural BMP(s) to inspect and perform maintenance
☒Features that are provided to facilitate inspection (e.g., observation ports, cleanouts, silt posts, or other features that allow the inspector to view necessary components of the structural BMP and compare to maintenance thresholds)
☒Manufacturer and part number for proprietary parts of structural BMP(s) when applicable
☒Maintenance thresholds specific to the structural BMP(s), with a location-specific frame of reference (e.g., level of accumulated materials that triggers removal of the materials, to be identified based on viewing marks on silt posts or measured with a survey rod with respect to a fixed benchmark within the BMP)
☒Recommended equipment to perform maintenance
☒When applicable, necessary special training or certification requirements for inspection and maintenance personnel such as confined space entry or hazardous waste management
Attachment 3b: For private entity operation and maintenance, Attachment 3b shall include a draft maintenance agreement in the local jurisdiction's standard format (PDP applicant to contact the City Engineer to obtain the current maintenance agreement forms).

CITY OF OCEANSIDE

BEST MANAGEMENT PRACTICES OPERATIONS AND MAINTENANCE PLAN
FOR PRIORITY PROJECTS

PROJECT NAME: CARMAX OCEANSIDE

PARCEL NUMBER: 168-012-42, -43

PROJECT NUMBER: _____

APPLICANT NAME: CENTERPOINT INTEGRATED SOLUTIONS

DATE: 2019-12-19

Prepared for:

City of Oceanside
Engineering Division
300 North Coast Hwy
Oceanside, CA 92054

Deemed Complete by the City of Oceanside
Engineering Division

Name: _____ Date: _____

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TABLE 3 Source Control BMPs
TABLE 4 Drainage Management Areas
TABLE 5 Stormwater Treatment Control BMPs

ATTACHMENTS

1. Organizational Chart
2. Training Program
3. BMP Operation and Maintenance Funding Supplemental Information
4. LID BMPs Inspection Form
5. Source Control BMP Inspection Form
6. Site Map
7. Plans and Other Operation and Maintenance Requirements
8. Treatment Control BMP Inspection and Maintenance Checklist(s)
9. Maintenance Schedule
10. Service Agreement
11. Annual Inspection and Maintenance Reporting Form
12. Copy of Storm water facility maintenance Agreement (SWFMA)
13. Annual Maintenance Cost Estimate

I. COMPLIANCE WITH STORMWATER BEST MANAGEMENT PRACTICES MAINTENANCE REQUIREMENTS

All applicants are responsible for ensuring that stormwater best management practices (BMPs) or facilities installed on their property are properly maintained and that they function as designed. Tenants shall be aware of their responsibilities regarding stormwater facility maintenance and need to be familiar with the contents of this Operations and Maintenance Plan (O&M Plan). Applicants have signed and agreed to a Standard Storm Water Facilities Maintenance Agreement with Access Rights and Covenants (SWFMA). All other maintenance agreements between the applicant and their maintenance employees associated with this property shall be included in Attachment 10.

II. DESIGNATION RESPONSIBLE PARTIES

Responsible parties shall be designated and identified in Table 1.

- The Responsible BMP Party is individual, party, or parties that shall have direct responsibility for the maintenance of stormwater controls. This individual shall be the designated contact with City of Oceanside inspectors and should sign self-inspection reports and any correspondence regarding verification of inspections and required maintenance.

- The Duly Authorized Representative is the corporate officer authorized to negotiate and execute any contracts that might be necessary for future changes to operation and maintenance or to implement remedial measures if problems occur.

- The Designated Emergency Respondent is the party responsible for emergencies such as clogged drains, broken irrigation pipes, etc., that would require immediate response should they occur during off-hours.

TABLE 1
OWNERSHIP AND MAINTENANCE

	Name	Address	Phone / Email
Responsible BMP Party (if different than above)	CARMAX		
Employees reporting to Responsible BMP Party			
Duly Authorized Representative			

Designated Emergency Respondent[1]			

[1] The Designated Emergency Respondent's phone number must be a cellular phone that is reachable 24 hours a day.

Updated contact information must be provided to City of Oceanside immediately whenever a property is sold and whenever designated individuals or contractors change.

A. Maintenance Personnel

Maintenance personnel including Responsible BMP Party, Employees Reporting to Responsible BMP Party, and the Designated Emergency Respondent, must be qualified to properly maintain stormwater BMPs (including treatment and flow-control facilities), especially for restoration or rehabilitation work. Inadequately trained personnel can cause additional problems resulting in additional maintenance costs.

B. Organizational Chart

An organization chart showing the relationships of authority and responsibility between the individuals responsible for maintenance is provided in Attachment 1.

C. Training

Periodic training is conducted by the responsible BMP party for all personnel affiliated with the maintenance of stormwater BMPs. New staff and/or contractors training regarding the purpose, mode of operation, and maintenance requirements for the site's storm water facilities will be provided by the site. Necessary ongoing training for staff and/or contractors will also be provided. The site's Staff Training Program is described in Attachment 2.

TABLE 2 **BMP OPERATION AND MAINTENANCE FUNDING**	
Sources of Funding	Funding for BMP maintenance will be by tuition
Budget Category for Expenditures	Ongoing Maintenance
Process for	

establishing Annual O&M Budget	
Process for obtaining unexpected expenditures for major corrective activities	

D. BMP Maintenance Funding

The funding for BMP operation and maintenance shall be described in Table 2; including sources of funds, budget category for expenditures, process for establishing the annual operations and maintenance budget, and process for obtaining authority should unexpected expenditures for major corrective maintenance be required. Any supplemental information, including calculations and documentation shall be included in Attachment 3.

III. LOW IMPACT DEVELOPMENT AND SITE DESIGN BMPS

Low Impact Development (LID) and Site Design BMPs have been incorporated into the project to minimize stormwater impacts. LID BMPs collectively minimize directly connected impervious area and promote infiltration on the project site. Site design BMPs are permanent measures and are similar to LID BMPs.

The LID and Site Design BMPs for the project which require maintenance are identified along with their locations, including Drainage Management Areas (DMAs), in the project SWQMP. A LID Inspection form for the site is provided in Attachment 4. In the event that a project use should change or maintenance considerations may require the site to become amended, Table 22 should be referenced for original site constraints and design guidelines.

IV. SOURCE CONTROL BMPS

Source control BMPs have been selected for the project in order to minimize or prevent pollutant generation. The SWQMP and Table 4 of this O&M identifies the potential pollutant sources and corresponding permanent and operational source controls as well as their locations.

Source control BMPs should be inspected routinely in order to reduce or prevent pollution from accumulating in these areas. Routine inspections of the site's source controls are discussed in the site's maintenance schedule. Source control inspection forms are in Attachment 5.

TABLE 3 SOURCE CONTROL BMPS			
Potential Pollutant Sources	**Description**	**Operational BMPs**	**Location**
☒On-site storm drain inlets	• All inlets shall be marked with City of Oceanside storm drain markers	• Maintain and periodically replace inlet markers, as necessary. • Review stormwater pollution prevention information applicable to the site. • Adhere to applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com • Do not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains.	
☒Interior floor drains and elevator shaft sump pumps	• Interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.	• Inspect and maintain drains to prevent blockages and overflow. • Regularly clear all associated cleanouts and hand holes.	
☐Interior parking garages	• Parking garage floor drains will be plumbed to the sanitary sewer.	• Inspect and maintain drains to prevent blockages and overflow.	

TABLE 3 SOURCE CONTROL BMPS			
Potential Pollutant Sources	**Description**	**Operational BMPs**	**Location**
☒Landscape/ Outdoor Pesticide Use	• Final site landscape plans shall be placed in Attachment 7 and shall be used to maintain the following: o Preserve existing native trees, shrubs, and ground cover to the maximum extent possible. o Minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution. o Where landscaped areas are used to retain or detain stormwater, maintain and replace, as necessary, plants that are tolerant of saturated soil conditions. o Consider using pest-resistant plants, especially adjacent to hardscape. o To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.	• Maintain landscaping using a minimum amount of or no pesticides (consider the use of organic techniques). • Review and adhere to applicable operational BMPs in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com • Review IMP information and provide to landscape and maintenance personnel.	
☒Use efficient irrigation systems	• Employ rain shutoff devices to prevent irrigation after precipitation. • Design irrigation systems to each landscape area's specific water requirements. • Use flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines. • Employ other comparable, equally effective, methods to reduce irrigation water runoff.	• Inspect irrigation system for leaks and/or malfunctions. • Inspect that water usage is consistent with vegetation requirements. • Inspect that irrigation shut-off controls operate correctly.	

TABLE 3 SOURCE CONTROL BMPS			
Potential Pollutant Sources	**Description**	**Operational BMPs**	**Location**
☒Need for future indoor & structural pest control	• Note building design features that discourage entry of pests.	• Review Integrated Pest Management information and provide to other maintenance personnel.	
☐Pools, spas, ponds, decorative fountains, and other water features.	• Plumb pools to the sanitary sewer in accordance with local requirements.	• Review and adhere to applicable operational BMPs in Fact Sheet SC-72, "Fountain and Pool Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	
☐Food service	• Describe the location and features of the designated cleaning area. • Describe the items to be cleaned in this facility and how it has been sized to insure that the largest items can be accommodated.		

TABLE 3 SOURCE CONTROL BMPS			
Potential Pollutant Sources	**Description**	**Operational BMPs**	**Location**
☒Refuse areas	• State how site refuse will be handled and provide supporting detail to what is shown on plans. • Prohibitive signs shall be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar. • Any drains from dumpsters, compactors, and bin areas shall be connected to a grease removal device before discharge to sanitary sewer.	• Provide adequate number of receptacles. • Inspect receptacles regularly; repair or replace leaky receptacles. • Keep receptacles covered at all times. • Prohibit/prevent dumping of liquid or hazardous wastes. • Post and replace, as necessary, "no hazardous materials" signs. • Inspect and pick up litter daily and clean up spills immediately. • Keep spill control materials available on-site. Review Fact Sheet SC-34, "Waste Handling and Disposal" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	
☐Industrial processes.	• Cover or enclose areas that would be the most significant source of pollutants; or, slope the area toward a dead-end sump; or, discharge to the sanitary sewer system in compliance with the applicable municipal waste water district's requirements (include a copy of the waste acceptance letter from the agency accepting the waste in Attachment 10). • Grade or berm area to prevent run-on from surrounding areas. • Installation of storm drains in areas of equipment repair is prohibited. • Implement other features which are comparable or equally effective.	• Review and adhere to Fact Sheet SC-10, "Non- Stormwater Discharges" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	

TABLE 3 SOURCE CONTROL BMPS			
Potential Pollutant Sources	**Description**	**Operational BMPs**	**Location**
☐ Outdoor storage of equipment or materials	• Comply with all requirements of local Hazardous Materials Programs for: o Hazardous Waste Generation o Hazardous Materials Release Response and Inventory o California Accidental Release (CalARP) o Aboveground Storage Tank o Uniform Fire Code Article 80 Section 103(b) & (c) 1991 • Underground Storage Tank • Storage of non-hazardous liquids shall be covered by a roof and/or drain to the sanitary sewer system, and be contained by berms, dikes, liners, or vaults. • Storage of hazardous materials and wastes must be in compliance with the local hazardous materials ordinance and a Hazardous Materials Management Plan for the site.	• Review and adhere to the Fact Sheets SC-31, "Outdoor Liquid Container Storage" and SC- 33, "Outdoor Storage of Raw Materials " in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	
	Include a detailed description of materials to be stored, storage areas, and structural features to prevent pollutants from entering storm drains.		

TABLE 3 SOURCE CONTROL BMPS			
Potential Pollutant Sources	**Description**	**Operational BMPs**	**Location**
☒Vehicle and Equipment Cleaning	• If a car wash area is not provided, describe measures taken to discourage on-site car washing and explain how these will be enforced. • Equip wash area with a clarifier, grease trap or other pretreatment facility, as appropriate and properly connect to the sanitary sewer. • Implement other features which are comparable or equally effective • Commercial/ industrial facilities having vehicle/ equipment cleaning needs shall either provide a covered, bermed area for washing activities or discourage vehicle/equipment washing by removing hose bibs and installing signs prohibiting such uses. • Washing areas for cars, vehicles, and equipment shall be paved, designed to prevent run-on to or runoff from the area, and plumbed to drain to the sanitary sewer. • Commercial car wash facilities shall be designed such that no runoff from the facility is discharged to the storm drain system. Wastewater from the facility shall discharge to the sanitary sewer, or a wastewater reclamation system shall be installed and permitted by proper regulatory authorities (attach permits in Attachment 10, as necessary).	• Follow operational measures to implement the following (if applicable): o Washwater from vehicle and equipment washing operations shall not be discharged to the storm drain system. o Car dealerships and similar may rinse cars with water only. o Review and adhere to Fact Sheet SC-21, “Vehicle and Equipment Cleaning,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	.

TABLE 3
SOURCE CONTROL BMPS

Potential Pollutant Sources	Description	Operational BMPs	Location
☒Vehicle/Equipment Repair and Maintenance	• No vehicle repair or maintenance will be done outdoors, or else describe the required features of the outdoor work area. • An industrial waste discharge permit will be obtained. For floor drains connected to the sanitary sewer; design will meet the permitting agency's requirements. • An industrial waste discharge permit will be obtained for tanks, containers or sinks to be used for parts cleaning or rinsing; design will meet the permitting agency's requirements. • Accommodate all vehicle equipment repair and maintenance indoors or designate an outdoor work area and design the area to prevent run-on and runoff of stormwater. • Show secondary containment for exterior work areas where motor oil, brake fluid, gasoline, diesel fuel, radiator fluid, acid-containing batteries or other hazardous materials or hazardous wastes are used or stored. Drains shall not be installed within the secondary containment areas.	• The following restrictions apply to use the site: o No person shall dispose of, nor permit the disposal, directly or indirectly of vehicle fluids, hazardous materials, or rinse water from parts cleaning into storm drains. o No vehicle fluid removal shall be performed outside a building, nor on asphalt or ground surfaces, whether inside or outside a building, except in such a manner as to ensure that any spilled fluid will be in an area of secondary containment. Leaking vehicle fluids shall be contained or drained from the vehicle immediately. o No person shall leave unattended drip parts or other open containers containing vehicle fluid, unless such containers are in use or in an area of secondary containment.	

TABLE 3 SOURCE CONTROL BMPS			
Potential Pollutant Sources	**Description**	**Operational BMPs**	**Location**
☒Fuel Dispensing Areas	• Fueling areas[1] shall have impermeable floors (i.e., portland cement concrete or equivalent smooth impervious surface) that are: o Graded at the minimum slope necessary to prevent ponding o Separated from the rest of the site by a grade break that prevents run-on of stormwater to the maximum extent practicable. • Fueling areas shall be covered by a canopy that extends a minimum of ten feet in each direction from each pump. [Alternative: The fueling area must be covered and the cover's minimum dimensions must be equal to or greater than the area within the grade break or fuel dispensing area[1]. The canopy [or cover] shall not drain onto the fueling area.	• The fueling area is to be dry swept routinely. • Review and adhere to the Business Guide Sheet, "Automotive Service—Service Stations" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	

[1] The fueling area shall be defined as the area extending a minimum of 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus a minimum of one foot, whichever is greater.

TABLE 3 SOURCE CONTROL BMPS			
Potential Pollutant Sources	**Description**	**Operational BMPs**	**Location**
☐Loading Docks	• Loading dock areas draining directly to the sanitary sewer shall be equipped with a spill control valve or equivalent device, which shall be kept closed during periods of operation. • Provide a roof overhang over the loading area or install door skirts cowling) at each bay that enclose the end of the trailer. • Roof downspouts shall be positioned to direct stormwater away from the loading area. Water from loading dock areas should be drained to the sanitary sewer where feasible.	• Move loaded and unloaded items indoors as soon as possible. • Review and adhere to Fact Sheet SC-30, "Outdoor Loading and Unloading," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	
☒Fire Sprinkler Test Water	• Provide a means to drain fire sprinkler test water to the sanitary sewer.	• Review the note in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	

TABLE 3 SOURCE CONTROL BMPS			
Potential Pollutant Sources	**Description**	**Operational BMPs**	**Location**
☒Miscellaneous Drain or Wash Water • Boiler drain lines Condensate drain lines • Rooftop equipment Drainage sumps • Roofing, gutters, and trim	• Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system. • Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system. • Rooftop mounted equipment with potential to produce pollutants shall be roofed and/or have secondary containment. • Any drainage sumps on-site shall feature a sediment sump to reduce the quantity of sediment in pumped water. • Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff.		
☒Plazas, sidewalks, and parking lots		• Plazas, sidewalks, and parking lots shall be swept regularly to prevent the accumulation of litter and debris. Debris from pressure washing shall be collected to prevent entry into the storm drain system. Washwater containing any cleaning agent or degreaser shall be collected and discharged to the sanitary sewer and not discharged to a storm drain.	

V. DRAINAGE AREAS

Table 5 summarizes the drainage management areas (DMAs) on site.

TABLE 4
DRAINAGE MANAGEMENT AREAS

DMA No.	Designation	Description
DMA-1	DMA-1	DMA-1 is the northerly portion of the site. DMA is landscape area, pervious pavement, a portion of the existing Plaza Drive, and the expansion of Plaza Drive.
DMA-2	DMA-2	DMA-2 is a portion of the existing and expansion of Plaza Drive.
DMA-3	DMA-3	DMA-3 is the majority of the site. DMA-3 is discharged to the underground detention system.
DMA-4	DMA-4	DMA-4 is a small portion of landscaped self-treated area and driveway and sidewalk de-minimus areas.

The site map in Attachment 6 shows the DMAs and their flow patterns. The map indicates, using flow patterns, how the flow from each DMA is routed to the corresponding storm water facility. Impervious and pervious areas are shown on the map.

VI. STORMWATER TREATMENT CONTROL BMPS

Treatment control BMPs treating runoff from DMAs are summarized in Table 5.

TABLE 5
STORMWATER TREATMENT CONTROL BMPS

Treatment Control BMP Type	Description	Size or Treatment Control BMP Capacity	Area Drained or Water Quality Flow
Proprietary Device	BMP-1	0.943 CFS	6.89 acres

The location and type of each of the project's stormwater facilities on site are shown on the site map in Attachment 6.
The as-built drawings[2], manufacturer's data, cut-sheets, manuals, and specific operation and maintenance requirements for each treatment control BMP shall be provided in Attachment 7.

VII. INSPECTING STORMWATER BMPS

The quality of stormwater entering the waters of the U.S. or waters of the state relies heavily on the proper operation and maintenance of permanent BMPs. LID, source control, and treatment control stormwater BMPs must be periodically inspected to ensure that they are functioning as designed. Inspections will determine the appropriate maintenance that is required for the facility.

A. Inspection Procedures

All stormwater treatment BMPs are required to be inspected a minimum of once per year. The Inspection and Maintenance Checklist(s) that is applicable to the site is provided in Attachment 8.

B. Inspection Report

The person(s) conducting the inspection activities (Responsible BMP Party. Employees reporting to Responsible BMP Party, or the Designated Emergency Respondent) shall complete the appropriate inspection checklist for the specific facility. All completed checklists are located in Attachment 8. All facilities are to be inspected on an annual basis at a minimum. A copy of each inspection form shall be kept by the applicant a minimum of 5 years.

Inspection Scoring

For each inspection item, a score is given to identify the urgency for any required maintenance. The scoring is as follows:

0 = No deficiencies identified.

1 = Monitor – Although maintenance may not be required at this time, a potential problem exists that will most likely need to be addressed in the future. This can include items like minor erosion, concrete cracks/spalling, or minor sediment accumulation. This item should be revisited at the next inspection.

[2] As-built drawings must be included after construction is complete.

2 = Routine Maintenance Required – Some inspection items can be addressed through the routine maintenance program. This can include items like vegetation management or debris/trash removal.

3 = Immediate Repair Necessary – This item needs immediate attention because failure is imminent or has already occurred. This could include items such as structural failure of a feature (outlet, weir, manhole, etc.), significant erosion, or significant sediment accumulation. This score should be given to an item that can significantly affect the function of the facility.

N/A = This is checked by an item that may not exist in a facility. Not all facilities have all of the features identified on the form (outlet, weir, manhole, etc.).

Overall Facility Rating

An overall rating is given for each facility inspected. The overall facility rating should correspond with the highest score (0, 1, 2, 3) given to any feature on the inspection form.

C. Verification of Inspection and Checklist Submittal

The Stormwater BMP Inspection and Maintenance Checklist (in Attachment 8) provides a record of inspections and the need for maintenance activities at the facility. Verification of the inspection of the stormwater facilities and the facility inspection checklist(s) shall be available to the City of Oceansideif requested.

VIII. MAINTENANCE SCHEDULE FOR STORMWATER BMPS

A maintenance schedule for the stormwater source control and treatment control BMPs on site is provided in Attachment 9. Attachment 9 includes schedules for routine inspection and maintenance, annual inspection and maintenance, and inspection and maintenance after major storm events.

A service agreement with any contractors hired to perform stormwater treatment control BMP maintenance is also provided in Attachment 10.

IX. MAINTAINING STORMWATER BMPS

Stormwater BMPs must be properly maintained to ensure that they operate correctly and provide the water quality treatment for which they were designed. Routine maintenance performed on a frequently scheduled basis, can help avoid more costly rehabilitative maintenance that results when facilities are not adequately maintained.

A. Maintenance Categories

Stormwater BMP maintenance programs are separated into three broad categories of work: routine, restoration, and rehabilitation. The categories are separated based upon the magnitude and type of the maintenance activities performed. A description of each category follows:

Routine Work

This work includes items such as the removal of debris/material that may be clogging the outlet structure well screens and trash racks. It also includes activities such as road and parking lot sweeping, weed control, mosquito treatment, and algae treatment. These activities normally will be performed numerous times during the year. These items can be completed without any prior correspondence; however, inspection and maintenance forms shall be completed.

Restoration Work

This work consists of a variety of isolated or small-scale maintenance and work needed to address operational problems. Most of this work can be completed by a small crew, with minor tools, and small equipment. These items do not require prior correspondence. However, completed maintenance forms are required.

Rehabilitation Work

This work consists of large-scale maintenance and major improvements needed to address failures within the stormwater BMP. This work requires consultation with the City of Oceanside and may require an engineering design with construction plans to be prepared for review and approval.

B. Maintenance Forms

The Stormwater BMP Inspection and Maintenance Form provides a record of maintenance activities and includes general cost information to assist in budgeting for future maintenance. Maintenance Forms for each facility type are provided in Appendix 3. Maintenance Forms shall be completed by the responsible BMP party. The form shall then be reviewed by the applicant or an authorized agent of the applicant and made available for review upon inspection by the City of Oceanside.

X. PREVENTATIVE MEASURES TO REDUCE MAINTENANCE COSTS

The most effective way to maintain a stormwater quality facility is to prevent pollutants from entering the facility. Common pollutants include sediment, trash

& debris, chemicals, pet wastes, runoff from stored materials, illicit discharges into the storm drainage system and many others. This maintenance program includes measures to address these potential contaminants at the source and save time and money in the long run. The maintenance program will consider the following:

- Educate employees and patrons to be aware of how their actions affect water quality and how they can help reduce maintenance costs.
- Keep properties, streets, gutters, and parking lots free of trash, debris, and lawn clippings.
- Ensure the proper use, storage, and disposal of hazardous wastes and chemicals. Promptly clean up spilled materials and dispose of properly.
- Plan landscape care to minimize and properly use chemicals and pesticides.
- Sweep paved surfaces and put the sweepings back on the lawn.
- Be aware of automobiles leaking fluids. Use absorbents such as cat litter to soak up drippings – dispose of properly.
- Encourage pet owners to clean up pet wastes.
- Re-vegetate disturbed and bare areas to maintain vegetative stabilization.
- Clean any private storm drainage system components, including inlets, storm drains, and outfalls.
- Do not store materials outdoors (including landscaping materials) unless properly protected from runoff.

XI. INSPECTION & MAINTENANCE – ANNUAL REPORTING

The tenant is responsible for providing verification that the stormwater treatment control BMPs have been properly inspected and maintained unless otherwise noted. Verification includes records of inspections and maintenance performed on site. Any maintenance required will be identified and described.
Records should be available at the City of Oceanside's request.

ATTACHMENT 1

ORGANIZATIONAL CHART

This section to be completed for the next submittal.

ATTACHMENT 2

TRAINING PROGRAM

EMPLOYEE TRAINING PROGRAM

Food facilities are a significant source of stormwater pollution. An important way to reduce pollution is by training employees to know the Best Management Practices for the restaurant business. Employee training should include but is not limited to the following:

Pavement and Parking Lot Cleaning

- Sweep or vacuum outside eating areas daily
- Routinely sweep parking lots and unloading areas
- Sweep up leaves on sidewalks, gutter, and streets

Litter Control

- Provide trash cans with lids
- Pick up litter daily
- Post “No littering” signs

Equipment Cleaning

- Wash floor mats, filters, and garbage cans indoors
- Dispose of washwater into sanitary sewer

Grease Handling

- Recycle and store grease in separate containers
- Regularly inspect and clean grease storage area
- Never pour oil, grease, or large quantities of oily liquids such as sauces or salad dressings or waste grease down a sink, floor drain, storm drain, or into a dumpster.
- Install screens and solid traps in sink and floor drains to catch larger solids. Clean these screens and traps frequently.
- Don’t try to “dissolve” grease by adding hot water or emulsifying chemicals – it will only move the grease further down the building‘s sewer line and make it harder to remove later.
- Use tallow bins or sealed containers with tamper-proof lids. Keep the exterior of the container clean. Check for leaks. Ask the recycler for a leak-free tallow bin and replace any leaky grease containers. If grease is stored outside, keep it under a roof, if possible.
- Inspect and clean all waste grease removal devices (grease trap or grease interceptor) often enough to keep them functioning properly and efficiently.

Waste Disposal

- Dispose of liquid waste into sanitary sewer
- Keep dumpster closed and locked
- Contact waste hauler for cleaning or repair

Landscaping and Grounds Maintenance

- Adjust sprinkler to avoid water runoff
- Minimize use of pesticides and fertilizers
- Never dispose of leftover pesticides in the gutter, street, or storm drain. Leftover pesticides must be either used up or disposed of as hazardous waste.
- Do not blow or rake leaves, grass, or garden clippings into the street, gutter, or storm drain.
- If pesticides are used, do not over apply or apply when rain is forecast.
- Do not use copper-based algaecides in pools or fountains. Control algae with chlorine or other alternatives to copper-based products.

Spill Clean-Up

- Use dry methods for spill clean ups
- Keep spill clean-up materials handy
- Report any spill that cannot be contained

Dumpster and Loading Dock Area

- Store and transfer all solid and liquid wastes, such as tallow, in watertight covered containers.
- Keep litter from accumulating around loading docks by providing trash receptacles and encouraging employees to use them.
- Bag and seal food waste before putting it in the dumpster. Do not place uncontained liquids, or leaking containers or garbage bags into a dumpster.
- Keep dumpster lids closed to keep out rainwater and to prevent trash from spilling out If the dumpster regularly overflows, get a bigger one or arrange for more frequent collection.
- If the dumpster is shared with other tenants, speak with the property/lease manager about scheduling more frequent trash pickups or a larger dumpster.
- Don’t hose out dumpsters. Apply absorbent over any fluids spilled in dumpster. Absorbent will usually be knocked out

when the dumpster is emptied.

- Have the dumpster leasing company repair or replace leaky dumpsters and compactors, and have them clean out dirty dumpsters
- Install a spill cleanup kit near the dumpster and loading dock areas.
- Post employee reminder signs such as “Keep lid closed” near tallow bins and dumpsters.
- Keep dumpsters or the dumpster enclosure locked to prevent illegal dumping

ATTACHMENT 3

BMP OPERATION AND MAINTENANCE FUNDING SUPPLEMENTAL INFORMATION

This section to be completed for the next submittal.

ATTACHMENT 4

LID BMPS INSPECTION FORM

LID BMP INSPECTION FORM					
Date:	**Inspector:**		**Weather:**		
Reason for Inspection:			**Comments:**		
LID BMP Type	**Description**	**Location**	**Operational BMPs**	**Maintenance Required**	**Maintenance Performed/Comments**
☐Bioretention			☐Regularly weed and water during plant establishment phase	☐No ☐ Yes	
			☐Area is free of litter and excess sediment	☐No ☐ Yes	
			☐Area free of erosion and stabilized	☐No ☐ Yes	
			☐Plants are healthy and thriving	☐No ☐ Yes	
			☐Plant types are those from original design	☐No ☐ Yes	
☐Filter Strips			☐Regularly weed and water during plant establishment phase	☐No ☐ Yes	
			☐Plants are healthy and thriving	☐No ☐ Yes	
			☐Area free of erosion and stabilized	☐No ☐ Yes	
			☐Area is free of litter and excess sediment	☐No ☐ Yes	
			☐Plant types are those from original design	☐No ☐ Yes	
			☐Flow spreader is free of debris and is not clogged	☐No ☐ Yes	

LID BMP INSPECTION FORM					
Date:	**Inspector:**		**Weather:**		
Reason for Inspection:			**Comments:**		
LID BMP Type	**Description**	**Location**	**Operational BMPs**	**Maintenance Required**	**Maintenance Performed/Comments**
☐Vegetated Buffers			☐Regularly weed and water during plant establishment phase	☐No ☐ Yes	
			☐Plants are healthy and thriving	☐No ☐ Yes	
			☐Area free of erosion and stabilized	☐No ☐ Yes	
			☐Area is free of litter and excess sediment	☐No ☐ Yes	
			☐Plant types are those from original design	☐No ☐ Yes	
			☐Flow spreader is free of debris and is not clogged	☐No ☐ Yes	
☐Bioswale/Grassed Swale			☐Regularly weed and water during plant establishment phase	☐No ☐ Yes	
			☐Plants are healthy and thriving	☐No ☐ Yes	
			☐Area free of erosion and stabilized	☐No ☐ Yes	
			☐Area is free of litter and excess sediment	☐No ☐ Yes	
			☐Plant types are those from original design	☐No ☐ Yes	
☐Green Roofs			☐Regularly weed and water during plant establishment phase	☐No ☐ Yes	

LID BMP INSPECTION FORM					
Date:	**Inspector:**		**Weather:**		
Reason for Inspection:			**Comments:**		
LID BMP Type	**Description**	**Location**	**Operational BMPs**	**Maintenance Required**	**Maintenance Performed/Comments**
☐*Green Roofs Cont'd*			☐Plants are healthy and thriving	☐No ☐ Yes	
☐Rain Barrels / Cisterns			☐Roof catchment and gutters are free of debris and sediment	☐No ☐ Yes	
			☐Downspouts are free of leaks and obstructions	☐No ☐ Yes	
			☐Rain barrel, top, and seal are free of leaks	☐No ☐ Yes	
			☐Overflow pipe is not causing erosion	☐No ☐ Yes	
☒Porous Pavement			☐Pavement is free of debris and sediment	☐No ☐ Yes	
			☐Pavement is swept monthly	☐No ☐ Yes	
			☐Pavement is in good condition and stabilized	☐No ☐ Yes	
			☐Area is dry swept regularly	☐No ☐ Yes	
☐Soil Structure Enhancement (use of compost)			☐Area is protected from compaction	☐No ☐ Yes	
			☐Limited foot traffic	☐No ☐ Yes	
			☐2 to 1 ratio of compost soil and existing soil is present	☐No ☐ Yes	

ATTACHMENT 5

SOURCE CONTROL BMP INSPECTION FORM

SOURCE CONTROL BMP INSPECTION FORM

Date:	**Inspector:**	**Weather:**
Reason for Inspection:		**Comments:**

Potential Pollutant Sources	**Location**	**Operational BMPs**	**Maintenance Required**	**Maintenance Performed/Comments**
☒On-site storm drain inlets		☐Maintain and periodically replace inlet markers, if necessary.	☐No ☐ Yes	
		☐Review stormwater pollution prevention information applicable to the site.	☐No ☐ Yes	
		☐Adhere to applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	☐No ☐ Yes	
		☐Do not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains.	☐No ☐ Yes	
☒Interior floor drains and elevator shaft sump pumps		☐Inspect and maintain drains to prevent blockages and overflow.	☐No ☐ Yes	
☐Interior parking garages		☐Inspect and maintain drains to prevent blockages and overflow.	☐No ☐ Yes	
☒Landscape/ Outdoor Pesticide Use		☐Maintain landscaping using minimum or no pesticides.	☐No ☐ Yes	
		☐Review and adhere to applicable operational BMPs in Fact Sheet SC-41, `"Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	☐No ☐ Yes	

SOURCE CONTROL BMP INSPECTION FORM

Date:	**Inspector:**	**Weather:**
Reason for Inspection:		**Comments:**

Potential Pollutant Sources	**Location**	**Operational BMPs**	**Maintenance Required**	**Maintenance Performed/Comments**
Landscape/Outdoor pesticide Use Continued		☐Review IMP information and provide to landscape and maintenance personnel.	☐No ☐ Yes	
☒Use efficient irrigation systems		☐Inspect irrigation system for leaks and/or malfunctions.	☐No ☐ Yes	
☒Need for future indoor & structural pest control		☐Review Integrated Pest Management information and provide to other maintenance personnel.	☐No ☐ Yes	
☐Pools, spas, ponds, decorative fountains, and other water features.		☐Review and adhere to applicable operational BMPs in Fact Sheet SC-72, “Fountain and Pool Maintenance,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	☐No ☐ Yes	
☐Food service		☐Grease traps cleaned, as necessary. ☐See Refuse Areas.	☐No ☐ Yes	
☒Refuse areas		☐Provide adequate number of receptacles.	☐No ☐ Yes	
		☐Inspect receptacles regularly; repair or replace leaky receptacles.	☐No ☐ Yes	
		☐Keep receptacles covered at all times.	☐No ☐ Yes	
		☐Prohibit/prevent dumping of liquid or hazardous wastes.	☐No ☐ Yes	
		☐Post “no hazardous materials” signs.	☐No ☐ Yes	

SOURCE CONTROL BMP INSPECTION FORM				
Date:	**Inspector:**	**Weather:**		
Reason for Inspection:		**Comments:**		
Potential Pollutant Sources	**Location**	**Operational BMPs**	**Maintenance Required**	**Maintenance Performed/Comments**
Refuse areas- Continued		☐Inspect and pick up litter daily and clean up spills immediately.	☐No ☐ Yes	
		☐Keep spill control materials available on- site. Review Fact Sheet SC-34, "Waste Handling and Disposal" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	☐No ☐ Yes	
☐Industrial processes.		☐Review and adhere to Fact Sheet SC-10, "Non- Stormwater Discharges" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	☐No ☐ Yes	
☐Outdoor storage of equipment or materials		☐Review and adhere to the Fact Sheets SC-31, "Outdoor Liquid Container Storage" and SC- 33, "Outdoor Storage of Raw Materials " in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	☐No ☐ Yes	
☒Vehicle and Equipment Cleaning		**Follow operational measures to implement the following (if applicable):**		
		☐Washwater from vehicle and equipment washing operations shall not be discharged to the storm drain system.	☐No ☐ Yes	

SOURCE CONTROL BMP INSPECTION FORM

Date:	**Inspector:**	**Weather:**
Reason for Inspection:		**Comments:**

Potential Pollutant Sources	**Location**	**Operational BMPs**	**Maintenance Required**	**Maintenance Performed/Comments**
Vehicle and Equipment Cleaning Continued		☐Car dealerships and similar may rinse cars with potable water only. Any excess water shall be drained through landscaping and dechlorinated prior to discharge to the storm drain system.	☐No ☐ Yes	
		☐Review and adhere to Fact Sheet SC-21, "Vehicle and Equipment Cleaning," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	☐No ☐ Yes	
☒Vehicle/Equipment Repair and Maintenance		**The following restrictions apply to use the site:**		
		☐No person shall dispose of, nor permit the disposal, directly or indirectly of vehicle fluids, hazardous materials, or rinse water from parts cleaning into storm drains.	☐No ☐ Yes	
		☐No vehicle fluid removal shall be performed outside a building, Nor on asphalt or ground surfaces, whether inside or outside a building, except in such a manner as to ensure that any spilled fluid will be in an area of secondary containment. Leaking vehicle fluids shall be contained or drained from the vehicle immediately.	☐No ☐ Yes	

SOURCE CONTROL BMP INSPECTION FORM

Date:	**Inspector:**	**Weather:**
Reason for Inspection:		**Comments:**

Potential Pollutant Sources	**Location**	**Operational BMPs**	**Maintenance Required**	**Maintenance Performed/Comments**
Vehicle/Equipment Repair and Maintenance Continued		☐No person shall leave unattended drip parts or other open containers of chemicals such as vehicle fluid, unless such containers are in use or in an area of secondary containment.	☐No ☐ Yes	
☒Fuel Dispensing Areas		☐The fueling area is to be dry swept routinely.	☐No ☐ Yes	
		☐Review and adhere to the Business Guide Sheet, "Automotive Service—Service Stations" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	☐No ☐ Yes	
		☐Fueling areas are covered by a canopy.	☐No ☐ Yes	
		☐The canopy does not drain onto the fueling area.	☐No ☐ Yes	
		☐Grading of the area prevents run-on of stormwater to the maximum extent practicable.	☐No ☐ Yes	
☐Loading Docks		☐Move loaded and unloaded items indoors as soon as possible.	☐No ☐ Yes	
		☐Review and adhere to Fact Sheet SC-30, "Outdoor Loading and Unloading," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	☐No ☐ Yes	

SOURCE CONTROL BMP INSPECTION FORM

Date:	**Inspector:**	**Weather:**
Reason for Inspection:		**Comments:**

Potential Pollutant Sources	**Location**	**Operational BMPs**	**Maintenance Required**	**Maintenance Performed/Comments**
☒Fire Sprinkler Test Water		☐Review the note in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	☐No ☐ Yes	
☒Miscellaneous Drain or Wash Water • Boiler drain lines Condensate drain lines • Rooftop equipment Drainage sumps • Roofing, gutters, and trim			☐No ☐ Yes	
☒Plazas, sidewalks, and parking lots		☐Plazas, sidewalks, and parking lots shall be swept regularly to prevent the accumulation of litter and debris. Debris from pressure washing shall be collected to prevent entry into the storm drain system. Washwater containing any cleaning agent or degreaser shall be collected and discharged to the sanitary sewer and not discharged to a storm drain.	☐No ☐ Yes	

ATTACHMENT 6

SITE MAP

ATTACHMENT 7

AS-BUILT DRAWINGS

ATTACHMENT 8

TREATMENT CONTROL BMP INSPECTION AND MAINTENANCE CHECKLIST(S)

Constructed Wetlands
INSPECTION AND MAINTENANCE CHECKLIST

Property Address: _____ Property Applicant: _____

Treatment Measure No.: _____ Date of Inspection: _____ Type of Inspection: ☐ Monthly ☐ Pre-Wet Season ☐ After heavy runoff ☐ End of Wet Season

Inspector(s): _____ Overall Facility Score*:_____ ☐ Other:_____

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	Results Expected When Maintenance Is Performed
General				
Trash & Debris	Trash and debris accumulated in basin at a minimum of once prior to October 1st, once around Feb 1st, and once May 15th. Visual evidence of dumping.			Trash and debris cleared from site and disposed of properly.
Poisonous Vegetation and noxious weeds	Poisonous or nuisance vegetation or noxious weeds, e.g., morning glory, English ivy, reed canary grass, Japanese knotweed, purple loosestrife, blackberry, Scotch broom, poison oak, stinging nettles, or devil's club.			Use Integrated Pest Management techniques to control noxious weeds or invasive species.
Contaminants and Pollution	Any evidence of oil, gasoline, contaminants or other pollutants. Note signs of hydrocarbon buildup such as floating oil on water surface.			No contaminants or pollutants present.

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	Results Expected When Maintenance Is Performed
Rodent Holes	If facility acts as a dam or berm, any evidence of rodent holes, or any evidence of water piping through dam or berm via rodent holes.			The design specifications are not compromised by holes. Any rodent control activities are in accordance with applicable laws and do not affect any protected species.
Insects	Insects such as wasps and hornets interfere with maintenance activities. Where permitted by CA DFG, or other agency regulations, stock regularly with mosquito fish (Gambusia spp.) to enhance natural mosquito and midge control. Maintain vegetation to assist Gambusia spp. movements to control mosquitoes, as well as to provide access for vector inspectors. Maintain emergent and perimeter shoreline vegetation as well as site and road access to facilitate vector surveillance and control activities.			Insects do not interfere with maintenance activities. No mosquitoes or other vectors present in unusual abundance.

Constructed Wetlands Basin - Inspection and Maintenance Checklist
Property Address: _____

Date of Inspection:_____
Treatment Measure No.:_____

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	Results Expected When Maintenance Is Performed
Vegetation	Inspect for invasive vegetation, differential settlement, cracking; erosion, leakage, or tree growth on the embankment. Correct observed problems as necessary. Mow side slopes and remove grass clippings every other month or as necessary. Supplement wetland plants if a significant portion have not established (at least 50% of the surface area) on an annual basis. Remove nuisance plant species.			Wetland vegetation should be at proper vigor and density, no nuisance or noxious weeds or invasive species should be visible, and growth should not hinder physical characteristics or requirements of wetland area.
Tree/Brush Growth and Hazard Trees	Growth does not allow maintenance access or interferes with maintenance activity. Vegetation harvesting should occur preferably between June to September (CASCA TC-21) Dead, diseased, or dying trees.			Trees do not hinder maintenance activities. Remove hazard trees as approved by the City. (Use a certified Arborist to determine health of tree or removal requirements).

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	Results Expected When Maintenance Is Performed
Drainage time	Standing water remains in basin more than five days.			Correct any circumstances that restrict the flow of water from the system. Restore drainage to design condition. If the problem cannot be corrected and problems with standing water recur, then mosquitoes should be controlled with larvicides, applied by a licensed pesticide applicator.
Outfall structure	Debris or silt build-up obstructs an outfall structure.			Remove debris and/or silt build-up and dispose of properly.
Side Slopes				
Erosion	Eroded over 2 in. deep where cause of damage is still present or where there is potential for continued erosion. Any erosion on a compacted berm embankment.			Cause of erosion is managed appropriately. Side slopes or berm are restored to design specifications, as needed.
Storage Area				

Constructed Wetlands Basin - Inspection and Maintenance Checklist
Property Address: _____

Date of Inspection:_____
Treatment Measure No.:_____

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	Results Expected When Maintenance Is Performed
Sediment	Monitor for sediment accumulation in the facility and forebay. Remove accumulated sediment in the forebay and regrade about every 5-7 years or when the accumulated sediment volume exceeds 10 percent of the basin volume. Sediment removal may not be required in the main pool area for as long as 20 years.			Sediment cleaned out to designed basin shape and depth; basin reseeded if necessary to control erosion. Sediment disposed of properly.
Liner (If Applicable)	Liner is visible and has more than three 1/4-inch holes in it.			Liner repaired or replaced. Liner is fully covered.
Emergency Overflow/Spillway and Berms				
Settlement	Berm settlement 4 inches lower than the design elevation.			Dike is built back to the design elevation.

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	Results Expected When Maintenance Is Performed
Tree Growth	Tree growth on berms or emergency spillway >4 ft in height or covering more than 10% of spillway.			Trees should be removed. If root system is small (base less than 4 inches) the root system may be left in place. Otherwise the roots should be removed and the berm restored. A civil engineer should be consulted for proper berm/spillway restoration.
Emergency Overflow/ Spillway	Rock is missing and soil is exposed at top of spillway or outside slope.			Rocks and pad depth are restored to design standards.
Debris Barriers (*e.g.*, Trash Racks)				
Trash and Debris	Trash or debris is plugging openings in the barrier.			Trash or debris is removed and disposed of properly.
Damaged/ Missing Bars	Bars are missing, loose, bent out of shape, or deteriorating due to excessive rust.			Bars are repaired or replaced to allow proper functioning of trash rack.
Inlet/Outlet Pipe	Debris barrier is missing or not attached to pipe.			Debris barrier is repaired or replaced to allow proper functioning of trash rack.
Fencing and Gates				
Missing or broken parts	Any defect in or damage to the fence or gate that permits easy entry to a facility.			Fencing and gate are restored to design specifications.

Constructed Wetlands Basin - Inspection and Maintenance Checklist
Property Address: _____

Date of Inspection:_____
Treatment Measure No.:_____

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	Results Expected When Maintenance Is Performed
Deteriorating Paint or Protective Coating	Part or parts that have a rusting or scaling condition that has affected structural adequacy.			Paint or protective coating is sufficient to protect structural adequacy of fence or gate.
Flow Duration Control Outlet (if included in design to meet Hydromodification Management Standard) [[==refer to any attachments with additional provisions==]]				
Risers, orifices and screens	Any debris or clogging			Restore unobstructed flow through discharge structure; to meet original design; dispose of debris properly.
Miscellaneous				
Miscellaneous	Any condition not covered above that needs attention to restore extended detention basin to design conditions.			Meets the design specifications.

*Overall Facility Score = Worst Score from all Defect Items Noted.
**Scores: 0 = OK, 1 = Monitor, 2 = Routine Maintenance, 3 = Immediate Repair Necessary

Detention Basin
INSPECTION AND MAINTENANCE CHECKLIST

Property Address: _____ Property Applicant: _____

Treatment Measure No.: _____ Date of Inspection: _____ Type of Inspection: ☐ Monthly ☐ Pre-Wet Season ☐ After heavy runoff ☐ End of Wet Season

Inspector(s): _____ Overall Facility Score*:_____ ☐ Other:_____

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	Results Expected When Maintenance Is Performed
General				
Trash & Debris	Trash and debris accumulated in basin. Visual evidence of dumping.			Trash and debris cleared from site and disposed of properly.
Poisonous Vegetation and noxious weeds	Poisonous or nuisance vegetation or noxious weeds, e.g., morning glory, English ivy, reed canary grass, Japanese knotweed, purple loosestrife, blackberry, Scotch broom, poison oak, stinging nettles, or devil's club.			Use Integrated Pest Management techniques to control noxious weeds or invasive species.
Contaminants and Pollution	Any evidence of oil, gasoline, contaminants or other pollutants.			No contaminants or pollutants present.

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	Results Expected When Maintenance Is Performed
Rodent Holes	If facility acts as a dam or berm, any evidence of rodent holes, or any evidence of water piping through dam or berm via rodent holes.			The design specifications are not compromised by holes. Any rodent control activities are in accordance with applicable laws and do not affect any protected species.
Insects	Insects such as wasps and hornets interfere with maintenance activities.			Insects do not interfere with maintenance activities.
Tree/Brush Growth and Hazard Trees	Growth does not allow maintenance access or interferes with maintenance activity. Dead, diseased, or dying trees.			Trees do not hinder maintenance activities. Remove hazard trees as approved by the City. (Use a certified Arborist to determine health of tree or removal requirements).

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	Results Expected When Maintenance Is Performed
Drainage time	Standing water remains in basin more than five days.			Correct any circumstances that restrict the flow of water from the system. Restore drainage to design condition. If the problem cannot be corrected and problems with standing water recur, then mosquitoes should be controlled with larvicides, applied by a licensed pesticide applicator.
Outfall structure	Debris or silt build-up obstructs an outfall structure.			Remove debris and/or silt build-up and dispose of properly.
Side Slopes				
Erosion	Eroded over 2 in. deep where cause of damage is still present or where there is potential for continued erosion. Any erosion on a compacted berm embankment.			Cause of erosion is managed appropriately. Side slopes or berm are restored to design specifications, as needed.

Detention Basin - Inspection and Maintenance Checklist
Property Address: _____

Date of Inspection:_____
Treatment Measure No.:_____

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	Results Expected When Maintenance Is Performed
Storage Area				
Sediment	Accumulated sediment >10% of designed basin depth or affects inletting or outletting condition of the facility.			Sediment cleaned out to designed basin shape and depth; basin reseeded if necessary to control erosion. Sediment disposed of properly.
Liner (If Applicable)	Liner is visible and has more than three 1/4-inch holes in it.			Liner repaired or replaced. Liner is fully covered.
Emergency Overflow/ Spillway and Berms				
Settlement	Berm settlement 4 inches lower than the design elevation.			Dike is built back to the design elevation.
Tree Growth	Tree growth on berms or emergency spillway >4 ft in height or covering more than 10% of spillway.			Trees should be removed. If root system is small (base less than 4 inches) the root system may be left in place. Otherwise the roots should be removed and the berm restored. A civil engineer should be consulted for proper berm/spillway restoration.

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	Results Expected When Maintenance Is Performed
Emergency Overflow/ Spillway	Rock is missing and soil is exposed at top of spillway or outside slope.			Rocks and pad depth are restored to design standards.
Debris Barriers (e.g., Trash Racks)				
Trash and Debris	Trash or debris is plugging openings in the barrier.			Trash or debris is removed and disposed of properly.
Damaged/ Missing Bars	Bars are missing, loose, bent out of shape, or deteriorating due to excessive rust.			Bars are repaired or replaced to allow proper functioning of trash rack.
Inlet/Outlet Pipe	Debris barrier is missing or not attached to pipe.			Debris barrier is repaired or replaced to allow proper functioning of trash rack.
Fencing and Gates				
Missing or broken parts	Any defect in or damage to the fence or gate that permits easy entry to a facility.			Fencing and gate are restored to design specifications.
Deteriorating Paint or Protective Coating	Part or parts that have a rusting or scaling condition that has affected structural adequacy.			Paint or protective coating is sufficient to protect structural adequacy of fence or gate.

Detention Basin - Inspection and Maintenance Checklist
Property Address: _____

Date of Inspection:_____
Treatment Measure No.:_____

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	Results Expected When Maintenance Is Performed
Flow Duration Control Outlet (if included in design to meet Hydromodification Management Standard) [[==refer to any attachments with additional provisions==]]				
Risers, orifices and screens	Any debris or clogging			Restore unobstructed flow through discharge structure; to meet original design; dispose of debris properly.
Miscellaneous				
Miscellaneous	Any condition not covered above that needs attention to restore extended detention basin to design conditions.			Meets the design specifications.

*Overall Facility Score = Worst Score from all Defect Items Noted.
**Scores: 0 = OK, 1 = Monitor, 2 = Routine Maintenance, 3 = Immediate Repair Necessary

Manufactured Stormwater Treatment Measure
INSPECTION AND MAINTENANCE CHECKLIST

Property Applicant: _____ Property Address: _____

Date of Inspection: _____ Type of Inspection: ☐ Monthly ☐ Pre-Wet Season ☐ After heavy runoff ☐ End of Wet Season

System Type: _____

Installer/Contractor: _____ Overall Facility Score*: _____

Manufacturer: _____ Inspector(s): _____

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)	Results Expected When Maintenance Is Performed
1. Sediment, trash and debris accumulation on Filter	Sediment, trash and debris accumulated in the sedimentation basin, riser pipe, retention pipes and filter bed. Filter does not drain as specified.			Sediment, trash and debris removed from sedimentation basin, riser pipe and filter bed and disposed of properly. Filter drains per design specifications. Empty cartridge should be reassembled and reinstalled.
2. Standing water	Manufactured treatment measure does not drain within five days after rainfall.			Clogs removed from filters, sedimentation basin, riser pipe and filter bed. Filter drains per design specifications.

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)	Results Expected When Maintenance Is Performed
3. Mosquitoes	Evidence of mosquito larvae in manufactured treatment measure.			Clogs removed from sedimentation basin, riser pipe and filter bed. Filter drains per design specifications.
4. Miscellaneous	Any condition not covered above that needs attention in order for the manufactured treatment measure to function as designed.			Meet the design specifications.

*Overall Facility Score = Worst Score from all Defect Items Noted.
**Scores: 0 = OK, 1 = Monitor, 2 = Routine Maintenance, 3 = Immediate Repair Necessary.

Pervious Pavement
INSPECTION AND MAINTENANCE CHECKLIST

Property Address: _____ Property Applicant: _____

Treatment Measure No.: _____ Date of Inspection: _____ Type of Inspection: ☐ Monthly ☐ Pre-Wet Season ☐ After heavy runoff ☐ End of Wet Season

Inspector(s): _____ Overall Facility Score*:_____ ☐ Other:_____

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)	Results Expected When Maintenance Is Performed	Date Complete / Initial
1. Sediment, trash and debris accumulation	Sediment, trash and debris accumulated in the pervious pavement valley gutter and downstream catch basin. Pavement does not drain as specified.			Sediment, trash and debris removed from pervious pavement and catch basin and disposed of properly. Pavement drains per design specifications.	
2. Standing water	Pervious Pavement does not drain within three days after rainfall.			Clogs removed from pervious pavement. Pavement drains per design specifications.	
3. Sediment	Evidence of sedimentation in Pervious Pavement.			Material removed so that there is no clogging or blockage. Material is disposed of properly.	
4. Mosquitoes	Evidence of mosquito larvae in Pervious Pavement.			Clogs removed from pervious pavement. Pavement drains per design specifications.	

Pervious Pavement - Inspection and Maintenance Checklist
Property Address: _____

Date of Inspection:_____
Treatment Measure No.:_____

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)	Results Expected When Maintenance Is Performed	Date Complete / Initial
5. Miscellaneous	Any condition not covered above that needs attention in order for the non-proprietary media filter to function as designed.			Meet the design specifications.	

*Overall Facility Score = Worst Score from all Defect Items Noted.
**Scores: 0 = OK, 1 = Monitor, 2 = Routine Maintenance, 3 = Immediate Repair Necessary.

Trash Racks
INSPECTION AND MAINTENANCE CHECKLIST

Property Applicant: _____ Property Address: _____

Date of Inspection: _____ Type of Inspection: ☐ Monthly ☐ Pre-Wet Season ☐ After heavy runoff ☐ End of Wet Season

System Type: _____

Installer/Contractor: _____ Overall Facility Score*: _____

Manufacturer: _____ Inspector(s): _____

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)	Results Expected When Maintenance Is Performed
1. Sediment, trash and debris accumulation on Filter	Sediment, trash and debris accumulated in the sedimentation basin, riser pipe, retention pipes and filter bed. Filter does not drain as specified.			Sediment, trash and debris removed from sedimentation basin, riser pipe and filter bed and disposed of properly. Filter drains per design specifications. Empty cartridge should be reassembled and reinstalled.
2. Standing water	Manufactured treatment measure does not drain within five days after rainfall.			Clogs removed from filters, sedimentation basin, riser pipe and filter bed. Filter drains per design specifications.
3. Mosquitoes	Evidence of mosquito larvae in manufactured treatment measure.			Clogs removed from sedimentation basin, riser pipe and filter bed. Filter drains per design specifications.

Trash Racks - Inspection and Maintenance Checklist
Property Address: _____

Date of Inspection:_____
Treatment Measure No.:_____

Defect	Conditions When Maintenance Is Needed	Maintenance Score**	Comments (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)	Results Expected When Maintenance Is Performed
4. Miscellaneous	Any condition not covered above that needs attention in order for the manufactured treatment measure to function as designed.			Meet the design specifications.

*Overall Facility Score = Worst Score from all Defect Items Noted.
**Scores: 0 = OK, 1 = Monitor, 2 = Routine Maintenance, 3 = Immediate Repair Necessary.

ATTACHMENT 9

MAINTENANCE SCHEDULE

This section to be completed for the next submittal.

ATTACHMENT 10

STORMWATER FACILITIES MAINTENANCE AGREEMENT WITH ACCESS RIGHTS AND COVENANTS (SWFMA)

This section to be completed for the next submittal.

ATTACHMENT 11

ANNUAL INSPECTION AND MAINTENANCE REPORTING FORM

URBAN STORMWATER MITIGATION PLAN REPORTING FORM
ANNUAL INSPECTION AND MAINTENANCE OF TREATMENT CONTROL BMPS
(SIDE A)

Responsible Party for Inspection Maintenance: _____ Signature:_____
Date:_____ Print Name/Title

Facility Name:_____

BMP Type	Location Lat/Lon or Inlet #	Date of Construction	Inspection Date(s)	Condition of BMP Indicate whether the BMP is present and in working condition, requires cleaning or replacement.	*Maintenance required? (Y/N) If yes, complete reverse side.

* Maintenance is to be carried out as needed and in accordance with approved Operation and Maintenance Plan.

URBAN STORMWATER MITIGATION PLAN REPORTING FORM
ANNUAL INSPECTION AND MAINTENANCE OF TREATMENT CONTROL BMPS
(SIDE B)

BMP Type	BMP Location (lat/lon or Inlet #)	Date of Maintenance Activity	Description of maintenance performed	If applicable, describe any additional work required.

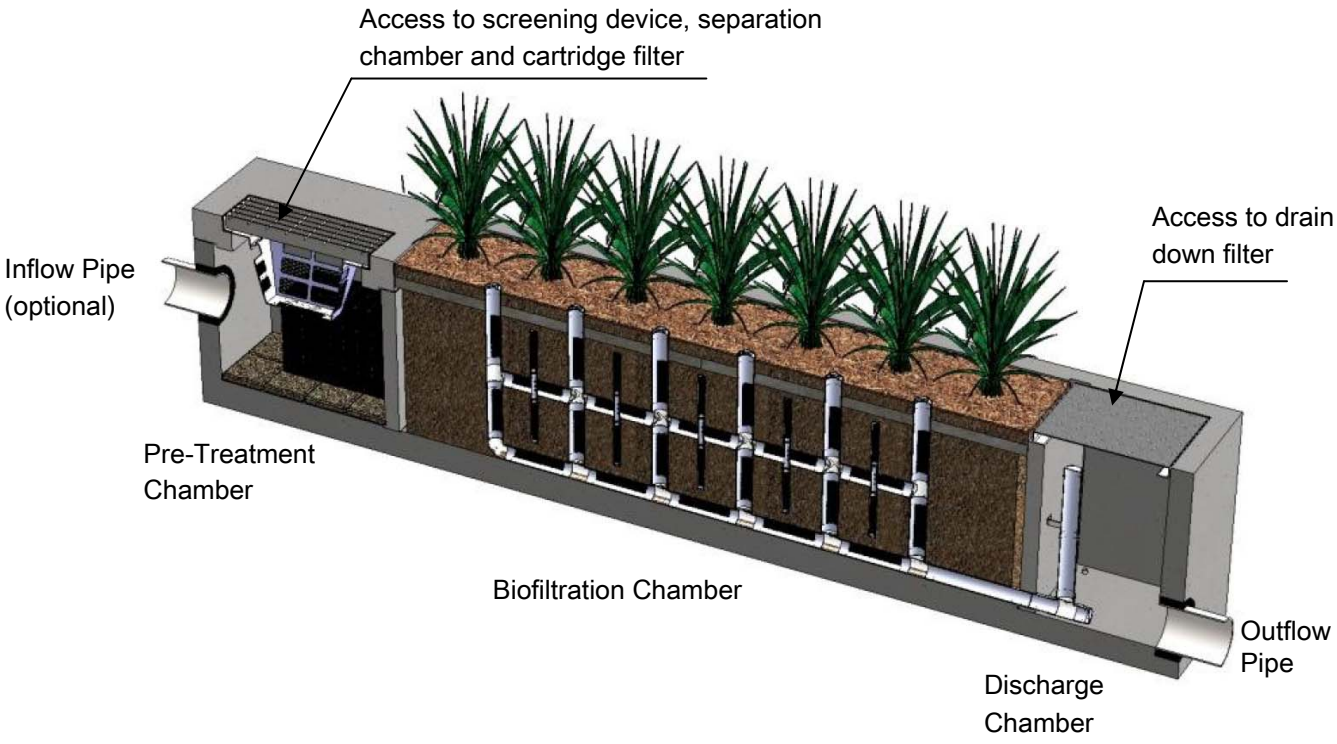
* Maintenance is to be carried out as needed and in accordance with the City of Oceanside's Operation and Maintenance Plan.

Maintenance Guidelines for Modular Wetland System - Linear

Maintenance Summary

- Remove Trash from Screening Device – average maintenance interval is 6 to 12 months.
  - (*5 minute average service time*).
- Remove Sediment from Separation Chamber – average maintenance interval is 12 to 24 months.
  - (*10 minute average service time*).
- Replace Cartridge Filter Media – average maintenance interval 12 to 24 months.
  - (*10-15 minute per cartridge average service time*).
- Replace Drain Down Filter Media – average maintenance interval is 12 to 24 months.
  - (*5 minute average service time*).
- Trim Vegetation – average maintenance interval is 6 to 12 months.
  - (*Service time varies*).

System Diagram



Maintenance Procedures

Screening Device

1. Remove grate or manhole cover to gain access to the screening device in the Pre-Treatment Chamber. Vault type units do not have screening device. Maintenance can be performed without entry.
2. Remove all pollutants collected by the screening device. Removal can be done manually or with the use of a vacuum truck. The hose of the vacuum truck will not damage the screening device.
3. Screening device can easily be removed from the Pre-Treatment Chamber to gain access to separation chamber and media filters below. Replace grate or manhole cover when completed.

Separation Chamber

1. Perform maintenance procedures of screening device listed above before maintaining the separation chamber.
2. With a pressure washer spray down pollutants accumulated on walls and cartridge filters.
3. Vacuum out Separation Chamber and remove all accumulated pollutants. Replace screening device, grate or manhole cover when completed.

Cartridge Filters

1. Perform maintenance procedures on screening device and separation chamber before maintaining cartridge filters.
2. Enter separation chamber.
3. Unscrew the two bolts holding the lid on each cartridge filter and remove lid.
4. Remove each of 4 to 8 media cages holding the media in place.
5. Spray down the cartridge filter to remove any accumulated pollutants.
6. Vacuum out old media and accumulated pollutants.
7. Reinstall media cages and fill with new media from manufacturer or outside supplier. Manufacturer will provide specification of media and sources to purchase.
8. Replace the lid and tighten down bolts. Replace screening device, grate or manhole cover when completed.

Drain Down Filter

1. Remove hatch or manhole cover over discharge chamber and enter chamber.
2. Unlock and lift drain down filter housing and remove old media block. Replace with new media block. Lower drain down filter housing and lock into place.
3. Exit chamber and replace hatch or manhole cover.

Maintenance Notes

1. Following maintenance and/or inspection, it is recommended the maintenance operator prepare a maintenance/inspection record. The record should include any maintenance activities performed, amount and description of debris collected, and condition of the system and its various filter mechanisms.

2. The owner should keep maintenance/inspection record(s) for a minimum of five years from the date of maintenance. These records should be made available to the governing municipality for inspection upon request at any time.

3. Transport all debris, trash, organics and sediments to approved facility for disposal in accordance with local and state requirements.

4. Entry into chambers may require confined space training based on state and local regulations.

5. No fertilizer shall be used in the Biofiltration Chamber.

6. Irrigation should be provided as recommended by manufacturer and/or landscape architect. Amount of irrigation required is dependent on plant species. Some plants may require irrigation.

Maintenance Procedure Illustration

Screening Device

The screening device is located directly under the manhole or grate over the Pre-Treatment Chamber. It's mounted directly underneath for easy access and cleaning. Device can be cleaned by hand or with a vacuum truck.

Separation Chamber

The separation chamber is located directly beneath the screening device. It can be quickly cleaned using a vacuum truck or by hand. A pressure washer is useful to assist in the cleaning process.

Cartridge Filters

The cartridge filters are located in the Pre-Treatment chamber connected to the wall adjacent to the biofiltration chamber. The cartridges have removable tops to access the individual media filters. Once the cartridge is open media can be easily removed and replaced by hand or a vacuum truck.

Drain Down Filter

The drain down filter is located in the Discharge Chamber. The drain filter unlocks from the wall mount and hinges up. Remove filter block and replace with new block.

Trim Vegetation

Vegetation should be maintained in the same manner as surrounding vegetation and trimmed as needed. No fertilizer shall be used on the plants. Irrigation per the recommendation of the manufacturer and or landscape architect. Different types of vegetation requires different amounts of irrigation.

Inspection Form

Modular Wetland System, Inc.
P. 760.433-7640
F. 760-433-3176
E. Info@modularwetlands.com

www.modularwetlands.com

Inspection Report
Modular Wetlands System

Project Name _____

Project Address _____
(city) (Zip Code)

Owner / Management Company _____

Contact _____ Phone ( ) –

Inspector Name _____ Date ____/____/____ Time _____ AM / PM

For Office Use Only
(Reviewed By)
(Date)
Office personnel to complete section to the left.

Type of Inspection ☐ Routine ☐ Follow Up ☐ Complaint ☐ Storm Storm Event in Last 72-hours? ☐ No ☐ Yes

Weather Condition _____ Additional Notes _____

Inspection Checklist

Modular Wetland System Type (Curb, Grate or UG Vault): _____ Size (22', 14' or etc.): _____

Structural Integrity:	**Yes**	**No**	**Comments**
Damage to pre-treatment access cover (manhole cover/grate) or cannot be opened using normal lifting pressure?			
Damage to discharge chamber access cover (manhole cover/grate) or cannot be opened using normal lifting pressure?			
Does the MWS unit show signs of structural deterioration (cracks in the wall, damage to frame)?			
Is the inlet/outlet pipe or drain down pipe damaged or otherwise not functioning properly?			
Working Condition:			
Is there evidence of illicit discharge or excessive oil, grease, or other automobile fluids entering and clogging the unit?			
Is there standing water in inappropriate areas after a dry period?			
Is the filter insert (if applicable) at capacity and/or is there an accumulation of debris/trash on the shelf system?			
Does the depth of sediment/trash/debris suggest a blockage of the inflow pipe, bypass or cartridge filter? If yes, specify which one in the comments section. Note depth of accumulation in in pre-treatment chamber.			Depth:
Does the cartridge filter media need replacement in pre-treatment chamber and/or discharge chamber?			Chamber:
Any signs of improper functioning in the discharge chamber? Note issues in comments section.			
Other Inspection Items:			
Is there an accumulation of sediment/trash/debris in the wetland media (if applicable)?			
Is it evident that the plants are alive and healthy (if applicable)? Please note Plant Information below.			
Is there a septic or foul odor coming from inside the system?			

Waste:	**Yes**	**No**
Sediment / Silt / Clay		
Trash / Bags / Bottles		
Green Waste / Leaves / Foliage		

Recommended Maintenance	
No Cleaning Needed	
Schedule Maintenance as Planned	
Needs Immediate Maintenance	

Plant Information	
Damage to Plants	
Plant Replacement	
Plant Trimming	

Additional Notes:

2972 San Luis Rey Road, Oceanside, CA 92058 P (760) 433-7640 F (760) 433-3176

Maintenance Report

Modular Wetland System, Inc.
P. 760.433-7640
F. 760-433-3176
E. Info@modularwetlands.com

www.modularwetlands.com

Cleaning and Maintenance Report
Modular Wetlands System

Project Name _____

Project Address _____
(city) (Zip Code)

Owner / Management Company _____

Contact _____ Phone ( ) –

Inspector Name _____ Date ____/____/____ Time _____ AM / PM

Type of Inspection ☐ Routine ☐ Follow Up ☐ Complaint ☐ Storm Storm Event in Last 72-hours? ☐ No ☐ Yes

Weather Condition _____ Additional Notes _____

For Office Use Only
(Reviewed By)
(Date)
Office personnel to complete section to the left.

Site Map #	GPS Coordinates of Insert	Manufacturer / Description / Sizing	Trash Accumulation	Foliage Accumulation	Sediment Accumulation	Total Debris Accumulation	Condition of Media 25/50/75/100 (will be changed @ 75%)	Operational Per Manufactures' Specifications (If not, why?)
	Lat: Long:	MWS Catch Basins						
		MWS Sedimentation Basin						
		Media Filter Condition						
		Plant Condition						
		Drain Down Media Condition						
		Discharge Chamber Condition						
		Drain Down Pipe Condition						
		Inlet and Outlet Pipe Condition						

Comments:

2972 San Luis Rey Road, Oceanside, CA 92058 P. 760.433.7640 F. 760.433.3176

Placeholder – **Structural BMP Maintenance Information**

Replace placeholder with required documentation.

Bio Clean

A Forterra Company

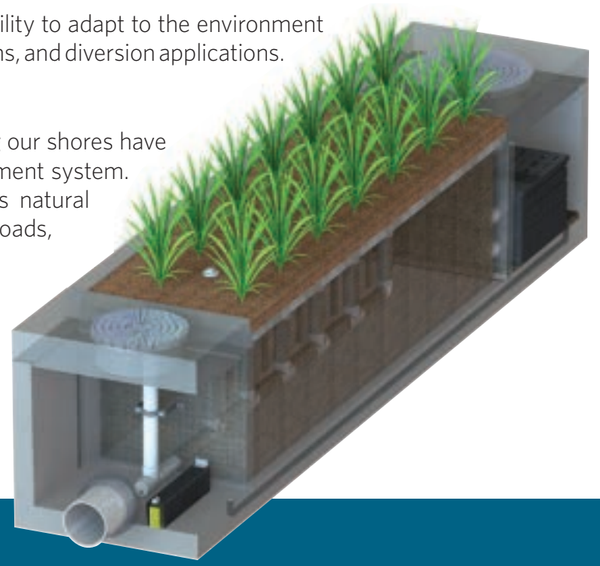
Modular Wetlands® System Linear

A Stormwater Biofiltration Solution

OVERVIEW

The Bio Clean Modular Wetlands® System Linear represents a pioneering breakthrough in stormwater technology as the only biofiltration system to utilize patented horizontal flow, allowing for a smaller footprint, higher treatment capacity, and a wide range of versatility. While most biofilters use little or no pretreatment, the Modular Wetlands® incorporates an advanced pretreatment chamber that includes separation and pre-filter cartridges. In this chamber, sediment and hydrocarbons are removed from runoff before entering the biofiltration chamber, reducing maintenance costs and improving performance.

Horizontal flow also gives the system the unique ability to adapt to the environment through a variety of configurations, bypass orientations, and diversion applications.



The Urban Impact

For hundreds of years, natural wetlands surrounding our shores have played an integral role as nature's stormwater treatment system. But as cities grow and develop, our environment's natural filtration systems are blanketed with impervious roads, rooftops, and parking lots.

Bio Clean understands this loss and has spent years re-establishing nature's presence in urban areas, and rejuvenating waterways with the Modular Wetlands® System Linear.

PERFORMANCE

The Modular Wetlands® continues to outperform other treatment methods with superior pollutant removal for TSS, heavy metals, nutrients, hydrocarbons, and bacteria. Since 2007 the Modular Wetlands® has been field tested on numerous sites across the country and is proven to effectively remove pollutants through a combination of physical, chemical, and biological filtration processes. In fact, the Modular Wetlands® harnesses some of the same biological processes found in natural wetlands in order to collect, transform, and remove even the most harmful pollutants.

66% REMOVAL OF DISSOLVED ZINC	**69%** REMOVAL OF TOTAL ZINC	**38%** REMOVAL OF DISSOLVED COPPER	**64%** REMOVAL OF TOTAL PHOSPHORUS	
45% REMOVAL OF NITROGEN	**50%** REMOVAL OF TOTAL COPPER	**95%** REMOVAL OF MOTOR OIL	**67%** REMOVAL OF ORTHO PHOSPHORUS	**85%** REMOVAL OF TSS

APPROVALS

The Modular Wetlands® System Linear has successfully met years of challenging technical reviews and testing from some of the most prestigious and demanding agencies in the nation and perhaps the world. Here is a list of some of the most high-profile approvals, certifications, and verifications from around the country.

Washington State Department of Ecology TAPE Approved
The MWS Linear is approved for General Use Level Designation (GULD) for Basic, Enhanced, and Phosphorus treatment at 1 gpm/ft² loading rate. The highest performing BMP on the market for all main pollutant categories.

California Water Resources Control Board, Full Capture Certification
The Modular Wetlands® System is the first biofiltration system to receive certification as a full capture trash treatment control device.

Virginia Department of Environmental Quality, Assignment
The Virginia Department of Environmental Quality assigned the MWS Linear the highest phosphorus removal rating for manufactured treatment devices to meet the new Virginia Stormwater Management Program (VSMP) regulation technical criteria.

Maryland Department of the Environment, Approved ESD
Granted Environmental Site Design (ESD) status for new construction, redevelopment, and retrofitting when designed in accordance with the design manual.

MASTEP Evaluation
The University of Massachusetts at Amherst – Water Resources Research Center issued a technical evaluation report noting removal rates up to 84% TSS, 70% total phosphorus, 68.5% total zinc, and more.

Rhode Island Department of Environmental Management, Approved BMP
Approved as an authorized BMP and noted to achieve the following minimum removal efficiencies: 85% TSS, 60% pathogens, 30% total phosphorus, and 30% total nitrogen.

ADVANTAGES

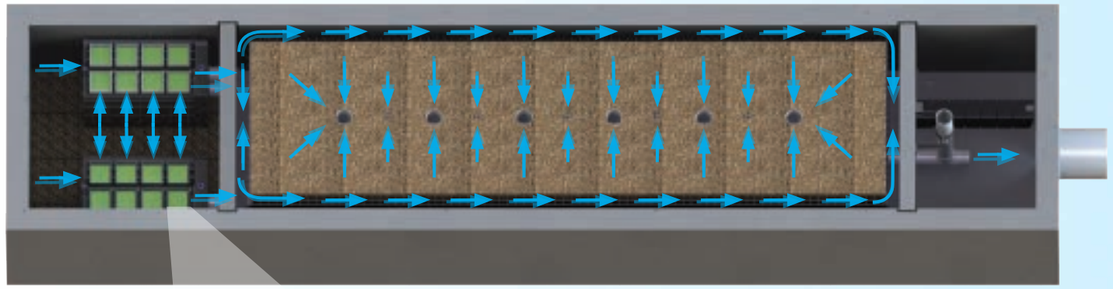
- HORIZONTAL FLOW BIOFILTRATION
- GREATER FILTER SURFACE AREA
- PRETREATMENT CHAMBER
- PATENTED PERIMETER VOID AREA
- FLOW CONTROL
- NO DEPRESSED PLANTER AREA
- AUTO DRAINDOWN MEANS NO MOSQUITO VECTOR

OPERATION

The Modular Wetlands® System Linear is the most efficient and versatile biofiltration system on the market, and it is the only system with horizontal flow which:

- Improves performance
- Reduces footprint
- Minimizes maintenance

Figure 1 & Figure 2 illustrate the invaluable benefits of horizontal flow and the multiple treatment stages.



2x to 3x more surface area than traditional downward flow bioretention systems.

Figure 2, Top View

1 PRETREATMENT

SEPARATION

- Trash, sediment, and debris are separated before entering the pre-filter cartridges
- Designed for easy maintenance access

PRE-FILTER CARTRIDGES

- Over 25 sq. ft. of surface area per cartridge
- Utilizes BioMediaGREEN™ filter material
- Removes over 80% of TSS and 90% of hydrocarbons
- Prevents pollutants that cause clogging from migrating to the biofiltration chamber

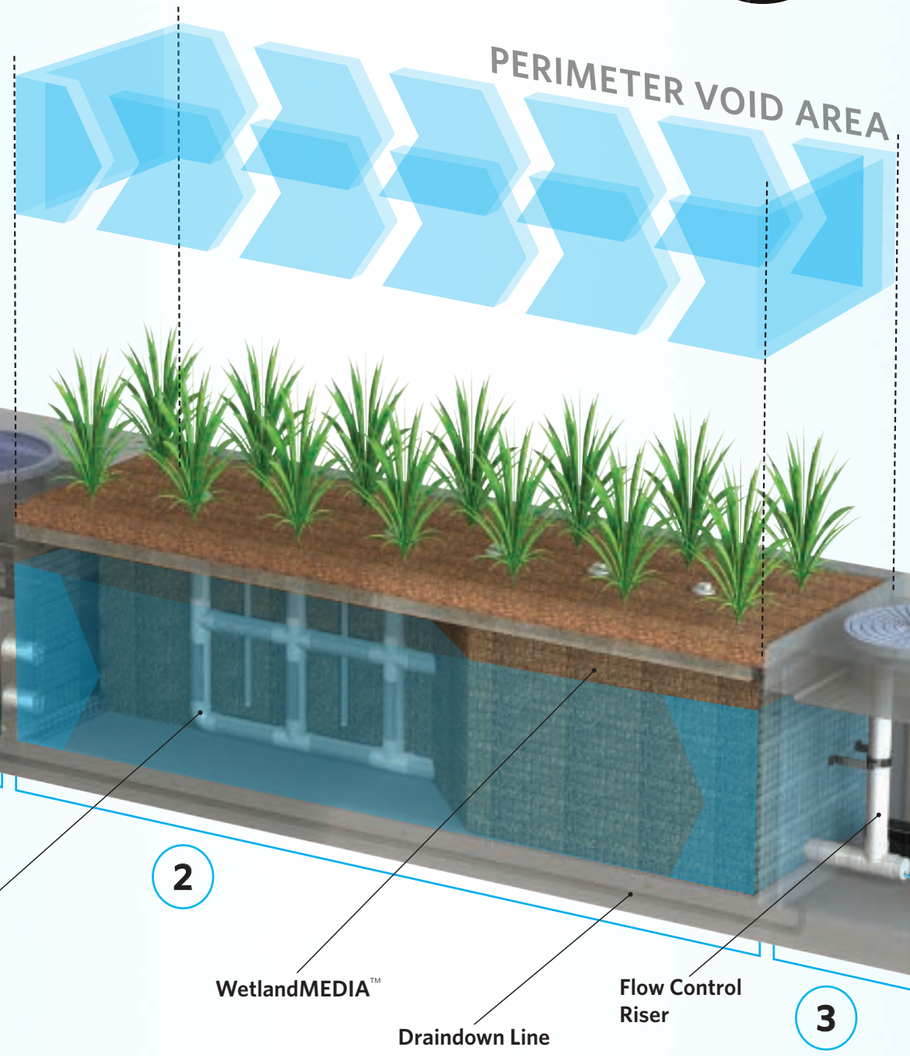


Figure 1

2 BIOFILTRATION

HORIZONTAL FLOW

- Less clogging than downward flow biofilters
- Water flow is subsurface
- Improves biological filtration

PATENTED PERIMETER VOID AREA

- Vertically extends void area between the walls and the WetlandMEDIA™ on all four sides
- Maximizes surface area of the media for higher treatment capacity

WETLANDMEDIA

- Contains no organics and removes phosphorus
- Greater surface area and 48% void space
- Maximum evapotranspiration
- High ion exchange capacity and lightweight

3 DISCHARGE

FLOW CONTROL

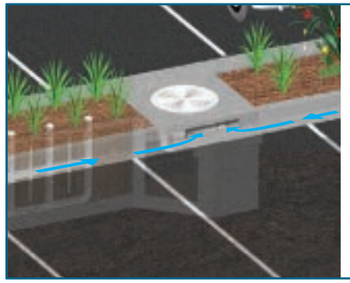
- Orifice plate controls flow of water through WetlandMEDIA™ to a level lower than the media's capacity
- Extends the life of the media and improves performance

DRAINDOWN FILTER

- The draindown is an optional feature that completely drains the pretreatment chamber
- Water that drains from the pretreatment chamber between storm events will be treated

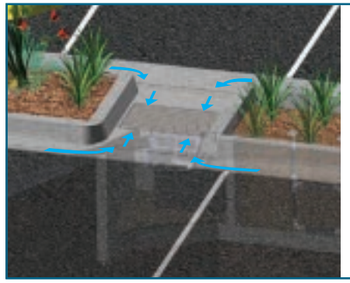
CONFIGURATIONS

The Modular Wetlands® System Linear is the preferred biofiltration system of civil engineers across the country due to its versatile design. This highly versatile system has available "pipe-in" options on most models, along with built-in curb or grated inlets for simple integration into your storm drain design.



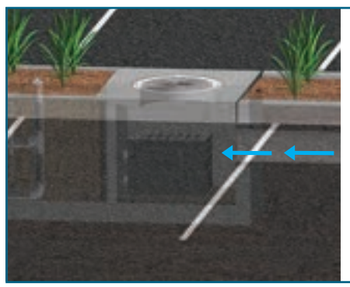
CURB TYPE

The Curb Type configuration accepts sheet flow through a curb opening and is commonly used along roadways and parking lots. It can be used in sump or flow-by conditions. Length of curb opening varies based on model and size.



GRATE TYPE

The Grate Type configuration offers the same features and benefits as the Curb Type but with a grated/drop inlet above the systems pretreatment chamber. It has the added benefit of allowing pedestrian access over the inlet. ADA-compliant grates are available to assure easy and safe access. The Grate Type can also be used in scenarios where runoff needs to be intercepted on both sides of landscape islands.



VAULT TYPE

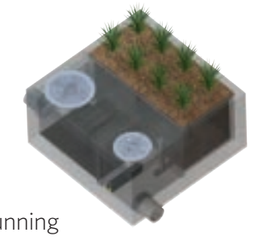
The system's patented horizontal flow biofilter is able to accept inflow pipes directly into the pretreatment chamber, meaning the Modular Wetlands® can be used in end-of-the-line installations. This greatly improves feasibility over typical decentralized designs that are required with other biofiltration/ bioretention systems. Another benefit of the "pipe-in" design is the ability to install the system downstream of underground detention systems to meet water quality volume requirements.

DOWNSPOUT TYPE

The Downspout Type is a variation of the Vault Type and is designed to accept a vertical downspout pipe from rooftop and podium areas. Some models have the option of utilizing an internal bypass, simplifying the overall design. The system can be installed as a raised planter, and the exterior can be stuccoed or covered with other finishes to match the look of adjacent buildings.

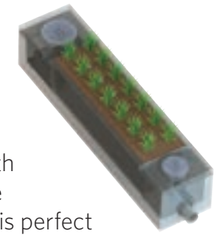
ORIENTATIONS

SIDE-BY-SIDE



The Side-By-Side orientation places the pretreatment and discharge chamber adjacent to one another with the biofiltration chamber running parallel on either side. This minimizes the system length, providing a highly compact footprint. It has been proven useful in situations such as streets with directly adjacent sidewalks, as half of the system can be placed under that sidewalk. This orientation also offers internal bypass options as discussed below.

END-TO-END



The End-To-End orientation places the pretreatment and discharge chambers on opposite ends of the biofiltration chamber, therefore minimizing the width of the system to 5 ft. (outside dimension). This orientation is perfect for linear projects and street retrofits where existing utilities and sidewalks limit the amount of space available for installation. One limitation of this orientation is that bypass must be external.

BYPASS

INTERNAL BYPASS WEIR (SIDE-BY-SIDE ONLY)

The Side-By-Side orientation places the pretreatment and discharge chambers adjacent to one another allowing for integration of internal bypass. The wall between these chambers can act as a bypass weir when flows exceed the system's treatment capacity, thus allowing bypass from the pretreatment chamber directly to the discharge chamber.

EXTERNAL DIVERSION WEIR STRUCTURE

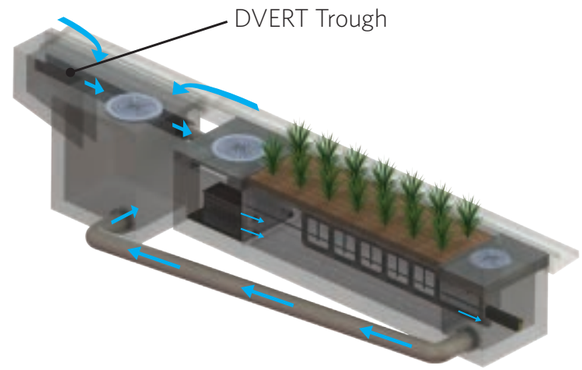
This traditional offline diversion method can be used with the Modular Wetlands® in scenarios where runoff is being piped to the system. These simple and effective structures are generally configured with two outflow pipes. The first is a smaller pipe on the upstream side of the diversion weir - to divert low flows over to the Modular Wetlands® for treatment. The second is the main pipe that receives water once the system has exceeded treatment capacity and water flows over the weir.

FLOW-BY-DESIGN

This method is one in which the system is placed just upstream of a standard curb or grate inlet to intercept the first flush. Higher flows simply pass by the Modular Wetlands® and into the standard inlet downstream.

DVERT LOW FLOW DIVERSION

This simple yet innovative diversion trough can be installed in existing or new curb and grate inlets to divert the first flush to the Modular Wetlands® via pipe. It works similar to a rain gutter and is installed just below the opening into the inlet. It captures the low flows and channels them over



to a connecting pipe exiting out the wall of the inlet and leading to the MWS Linear. The DVERT is perfect for retrofit and green street applications that allow the Modular Wetlands® to be installed anywhere space is available.

SPECIFICATIONS

FLOW-BASED DESIGNS

The Modular Wetlands® System Linear can be used in stand-alone applications to meet treatment flow requirements. Since the Modular Wetlands® is the only biofiltration system that can accept inflow pipes several feet below the surface, it can be used not only in decentralized design applications but also as a large central end-of-the-line application for maximum feasibility.

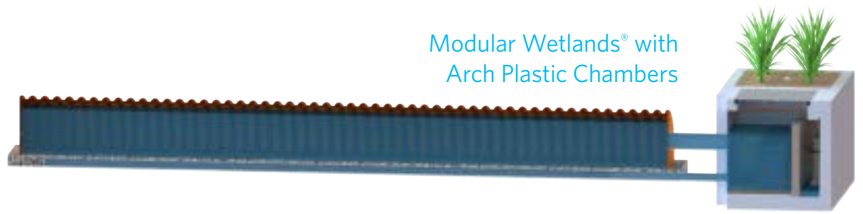
MODEL #	DIMENSIONS	WETLANDMEDIA SURFACE AREA (sq. ft.)	TREATMENT FLOW RATE (cfs)
MWS-L-4-4	4′ x 4′	23	0.052
MWS-L-4-6	4′ x 6′	32	0.073
MWS-L-4-8	4′ x 8′	50	0.115
MWS-L-4-13	4′ x 13′	63	0.144
MWS-L-4-15	4′ x 15′	76	0.175
MWS-L-4-17	4′ x 17′	90	0.206
MWS-L-4-19	4′ x 19′	103	0.237
MWS-L-4-21	4′ x 21′	117	0.268
MWS-L-6-8	7′ x 9′	64	0.147
MWS-L-8-8	8′ x 8′	100	0.230
MWS-L-8-12	8′ x 12′	151	0.346
MWS-L-8-16	8′ x 16′	201	0.462
MWS-L-8-20	9′ x 21′	252	0.577
MWS-L-8-24	9′ x 25′	302	0.693
MWS-L-10-20	10' x 20'	302	0.693

VOLUME-BASED DESIGNS

HORIZONTAL FLOW BIOFILTRATION ADVANTAGE

Modular Wetlands® with
Box Culvert Prestorage

The Modular Wetlands® System Linear offers a unique advantage in the world of biofiltration due to its exclusive horizontal flow design: Volume-Based Design. No other biofilter has the ability to be placed downstream of detention ponds, extended dry detention basins, underground storage systems and permeable paver reservoirs. The systems horizontal flow configuration and built-in orifice control allows it to be installed with just 6" of fall between inlet and outlet pipe for a simple connection to projects with shallow downstream tie-in points. In the example above, the Modular Wetlands® is installed downstream of underground box culvert storage. Designed for the water quality volume, the Modular Wetlands® will treat and discharge the required volume within local draindown time requirements.



Modular Wetlands® with
Arch Plastic Chambers

DESIGN SUPPORT

Bio Clean engineers are trained to provide you with superior support for all volume sizing configurations throughout the country. Our vast knowledge of state and local regulations allow us to quickly and efficiently size a system to maximize feasibility. Volume control and hydromodification regulations are expanding the need to decrease the cost and size of your biofiltration system. Bio Clean will help you realize these cost savings with the Modular Wetlands®, the only biofilter than can be used downstream of storage BMPs.

ADVANTAGES

- LOWER COST THAN FLOW-BASED DESIGN
- MEETS LID REQUIREMENTS
- BUILT-IN ORIFICE CONTROL STRUCTURE
- WORKS WITH DEEP INSTALLATIONS

APPLICATIONS

The Modular Wetlands® System Linear has been successfully used on numerous new construction and retrofit projects. The system's superior versatility makes it beneficial for a wide range of stormwater and waste water applications - treating rooftops, streetscapes, parking lots, and industrial sites.

INDUSTRIAL

Many states enforce strict regulations for discharges from industrial sites. The Modular Wetlands® has helped various sites meet difficult EPA-mandated effluent limits for dissolved metals and other pollutants.

RESIDENTIAL

Low to high density developments can benefit from the versatile design of the Modular Wetlands®. The system can be used in both decentralized LID design and cost-effective end-of-the-line configurations.

STREETS

Street applications can be challenging due to limited space. The Modular Wetlands® is very adaptable, and it offers the smallest footprint to work around the constraints of existing utilities on retrofit projects.

PARKING LOTS

Parking lots are designed to maximize space and the Modular Wetlands'® 4 ft. standard planter width allows for easy integration into parking lot islands and other landscape medians.

COMMERCIAL

Compared to bioretention systems, the Modular Wetlands® can treat far more area in less space, meeting treatment and volume control requirements.

MIXED USE

The Modular Wetlands® can be installed as a raised planter to treat runoff from rooftops or patios, making it perfect for sustainable "live-work" spaces.

More applications include:

• Agriculture • Reuse • Low Impact Development • Waste Water

PLANT SELECTION

Abundant plants, trees, and grasses bring value and an aesthetic benefit to any urban setting, but those in the Modular Wetlands® System Linear do even more - they increase pollutant removal. What's not seen, but very important, is that below grade, the stormwater runoff/flow is being subjected to nature's secret weapon: a dynamic physical, chemical, and biological process working to break down and remove non-point source pollutants. The flow rate is controlled in the Modular Wetlands®, giving the plants more contact time so that pollutants are more successfully decomposed, volatilized, and incorporated into the biomass of the Modular Wetlands'® micro/macro flora and fauna.

A wide range of plants are suitable for use in the Modular Wetlands®, but selections vary by location and climate. View suitable plants by visiting biocleanenvironmental.com/plants.

INSTALLATION

The Modular Wetlands® is simple, easy to install, and has a space-efficient design that offers lower excavation and installation costs compared to traditional tree-box type systems. The structure of the system resembles precast catch basin or utility vaults and is installed in a similar fashion.

The system is delivered fully assembled for quick installation. Generally, the structure can be unloaded and set in place in 15 minutes. Our experienced team of field technicians is available to supervise installations and provide technical support.

MAINTENANCE

Reduce your maintenance costs, man hours, and materials with the Modular Wetlands®. Unlike other biofiltration systems that provide no pretreatment, the Modular Wetlands® is a self-contained treatment train which incorporates simple and effective pretreatment.

Maintenance requirements for the biofilter itself are almost completely eliminated, as the pretreatment chamber removes and isolates trash, sediments, and hydrocarbons. What's left is the simple maintenance of an easily accessible pretreatment chamber that can be cleaned by hand or with a standard vac truck. Only periodic replacement of low-cost media in the pre-filter cartridges is required for long-term operation, and there is absolutely no need to replace expensive biofiltration media.

Bio Clean
A Forterra Company

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Carlsbad, CA 92008
855.566.3938
stormwater@forterrabp.com
biocleanenvironmental.com

010419R1A

ATTACHMENT 4
Copy of Plan Sheets Showing Permanent Storm Water BMPs

This is the cover sheet for Attachment 4.

Use this checklist to ensure the required information has been included on the plans:

The plans must identify:

☒Structural BMP(s) with ID numbers matching Form I-6 Summary of PDP Structural BMPs
☒The grading and drainage design shown on the plans must be consistent with the delineation of DMAs shown on the DMA exhibit
☒Details and specifications for construction of structural BMP(s)
☒Signage indicating the location and boundary of structural BMP(s) as required by the City Engineer
☒How to access the structural BMP(s) to inspect and perform maintenance
☒Features that are provided to facilitate inspection (e.g., observation ports, cleanouts, silt posts, or other features that allow the inspector to view necessary components of the structural BMP and compare to maintenance thresholds)
☒Manufacturer and part number for proprietary parts of structural BMP(s) when applicable
☒Maintenance thresholds specific to the structural BMP(s), with a location-specific frame of reference (e.g., level of accumulated materials that triggers removal of the materials, to be identified based on viewing marks on silt posts or measured with a survey rod with respect to a fixed benchmark within the BMP)
☒Recommended equipment to perform maintenance
☒When applicable, necessary special training or certification requirements for inspection and maintenance personnel such as confined space entry or hazardous waste management
☒Include landscaping plan sheets showing vegetation requirements for vegetated structural BMP(s)
☒All BMPs must be fully dimensioned on the plans
☒When propritery BMPs are used, site specific cross section with outflow, inflow and model number shall be provided. Broucher photocopies are not allowed.

CARMAX

THE AUTO SUPERSTORE

CarMax Auto Superstores California, LLC

SiteworkCriteria Plans

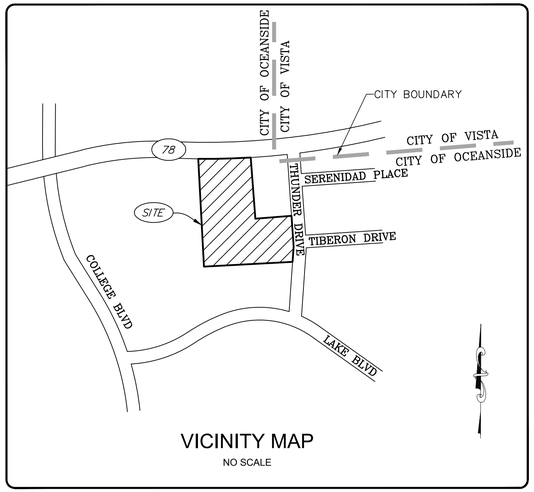
OCEANSIDE, CA

STORE #6163

ENTITLEMENTS REQUESTED:

1. (CUP) CONDITIONAL USE PERMIT PERMIT No. CUP19–00029
2. (DP) DEVELOPMENT PLAN PERMIT No. D19–00021

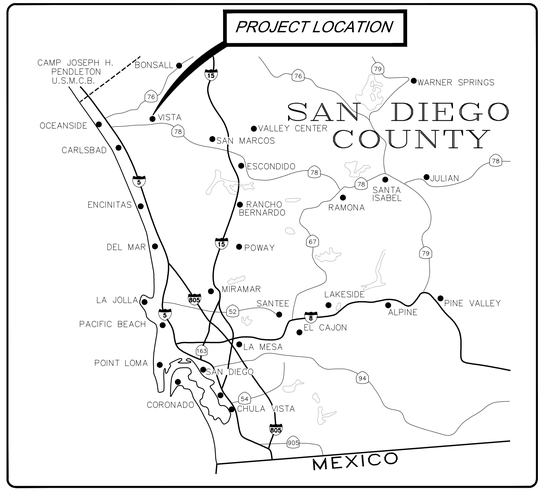
VICINITY MAP - NOT TO SCALE



VICINITY MAP

NO SCALE

COUNTY MAP - NOT TO SCALE



GENERAL NOTES

1. TOTAL CUSTOMER/EMPLOYEE PARKING SPACES: REQUIRED = 101 PER JURISDICTION PROVIDED = 148 SPACES
2. PARKING SPACE SIZE: REQUIREMENT (PER JURISDICTION) = 9' X 20' PROVIDED = 9' X 20'
3. PARCEL I.D. NO. = APNS: 168–012–42 & 168–012–43
4. SITE ZONING = COMMERCIAL
5. SITE ADDRESS = PLAZA DRIVE, OCEANSIDE, CA
6. TOTAL SITE ACREAGE = 10.54 ACRES (+0.44 AC EX ROAD, TOTAL 10.98 AC) TOTAL LOT COVERAGE = 4.31 ACRES = 39.25%
7. TOTAL DISTURBED ACREAGE = 7.31 ACRES.
8. AREA BREAKDOWN: BUILDING = 0.26 AC, = 2.37%
   PAVEMENT/IMPERVIOUS = 3.56 AC, = 32.42%
   PERVIOUS CONCRETE = 0.49 AC, = 4.46%
   OPEN SPACE = 1.50 AC, = 47.09%
   LANDSCAPE/GRASSED AREA = 1.50 AC. = 13.66%
   TOTAL = 10.98 AC
9. THE SITE IS LOCATED WITHIN THE FLOOD PLAIN PER FIRM PANEL 0766G NO PROPOSED SITE DISTURBANCE IS LOCATED WITHIN ZONE AE, ALL CONSTRUCTION IS LOCATED OUTSIDE OF THE FLOOD ZONE OR WITHIN ZONE X
10. EXISTING SEWER LINES WITHIN THE PROPERTY WILL BE RELOCATED OUTSIDE OF PROPOSED FILL AREAS.

PROJECT DATA BOX

BUILDING PROTO DESIGNATION:	"MFS"
AREA	
SALES & ADMINISTRATION	5,005 s.f.
PRESENTATION	1,197 s.f.
SERVICE	4,309 s.f.
CARWASH	936 s.f.
TOTAL	11,447 s.f.

PARKING SPACES

CUSTOMER	(9' x 20')	148 SPACES
SALES	(9' x 17')	285 SPACES
NON SALES		93 SPACES

LEGAL DESCRIPTION

(PER TITLE ORDER NO. 00101379–016–NJ–DB)

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TOPOGRAPHY SOURCE
FLOWN TOPO RECEIVED FROM: JESS L. McMARTIN,, ON JULY 09,2019
JOB NO. 19–3492

BENCHMARK
CITY OF OCEANSIDE BENCH MARK NO. E–67 IN TOP OF CURB AT W.P.C. NORTHWESTERLY CURB RETURN INTERSECTION LAKE BOULEVARD AND THUNDER DRIVE. BRASS DISC STAMPED "COS BM E–67"
ELEVATION: 194.898' DATUM: NGVD 29
ELEVATION: 197.165' DATUM: NAVD 88
(NGVD 29 + 2.267 = NAVD 88)

NOTE: ALL ELEVATIONS SHOWN ON THIS PLAN SET ARE BASED ON NAVD 88.

BASIS OF BEARINGS
THE BASIS OF BEARINGS FOR THIS PROJECT IS THE CENTERLINE OF THUNDER DRIVE AS SHOWN ON PARCEL MAP NO. 9036.
IE. N. 04°37'15" W.

SHEET INDEX

CIVIL

SHEET NO.	SHEET NAME
C1.0	NOTES & INFORMATION SHEET
C2.0	EXISTING CONDITIONS / ALTA SURVEY
C2.1	EXISTING CONDITIONS / AERIAL PHOTO
C3.0	SITE LAYOUT PLAN
C3.1	PLAZA DRIVE STREET STRIPING PLAN
C4.0	SITE UTILITY PLAN
C5.0	SITE GRADING PLAN
C5.1	SITE GRADING PLAN
C7.0	STORM SEWER PLAN VIEW
C7.1	STORM SEWER PROFILES
C8.0	SANITARY SEWER PROFILES, PLAN VIEW
C9.0	SEGMENTAL RETAINING WALL DETAILS & PROFILES
C10.0	CONSTRUCTION DETAILS
C10.1	CONSTRUCTION DETAILS
C10.2	CONSTRUCTION DETAILS
C10.3	CONSTRUCTION DETAILS
C10.4	DUMPSTER AND FUEL TANK DETAILS
C10.5	CONSTRUCTION DETAILS
C10.6	CONSTRUCTION DETAILS
C11.0	FIRE & CAR CARRIER & GARAGE EXHIBIT
C12.0	MISC. REQUIREMENTS

LIST OF CONTACTS

STORM DRAINAGE
CITY OF OCEANSIDE
300 N COAST HWY
OCEANSIDE, CA 92054
(760) 435–4500

TELEPHONE
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CUSTOMER PROJECT PLANNER
CONTACT: JAMES TODD
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EEI
CATHY AGUIRRE,
CORPORATE OFFICE MANAGER
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CARLSBAD, CA 92010
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FAX, TOLL FREE: (833) 431–3747

DOMESTIC WATER
CITY OF OCEANSIDE
WATER UTILITIES DEPARTMENT
CONTACT: BRYAN KALLENBAUGH
(760) 435–5860

GAS
SAN DIEGO GAS & ELECTRIC (SDG&E),
CUSTOMER PROJECT PLANNER
CONTACT: JAMES TODD
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SITE PLANNING & ZONING
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PLANNING DEPARTMENT
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CA 92054
(760) 435–4373

SANITARY SEWER
CITY OF OCEANSIDE
SANITARY SEWER UTILITIES
CONTACT: MABEL UYEDA
(760) 435–5860

CABLE
INSERT

FIRE DEPARTMENT
CITY OF OCEANSIDE FIRE DEPARTMENT
CONTACT: TIM RISE
(760) 435–4101

POWER
SAN DIEGO GAS & ELECTRIC (SDG&E),
CUSTOMER PROJECT PLANNER
CONTACT: JAMES TODD
(858) 636–3920

PROJECT TEAM

OWNER
CARMAX
12800 TUCKAHOE CREEK PARKWAY
RICHMOND, VA 23238–1115
PHONE: (804) 747–0422
FAX: (804) 935–4595
CONTACT – JASON PRUITT

CIVIL ENGINEER
REC CONSULTANTS, INC.
2442 SECOND AVENUE
SAN DIEGO, CA 92101
(619)232–9200
(619)232–9210 FAX

OWNERS REPRESENTATIVE
CENTER POINT INTEGRATED SOLUTIONS
1240 Bergen Pkwy
Suite A 250
Evergreen, CO 80439
PHONE (303) 679–6960
FAX (303) 670–4172
CONTACT – GREG TOLER

SURVEYOR
REC CONSULTANTS, INC.
2442 SECOND AVENUE
SAN DIEGO, CA 92101
(619)232–9200
(619)232–9210 FAX

ARCHITECT/SITE PLANNER
CHARLES J. O'BRIEN III IN ASSOCIATION WITH
PIEPER, O'BRIEN, HERR ARCHITECTS
3000 ROYAL BLVD. SOUTH
ALPHARETTA, GEORGIA 30022
PHONE: (770)569–1706
FAX: (770) 569–1786
CONTACT – DAVID HOLT

LANDSCAPE ARCHITECT
TBD

Civil Engineering · Environmental
Land Surveying
2442 Second Avenue
San Diego, CA 92101
(619)232–9200 (619)232–9210 Fax
REC Consultants, Inc.

NOT RELEASED FOR CONSTRUCTION

DESCRIPTION	DRAWN BY:

REVISIONS		
SHEET NO.	DATE	

CARMAX
12800 TUCKAHOE CREEK PKWY RICHMOND, VA 23238
804-747-0422 | CARMAX.COM
OCEANSIDE, CALIFORNIA

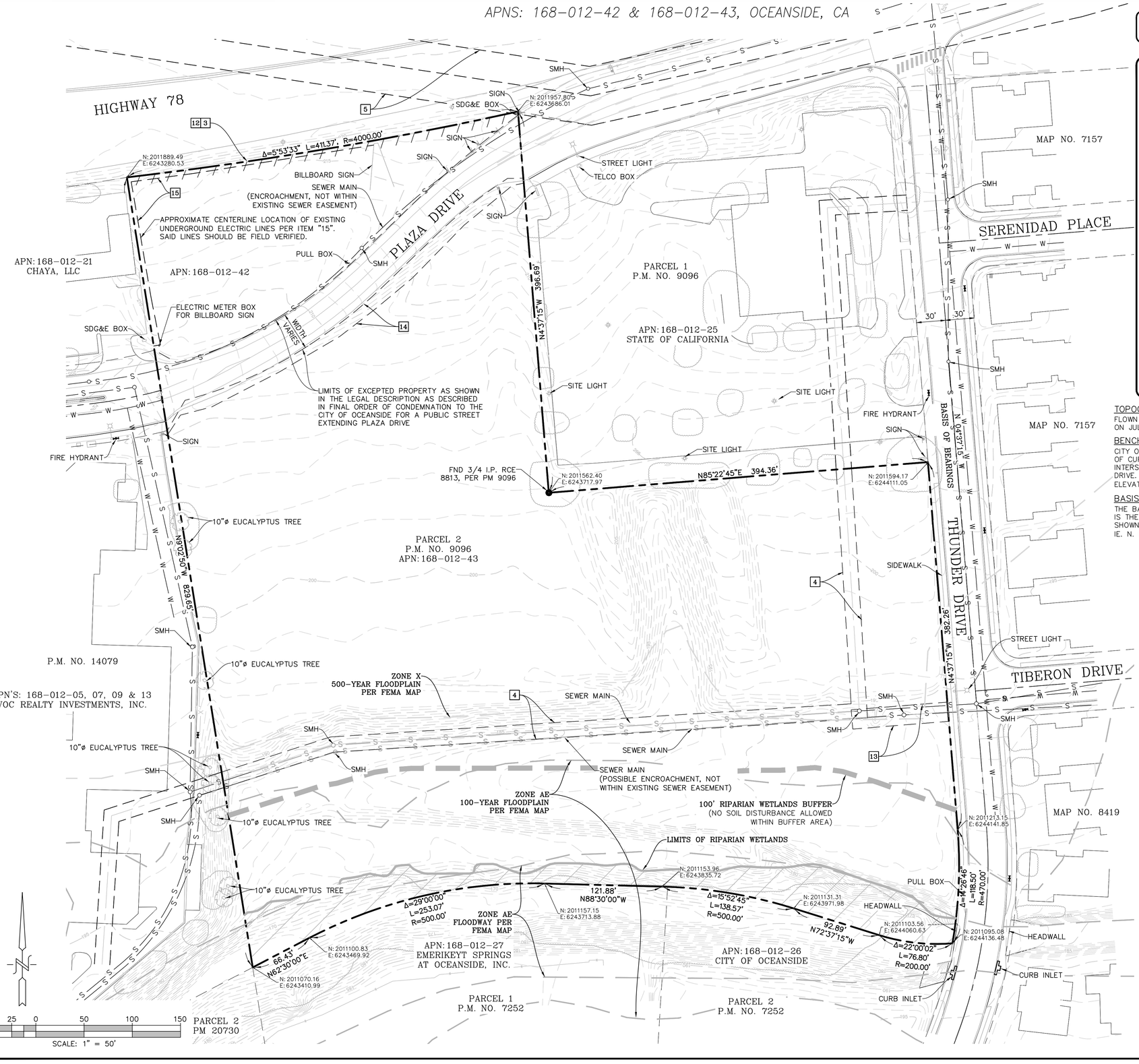
PROJECT NO
DATE March 6, 2020
SHEET TITLE
NOTES & INFORMATION

SHEET NO C1.0

SAVE DATE: 3/6/2020 ~ PLOT DATE: 3/6/2020 ~ FILE NAME: P:\Acad\1492 CarMax Oceanside\Civil\Preliminary Grading Plan\Preliminary Grading Plan.dwg

ALTA SURVEY DRAWING

APNS: 168-012-42 & 168-012-43, OCEANSIDE, CA



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CITY OF OCEANSIDE BENCH MARK NO. E-67 IN TOP OF CURB AT W.P.C. NORTHWESTERLY CURB RETURN INTERSECTION LAKE BOULEVARD AND THUNDER DRIVE. BRASS DISC STAMPED "COS BM E-67"
ELEVATION: 197.165' DATUM: NAVD 88

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS PROJECT IS THE CENTERLINE OF THUNDER DRIVE AS SHOWN ON PARCEL MAP NO. 9036.
IE. N. 04°37'15" W.

MINIMUM BUILDING SETBACKS:

CC: FRONT: 15 FT.
SIDE YARD: N/A
REAR YARD: N/A
CORNER SIDE: 15 FEET

FLOOD ZONE

COMMUNITY: CITY OF OCEANSIDE
PANEL: 766 OF 2375
MAP NO. 06073 C 0766 G
EFFECTIVE DATE: MAY 16, 2012
ZONE: AE AND X,

CURRENT ZONING

CITY OF OCEANSIDE COMPREHENSIVE ZONING ORDINANCE ARTICLE 11 (CC ZONE)

LAND AREA (GROSS)

14.16 ACRES

ITEMS CORRESPONDING TO SCHEDULE "B"

BY: CHICAGO TITLE INSURANCE COMPANY
725 SOUTH FIGUEROA STREET, SUITE 200
LOS ANGELES, CA 90017

TITLE ORDER NO.: 00101379-016-NJ-DB
TITLE OFFICER:
COMMITMENT DATE: AUGUST 21, 2019

THIS SURVEY WAS BASED UPON COMMITMENT FOR TITLE INSURANCE ISSUED BY CHICAGO TITLE INSURANCE COMPANY AS NOTED ABOVE. THE EFFECTS OF AGREEMENTS, PERMITS, LIENS, ASSESSMENTS OR LEASES, ABSTRACTS OF JUDGEMENT, AND PENDING COURT ACTIONS, APPEARING IN SAID REPORT AS SCHEDULE 'B' ITEM NOS. 1, 16, 17, 18, 19, 20, 21 AND 22 ARE NOT NOTED ON THIS SURVEY.

2 THE FOLLOWING RECITALS CONTAINED IN DEED FROM VISTA IRRIGATION DISTRICT, RECORDED JULY 17, 1945 IN BOOK 1901, PAGE 429, OF OFFICIAL RECORDS. "THAT THE DISCHARGE FROM THE VISTA SANITARY DISTRICT FLOWS TO, UPON AND ACROSS SAID PREMISES AND THE RIGHT OF SUCH SANITARY DISTRICT TO CONTINUE SUCH FLOWAGE PERMANENTLY IS HEREBY ACKNOWLEDGED AND ACCEPTED BY GRANTEE AND HIS SUCCESSORS IN INTEREST."SAID EASEMENT IS NOT PLOTTABLE.

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4 AN EASEMENT IN FAVOR OF THE CITY OF OCEANSIDE FOR THE PURPOSE SEWER PIPELINE PURPOSES, RECORDED: JUNE 29, 1961 AS INSTRUMENT NO. 111643.

5 AN EASEMENT IN FAVOR OF CONTRACTORS ASPHALT PRODUCTS CO., INC., A CALIFORNIA CORPORATION FOR ROAD PURPOSES, RECORDED: MARCH 24, 1964 AS INSTRUMENT NO. 53097.

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Civil Engineering · Environmental
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2442 Second Avenue
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(619)232-9200 (619)232-9210 Fax
R·E·C Consultants, Inc.

NOT RELEASED FOR CONSTRUCTION

DESCRIPTION	DRAWN BY:

REVISIONS		
SHEET NO.	DATE	

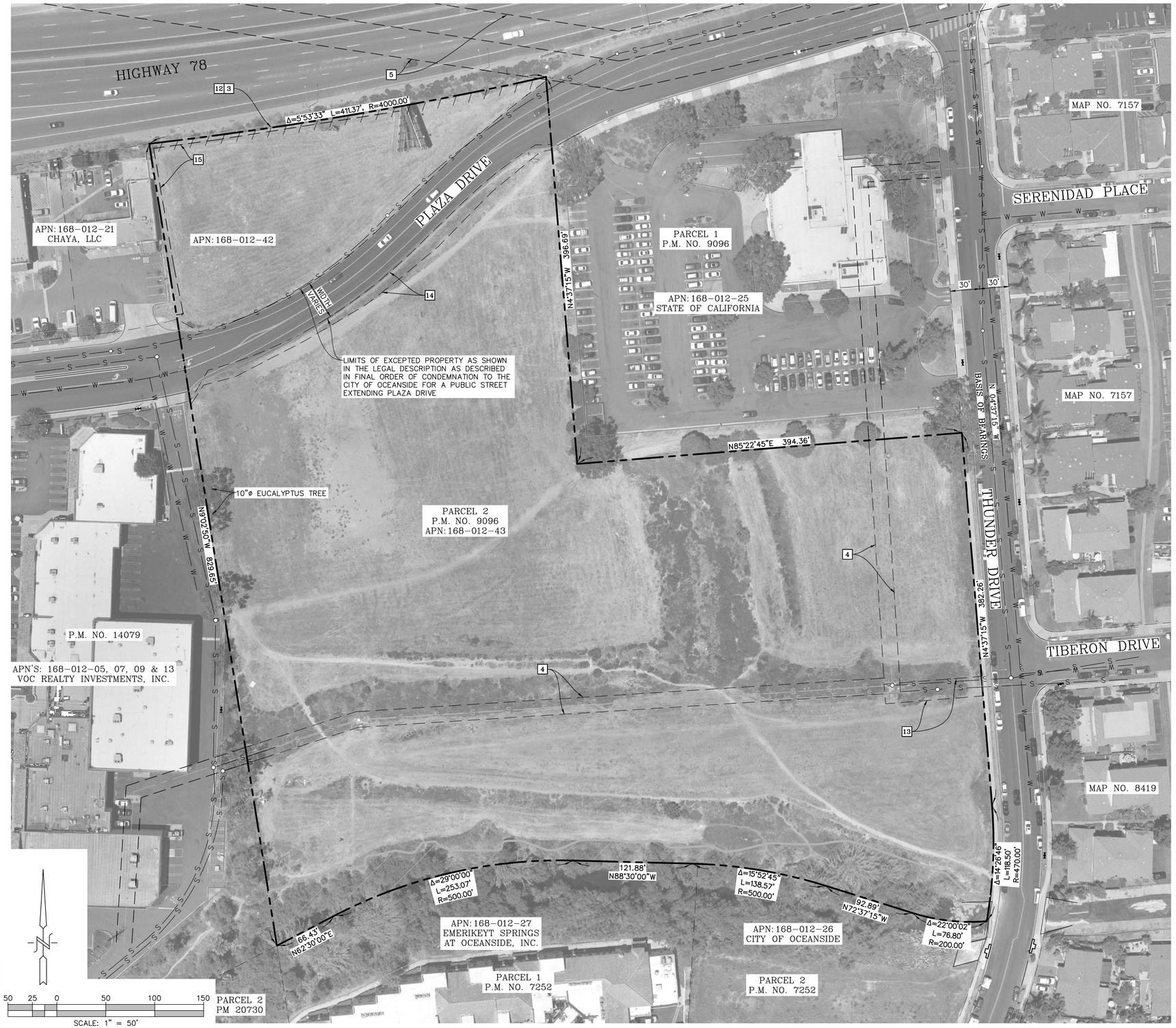
CARmax
12800 TUCKAHOE CREEK PKWY RICHMOND, VA 23238
804-747-0422 | CARMAX.COM
OCEANSIDE, CALIFORNIA

PROJECT NO
DATE March 6, 2020
SHEET TITLE
EXISITNG CONDITIONS / ALTA SURVEY

SHEET NO C2.0

AERIAL PHOTO

APNS: 168-012-42 & 168-012-43, OCEANSIDE, CA



JESS L. McMARTIN

PHOTOGRAMMETRIC CONSULTANTS

985 KENDALL DRIVE, Suite A-301
SAN BERNARDINO, CA 92407
Tel: (909) 887-7966

Mapped by JESS L. McMARTIN from photography dated 07-09-19

ITEMS CORRESPONDING TO SCHEDULE "B"

BY: CHICAGO TITLE INSURANCE COMPANY
725 SOUTH FIGUEROA STREET, SUITE 200
LOS ANGELES, CA 90017

TITLE ORDER NO.: 00101379-016-NJ-DB
TITLE OFFICER:
COMMITMENT DATE: AUGUST 21, 2019

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NOT RELEASED FOR CONSTRUCTION

DESCRIPTION	DRAWN BY:

REVISIONS: SH NO	DATE

CARMAX
12800 TUCKAHOE CREEK PKWY RICHMOND, VA 23238
804-747-0422 | CARMAX.COM

OCEANSIDE, CALIFORNIA

PROJECT NO

DATE March 6, 2020

SHEET TITLE
EXISITNG CONDITIONS / AERIAL PHOTO

SHEET NO C2.1

HIGHWAY 78

EXISTING SIGN TO REMAIN

BUILDING SETBACK LINE

CONCRETE PAVEMENT REFER TO DETAIL "33" ON SHEET C.10.3 FOR MORE INFORMATION

N: 2011957.80
E: 6243686.01

Δ=5°53'33" L=411.37' R=4000.00'

N: 2011889.49
E: 6243280.53

SALES DISPLAY 69 SPACES 0.47 ACRES

KNOX BOX SEE DETAIL "23" ON SHEET C.10.1

SECURITY GATE AND CONTROL ISLAND; SEE SHEET C10.0

PED RAMP PER G-14D (TYPICAL)

SIGHT DISTANCE LINE 300' ~ 40 MPH

20' PYLON SIGN (SEE SIGN PACKAGE FOR DETAILS)

GUARDRAIL (TYP). SEE DETAIL "35" ON SHEET C.10.2 FOR MORE INFORMATION

PHASE 2 NOTE: ALL ROW IMPROVEMENTS NORTH OF THE NORTHERLY CURB LINE OF PLAZA DRIVE TO BE COMPLETED WITH PHASE 2.

PHASE 2

PLAZA DRIVE

NOTE: MIN. CURB RADIUS IS 3.5' – WILL VARY BASED ON APPROACHES, FIRE ROUTE REQ., AND CAR CARRIER PATH

BUILDING SETBACK LINE

TREE WELL SEE DETAIL SHEET C3.1

EX 36" VCP SEWER

SALES/ STAGING LOT @ RIGHT-OF-WAY LINE – SEE DETAIL "28" / C.10.2

SALES/ STAGING LOT @ PROPERTY LINE – SEE DETAIL "12" / C.10.2

EX 8" PVC SEWER

EX 36" VCP SEWER

PED RAMP PER G-14D (TYPICAL)

SITE LIGHTING (TYPICAL)

BUILDING SETBACK LINE ENCROACHMENTS: CURB AND GUTTER, FENCE, GUARDRAIL AND LIGHTING

ORNAMENTAL FENCE. SEE DETAIL "34" ON SHEET C.10.1

GUARDRAIL (TYP). SEE DETAIL "18" ON SHEET C.10.2 FOR MORE INFORMATION

18" CURB/GUTTER; REFER TO DETAIL "31" ON SHEET C.10.3 FOR MORE INFORMATION.

CONCRETE PAVEMENT REFER TO DETAIL "33" ON SHEET C.10.3 FOR MORE INFORMATION

BUILDING SETBACK LINE ENCROACHMENTS: CURB, PCC WALKWAY AND LIGHTING

SIGHT DISTANCE LINE 150' ~ 25 MPH

N: 2011594.17
E: 6244111.05

PHASE 1
SALES DISPLAY 285 SPACES 2.30 ACRES

SITE LIGHTING (TYPICAL)

N85°22'45"E 394.36'

SALES/ STAGING LOT @ PROPERTY LINE – SEE DETAIL "10" / C.10.2

N: 2011562.40
E: 6243717.97

FLUSH CURB

GUARDRAIL (TYP). SEE DETAIL "38" ON SHEET C.10.2 FOR MORE INFORMATION

WHEEL STOP (TYPE) SEE DETAIL "26" ON SHEET C.10.3

BUILDING TIE-IN LINE S04°34'43"W 65.14' FLUSH CURB

HANDICAP STRIPING SEE DETAIL "9" ON SHEET C.10.3

CUSTOMER/EMPLOYEE PARKING
148 SPACES 1.80 ACRES

PEDESTRIAN ACCESS EASEMENT

PED RAMP PER G-27 (TYPICAL)

6' MONUMENT SIGN (SEE SIGN PACKAGE FOR DETAILS)

BUILDING TIE-IN POINT
N: 2011497.46
E: 6243712.77

FLUSH CURB

FF = 204.42
PAD = 203.5

DIRECTIONAL SIGNAGE SEE DETAIL"22" ON SHEET C10.3

SIGHT DISTANCE LINE 150' ~ 25 MPH

BUILDING SETBACK LINE ENCROACHMENTS: CURB AND GUTTER, GUARDRAIL AND LIGHTING

SITE LIGHTING (TYPICAL)

10' CONC APRON IN FRONT OF DUMPSTER

DUMPSTER PAD AREA; REFER TO STRUCTURAL PLANS FOR MORE INFORMATION.

MAN GATE SEE DETAIL "30" ON SHEET C.10.1

EX SEWER EASEMENT TO BE VACATED

FUEL DISPENSER REFER TO FUEL SYSTEM AND PLUMB DRAWINGS FOR CONSTRUCTION INFORMATION.

SALES/ STAGING AREA
0.92 ACRES 93 SPACES

CONC. ON TOP OF ALL O/W SEPARATORS AND RECLAIM TANKS (TYP)

CONCRETE PAVEMENT SEE DETAIL "33"/C10.3

CHAIN LINK FENCE – SEE DETAIL "32" / C.10.1

REVISED SEWER MAIN LOCATIONS

EX MH
IE=180.52

EX MH
IE=177.66

SIGHT DISTANCE LINE 150' ~ 25 MPH

EX MH
IE IN =175.59
IE OUT = 174.26

RETAINING WALL PER C–11

FUEL TANK AREA REFER TO FUEL SYSTEM AND PLUMB DRAWINGS FOR CONSTRUCTION INFORMATION. COORDINATE STRIPING WITH FILL LOCATION OF TANK.

DG ACCESS FOR SEWER MAINTENANCE

PROVIDE BOLLARDS AROUND ANY EXTERIOR MOUNTED/ WALL MOUNTED TRANSFORMERS, CT CABINETS, ETC. COORDINATE REQUIREMENTS WITH LOCAL MUNICIPALITY. SEE DETAIL "22" ON SHEET C.10.1

EX MH
IE=171.14

NEW SEWER MANHOLES

PROPOSED SEWER MAIN IS LOCATED OUTSIDE OF BUFFER SETBACK LINE

SALES/ STAGING WALL – SEE DETAIL "33" / C.10.2 AND SECTION A–A SHEET C.8.0

SALES/ STAGING WALL – SEE DETAIL "33" / C.10.2

100' RIPARIAN WETLANDS BUFFER
(REFER TO BUSBY BIOLOGICAL CONSTRAINTS LETTER DATED AUGUST 8TH 2019)

N: 2011213.15
E: 6244141.85

SERENIDAD PLACE

THUNDER DRIVE

TIBERON DRIVE

N19°02'30"W 829.65'

N43°37'15"W 382.26'

N51°37'45"W 396.69'

221.80'

216.60'

242.38'

THE PROPOSED PROJECT HAS BEEN DESIGNED TO INCLUDE THE 100 FOOT BUFFER FROM THE RIPARIAN HABITAT BUFFER. THIS INCLUDES THE 50' BIOLOGICAL BUFFER AS WELL AS THE MANDATORY 50' PLANNING BUFFER. THE PROPOSED PROJECT IS ANTICIPATED TO ENCROACH APPROXIMATELY 6' INTO THE A SMALL PORTION OF THE 50' PLANNING BUFFER FOR THE SEWER REALIGNMENT. TEMPORARY IMPACTS WOULD OCCUR TO APPROXIMATELY 0.0008 AC (344 SF) WITHIN THE PANNING BUFFER. DUE TO THE SMALL SIZE OF THE IMPACTS AND THE DISTANCE (94') FROM THE RIPARIAN HABITAT , NO DIRECT IMPACTS TO RIPARIAN HABITAT IS ANTICIPATED.

6" PCC CURB & GUTTER - DATA TABLE

#	BEARING/DELTA	RADIUS	LENGTH
C1	Δ = 12°01'14"	532.00'	111.61'
C2	Δ = 86°49'21"	12.00'	18.18'
C3	Δ = 88°32'29"	12.00'	18.54'
C4	Δ = 12°48'04"	532.00'	118.86'
C6	Δ = 13°41'42"	468.00'	111.86'
C8	Δ = 26°05'55"	468.00'	213.18'
C9	Δ = 90°34'04"	12.00'	18.97'
C10	Δ = 89°57'19"	12.00'	18.84'
C12	Δ = 17°03'58"	532.00'	158.46'
C13	Δ = 89°57'26"	26.00'	40.82'
C15	Δ = 89°58'28"	26.00'	40.83'
C16	Δ = 90°01'32"	26.00'	40.85'
C18	Δ = 90°05'15"	26.00'	40.88'
L25	N 04°38'47" W		52.00'
L26	N 45°53'38" E		72.80'
L27	N 72°30'56" E		17.07'
L28	N 45°53'38" E		32.96'
L29	N 85°22'45" E		33.42'
L30	N 85°22'45" E		20.52'
L34	N 85°22'45" E		20.55'
L35	N 85°22'45" E		30.55'

40 20 0 40 80 120

SCALE: 1" = 40'

NOTE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION DIMENSIONS AND DETAILS FOR THE PROPOSED MONUMENT SIGNS SHOWN. LOCATIONS AND SIZE SHOWN ON THIS PLAN ARE FOR GENERAL COORDINATION PURPOSES ONLY.

NOTE: SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND DETAILS. ANY BUILDING DIMENSIONS SHOWN ON THIS PLAN ARE FOR GENERAL COORDINATION PURPOSES ONLY AND SHOULD NOT BE USED TO LAYOUT THE BUILDING OR ITS APPURTENANCES (STAIRS, DOORS, DOCKS ETC...)

GRADING QUANTITIES

CUT	12,500 CY
FILL	12,500 CY
NET	NONE

69,250 CY REMEDIAL REMOVAL AND RECOMPACTION

LEGEND

- PROPERTY LINES
- DD° – MM' – SD" — DEGREES/MINUTES/SECONDS
- PROPOSED BUILDING
- PROPOSED STORM DRAIN PIPE — SD —
- PROPOSED ADA PARKING STRIPE
- PROPOSED PARKING STRIPE
- PROPOSED SEWER MAIN
- PROPOSED CONCRETE CURB AND GUTTER
- PROPOSED CONCRETE ROLL OVER CURB
- PROPOSED SITE POST BOLLARD
- PROPOSED SITE RETAINING WALL
- PROPOSED ORNAMENTAL FENCE
- PROPOSED GUARD RAIL
- PROPOSED CHAINLINK FENCE
- PROPOSED UNDERGROUND STORAGE TANK (6,090 SF, 4' DEPTH)
- PROPOSED STANDARD DUTY ASPHALT PAVING
- PROPOSED HEAVY DUTY ASPHALT PAVING
- PROPOSED CONCRETE SIDEWALK
- PROPOSED CONCRETE PAVEMENT
- PROPOSED PERVIOUS PAVEMENT
- PROPOSED DG UTILITY ACCESS

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DRAWN BY:

DESCRIPTION

REVISIONS
SHEET NO. | DATE

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804-747-0422 | CARMAX.COM

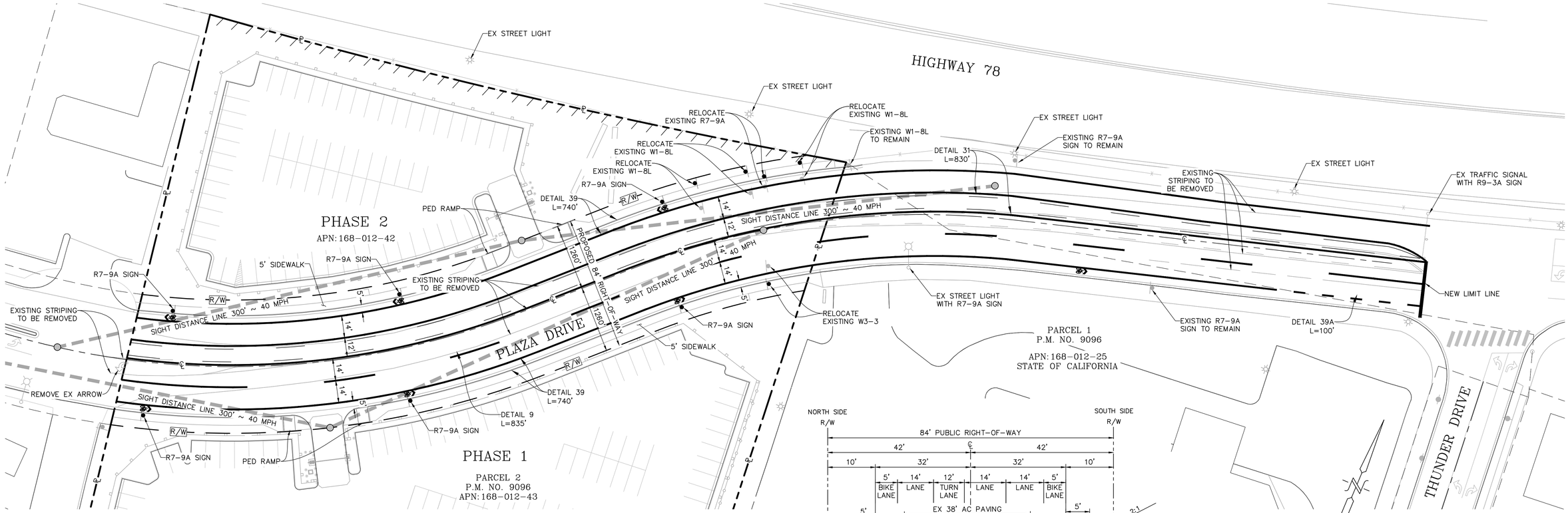
OCEANSIDE, CALIFORNIA

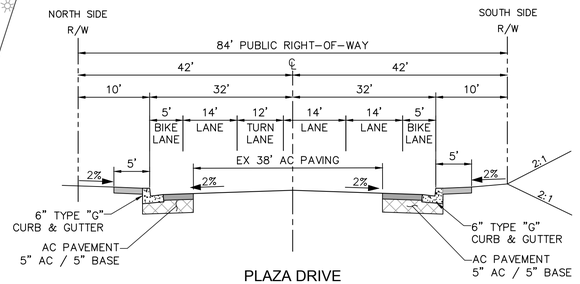
PROJECT NO

DATE March 6, 2020

SHEET TITLE
SITE
LAYOUT PLAN

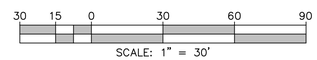
SHEET NO C3.0





PLAZA DRIVE

NOT TO SCALE



LEGEND:

SIGN	●
R7-9A	R BIKE LANE
R2-1	SPEED LIMIT 40
W3-3	
W1-8L	
R9-3a	

SIGNING NOTES:

ALL SIGNS SHALL BE MADE WITH ALUMINUM SIGN PANELS WITH TYPE IV OR BETTER (AT LEAST HIGH INTENSITY PRISMATIC) RETROREFLECTIVE SHEETING IN CONFORMANCE WITH SECTION 82, "SIGNS AND MARKINGS" OF THE MOST CURRENT CALTRANS STANDARD SPECIFICATIONS WITH THE EXCEPTION OF SECTION 82-2.02A, PART 1.

UNLESS SPECIFICALLY NOTED ON THE PLAN, ALL SIGNS SHALL BE MOUNTED SO THAT THE BOTTOM OF THE SIGN IS 7' ABOVE THE SURROUNDING GROUND SURFACE. ROADSIDE SIGNS SHALL NOT HANG OVER THE ROADWAY. SIGN PLACEMENT SHALL COMPLY WITH RS1 OF THE MOST CURRENT CALTRANS STANDARD PLANS.

SIGN POSTS SHALL BE 4"x 4" TREATED WOOD PER SECTION 82-3, "ROADSIDE SIGNS" OF THE MOST CURRENT CALTRANS STANDARD SPECIFICATIONS. SIGN POSTS SHALL BE PLACED SO THAT THEY COMPLY WITH ADA (FACILITY ACCESSIBILITY) REQUIREMENTS. SIGN POSTS SHALL BE PLACED IN COMPACTED NATIVE SOIL PER RS2 OF THE MOST CURRENT CALTRANS STANDARD PLANS. IT IS PREFERRED THAT SIGNS BE INSTALLED BEHIND SIDEWALKS, BUT IF SIGN POSTS ARE TO BE INSTALLED IN CONCRETE SIDEWALKS, THEN A 1'x 1' SQUARE, 1/2-INCH DEEP JOINT OR SAWCUT SHALL BE PLACED AROUND THE SIGN POST IN THE SIDEWALK. SIGNS SHALL BE MOUNTED ON SIGN POSTS USING SIGN PANEL FASTENING HARDWARE PER RS2 OF THE MOST CURRENT CALTRANS STANDARD PLANS, SECTION 82-3, "ROADSIDE SIGNS" OF THE MOST CURRENT CALTRANS STANDARD SPECIFICATIONS, AND AS SPECIFIED BY THE SIGN FILM MANUFACTURER.

SIGNS TO BE INSTALLED ON COUNTY OF SAN DIEGO – MAINTAINED STREET LIGHT POLES, TRAFFIC SIGNAL POLES, AND FLASHERS SHALL BE INSTALLED AS APPROVED BY THE RESIDENT ENGINEER PER THE PLAN OR WITH APPROVED STAINLESS STEEL BAND CLAMPS OR OTHER APPROVED HARDWARE THAT IS APPROPRIATE FOR THE WIND LOADING.

STREET NAME SIGNS SHALL BE INSTALLED PER THE MOST CURRENT COUNTY OF SAN DIEGO DESIGN STANDARD DRAWINGS DS-13A THROUGH DS-13G.

THE RESIDENT ENGINEER SHALL APPROVE ALL SIGN INSTALLATION LOCATIONS PRIOR TO THE CONTRACTOR INSTALLING THE SIGNS. ALL TRAFFIC SIGNS SHALL BE READILY VISIBLE TO ALL MOTORISTS DRIVING AT THE PREVAILING SPEED AS WELL AS ALL OTHER ROADWAY USERS (BICYCLISTS, EQUESTRIANS, AND PEDESTRIANS). IF THE VISIBILITY OF THE TRAFFIC SIGN IS BLOCKED, THEN THE CONTRACTOR WITH THE RESIDENT ENGINEER'S APPROVAL SHALL EITHER RELOCATE THE SIGN OR REMOVE THE OBSTRUCTIONS (SUCH AS VEGETATION, ROCKS, PRIVATE SIGNS, AND MINOR EMBANKMENTS THROUGH MINOR GRADING) THAT BLOCK THE VISIBILITY OF THE SIGN.

STRIPING NOTES:

TRAFFIC STRIPES, THERMOPLASTIC PAVEMENT MARKINGS, AND PAVEMENT MARKERS

CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ALL STRIPING, PAVEMENT MARKERS, AND LEGENDS (PAVEMENT MARKINGS) OBLITERATED BY THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL NEW STRIPING, PAVEMENT MARKERS, AND LEGENDS REQUIRED FOR THIS PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONFLICTING AND REDUNDANT STRIPING, PAVEMENT MARKERS, AND LEGENDS IN THIS PROJECT.

INSTALLATION OF TRAFFIC STRIPES (TRAFFIC LINES) AND THERMOPLASTIC PAVEMENT MARKINGS SHALL CONFORM TO SECTION 84-1, "GENERAL" AND 84-2, "TRAFFIC STRIPES AND PAVEMENT MARKINGS", OF THE CALTRANS STANDARD SPECIFICATIONS AND THE FOLLOWING:

CONTROL OF THE ALIGNMENT AND LAYOUT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SUBJECT TO APPROVAL BY THE ENGINEER. ALL NEW STRIPING AND REMOVAL OF REDUNDANT STRIPING SHALL BE DONE BY CONTRACTOR. STRIPING SHALL BE REMOVED BY SANDBLASTING / GRINDING AND THEN SAND SEALED PER THE ENGINEER. CONTRACTOR TO PROVIDE AND INSTALL PAVEMENT MARKERS.

SECTION 84-2.02, "MATERIALS", OF THE STANDARD SPECIFICATIONS IS AMENDED TO READ:

PAINT FOR TRAFFIC STRIPING SHALL BE LEAD FREE AND CONFORM TO THE LATEST STATE SPECIFICATIONS FOR RAPID DRY WATER BORNE, WHITE & YELLOW PAINT.

THERMOPLASTIC MATERIAL SHALL BE FREE OF LEAD AND CHROMIUM, AND SHALL CONFIRM TO THE REQUIREMENTS IN STATE SPECIFICATION PTH-02SPRAY, PTH-02HYDRO, OR PTH-02ALKYD.

FOR EACH BATCH OF THERMOPLASTIC MATERIAL FOR PAVEMENT MARKINGS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER:

1. CERTIFICATE OF COMPLIANCE UNDER SECTION 6-1.07, "CERTIFICATES OF COMPLIANCE," OF THE STANDARD SPECIFICATIONS
2. DEPARTMENT'S MATERIALS ENGINEERING AND TESTING SERVICES NOTIFICATION LETTER STATING THAT THE MATERIAL IS APPROVED FOR USE
3. MATERIAL SAFETY DATA SHEET

PRIMER MUST COMPLY WITH THE THERMOPLASTIC MANUFACTURER'S RECOMMENDATIONS. DO NOT THIN THE PRIMER.

GLASS BEADS SHALL CONFORM TO STATE SPECIFICATIONS NO. 8010-004 (TYPE II).

COPIES OF STATE SPECIFICATIONS FOR TRAFFIC PAINT AND GLASS BEADS MAY BE OBTAINED FROM THE TRANSPORTATION LABORATORY, P.O. BOX 19128, SACRAMENTO, CALIFORNIA, 95812, TEL. (916) 227-7000.

THERMOPLASTIC PAVEMENT MARKINGS WITH ENHANCED WET-NIGHT VISIBILITY MUST CONSIST OF A SINGLE UNIFORM LAYER OF THERMOPLASTIC AND 2 LAYERS OF GLASS BEADS AS FOLLOWS:

1. THE 1ST LAYER OF GLASS BEADS MUST BE ON THE AUTHORIZED MATERIAL LIST UNDER HIGH-PERFORMANCE RETROREFLECTIVE GLASS BEADS FOR USE IN THERMOPLASTIC PAVEMENT MARKINGS. THE COLOR OF THE GLASS BEADS MUST MATCH THE COLOR OF THE STRIPE OR MARKING TO WHICH THEY ARE BEING APPLIED.
2. THE 2ND LAYER OF GLASS BEADS MUST COMPLY WITH AASHTO M 247, TYPE 2.

BOTH TYPES OF GLASS BEADS MUST BE SURFACE TREATED FOR USE WITH THERMOPLASTIC UNDER THE BEAD MANUFACTURER'S INSTRUCTIONS.

GLASS BEADS MAYBE APPLIED BY HAND ON THERMOPLASTIC PAVEMENT MARKINGS.

WITHIN 14 DAYS OF APPLYING A THERMOPLASTIC PAVEMENT MARKING WITH ENHANCED WET-NIGHT VISIBILITY, THE RETROREFLECTIVITY MUST BE A MINIMUM OF 700 MCD/SQ M/LX FOR WHITE STRIPES AND MARKINGS AND 500 MCD/SQ M/LX FOR YELLOW STRIPES AND MARKINGS. TEST THE RETROREFLECTIVITY USING A REFLECTOMETER UNDER ASTM E 1710.

WHERE STRIPING JOINS EXISTING STRIPING, AS SHOWN ON THE PLANS, THE CONTRACTOR SHALL BEGIN AND END THE TRANSITION FROM THE EXISTING STRIPING PATTERN INTO OR FROM THE NEW STRIPING PATTERN A SUFFICIENT DISTANCE TO ENSURE CONTINUITY OF THE STRIPING PATTERN.

APPLY EXTRUDED THERMOPLASTIC AT A TEMPERATURE FROM 400 TO 425 DEGREES F, UNLESS A DIFFERENT TEMPERATURE IS INSTRUCTED BY THE MANUFACTURER.

APPLY THERMOPLASTIC PAVEMENT MARKING AT A RATE OF AT LEAST 1.06 LB/SQ FT. THE APPLIED THERMOPLASTIC PAVEMENT MARKING MUST BE AT LEAST 0.125 INCH THICK.

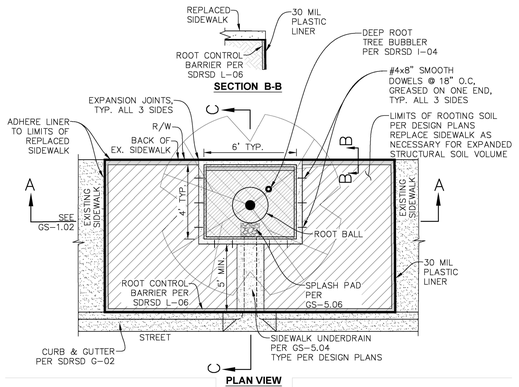
DISTRIBUTE GLASS BEADS UNIFORMLY ON PAVEMENT MARKINGS. APPLY HIGH-PERFORMANCE GLASS BEADS AT A RATE OF AT LEAST 6 LB/100 SQ FT OF MARKING. APPLY AASHTO M 247, TYPE 2, GLASS BEADS AT A RATE OF AT LEAST 8 LB/100 SQ FT OF MARKING. THE COMBINED WEIGHT OF THE 2 TYPES OF GLASS BEADS MUST BE GREATER THAN 14 LB/100 SQ FT OF MARKING.

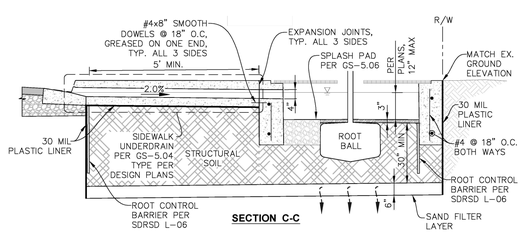
THERMOPLASTIC PAVEMENT MARKINGS SHALL BE FREE OF RUNS, BUBBLES, CRATERS, DRAG MARKS, STRETCH MARKS, AND DEBRIS.

THE SURFACE OF THE THERMOPLASTIC MATERIAL UPON APPLICATION SHALL PROVIDE A MINIMUM SKID RESISTANCE VALUE OF 60 BPN WHEN TESTED ACCORDING TO ASTM E 303. DOCUMENTATION DETAILING MANUFACTURE'S MINIMUM SKID RESISTANCE FOR PERFORMED THERMOPLASTIC MATERIAL SHALL BE PROVIDED TO THE ENGINEER PRIOR TO COMMENCEMENT OF PAVEMENT MARKING OPERATIONS.

PAVEMENT MARKER SHALL CONFORM TO SECTION 81-3, "PAVEMENT MARKERS," OF THE MOST CURRENT CALTRANS STANDARD SPECIFICATIONS, AND THE FOLLOWING PROVISIONS:

PAVEMENT MARKER HEIGHT SHALL BE 0.70-INCH MINIMUM. "LOW PROFILE" TYPE MARKERS WILL NOT BE ACCEPTABLE.





TREE WELL DETAIL

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NO.	DATE	DESCRIPTION	DRAWN BY:

REVISIONS

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804-747-0422 | CARMAX.COM
OCEANSIDE, CALIFORNIA

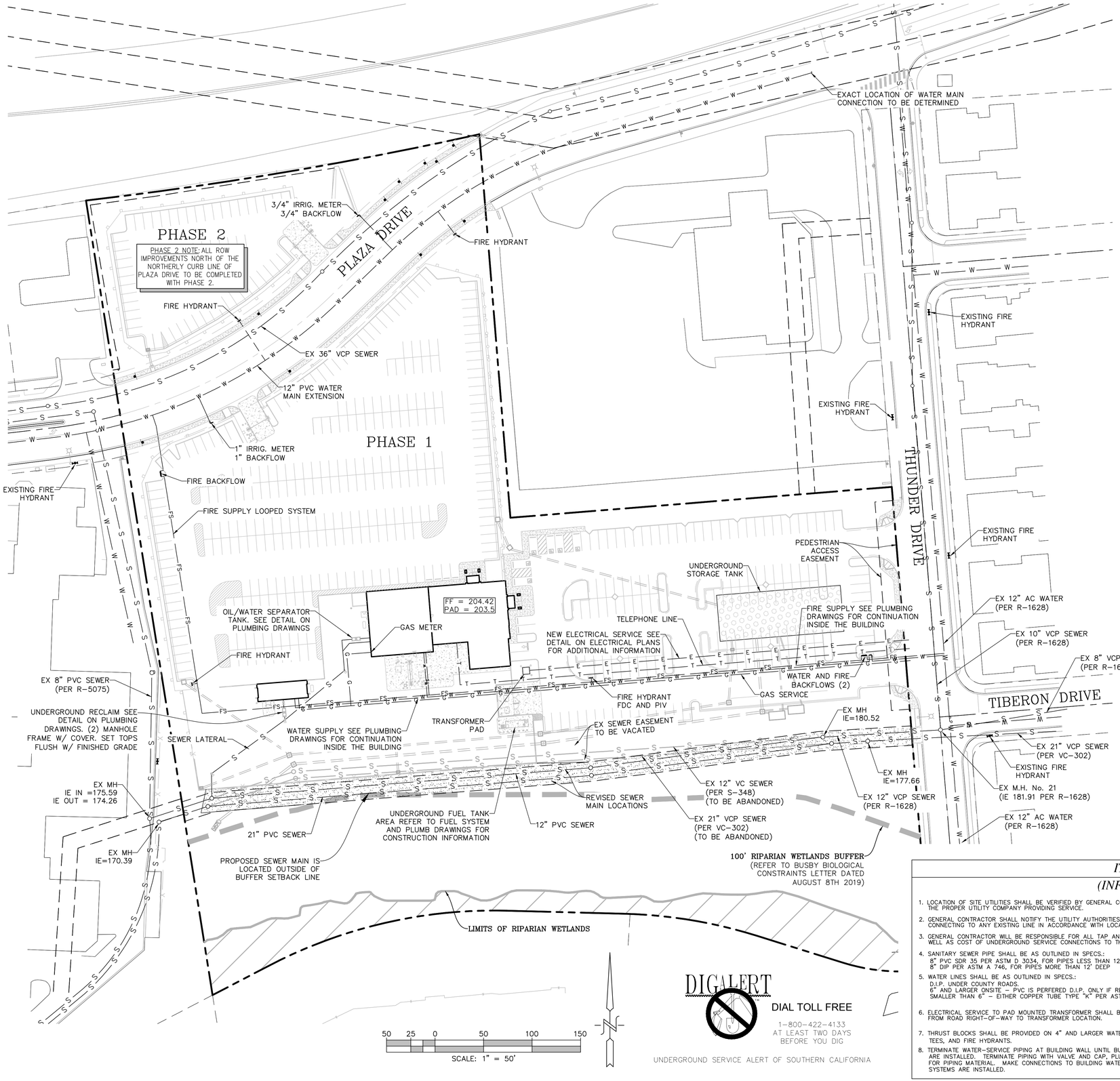
PROJECT NO

DATE March 6, 2020

SHEET TITLE
PLAZA DRIVE
STREET STRIPING PLAN

C3.1

SHEET NO



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DIAL TOLL FREE

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AT LEAST TWO DAYS BEFORE YOU DIG

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

SANITARY SEWER MANHOLES

CLEANOUT NO.	TOP ELEVATION	INV. IN	INV. OUT	NORTHING	EASTING
C.O. #1	995.50	993.20	993.00	N 123456.789	E 123456.789

SANITARY SEWER CLEANOUTS

CLEANOUT NO.	TOP ELEVATION	INV. ELEVATION	NORTHING	EASTING
C.O. #1	996.00	993.00	N 123456.789	E 123456.789

LEGEND

PROPOSED THRUST BLOCK	▶
PROPOSED GATE VALVE	
PROPOSED ELECTRIC SERVICE	E
PROPOSED TELEPHONE SERVICE	T
SANITARY SEWER CLEANOUT	GCO
WATER METER	W.M.
BACK FLOW PREVENTOR	BFP
GATE VALVE	G.V.
SANITARY SEWER MANHOLE	SSMH
TO BE REMOVED	TBR
PROPOSED FEATURES PROPOSED BUILDING	
PROPERTY LINES EXISTING FEATURES	
EXISTING FENCE	x x x
PROPOSED ELECTRIC SERVICE	E
PROPOSED GAS SERVICE	G
EXIST. POWER LINE	
EXIST. POWER LINE	
EXIST. WATER LINE	W
PROPOSED STORMWATER PIPE	
PROPOSED POWER POLE	
PROPOSED FIRE HYDRANT	
DOMESTIC WATER SERVICE (2-INCH TYPE "K", COOPER)	2" W
FIRE PROTECTION SERVICE	8" FW
SANITARY SEWER SERVICE	6" S.S.

THE PROPOSED PROJECT HAS BEEN DESIGNED TO INCLUDE THE 100 FOOT BUFFER FROM THE RIPARIAN HABITAT BUFFER. THIS INCLUDES THE 50' BIOLOGICAL BUFFER AS WELL AS THE MANDATORY 50' PLANNING BUFFER. THE PROPOSED PROJECT IS ANTICIPATED TO ENCROACH APPROXIMATELY 6' INTO THE A SMALL PORTION OF THE 50' PLANNING BUFFER FOR THE SEWER REALIGNMENT. TEMPORARY IMPACTS WOULD OCCUR TO APPROXIMATELY 0.0008 AC (344 SF) WITHIN THE PANNING BUFFER. DUE TO THE SMALL SIZE OF THE IMPACTS AND THE DISTANCE (94') FROM THE RIPARIAN HABITAT , NO DIRECT IMPACTS TO RIPARIAN HABITAT IS ANTICIPATED.

NOTE: *SEE IRRIGATION PLANS FOR IRRIGATION METER

NOTE: CONTRACTOR TO COORDINATE GAS LINE INSTALLATION WITH UTILITY PROVIDER.

NOTE: CONTRACTOR TO PROVIDE TAMPER SWITCHES IN THE VAULT AND THE POST INDICATING SPRINKLER CONTROL VALVE

NOTE: SEE PLUMBING DRAWINGS FOR EXACT UTILITY CONNECTION LOCATIONS AT THE BUILDING. LOCATIONS SHOWN ON THIS PLAN ARE FOR GENERAL COORDINATION PURPOSES ONLY AND SHOULD BE VERIFIED PRIOR TO INSTALLATION.

NOTE: CONTRACTOR TO SEE ELECTRICAL DWGS. FOR COORDINATION WITH SITE LIGHTING, TELECOMMUNICATIONS REQUIREMENTS.

ITEMS REQUIRED LIST / NOTES TO DESIGNER

(INFORMATION REQUIRED ON SITE UTILITY PLAN)

1. LOCATION OF SITE UTILITIES SHALL BE VERIFIED BY GENERAL CONTRACTOR WITH THE PROPER UTILITY COMPANY PROVIDING SERVICE.
2. GENERAL CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS BEFORE CONNECTING TO ANY EXISTING LINE IN ACCORDANCE WITH LOCAL REQUIREMENTS.
3. GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR ALL TAP AND TIE ON FEES REQUIRED, AS WELL AS COST OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
4. SANITARY SEWER PIPE SHALL BE AS OUTLINED IN SPECS.:
   8" PVC SDR 35 PER ASTM D 3034, FOR PIPES LESS THAN 12' DEEP
   8" DIP PER ASTM A 746, FOR PIPES MORE THAN 12' DEEP
5. WATER LINES SHALL BE AS OUTLINED IN SPECS.:
   D.I.P. UNDER COUNTY ROADS.
   6" AND LARGER ONSITE – PVC IS PERFERED D.I.P. ONLY IF REQUIRED.
   SMALLER THAN 6" – EITHER COPPER TUBE TYPE "K" PER ASTM B 88 OR D.I.P.
6. ELECTRICAL SERVICE TO PAD MOUNTED TRANSFORMER SHALL BE RUN UNDERGROUND, FROM ROAD RIGHT-OF-WAY TO TRANSFORMER LOCATION.
7. THRUST BLOCKS SHALL BE PROVIDED ON 4" AND LARGER WATER LINES AT ALL BENDS, TEES, AND FIRE HYDRANTS.
8. TERMINATE WATER-SERVICE PIPING AT BUILDING WALL UNTIL BUILDING WATER PIPING SYSTEMS ARE INSTALLED. TERMINATE PIPING WITH VALVE AND CAP, PLUG, OR FLANGE AS REQUIRED FOR PIPING MATERIAL. MAKE CONNECTIONS TO BUILDING WATER PIPING SYSTEMS WHEN THOSE SYSTEMS ARE INSTALLED.
9. ALL FIRE HYDRANTS SHALL BE PROVIDED WITH AN APPROVED GATE VALVE A MAXIMUM OF 5'-0" FROM HYDRANT.
10. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
11. REFER TO PLUMBING AND/OR FIRE PROTECT. SHEETS FOR FIRE LINE LEAD-IN LOCATION AND DETAIL.
12. RUN FIRE LINE AS SPECIFIED IN NOTE NO. 8 THIS SHEET.
13. REFER TO PLUMBING SHEETS FOR LOCATION OF SEWER, AND DOMESTIC UTILITY CONNECTIONS.
14. ALL PIPING SHALL BE INSTALLED WITH A MINIMUM OF 30" OF COVER, OR 12 INCHES BELOW LEVEL OF MAX FROST LINE, OR AS OUTLINED IN CONSTRUCTION SPECIFICATIONS
15. CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE LOCAL AUTHORITIES WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES
16. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY EXACT LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
17. ALL NECESSARY INSPECTIONS, CERTIFICATIONS AND AS-BUILT SURVEYS REQUIRED BY CODES AND UTILITY COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED SCHEDULED SUBSTANTIAL COMPLETION AND THE FINAL C.O.
18. CONTRACTOR IS TO COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.

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CARMAX
12800 TUCKAHOE CREEK PKWY RICHMOND, VA 23238
804-747-0422 | CARMAX.COM

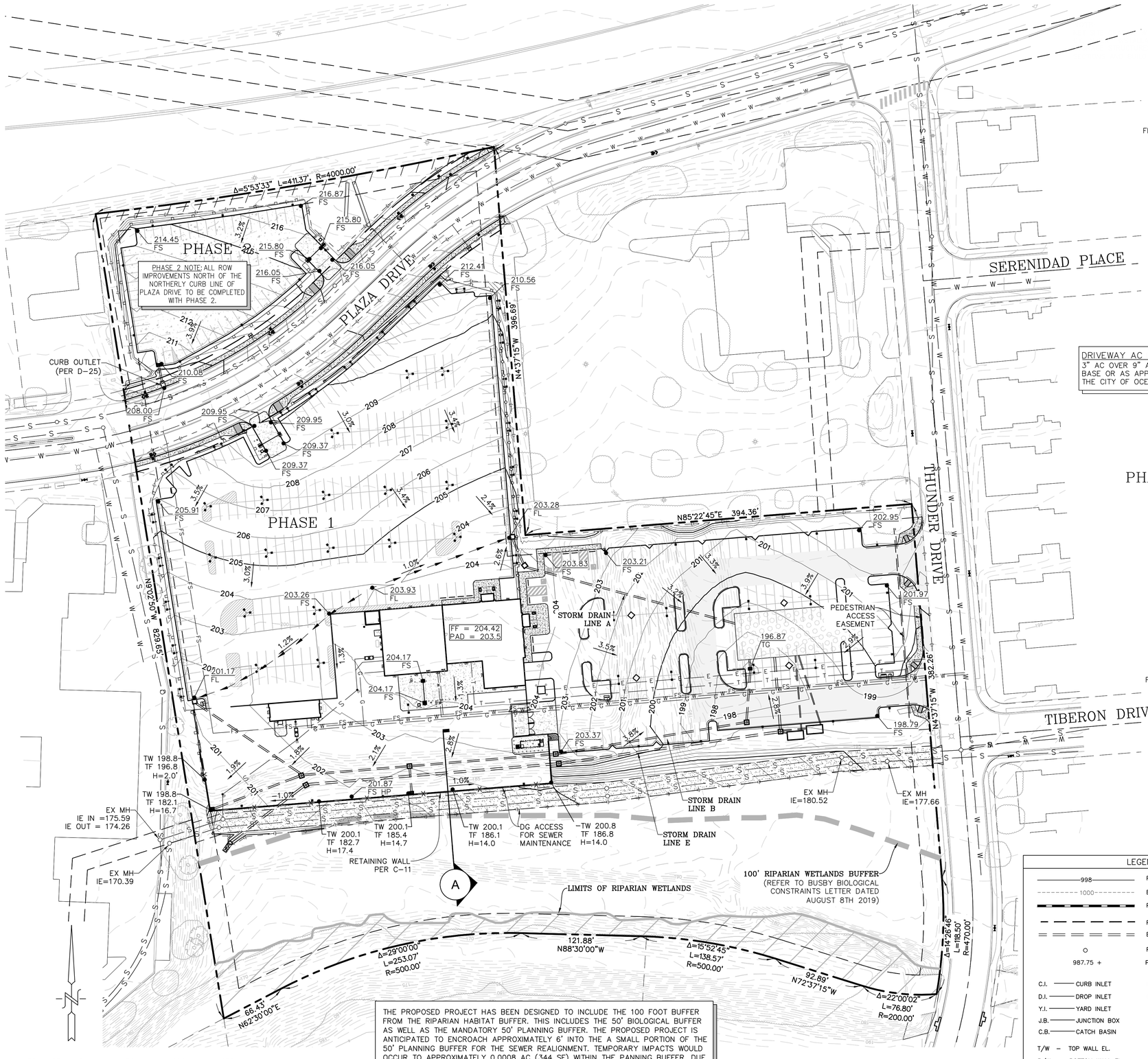
OCEANSIDE, CALIFORNIA

PROJECT NO

DATE March 6, 2020

SHEET TITLE UTILITY PLAN

SHEET NO C4.0

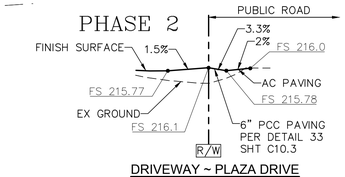


THE PROPOSED PROJECT HAS BEEN DESIGNED TO INCLUDE THE 100 FOOT BUFFER FROM THE RIPARIAN HABITAT BUFFER. THIS INCLUDES THE 50' BIOLOGICAL BUFFER AS WELL AS THE MANDATORY 50' PLANNING BUFFER. THE PROPOSED PROJECT IS ANTICIPATED TO ENCROACH APPROXIMATELY 6' INTO THE A SMALL PORTION OF THE 50' PLANNING BUFFER FOR THE SEWER REALIGNMENT. TEMPORARY IMPACTS WOULD OCCUR TO APPROXIMATELY 0.0008 AC (344 SF) WITHIN THE PANNING BUFFER. DUE TO THE SMALL SIZE OF THE IMPACTS AND THE DISTANCE (94') FROM THE RIPARIAN HABITAT , NO DIRECT IMPACTS TO RIPARIAN HABITAT IS ANTICIPATED.

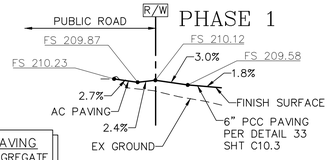
GRADING QUANTITIES

CUT	12,500 CY
FILL	12,500 CY
NET	NONE

69,250 CY REMEDIAL REMOVAL AND RECOMPACTION

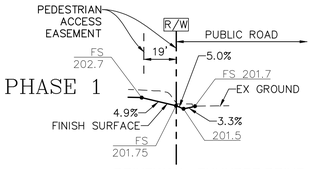


DRIVEWAY ~ PLAZA DRIVE
NORTH SIDE
SCALE: HORZ: 1" = 40'
VERT: 1" = 8'

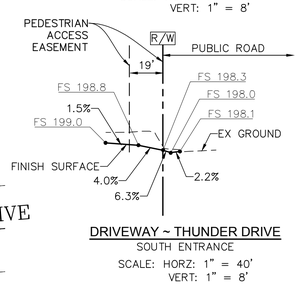


DRIVEWAY ~ PLAZA DRIVE
SOUTH SIDE
SCALE: HORZ: 1" = 40'
VERT: 1" = 8'

DRIVEWAY AC PAVING
3" AC OVER 9" AGGREGATE BASE OR AS APPROVED BY THE CITY OF OCEANSIDE



DRIVEWAY ~ THUNDER DRIVE
NORTH ENTRANCE
SCALE: HORZ: 1" = 40'
VERT: 1" = 8'



DRIVEWAY ~ THUNDER DRIVE
SOUTH ENTRANCE
SCALE: HORZ: 1" = 40'
VERT: 1" = 8'

NOTE: SEE SHEET PIPE PROFILES SHEETS FOR INVERT ELEVATIONS (TYPICAL).

NOTE: SEE SHEET C2.0 FOR APPROXIMATE LOCATIONS OF EXISTING UTILITIES.

MAXIMUM CUT OR FILL SLOPES IS 2H:1V

NOTE

ALL THE ELEVATIONS SHOWN ARE FINISHED GRADE ELEVATIONS. CONTRACTOR TO SUBSTRACT PAVEMENT THICKNESS AND FLOOR SLAB THICKNESS FOR SUBGRADE ELEVATIONS.

NOTE

CONTRACTOR SHALL REFER TO ARCHITECTURAL AND PLUMBING PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ALL VESTIBULES, SIDEWALKS, EXIT PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS, AND EXACT UTILITY ENTRANCE LOCATIONS.

CLEAN-OUT COORDINATES

STRUCTURE	NORTHING	EASTING
C.O. #1	N 123456.789	E N 123456.789

DRAINAGE STRUCTURE COORDINATES

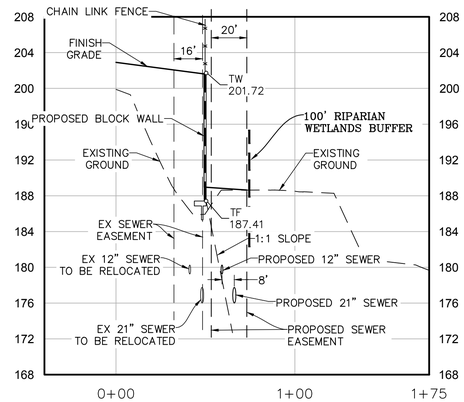
STRUCTURE	NORTHING	EASTING
J.B. A-1	N 123456.789	E N 123456.789

LEGEND

PROPERTY LINES	
DD° – MM' – SD"	DEGREES/MINUTES/SECONDS
PROPOSED BUILDING	
PROPOSED STORM DRAIN PIPE	SD
PROPOSED ADA PARKING STRIPE	
PROPOSED PARKING STRIPE	
PROPOSED SEWER MAIN	
PROPOSED CONCRETE CURB AND GUTTER	
PROPOSED CONCRETE ROLL OVER CURB	
PROPOSED SITE POST BOLLARD	
PROPOSED SITE RETAINING WALL	
PROPOSED ORNAMENTAL FENCE	
PROPOSED GUARD RAIL	
PROPOSED CHAINLINK FENCE	
PROPOSED UNDERGROUND STORAGE TANK (6,090 SF, 4' DEPTH	
PROPOSED STANDARD DUTY ASPHALT PAVING	
PROPOSED HEAVY DUTY ASPHALT PAVING	
PROPOSED CONCRETE SIDEWALK	
PROPOSED CONCRETE PAVEMENT	
PROPOSED PERVIOUS PAVEMENT	
PROPOSED DG UTILITY ACCESS	

LEGEND

998	PROPOSED CONTOUR
1000	EXISTING CONTOUR
	PROPOSED STORM SEWER
	PROPOSED STORM ROOF LEADER
	EXISTING STORM SEWER
	PROPOSED STORMWATER CLEAN OUT
987.75 +	PROPOSED SPOT ELEVATION
C.I. CURB INLET	H.W. HEAD WALL
D.I. DROP INLET	O.C.S. OUTLET STRUCTURE
Y.I. YARD INLET	
J.B. JUNCTION BOX	
C.B. CATCH BASIN	
T/W – TOP WALL EL.	+H.P. – HIGH POINT
B/W – BOTTOM WALL EL.	T.B.R. – TO BE REMOVED



SECTION A
SCALE: HORZ: 1" = 40'
VERT: 1" = 8'

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SHT NO	DESCRIPTION	DATE	

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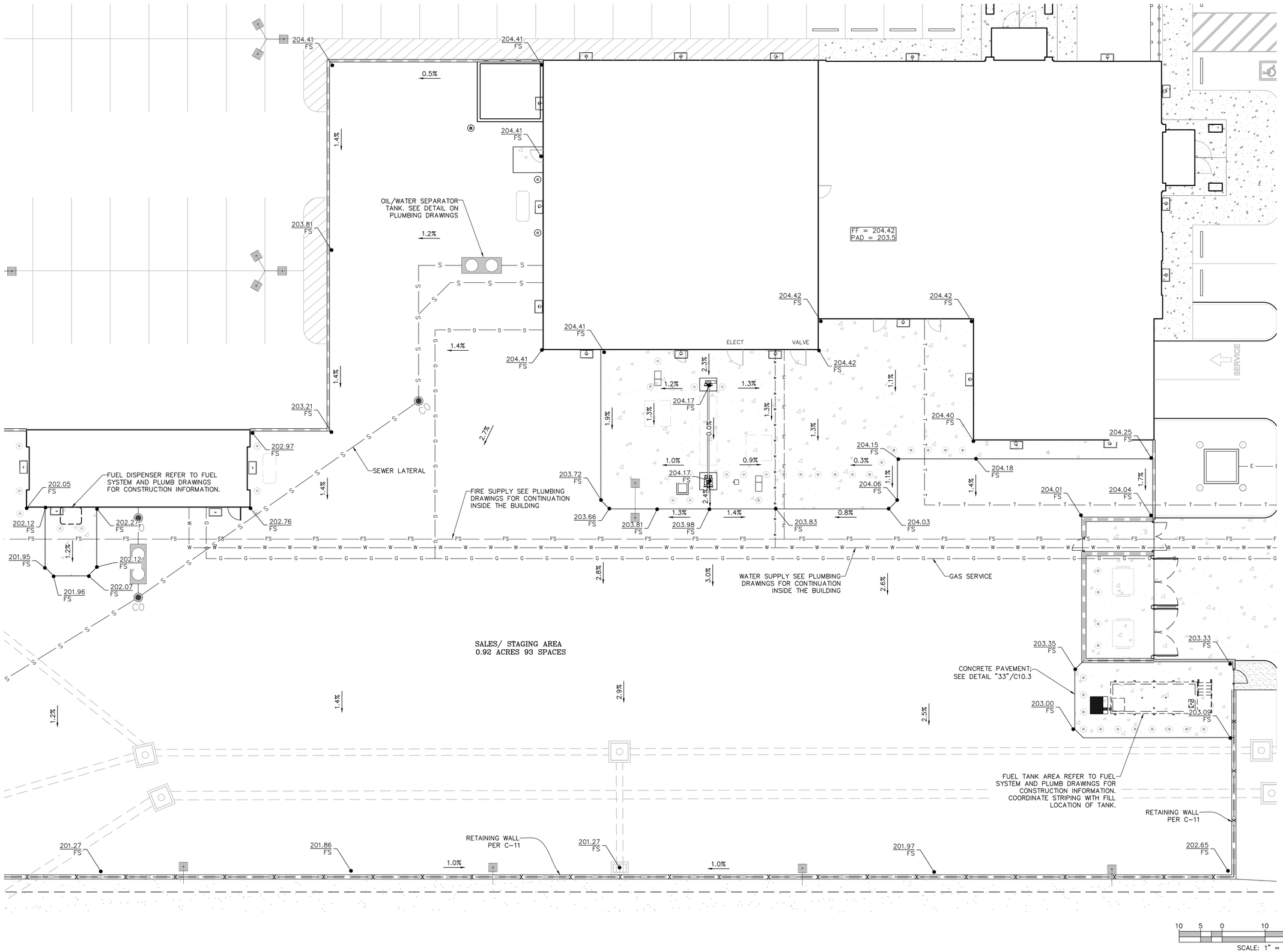
OCEANSIDE, CALIFORNIA

PROJECT NO

DATE March 6, 2020

SHEET TITLE
GRADING PLAN

SHEET NO C5.0



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OCEANSIDE, CALIFORNIA

PROJECT NO

DATE March 6, 2020

SHEET TITLE
GRADING PLAN

SHEET NO C5.1

STORM SEWER STRUCTURE LEGEND

C.I. – CURB INLET
Y.I. – YARD INLET
D.I. – DROP INLET
S.W.C.B. – SINGLE WING CATCH BASIN
D.W.C.B. – DOUBLE WING CATCH BASIN
J.B. – JUNCTION BOX
W.B. – WEIR BOX

STORM DRAIN DATA TABLE				
#	BEARING/DELTA	RADIUS	LENGTH	NOTES
L5	N 23°37'53" W		27.91'	12" PVC @ 0.5% MIN
L6	N 74°54'22" W		220.35'	12" PVC @ 0.5% MIN
L7	N 56°04'31" W		128.71'	12" PVC @ 0.5% MIN
L8	N 85°15'32" E		106.42'	12" PVC @ 0.5% MIN
L9	N 85°15'32" E		145.33'	12" PVC @ 0.5% MIN
L10	N 80°28'01" E		193.06'	12" PVC @ 0.5% MIN
L11	N 04°09'59" E		51.77'	12" PVC @ 0.5% MIN
L12	N 69°06'08" E		93.33'	12" PVC @ 0.5% MIN
L13	N 04°44'28" W		24.14'	12" PVC @ 0.5% MIN
L14	N 12°01'40" W		15.88'	12" PVC @ 0.5% MIN
L15	N 04°37'15" W		73.81'	18" PVC @ 0.5% MIN
L16	N 81°46'13" E		224.00'	18" PVC @ 0.5% MIN
L17	N 85°15'32" E		254.33'	18" PVC @ 0.5% MIN
L18	N 52°40'12" E		93.26'	18" PVC @ 0.5% MIN
L23	N 04°37'15" W		8.55'	12" PVC @ 0.5% MIN

SEE SHEET C7.1 FOR STORM DRAIN PROFILES

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PHASE 2

PHASE 2 NOTE: ALL ROW IMPROVEMENTS NORTH OF THE NORTHERLY CURB LINE OF PLAZA DRIVE TO BE COMPLETED WITH PHASE 2.

PHASE 1

SERENIDAD PLACE

TIBERON DRIVE

THUNDER DRIVE

MF SERVICE

PRES. LANES

CARWASH

FF = 204.42
PAD = 203.5

(58) UNDERGROUND DETENTION TANKS
7X15X4 (INTERNAL DIMENSIONS)
OPEN BOTTOM WITH 6" OF GRAVEL BELOW

(2) MODULAR WETLANDS
MWS-L-8-16-V

TANK OUTLET STRUCTURES
SEE DETAIL SHEET C7.1

CURB OUTLET
(PER D-25)

ENERGY DISSIPATOR D-40 TYPE 1
ROCK CLASS No 2 BACKING
T=1.1 W= 5 L=10
V100=3.92 FT/SEC
Q100=23.75 CFS

EX MH
IE IN =175.59
IE OUT = 174.26

EX MH
IE=171.14

EX MH
IE=180.52

EX 8" PVC SEWER
(PER R-5075)

EX 12" AC WATER
(PER R-1628)

EX 10" VCP SEWER
(PER R-1628)

EX 8" VCP SEWER
(PER R-1629)

EX 21" VCP SEWER
(PER VC-302)

EX M.H. No. 21
(IE 181.91 PER R-1628)

EX 12" VCP SEWER
(PER R-1628)

EX 12" AC WATER
(PER R-1628)

PROPOSED 21" PVC SEWER
MAIN IS LOCATED OUTSIDE
OF BUFFER SETBACK LINE

12" PVC SEWER

100' RIPARIAN WETLANDS BUFFER
(REFER TO BUSBY BIOLOGICAL
CONSTRAINTS LETTER DATED
AUGUST 8TH 2019)

LIMITS OF RIPARIAN WETLANDS

STORM DRAIN LINE A
STORM DRAIN LINE B
STORM DRAIN LINE C
STORM DRAIN LINE D
STORM DRAIN LINE E

BOX INLET 10+00.00
TYPE "B" INLET 10+00.00
TYPE "A" CLEANOUT 11+30.70
TYPE "A" CLEANOUT 12+41.13
BOX INLET 10+00.00
TYPE "A" CLEANOUT 13+90.45
TYPE "A" CLEANOUT 13+03.81
BOX INLET 16+41.07
TYPE "A" CLEANOUT 15+86.93
TYPE "A" CLEANOUT 10+75.81
TYPE "A" CLEANOUT 15+62.74
TYPE "A" CLEANOUT 16+57.42
TYPE "B" INLET 9+98.00
TYPE "A" CLEANOUT 10+29.94

SCALE: 1" = 40'

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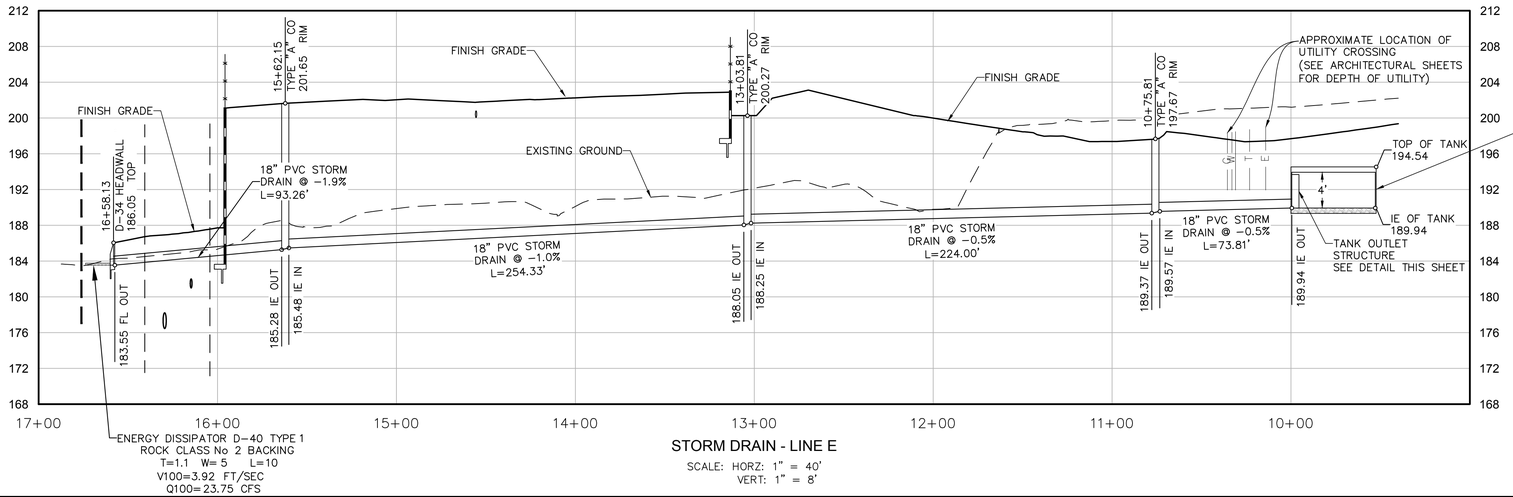
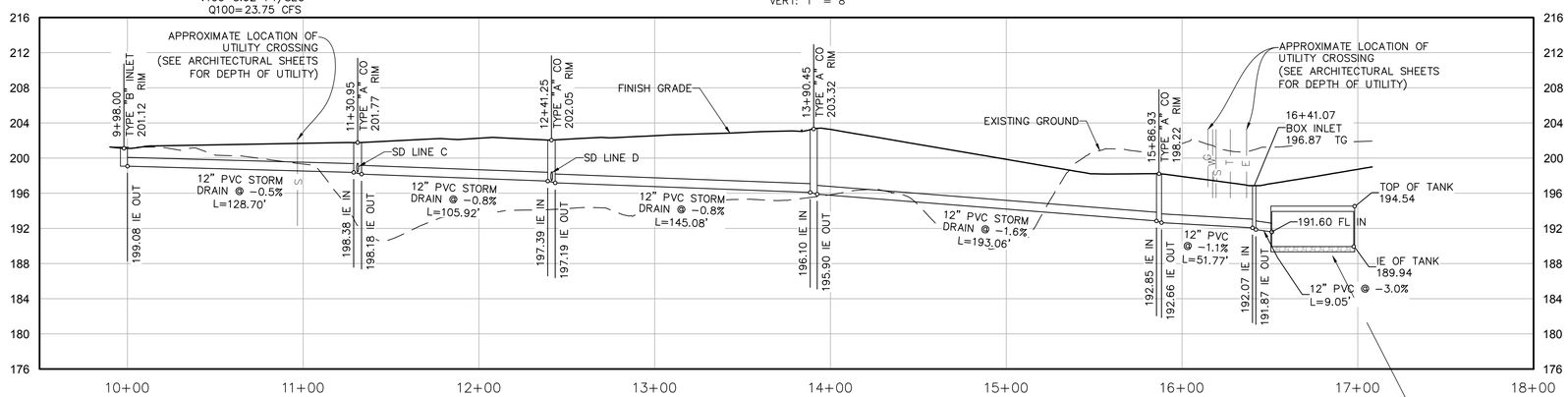
STORM SEWER PROFILES

SHEET NO C7.0



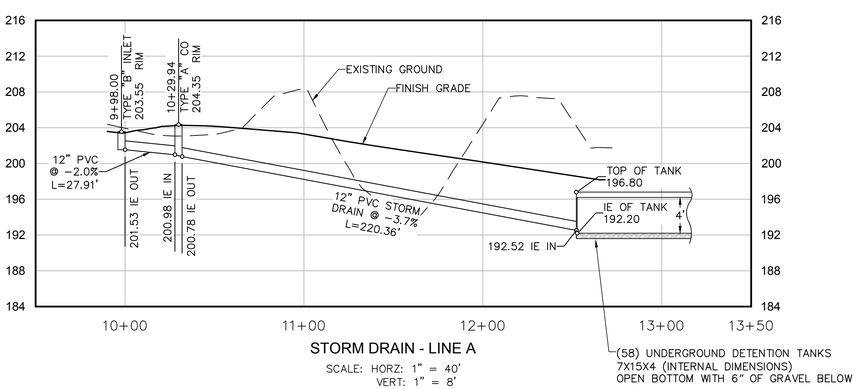
STORM DRAIN - LINE E

SCALE: HORZ: 1" = 40'
VERT: 1" = 8'



STORM DRAIN - LINE B

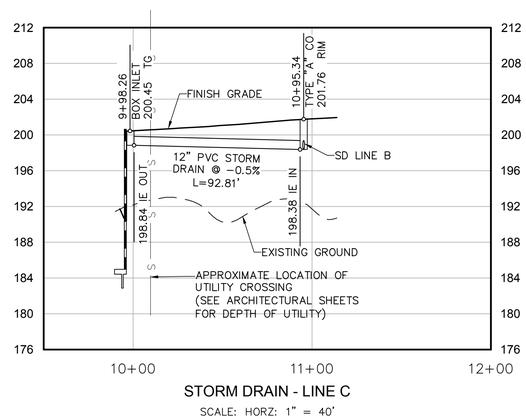
SCALE: HORZ: 1" = 40'
VERT: 1" = 8'



STORM DRAIN - LINE A

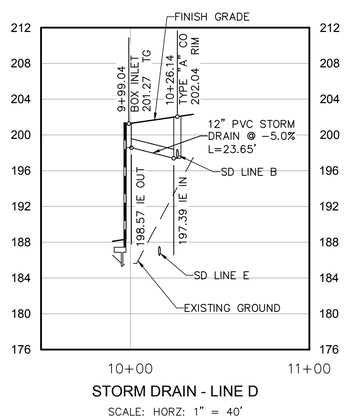
SCALE: HORZ: 1" = 40'
VERT: 1" = 8'

(58) UNDERGROUND DETENTION TANKS
7X15X4 (INTERNAL DIMENSIONS)
OPEN BOTTOM WITH 6" OF GRAVEL BELOW



STORM DRAIN - LINE C

SCALE: HORZ: 1" = 40'
VERT: 1" = 8'

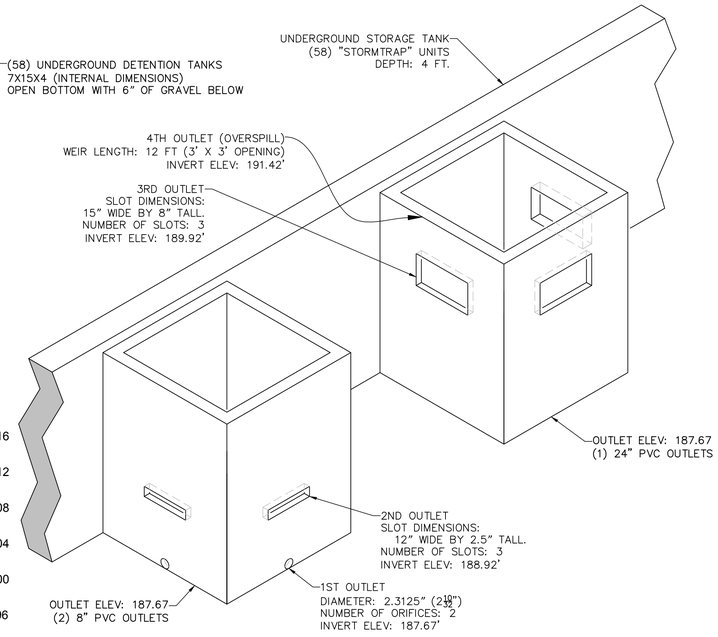


STORM DRAIN - LINE D

SCALE: HORZ: 1" = 40'
VERT: 1" = 8'

STORM SEWER STRUCTURE LEGEND

C.I.	–	CURB INLET
Y.I.	–	YARD INLET
D.I.	–	DROP INLET
S.W.C.B.	–	SINGLE WING CATCH BASIN
D.W.C.B.	–	DOUBLE WING CATCH BASIN
J.B.	–	JUNCTION BOX
W.B.	–	WEIR BOX



TANK OUTLET STRUCTURES

NOT TO SCALE

STORM DRAIN DATA TABLE				
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L6	N 74°54'22" W		220.35'	12" PVC @ 0.5% MIN
L7	N 56°04'31" W		128.71'	12" PVC @ 0.5% MIN
L8	N 85°15'32" E		106.42'	12" PVC @ 0.5% MIN
L9	N 85°15'32" E		145.33'	12" PVC @ 0.5% MIN
L10	N 80°28'01" E		193.06'	12" PVC @ 0.5% MIN
L11	N 04°09'59" E		51.77'	12" PVC @ 0.5% MIN
L12	N 69°06'08" E		93.33'	12" PVC @ 0.5% MIN
L13	N 04°44'28" W		24.14'	12" PVC @ 0.5% MIN
L14	N 12°01'40" W		15.88'	12" PVC @ 0.5% MIN
L15	N 04°37'15" W		73.81'	18" PVC @ 0.5% MIN
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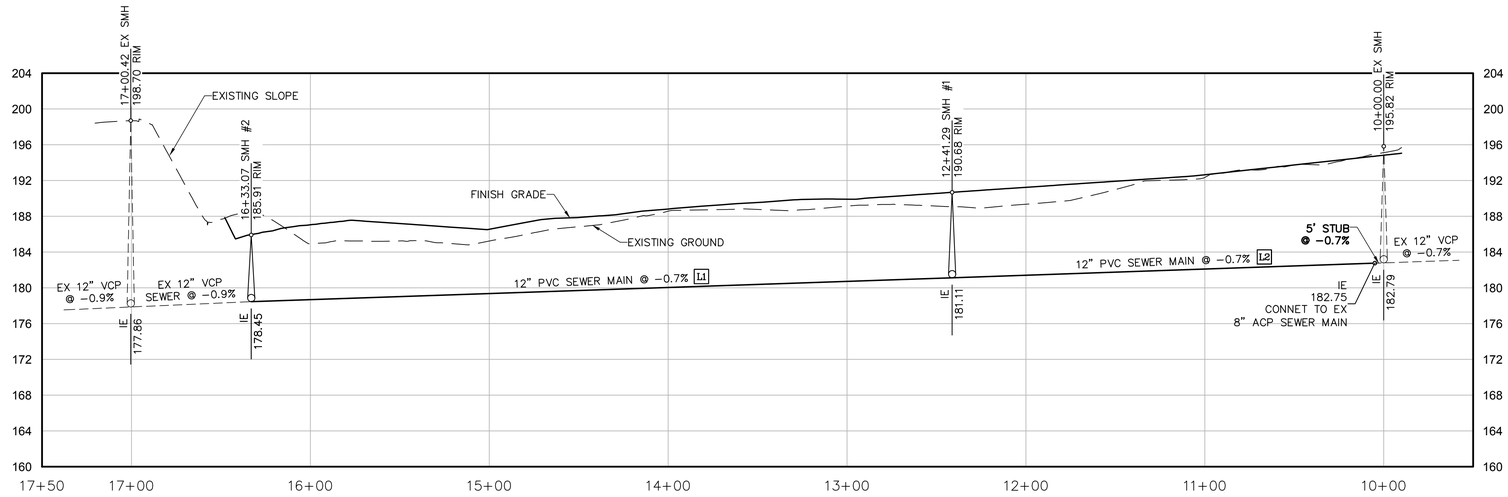
OCEANSIDE, CALIFORNIA

PROJECT NO
DATE March 6, 2020
SHEET TITLE
STORM SEWER PROFILES

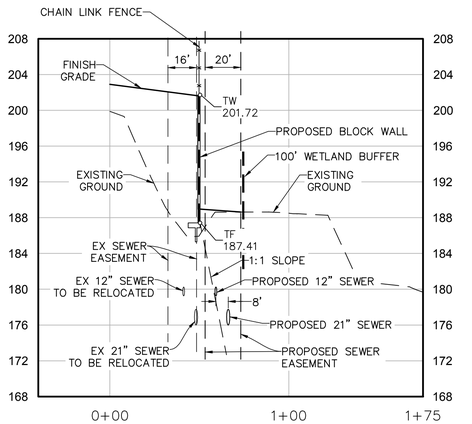
SHEET NO C7.1

SEWER DATA TABLE				
#	BEARING/DELTA	RADIUS	LENGTH	NOTES
L1	N 85°22'45" E		391.78'	12" PVC @ 0.7%
L2	N 82°25'36" E		236.58'	12" PVC @ 0.7%
L3	N 85°22'45" E		396.59'	21" PVC @ 0.9%
L4	N 82°25'36" E		249.64'	21" PVC @ 0.9%



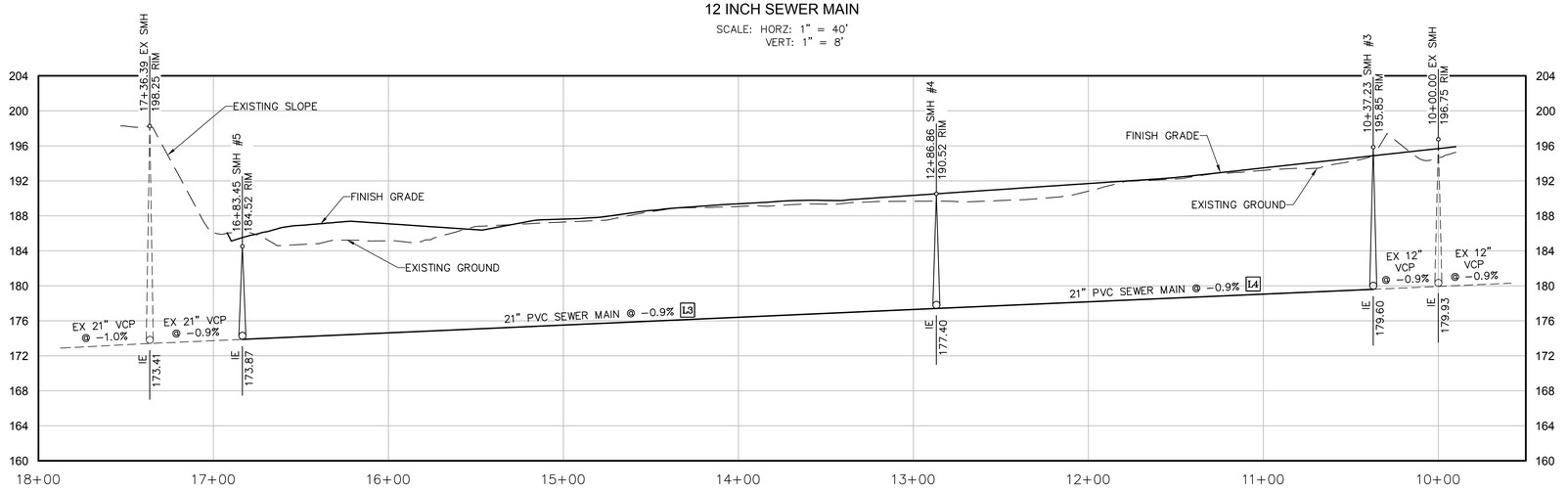
12 INCH SEWER MAIN

SCALE: HORZ: 1" = 40'
VERT: 1" = 8'



SECTION A

SCALE: HORZ: 1" = 40'
VERT: 1" = 8'



21 INCH SEWER MAIN

SCALE: HORZ: 1" = 40'
VERT: 1" = 8'

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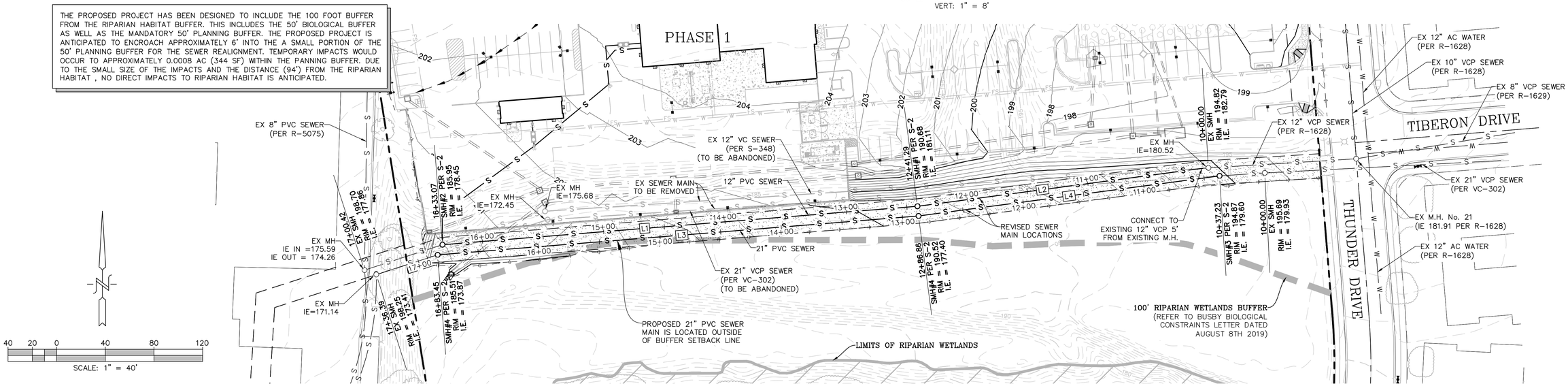

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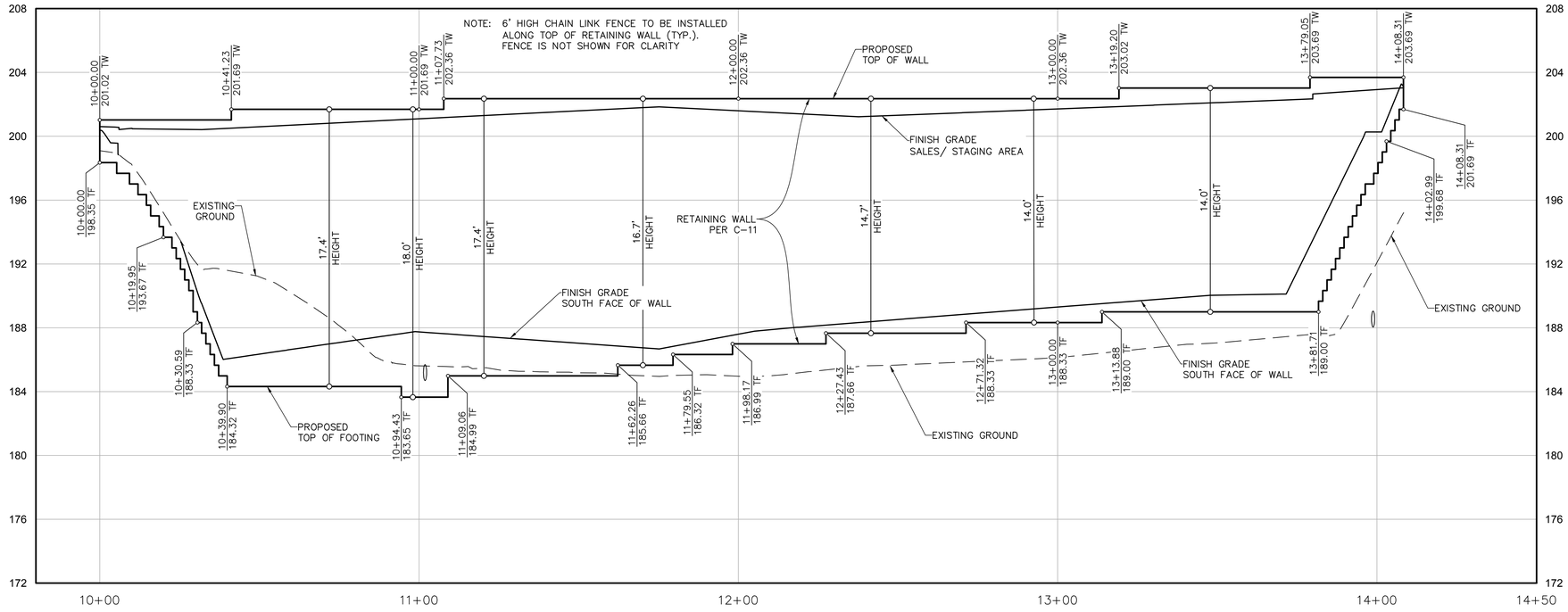

RETAINING WALL PROFILE

SCALE: HORZ: 1" = 20'
VERT: 1" = 4'

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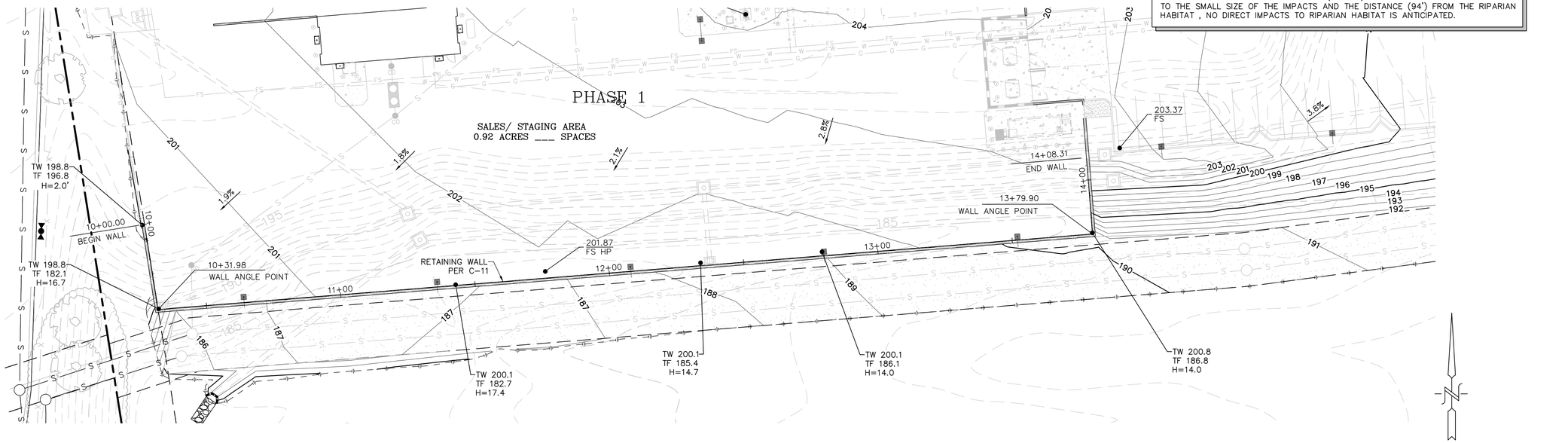

40 20 0 40 80 120

SCALE: 1" = 40'

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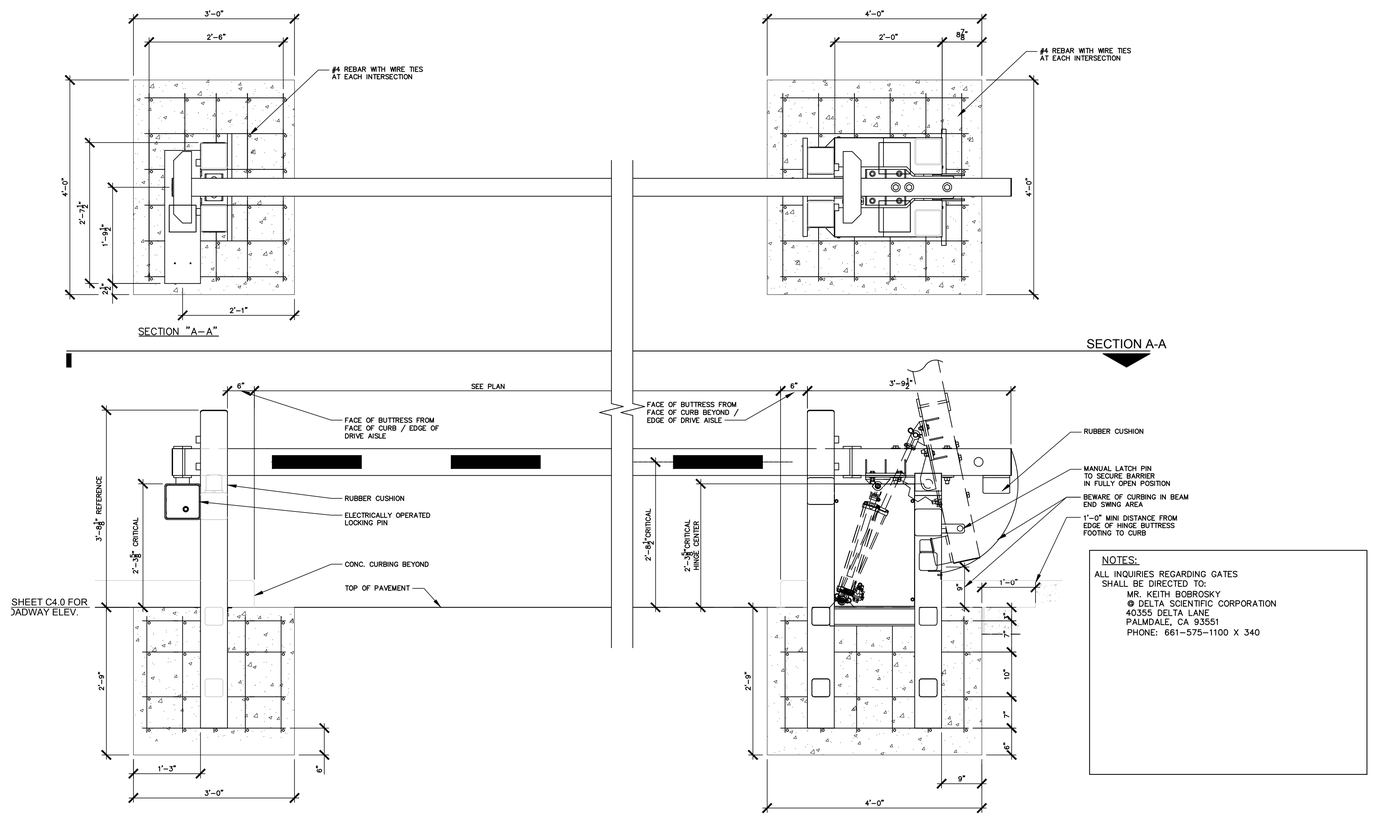
OCEANSIDE, CALIFORNIA

PROJECT NO.

DATE March 6, 2020

SHEET TITLE
SEGMENTAL RETAINING WALL DTLS. & PROFILES

SHEET NO. C9.0



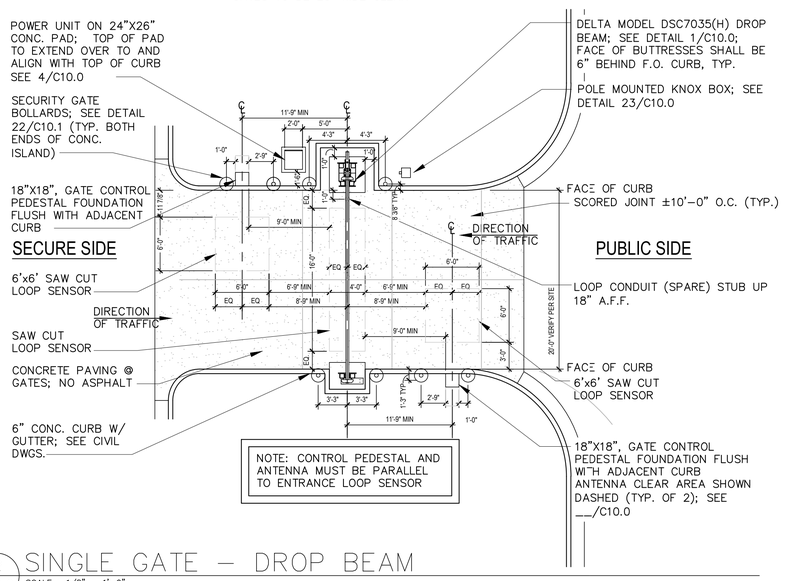
NOTES:

ALL INQUIRIES REGARDING GATES SHALL BE DIRECTED TO:
MR. KEITH BOBROSKY
@ DELTA SCIENTIFIC CORPORATION
40355 DELTA LANE
PALMDALE, CA 93551
PHONE: 661-575-1100 X 340

1 C10.X SECURITY GATE DETAIL (DROP BEAM) FOR TYP SINGLE GATE - MODEL DSC7035(H)

SCALE: N.T.S.

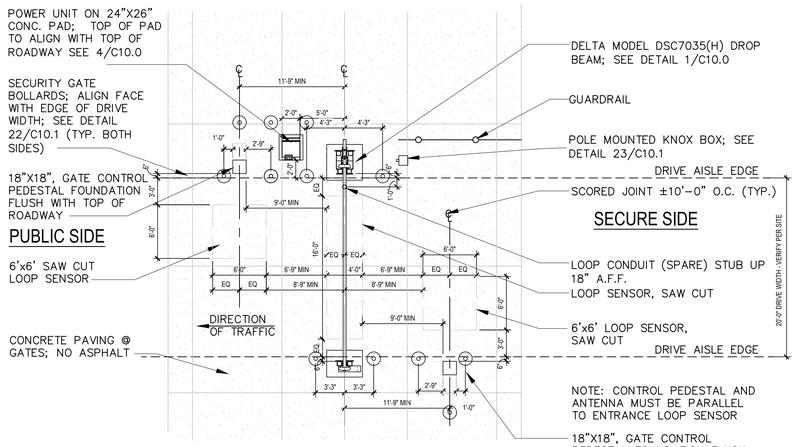
GATES TO BE 20' WIDE CLEAR



2 C10.0 SINGLE GATE - DROP BEAM

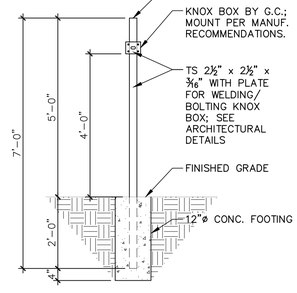
SCALE : 1/8" = 1'-0"

GATES TO BE 20' WIDE CLEAR



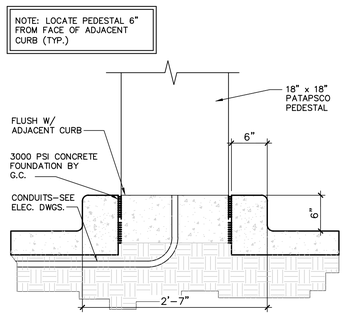
3 C10.0 SINGLE SECURITY GATE - DROP BEAM

SCALE : 1/8" = 1'-0"



23 C10.0 KNOX BOX DETAIL

SCALE : 1/2" = 1'-0"



4 C10.0 PATAPSCO PEDESTAL

SCALE : 1" = 1'-0"

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San Diego, CA 92101
(619)232-9200 (619)232-9210 Fax
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REVISIONS			
SHEET NO.	DESCRIPTION	DRAWN BY:	DATE

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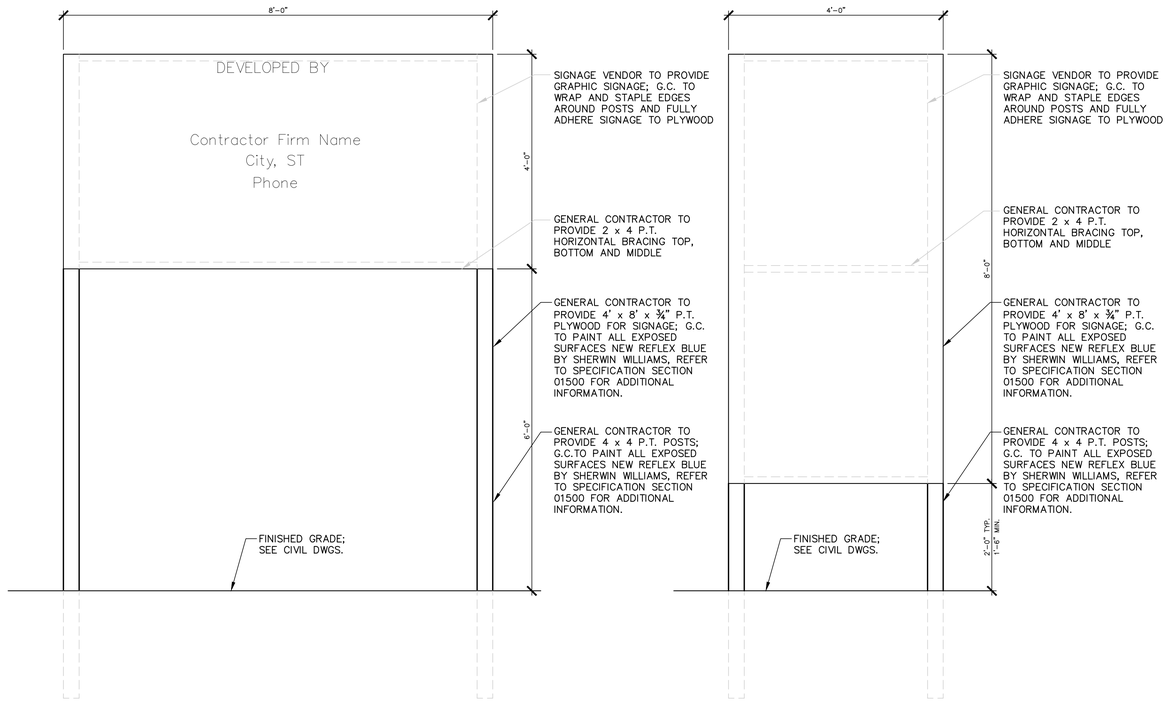
804-747-0422 | CARMAX.COM
OCEANSIDE, CALIFORNIA

PROJECT NO

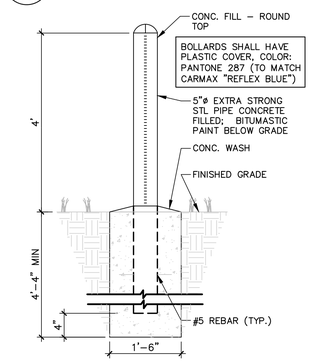
DATE March 6, 2020

SHEET TITLE
CONSTRUCTION DETAILS

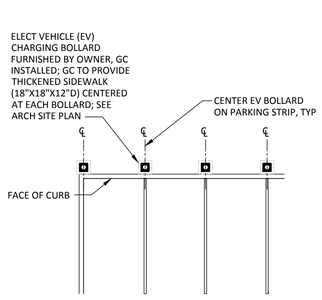
C10.0
SHEET NO



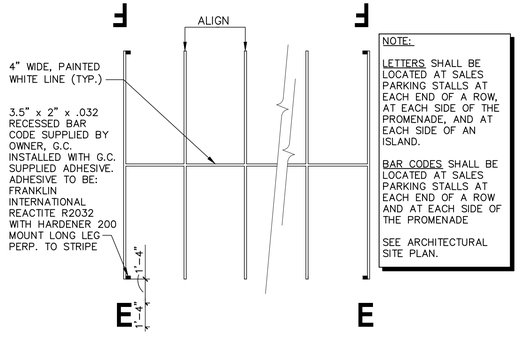
15 C10.1 COMING SOON SIGNS
SCALE : 3/4" = 1'-0"



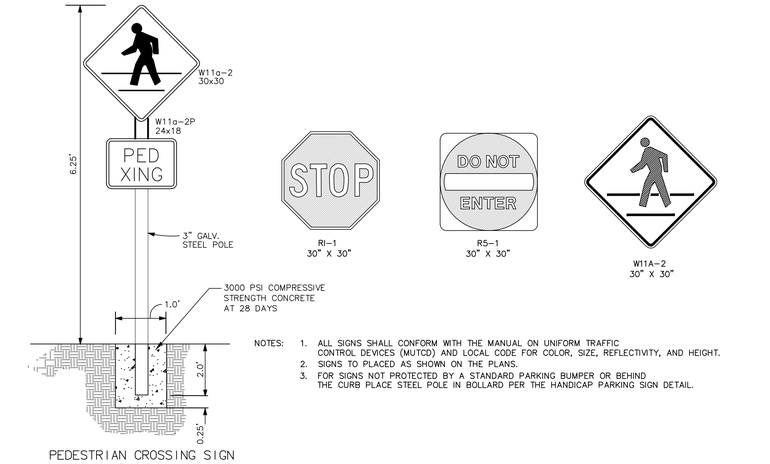
22 C10.1 SITE BOLLARD
SCALE : 1" = 1'-0"



23 C10.1 EV CHARGING BOLLARD
SCALE : 1/2" = 1'-0"

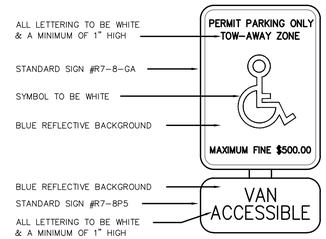


24 C10.1 TYP. SALES LOT IDENTIFIERS
SCALE : 1/2" = 1'-0"

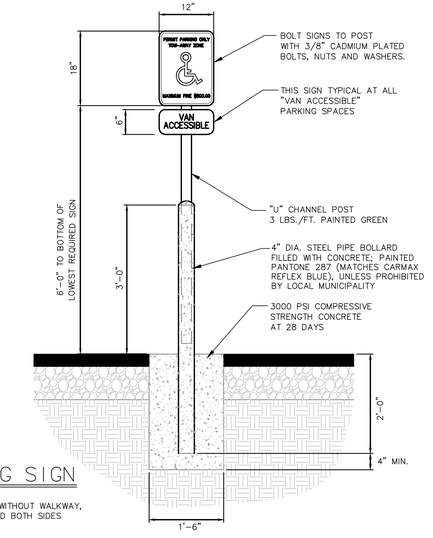


PEDESTRIAN CROSSING SIGN

12 C10.1 TYPICAL SIGN DETAILS
SCALE : N.T.S.

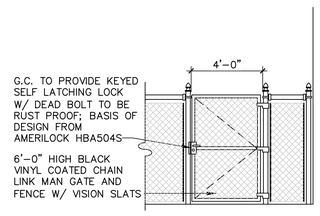


1. ALL SIGNS TO BE 0.080" THICK ALUMINUM
2. ALL SIGNS SHALL CONFORM WITH ALL CURRENT A.D.A., FEDERAL, STATE AND LOCAL CODES AND REGULATIONS.
3. PLACE "VAN ACCESSIBLE" SIGN IN FRONT OF VAN ACCESSIBLE SPACES ONLY.

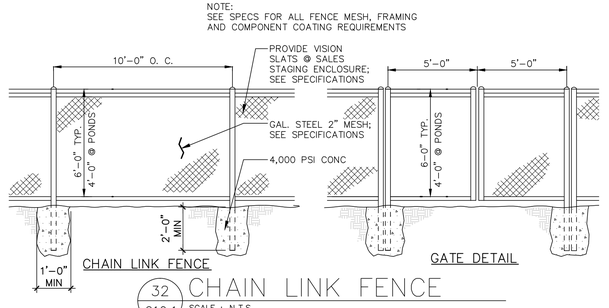


ACCESSIBLE PARKING SIGN
ONE AT EACH ACCESSIBLE SPACE.
WHERE ACCESSIBLE SPACES FACE EACH OTHER WITHOUT WALKWAY, THERE SHALL BE ONE POST WITH SIGNS MOUNTED BOTH SIDES

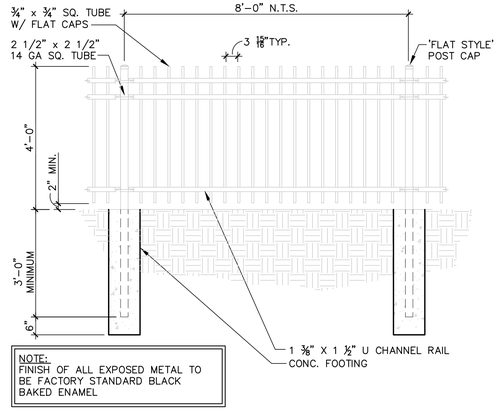
26 C10.1 ACCESSIBLE PARKING SIGN
SCALE : N.T.S.



30 C10.1 GATE DETAIL
SCALE : 1/4" = 1'-0"



32 C10.1 CHAIN LINK FENCE
SCALE : N.T.S.



34 C10.1 ORNAMENTAL PICKET FENCE
SCALE : 1/2" = 1'-0"

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OCEANSIDE, CALIFORNIA

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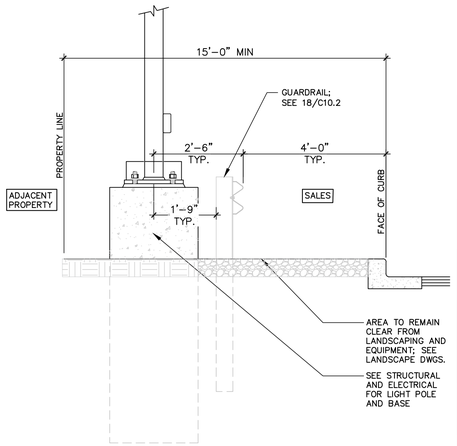
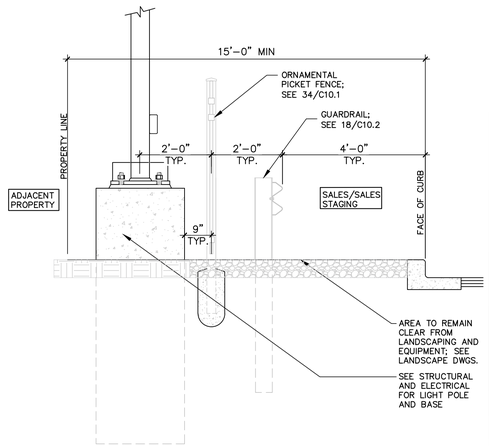


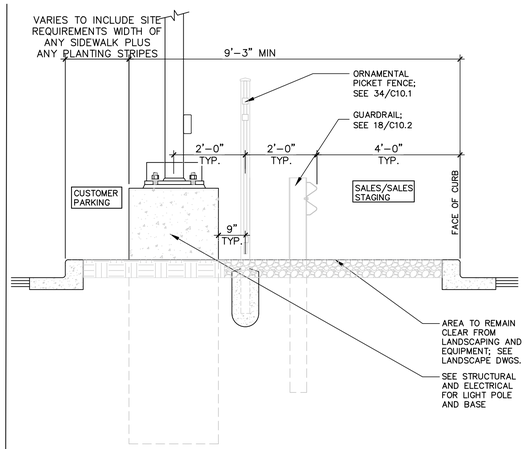
SECTION–
SALES/WIP @ PROP LINE

10 / 10.2 SCALE : 1/2" = 1'-0"



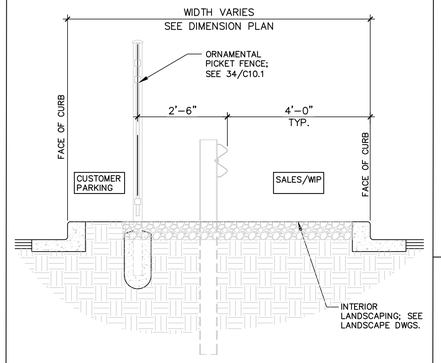
SECTION–
SALES/WIP @ PROP LINE

12 / C10.2 SCALE : 1/2" = 1'-0"



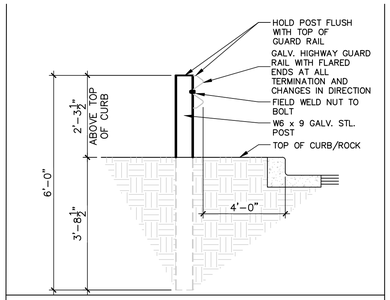
SECTION–
SALES AND C/E PARKING

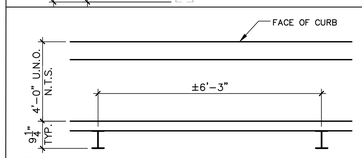
14 / C10.2 SCALE : 1/2" = 1'-0"



SECTION–
FENCE/GUARD RAIL DTL

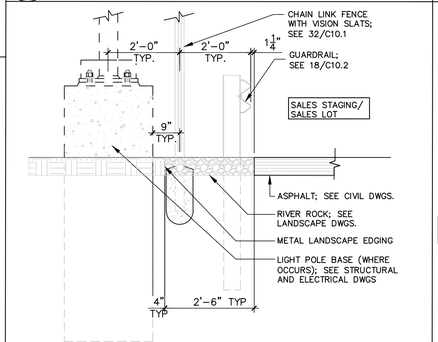
16 / C10.2 SCALE : 1/2" = 1'-0"





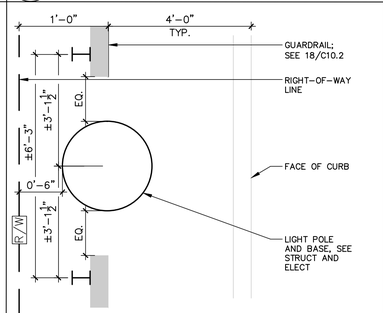
SECTION–GUARD RAIL

18 / C10.2 SCALE : 1/2" = 1'-0"



SECTION–END OF PAVEMENT
@ FUTURE EXP.

26 / C10.2 SCALE : 1/2" = 1'-0"



DETAIL–
LIGHT/GUARDRAIL IN LINE

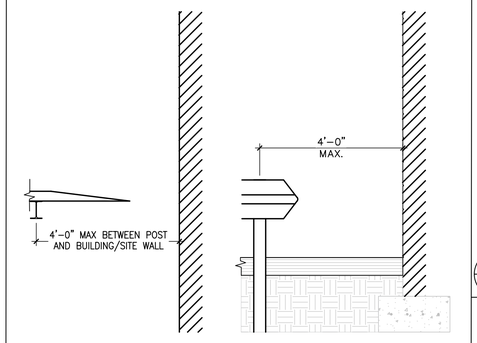
28 / C10.2 SCALE : 1/2" = 1'-0"

NOT USED

20 / C10.2 SCALE : 1/2" = 1'-0"

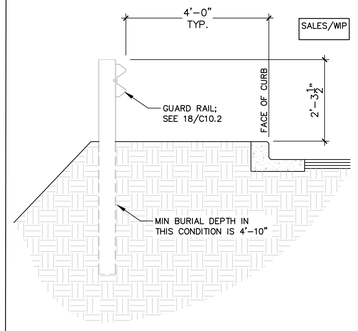
NOT USED

22 / C10.2 SCALE : 1/2" = 1'-0"



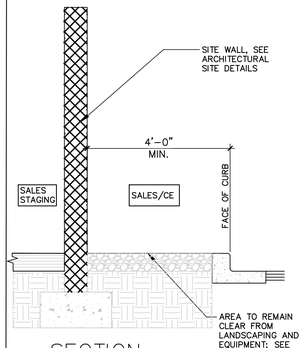
DTL.–GUARDRAIL POST SPACING

24 / C10.2 SCALE : 1/2" = 1'-0"



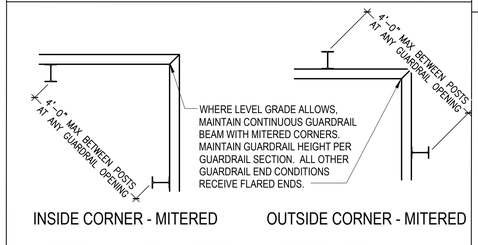
SECTION–GUARD RAIL

38 / C10.2 SCALE : 1/2" = 1'-0"



SECTION–
SALES STAGING WALL

33 / C10.2 SCALE : 1/2" = 1'-0"



DETAIL–GUARDRAIL CORNER

35 / C10.2 SCALE : 1/2" = 1'-0"

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804-747-0422 | CARMAX.COM

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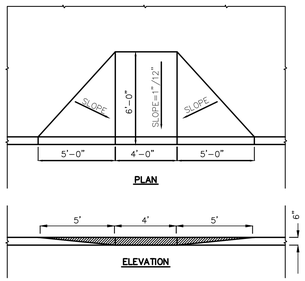
SHEET TITLE
CONSTRUCTION DETAILS

C10.2
SHEET NO



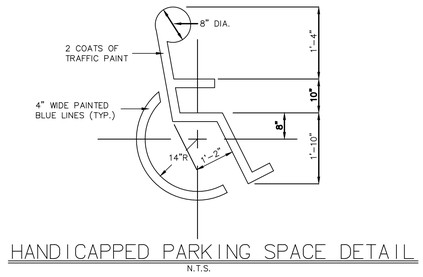
HANDICAP RAMP TYP.

N.T.S.

NOTES:
1. SURFACES ALONG ACCESSIBLE ROUTES SHALL BE SLIP RESISTANT.
2. MAXIMUM SLOPE OF FLARED SIDE SHALL BE 1V:10H.
3. CURB RAMPS SHALL HAVE HAVE A DETECTABLE WARNING TEXTURE EXTENDING THE FULL WIDTH AND DEPTH OF THE CURB RAMP, INCLUDING FLARES. (DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9", A HEIGHT OF NOMINAL 0.2" AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCHES AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIALS USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.)
4. BUILT-UP CURB RAMPS SHALL BE LOCATED SO THAT THEY DO NOT PROJECT INTO VEHICULAR TRAFFIC LANES.

8 C10.3 DETAIL – HANDICAP RAMP

SCALE: N.T.S.

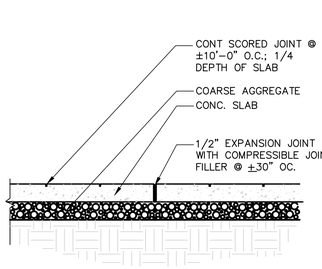


HANDICAPPED PARKING SPACE DETAIL

N.T.S.

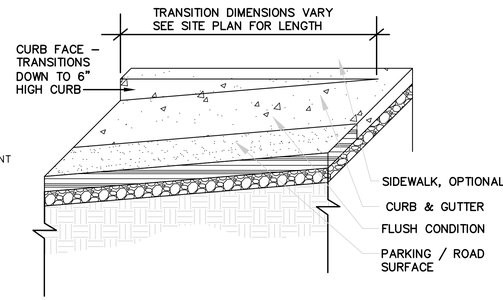
9 C10.3 DETAIL – HC PARKING SPACE

SCALE: N.T.S.



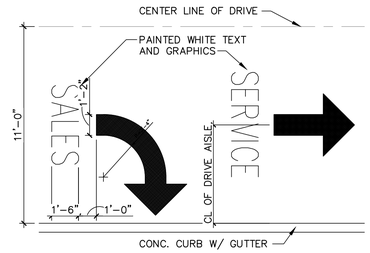
10 C10.3 TYP. SIDEWALK DTL

SCALE: 3/4" = 1'-0"



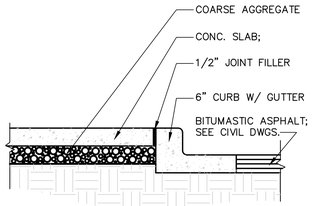
11 C10.3 TRANSITION CURB DETAIL

SCALE : N.T.S.



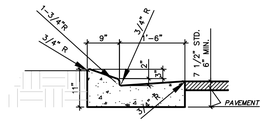
13 C10.3 DIRECTIONAL SIGNAGE

SCALE : 1/4" = 1'-0"



18 C10.3 TYP. SIDEWALK @ CURB

SCALE: 3/4" = 1'-0"

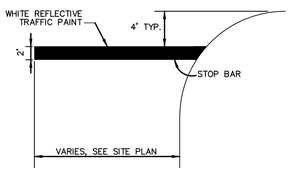


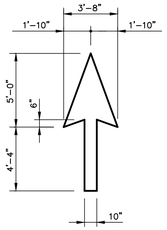
NOTE:
WHEN USED ON THE HIGH SIDE OF ROADWAY, THE CROSS-SLOPE OF THE GUTTER SHALL MATCH THE CROSS-SLOPE OF THE ADJACENT PAVEMENT AND THE THICKNESS OF THE LIP SHALL BE 6".

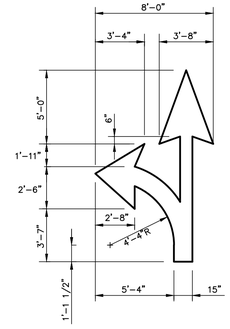
MOUNTABLE CONCRETE CURB AND GUTTER DETAIL

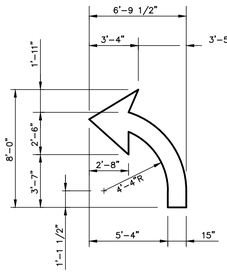
18 C10.3 TYP. MOUNTABLE CURB

SCALE: 3/4" = 1'-0"









TURN ARROW DETAILS

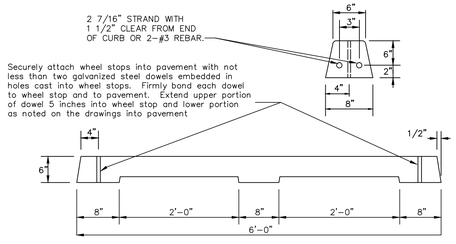
NOTE TO DESIGNER
USE TURN ARROWS AS REQUIRED IN PARKING LOT AND DRIVEWAYS.
PAVEMENT MARKINGS ARE TO BE PAINTED ON PER SITE SPECIFICATIONS.
USE LOCAL PAVEMENT DETAILS AND SPECS FOR MARKINGS IN THE R/W.

TYP. OFF SITE PAVEMENT AREA MARKINGS

N.T.S.

22 C10.3 DETAIL – TYPICAL PAVEMENT MARKINGS

SCALE: N.T.S.

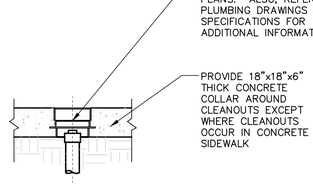


STANDARD WHEEL STOP

N.T.S.

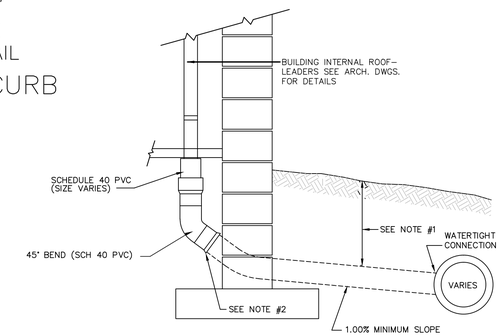
25 C10.3 DETAIL – WHEEL STOP

SCALE: N.T.S.



26 C10.3 TYP. CLEANOUT DTL

SCALE: 3/4" = 1'-0"



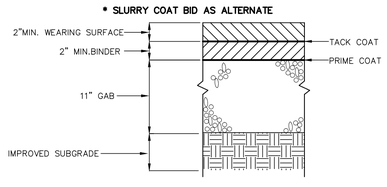
INTERNAL ROOF-LEADER COLLECTOR

N.T.S.

NOTES:
1. FOR ALL DEPTHS OF COVER LESS THAN TWO (2) FEET, PIPE MUST BE SCHEDULE 40 PVC. FOR DEPTHS OF COVER GREATER THAN TWO (2) FEET, FLEXIBLE PIPE MAY BE USED. REFER TO SPECIFICATIONS FOR ALLOWABLE PIPE TYPES.
2. A WATERTIGHT CONNECTION SHALL BE MAINTAINED WITH ANY TRANSITION FROM SCHEDULE 40 PVC PIPE TO ANY OTHER TYPE OF PIPE.

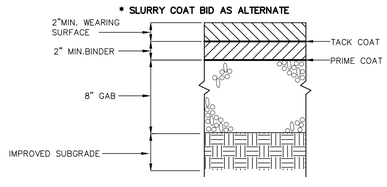
27 C10.3 DETAIL – ROOF LEADER

SCALE: N.T.S.



HEAVY DUTY PAVING SECTION

N.T.S.



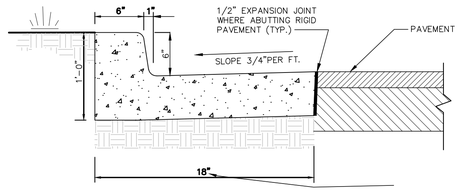
STANDARD DUTY PAVING SECTION

N.T.S.

USE PAVING SECTION FROM LOCAL GOVERNING AUTHORITY FOR PAVING IN THE R/W

29 C10.3 DETAIL – TYPICAL PAVEMENT MARKINGS

SCALE: N.T.S.



CONCRETE CURB & GUTTER

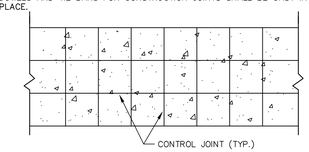
N.T.S.

NOTES:
1. FOR SPILL CURB SLOPE 3/4" PER FOOT AWAY FROM THE FACE OF CURB.
2. CONCRETE TO HAVE A MIN. 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
3. USE CURB SPECIFIED BY LOCAL GOVERNING AUTHORITY IN PUBLIC R/W.

31 C10.3 DETAIL – CURB & GUTTER

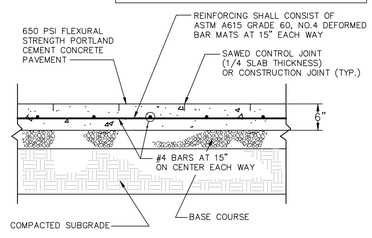
SCALE: 1/4" = 1'-0"

NOTES:
1. LONGITUDINAL AND TRANSVERSE JOINTS SHALL BE SAWED AS INDICATED.
2. THE JOINT SEAL MANUFACTURER'S SPECIFICATIONS SHALL BE COMPATIBLE WITH THE JOINT CONFIGURATION. PROVIDE TYPICAL DETAILS FOR CONSTRUCTION & EXP. JTS.
3. FOR ALL JOINTS THE BACKER ROD MATERIAL SHALL BE COMPATIBLE WITH THE COLD POURED SEALANT AND SLIGHTLY OVERSIZED TO PREVENT MOVEMENT DURING THE JOINT SEALANT OPERATION.
4. THE WIDTH OF ALL JOINTS SHALL BE CORRECTED FOR 68 DEGREE F.
5. EXPANSION JOINTS SHALL BE USED AT ALL LOCATIONS WHERE PAVEMENT ABUTS A PERMANENT STRUCTURE.
6. DOWELS AND TIE BARS FOR CONSTRUCTION JOINTS SHALL BE CAST IN PLACE.



PLAN

NOTE TO DESIGNER
SEE GEOTECH REPORT FOR EXACT PAVEMENT THICKNESS AND SUBGRADE COMPACTION RECOMMENDATIONS.



PLAN SECTION

CONCRETE PAVEMENT DETAIL

N.T.S.

33 C10.3 DETAIL – CONCRETE PAVEMENT

SCALE: 1/4" = 1'-0"

Civil Engineering-Environmental
Land Surveying
2442 Second Avenue
San Diego, CA 92101
(619)232-9200 (619)232-9210 Fax
R·E·C Consultants, Inc.

NOT RELEASED FOR CONSTRUCTION

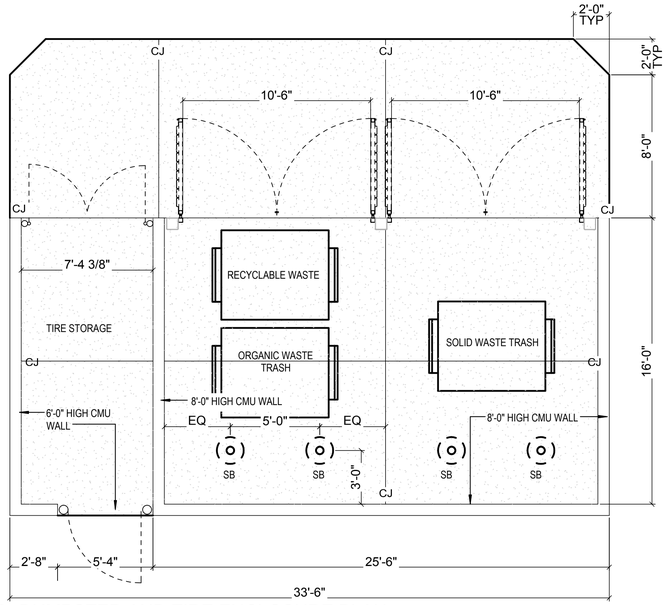
DESCRIPTION	DRAWN BY:

REVISIONS:		
SY NO.	DATE	

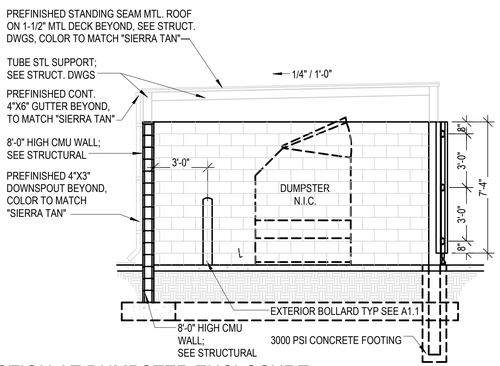
CARMAX
12800 TUCKAHOE CREEK PKWY RICHMOND, VA 23238
804-747-0422 | CARMAX.COM
OCEANSIDE, CALIFORNIA

PROJECT NO
DATE March 6, 2020
SHEET TITLE
CONSTRUCTION DETAILS

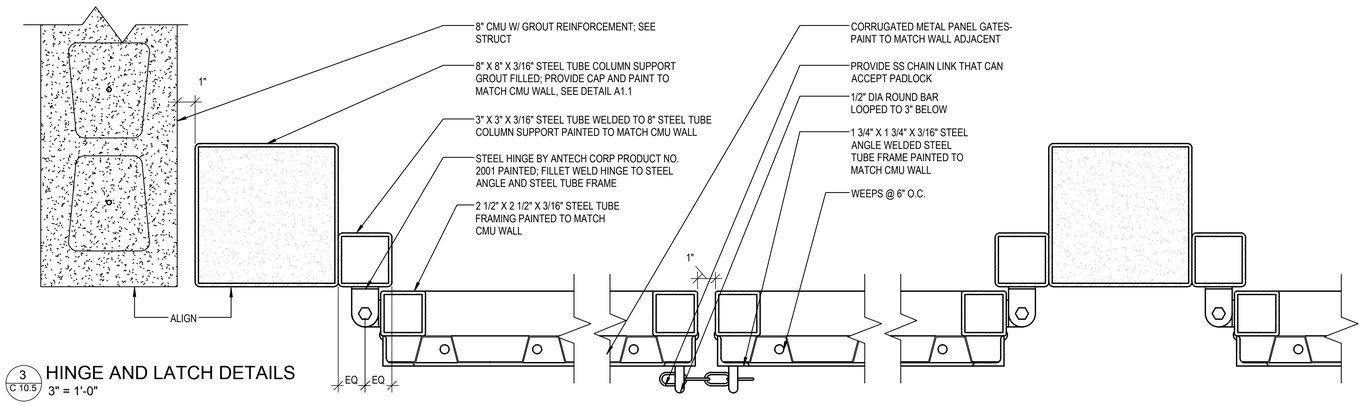
C10.3
SHEET NO



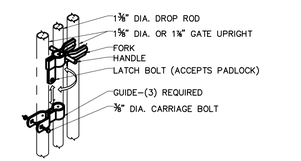
1 C10.5 DUMPSTER AND TIRE ENCLOSURE PLAN
1/4" = 1'-0"



2 C.10.5 SECTION AT DUMPSTER ENCLOSURE
1/4" = 1'-0"



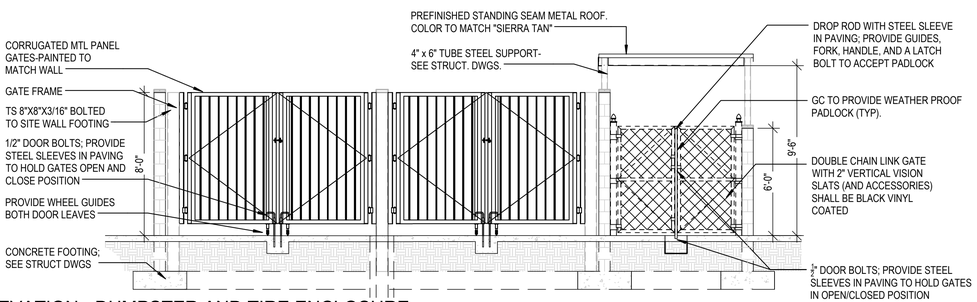
3 C.10.5 HINGE AND LATCH DETAILS
3" = 1'-0"



INDUSTRIAL LATCH W/ DROP ROD AND GATE HINGE
NTS

25 C10.1 HINGE & LATCH
NTS

1. EXPOSED STEEL COLOR TO MATCH CMU
2. PROVIDE SPLASH BLOCK AT DOWNSPOUTS.



4 C10.5 ELEVATION - DUMPSTER AND TIRE ENCLOSURE
1/4" = 1'-0"

Civil Engineering · Environmental
Land Surveying
2442 Second Avenue
San Diego, CA 92101
(619)232-9200 (619)232-9210 Fax

R·E·C
Consultants, Inc.

NOT RELEASED FOR CONSTRUCTION

NO.	DATE	DESCRIPTION	DRAWN BY:

REVISIONS

CARMAX
12800 TUCKAHOE CREEK PKWY RICHMOND, VA 23238
804-747-0422 | CARMAX.COM

OCEANSIDE, CALIFORNIA

PROJECT NO

DATE March 6, 2020

SHEET TITLE
DUMPSTER AND FUEL TANK DETAILS

C10.4
SHEET NO

SAMPLING

The majority of the stormwater from the developed portions of the Carmax Facility Development site will be routed to the _____ on-site detention pond(s), located just (north, south, east or west) of the proposed facility and will out-fall to the (north, south, east or west) where it will continue as sheet flow via the existing drainage paths to the receiving waters. A small amount of the developed portion of the site, storm water will by-pass the detention pond(s) via sheet flow to the (north, south, east or west). Sampling of the outfalls will be utilized for the required site storm water monitoring. The surface water drainage area of the project is approximately _____ acres of land (_____ square miles) and the proposed project area of disturbance is acres of land (see attached USGS map for activity location and receiving waters). Therefore, the required effluent NTU appropriate to the outfall is NTU, based on the guidelines provided in Appendix B of the permit.

Sampling Methods

Samples will be collected in accordance with the methodology outlined in the EPA guidance document named "NPDES Storm Water Sampling Guidance Document - EPA 833-B-92-001," an excerpt of which is included. All samples taken will be "grab samples." The samples collected are for a particular time and represent conditions at that moment.

The samples at this site are anticipated to be collected with an automatic sampler. All samples will be collected from the sampler no later than one business day after they are taken. The sample containers will be large-mouthed plastic jars with a minimum sample size of 100 milliliters. All sampling equipment will be thoroughly cleaned before any samples are taken, and care will be taken during sampling to avoid contamination by not stirring excess bottom debris in the channel or outfall, and by avoiding floating debris in the channel. Sample bottles will be labeled prior to sampling, if taken to a laboratory for testing. All samples will be taken in an area where the water is well mixed.

The samples will be well mixed prior to any transfer to a secondary container. (i.e. turbidity test vial). Samples will be analyzed within 48 hours of collection for turbidity in NTU in accordance with methodology and test procedures described in 40 CFR Part 136: EPA Method I-3860-85. A sampling narrative is required, which includes (for each sampling location) precise sampling methodology and the analytical method used to collect and analyze the samples. Operation of meters for turbidity analyses will follow manufacture's specifications. Samples taken from the Carmax Facility Development construction site are anticipated to be tested with an on site meter by qualified personnel. As necessary, samples will be submitted to an analytical laboratory for testing.

Monitoring records will be maintained for all sampling events. These records will include at a minimum:

* The facility name and address;
* Name of the analyst;
* Location of sample;
* Sample ID;
* Date and time of measurement;
* Date and time of analysis; and
* Name/model number of the analyzer instrument
* The analytical method used to collect and analyze the samples including quality control/quality assurance procedures. The narrative must include precise sampling methodology for each sampling location.

For all samples sent to a laboratory for analysis, a chain of custody will be implemented. If sampling equipment malfunctions or if vandalism, equipment loss, or other unforeseen circumstances prevent the collection of a sample, the situation will be reported in the sampling report and in the monthly report to (provide the name of the Governing Municipal Agency).

Sampling Frequency

All samples must be collected within 45 minutes of the accumulation of the specified rainfall amount. If discharge from an outfall begins after a minimum accumulation of rainfall, then a sample must be collected within 45 minutes of the first discharge from the outfall after a qualifying event. Sampling after each qualifying event will continue until the (NOT) is submitted with the final sampling data. Qualifying events are defined as:

a). For each area of the site that discharges to a receiving stream, the first rain event that reaches or exceeds 0.5 inch and allows for monitoring during normal business hours* (Monday thru Friday, 8:00 AM to 5:00 PM and Saturday, 8:00 AM to 5:00 PM when construction activity is being conducted by the Primary permittee) that occurs after all clearing and grubbing operations have been completed in the drainage area of the location selected as the representative sampling location; and

b). In addition to (a) above, for each area of the site that discharges to a receiving stream, the first rain event that reaches or exceeds 0.5 inch and allows for monitoring during normal business hours* that occurs either 90 days after the first sampling event or after all mass grading operations have been completed in the drainage area of the location selected as the representative sampling location, whichever comes first;

c). At the time of sampling performed pursuant to (a) and (b) above, if BMPs are found to be properly designed, installed and maintained, no further action is required. If BMPs in any area of the site that discharges to a receiving stream are not properly designed, installed and maintained, corrective action shall be defined and implemented within 2 business days, and turbidity samples shall be taken from discharges from that area of the site for each subsequent rain event that reaches or exceeds 0.5 inch during normal business hours* until the selected turbidity standard is attained, or until post-storm event inspections determine that BMPs are properly designed, installed and maintained; and

d). Existing construction activities, i.e., those that are occurring on or before the effective date of this permit, that have met the sampling required by (a) above shall sample in accordance with (b). Those existing construction activities that have met the sampling required by (b) above shall not be required to conduct additional sampling other than as required by (c) above.

*Note that the Permittee may choose to meet the requirements of (a) and (b) above by collecting turbidity samples from any rain event that reaches or exceeds 0.5 inch and allows for monitoring at any time of the day or week.

After construction is completed and the disturbed land has been stabilized, the final sampling event will take place within 45 minutes of the first storm of at least 0.5 inches or more within a 24-hour period.

If it is determined that BMP's are not properly designed, installed, or maintained in accordance with the permit, qualifying events will be re-defined as any storm greater than 0.5 inches in a 24 hour period. Sampling at this schedule will continue until the first rainfall event after the BMP's are deemed properly designed, installed, and maintained.

Any analysis of additional sampling taken beyond the minimum frequency defined above must be included in the sampling reports sent to (provide the name of the Governing Municipal Agency). Multiple samples taken in the same location may be averaged to comply with the standards outlined in the permit, but no analyzed data may be eliminated from the reporting.

Sampling Narrative

There are _____ proposed monitoring/sampling location shown on the Erosion, Sedimentation & Pollution Control Plan. The following is a narrative describing the proposed monitoring/sampling locations:

Sampling Point #1: Station #1 is located at the outlet pipe of the storm water management Detention Pond #1 that has been designed to attenuate the storm water runoff from the subject site. This location is designated as an out-fall sampling point for discharge from the proposed detention pond. (see the USGS Quadrant Map for activity location and receiving waters). The allowable NTU limit for this sampling station is ____ NTU's.

Sampling Point #2: Station #2 is located at the outlet pipe of the storm water management Detention Pond #2 that has been designed to attenuate the storm water runoff from the subject site. This location is designated as an out-fall sampling point for discharge from the proposed detention pond. (see the USGS Quadrant Map for activity location and receiving waters). The allowable NTU limit for this sampling station is _____ NTU's.

BMP MAINTENANCE (Note: Modify as applicable to the BMP's installed on the subject project)

Permittee Requirements

To maintain the efficiency of the BMPs, maintenance procedures will follow those specified in the (provide the name of the applicable erosion control document mandated by the State in which the project is to be constructed).

Construction Entrance/Exit (Co) - The construction entrance/exit will be inspected each day that construction activity occurs. Efforts must be made to prevent dirt, sediment, or mud flow onto any paved area. Maintenance to the entrance/exit may include top dressing of the road with 1.5 to 3.5-inch stone. Clean out and/or repair of any structures in place to trap sediment. Any material that escapes from the site onto any paved area including public rights-of-way will be immediately removed.

Disturbed Area Stabilization (Ds1, Ds2, Ds3) - Mulch or temporary grassing must be monitored to ensure that a continuous 90% cover is maintained. After seeding of permanent vegetation, the planted area must be monitored to ensure germination of the entire area.

Erosion Control Matting and Blankets (Mb) - All erosion control blankets and matting should be inspected periodically following installation, particularly after rainstorms to check for erosion and undermining. Any dislocation or failure should be repaired immediately. If washouts or breakage occurs, reinstall the material after repairing damage to the slope or ditch. Continue to monitor these areas until they become permanently stabilized.

Silt Fences and haybales (Sd1) - The barriers will be inspected weekly and after each rain event, with repairs or replacement being performed as needed. Additional barriers will be installed on site as needed to trap sediment. Sediment will be removed once it accumulates to one-half the original height of the barrier. The filter fabric will be replaced if it becomes deteriorated to a point where its effectiveness is reduced (approximately every 6 months). Sediment controls will remain until the site is permanently stabilized. Once the site is permanently stabilized, all sediment accumulated behind a barrier must be removed and properly salvaged or disposed of prior to removal of the barrier.

Inlet Sediment Traps (Sd2) - The barriers will be inspected weekly and after each rain event, with repairs or replacement being performed as needed. Additional barriers will be installed on site as needed to trap sediment. Sediment will be removed once it accumulates to one-half the original height of the barrier. The filter fabric will be replaced if it becomes deteriorated to a point where its effectiveness is reduced (approximately every 6 months). Sediment controls will remain until the site is permanently stabilized. Once the site is permanently stabilized, all sediment accumulated behind a barrier must be removed and properly salvaged or disposed of prior to removal of the barrier.

Storm Drain Outlet Protection (St) - Inspect riprap outlet structures weekly and after each rain event to determine if any erosion around or below the riprap has taken place or if stones have been dislodged. Conduct all needed repairs immediately to prevent further damage.

Filter Ring (Fr) - The filter ring must be kept clear of trash and debris. This will require continuous monitoring and maintenance, which includes sediment removal when one-half full. Structures are temporary and should be removed when the land-disturbing project has been stabilized.

Retrofit (Rt) - Repair all damages caused by soil erosion or construction equipment at or before the end of each working day. Sediment shall be removed from the pond when it reaches the specified depth on the silt gauge. Sediment shall not enter adjacent streams or drainage ways during sediment removal or disposal. The sediment shall not be deposited downstream from the embankment, adjacent to stream or floodplain.

REPORTING

All monitoring results will be submitted to the (provide the name of the appropriate Governing Municipal Agency) at the address noted below, by the fifteenth day of the month following the reporting period. Reporting periods are months during which samples are taken in accordance with the GAR 100001 permit. Upon written notification, the (provide the name of the appropriate Governing Municipal Agency) may require the permittee to submit the monitoring results on a more frequent basis. Results for the Carmax Facility Development project, which is located in (City or Town), (State), will be submitted by **return receipt certified mail** (or similar service) to the following address:

(Provide the name and address of the appropriate Governing Municipal Agency)

(phone number)

These monitoring reports will, at minimum, include:

* The date, exact place, and time of sampling;
* The name of the qualified personnel conducting the sampling;
* The date the analyses were performed;
* The time the analyses were initiated;
* The name of the individual conducting the analyses;
* References and written procedures, when available, for the analytical techniques or methods used;
* The results of the analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc. used to determine these results;
* Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU."

If no qualifying rain event occurs during a month, a monitoring report must be filed detailing such. The monitoring reports will continue to be filed with (provide the name of the Governing Municipal Agency) until the (NOT) is submitted. The (NOT) for the Carmax Facility Development project will be submitted once all construction activities have ceased, final stabilization techniques have been implemented, and the site is in compliance with the permit. The (NOT) will include the following information corresponding to the information previously submitted in the (NOI):

* The permittee's legal name, address, and phone number;
* The site/project name, site location, and GPS location of the site;
* The NPDES permit number for the storm water discharge associated with construction activity identified by the (NOT);
* A copy of the final monitoring report; and
* The name of all receiving waters.
* Certification statement signed by a corporate officer.

DOCUMENT PRESERVATION

The Erosion, Sedimentation and Pollution Control Plan and the Comprehensive Monitoring Program Plan will be retained at the corporate offices of Carmax.

The following record documents should be maintained for a period of at least 3 years after the date of final stabilization including:

* Copy of (NOI), including any backup information and all data used to complete the (NOI)
* Copy of (NOT), including any backup information
* Site plans
* Inspection summaries
* Monitoring reports including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation.

The document preservation period for these records will be extended if a written request is received from (provide the name of the Governing Municipal Agency). The Carmax Facility Development project records will be maintained at the corporate offices of Carmax, (i.e., primary permittee) once all construction activities on site have ceased.

The Erosion, Sedimentation and Pollution Control Plan and the Comprehensive Monitoring Program Plan were developed to be a dynamic document. It should represent current site conditions. Documentation may include adding an addendum page to the Plans or making written corrections for small changes. All major changes and amendments to the Erosion, Sedimentation and Pollution Control Plan and the Comprehensive Monitoring Program Plan, such as changing sampling locations, must be certified by a licensed professional.

SITE DESCRIPTION

This Comprehensive Monitoring Plan (CMP) has been prepared to meet the requirements under the General Permit No. GAR 100001 for Authorization to Discharge under the National Pollutant Discharge Elimination System (NPDES), Storm Water Discharges Associated with Construction Activities For Stand Alone Construction Projects, under the State of _____, Environmental Protection Division (EPD). The Carmax Facility Development Site Activities will disturb an area of approximately _____ acres, subsequently, a Notice of Intent (NOI), Erosion, Sedimentation and Pollution Control Plan (ES&PC), Comprehensive Monitoring Plan (CMP), and a Notice of Termination (NOT) are required for the site. The ES&PC Plan and the (CMP) will be kept at the corporate offices of Carmax and will be updated when erosion controls on site are modified to improve erosion and sediment control. The (NOT) will be submitted after Construction and final site stabilization is completed.

Carmax has identified the need to construct the _____ s.f. automobile dealership facility in (City or Town), (State). The proposed project is located on a _____ acre tract of land in (City or Town), (State). Currently, the majority of the site is (give brief description of the existing site conditions, wooded, partially developed, etc...). The surface water body that will be receiving the proposed discharge from this site (is or is not)located on the subject property. The receiving surface water body for storm water runoff from this site is (provide description of receiving waters). Please see the site USDA Quad map for reference.

The project includes construction of the _____ s.f. Sales and Service buildings with the accompanying _____ vehicle parking area, storm water management facilities, and other infrastructure to support the facility. The proposed site is located in a generally _____ area of (City or Town), (State). The site is bound on the north by _____, on the east by _____, on the west by _____ and on the south by _____. The site is comprised of _____ drainage basins, in which _____ basin drains to the (north, south, east or west) as sheet flow and the _____ basin drains to the (north, south, east or west) as sheet flow. The Carmax Facility Development Site construction activities will disturb approximately _____ acres of land. Final stabilization of the construction area is anticipated to occur 12 months after the beginning of construction. For additional information see the Site Map and Anticipated Activity Schedule included on the attached drawings.

Erosion and sedimentation control requirements for this site were explained in the accompanying ES&PC Plan dated _____. The comprehensive monitoring program details the monitoring and reporting steps required under the permit. Storm water from the Carmax Facility Development Site will ultimately be routed from the proposed storm water management conveyance systems into the existing drainage swales which exit the subject property along its (northern, southern, eastern or western) property boundary lines. Outfall sampling will be utilized for the required site storm water monitoring; this is discussed in further detail in Section 9, Sampling. The location of the outfall, streams or other bodies of water, receiving waters, and sampling locations are indicated on the Comprehensive Monitoring Program Plan (CMP1.0).

RAINFALL MONITORING

Rainfall measurements will be measured and recorded daily by automatic rain gauges. The gauges are to be mounted away from any other obstructions and inspected to ensure they are free from obstructions and debris. One gauge is to be utilized for each sampling device and inspected during the rainfall events to record the time the qualifying event occurs. One gauge must be designated as the primary measuring point for the purpose of daily rainfall measurements. If this gauge fails, another gauge may be used until a replacement is installed.

The design of the rainfall gauges requires the adjustment for the rainfall sensor to trigger the automatic sampler (if used as anticipated, please see Section 9 - Sampling). The sensor must be adjusted for the appropriate qualifying event. Sampling shall occur for the following events:

a. For each area of the site that discharges to a receiving stream, the first rain event that reaches of exceeds 0.5 inch and allows for monitoring during normal business hours* (Monday thru Friday, 8:00 AM to 5:00 PM and Saturday 8:00 AM to 5:00 PM when construction activity is being conducted by the Primary permittee) that occurs after all clearing and grubbing operations have been completed in the drainage area of the location selected as the representative sampling location;

b. In addition to (a.) above, for each area of the site that discharges to a receiving stream, the first rain event that reaches or exceeds 0.5 inch and allows for monitoring during normal business hours* that occurs either 90 days after the first sampling event or after all mass grading operations have been completed in the drainage area of the location selected as the representative sampling location, whichever comes first;

c. At the time of sampling performed pursuant to (a.) and (b.) above, if BMPs are found to be properly designed, installed and maintained, no further action is required. If BMPs in any area of the site that discharges to a receiving stream are not properly designed, installed and maintained, corrective action shall be defined and implemented within 2 business days, and turbidity samples shall be taken from discharges from that area of the site of each subsequent rain event that reaches or exceeds 0.5 inch during normal business hours* until the selected turbidity standard is attained, or until post-storm event inspections determine that BMPs are properly designed, installed and maintained; and

d. Existing construction activities, i.e., those that are occurring on or before the effective date of this permit, that have met the sampling required by (a.) above shall sample in accordance with (b.). Those existing construction activities that have met the sampling required by (b.) above shall not be required to conduct additional sampling other than as required by (c.) above.

* Note that the Permittee may choose to meet the requirements of (a.) and (b.) above by collecting turbidity samples from any rain event that reaches of exceeds 0.5 inch and allows for monitoring at any time of the day or week.

INSPECTIONS

Permittee Requirements

1). Each day when any type of construction activity has taken place, qualified personnel (i.e., a person who has successfully completed an erosion and sediment control short course approved by the (provide the name of the Governing Municipal Agency) shall:

* Inspect all areas at the site where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment.
* Inspect all locations at the site where vehicles enter or exit the site for evidence of off-site sediment tracking.
* Measure rainfall once each twenty-four hour period at the site.

These inspections must be conducted until a Notice of Termination is submitted.

2). Qualified personnel (provided by the primary permittee) shall inspect at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater:

* Disturbed areas of the site that have not undergone final stabilization.
* Areas used for storage of materials that are exposed to precipitation that have not undergone final stabilization.
* Structural control measures.

Erosion and sediment control measures identified in the Plan applicable to the site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). For areas of a site that have undergone final stabilization, the permittee must comply with Part IV.D.3.a.(3) of the general permit no. GAR 100001. These inspections must be conducted until a Notice of Termination is submitted.

3). Qualified personnel (provided by the primary permittee) shall inspect at lease once per month (until a Notice of Termination is received by (provide the name of the Governing Municipal Agency)) the areas of the site that have undergone final stabilization. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and the receiving water(s). Erosion and sediment control measures identified on the Erosion, Sedimentation and Pollution Control Plans (provide appropriate sheet numbers), shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

4). Based on the results of each inspection, the site description and the pollution prevention and control measures identified in the Erosion, Sedimentation and Pollution Control Plans (provide appropriate sheet numbers), the Plans shall be revised as appropriate not later than seven (7) calendar days following each inspection. Implementation of such changes shall be made as soon as practical but in no case later than seven (7) calendar days following each inspection.

A report summarizing the scope of each inspection, will, at a minimum, include the name of the qualified personnel making the inspection, the date of the inspection, major observations during the inspection relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan (provide appropriate sheet numbers), and any foreseen revisions to the plan, shall be made and retained at the site or be readily available at a designated alternate location until the entire site or that portion of a construction project that has been phased has undergone final stabilization and a Notice of Termination is submitted to EPD. The reports will also identify any incidents of non-compliance. Where the report does not identify any incidents of non-compliance, the report shall contain a certification that the facility is in compliance with the Erosion, Sedimentation and Pollution Control Plan and this permit. The report shall be signed in accordance with Part V.G. of the GAR 100001 permit. Reports of all inspections will be retained and readily available at the corporate offices of Carmax.

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PROJECT NO

DATE March 6, 2020

SHEET TITLE
CONSTRUCTION DETAILS

C10.5
SHEET NO

TURBIDITY
EPA Method 180.1 (Nephelometric)
Approved for NPDES and SDWA
Issued 1971; Editorial revisions 1974 and 1978
Store no. 00076

1. Scope and Application
1.1 This method is applicable to drinking, surface, and saline waters in the range of turbidity from 0 to 40 nephelometric turbidity units (NTU). Higher values may be obtained with dilution of the sample.
NOTE 1: NTU's are considered comparable to the previously reported Formazin Turbidity Units (FTU) and Jackson Turbidity Units (JTU).

2. Summary of Method
2.1 This method is based upon a comparison of the intensity of ligJbt scattered by the sample under defined conditions with the intensity of light scattered by a standard reference suspension. The higher, the intensity of scattered light, the higher the turbidity. Readings, in NTU's, are made in a nephelometer designed according to specifications outlined in Apparatus. A standard suspension of FormaTin, prepared under closely defined conditions, is used to calibrate the instrument
2.1.1 Formazin polymer is used as the turbidity reference suspension for water because it is more reproducible than other types of standards previously used for turbidity standards.
2.1.2 A commercially available polymer standard is also approved for use for the National Interim Primary Drinking Water Regulations. This standard is identified as AMCO-AEPA-1 available from Amoco Standard International, Inc.

3. Sample Handling and Preservation
3.1 Preservation of the sample is not practical; analysis should begin as soon as possible. Refrigeration or icing to 4°C, to minimize microbiological decomposition of solids, is recommended.

4. Interferences
4.1 The presence of floating debris and coarse sediments which settle out rapidly will give low readings. Finely divided air bubbles will affect the results in a positive manner.
4.2 The presence of true color, that is the color of water which is due to dissolved substances which absorb light, will cause turbidities to be low, although this effect is generally not significant with finished waters.

5. Apparatus
5.1 The turbidimeter shall consist of a nephelometer with light source for illuminating the sample and one or more photo-electric detectors with a readout device to indicate the intensity of light scattered at right angles to the path of the incident light The turbidimeter should be so designed that little stray light reaches the detector in the absence of turbidity and should be free from significant drift after a short warm-up period.
5.2 The sensitivity of the instrument should permit detection of a turbidity difference of 0.02 unit or less in waters having turbidities less than 1 unit The instrument should measure from 0 to 40 units turbidity. Several ranges will be necessary to obtain both adequate coverage and sufficient sensitivity for low turbidities.
5.3 The sample tubes to be used with the available instrument must be of clear, colorless glass. They should be kept scrupulously clean, both inside and out, and discarded when they become scratched or etched. They must not be handled at *all* where the Light strikes them, but should be provided with sufficient extra length, or with a protective case, so that they may be handled.
5.4 Differences in physical design of turbidimeters will cause differences in measured values for turbidity even though the same suspension is used for calibration. To minimize such differences, the following design criteria should be observed:
5.4.1 Light source: Tungsten lamp operated at a color temperature between 2200-3000° K.
5.4.2 Distance traversed by incident light and scattered light within the sample tube: Total not to exceed 10 cm.
5.4.3 Detector: Centered at 90° to the incident light path and not to exceed ±30° from 90°. The Detector and filter system, if used, shall have a spectral peak response between 400 and 600 nm.
5.5 The Hatch Turbidimeter, Model 2100 and 2100A, is in wide use and has been found to be reliable; however, other instruments meeting the above design criteria are acceptable.

6. Reagents
6.1 Turbidity-free water: Pass distilled water through a 0.45*u* pore size membrane filter if such filtered water shows a lower turbidity than the distilled water.
6.2 Stock formazin turbidity suspension:
Solution. 1: Dissolve 1.00g hydrazine sulfate, (NH2),*H2SO4, in distilled water and dilute to 100 ml in a volumetric flask.
Solution 2: Dissolve 10.00g hexamemylenetetramine in distilled water and dilute to 100 ml in a volumetric flask.
In a 100 ml volumetric flask, mix 5.0 ml Solution 1 with 5.0 ml Solution 2. Allow to stand 24 hours at 25 ±3°C, then dilute to the mark and mix.
6.3 Standard formazin turbidity suspension: Dilute 10.00ml stock turbidity suspension to 100ml with turbidity-free water. The turbidity of this suspension is defined as 40 units. Dilute portions of the standard turbidity suspension with turbidity-free water as required.
6.3.1 A new stock turbidity suspension should be prepared each month. The standard turbidity suspension and dilute turbidity standards should be prepared weekly by dilution of the stock turbidity suspension.
6.4 The AMCO-AEPA-1 standard as supplied requires no preparation or dilution prior to use.

7. Procedure
7.1 Turbidimeter calibration: The manufacturer's operating instructions should be followed. Measure standards on the turbidimeter covering the range of interest. If the instrument is already calibrated in standard turbidity units, this procedure will check the accuracy of the calibration scales. At least one standard should be run in each instrument range to be used. Some instruments permit adjustments of sensitivity so that scale values will correspond to turbidities. Reliance on a manufacturer's solid scattering standard for setting overall instrument sensitivity for all ranges is not an acceptable practice unless the turbidimeter has been shown to be free of drift on all ranges. If a pre-calibrated scale is not supplied, then calibration curves should be prepared for each range of the instrument.
7.2 Turbidities less than 40 units: Shake the sample to thoroughly disperse the solids. Wait until air bubbles disappear, then pour the sample into the turbidimeter tube. Read the turbidity directly from the instrument scale or from the appropriate calibration curve.
7.3 Turbidities exceeding 40 units: Dilute the sample with one or more volumes of turbidity-free water until the turbidity falls below 40 units. The turbidity of the original sample is then computed from the turbidity of the diluted sample and the dilution factor. For example, if 5 volumes of turbidity-free water were added to 1 volume of sample, and the diluted sample showed a turbidity of 30 units, then the turbidity of fee original sample was 180 units.
7.3.1 The Hach Turbidimeters, Models 2100 and 2100A, are equipped with 5 separate scales: 0-0.2, 0-1.0, 0-100, and 0-1000 NTU. The upper scales are to be used only as indicators of required dilution volumes to reduce readings to less than 40 NTU. **NOTE 2**: Comparative work performed in the MDQAR Laboratory indicates a progressive error on sample turbidities in excess of 40 units.

8. Calculation
8.1 Multiply sample readings by appropriate dilution to obtain final reading.
8.2 Report results as follows:

NTU	Record to Nearest:
0,0-1.0	0.05
1-10	0.1
10-40	1
40-100	5
100-400	10
400-1000	50
>1000	100

9. Precision and Accuracy
9.1 In a single laboratory (EMSL), using surface water samples at levels of 26, 41, 75 and 180 NTU, the standard deviations were ±0.60, ±0.94, ±1.2 and ±4.7 units, respectively.
9.2 Accuracy data are not available at this time.

Excerpts from NPDES Storm Water Sampling Guidance Document (Page 67-70; 119-123)
United States Environmental Protection Agency
Office of Water (EN-336)
EPA 833-B-92-001
July 1992

6. Health and Safety

Storm water sampling activities may occur when the sampling environment and/or storm water discharges create hazardous conditions. Hazardous conditions associated with sampling include:

· Hazardous weather conditions (e.g. wind, lightning, flooding, etc.)
· Sampling in confined spaces (e.g. manholes)
· Hazards associated with chemicals
· Biological hazards (e.g. rodents and snakes)
· Physical hazards (e.g. traffic, falling objects, sharp edges, slippery footing, and the potential for lifting injuries from opening or removing access panels an manhole covers, etc.)

It is essential that sampling personnel be aware of these hazards. Sampling personnel should be trained to evaluate potentially hazardous situations and develop ways for handling them. Since sampling hazards can be life threatening, safety must be the highest priority for all personnel. This chapter outlines general health and safety issues and concerns. Additional references discussed below should be consulted for more specific guidance to avoid adverse health and safety situations.

6.1 General Training Requirements

Preparation and training of all sampling personnel should be completed before beginning any sampling task. Extreme care should be taken to allow for safety precautions including proper equipment and appropriate operational techniques, sufficient time to accomplish the task, training on potential hazards, and emergency procedures. EPA's Order 1440.2 sets out the policy, responsibilities, and mandatory requirements for the safety of personnel who are involved in sampling activities. This order, which is found within the EPD NPDES Compliance Monitoring Inspector Training: Sampling manual provides further guidance to applicants' storm water sampling personnel. Basic emergency precautions include having access to both local emergency phone numbers and communication equipment (i.e. phones or radios), and ensuring that personnel are trained in first aid and carry first aid equipment.

6.2 Necessary Safety Equipment

Exhibit 6-1 contains a list of safety equipment that may be appropriate depending on the characteristics of the sampling site.
Exhibit 6-1: List of Safety Equipment
Flashlight18-inch traffic cones, Meters (for oxygen, explosivity, toxic gasses)Insect/rodent repellant, Ladder, Ventilation equipment, Safety harness50 feet of ½ inch nylon rope, Hard hat, Safety shoes, Safety goggles, Rain wear, Coveralls, Gloves (rubber)qRespiratorFirst aid kit, Reflective vestsSelf-contained breathing apparatus, Source: Adapted from NPDES Compliance Monitoring Inspector Training: Sampling, U.S. EPA, August 1990

6.3 Hazardous Weather Conditions

Common sense should dictate whether sampling be conducted during adverse weather conditions. No sampling personnel should place themselves in danger during high winds, lightening storms, or flooding conditions which might be unsafe. Under extreme conditions, a less hazardous storm event should be sampled.

6.4 Sampling in Confined Spaces

Confined spaces encountered by storm water sampling personnel typically include manholes and deep, unventilated ditches. A confined space is generally defined as a space that is somewhat enclosed with limited access and inadequate ventilation.

The National Institute of Occupational Safety and Health (NIOSH) has developed a manual entitled "Working in Confined Spaces" which should be consulted prior to confined space entry. Also, several states have developed specific procedures, which should be consulted. Unless they have been trained for confined space entry, sampling personnel should avoid entry under all circumstances.

6.4.1 Hazardous Conditions in Confined Spaces

Confined spaces pose a threat to sampling personnel because of low oxygen, explosivity, and toxic gases. When entering a confined space, a qualified person should ensure that the atmosphere is safe by sampling to test for oxygen levels, potential flammable hazards, and toxic materials known or suspected to be present. If atmospheric conditions are detected, the confined space should be ventilated or sampling personnel should use a self-contained air supply and wear a lifeline. At least one person should remain outside of the confined space in the event that problems arise. If atmospheric testing has not been properly conducted, the confined space should not be entered. Manholes can also pose a threat to safety because of the small confined area, slippery surfaces, sharp objects, unsafe ladders, etc.

6.4.2 Special Training Requirements

Personnel should not enter into a confined space unless trained in confined space entry techniques. Such training covers hazard recognition, the use of respiratory equipment and atmospheric testing devices, use of special equipment and tools, and emergency rescue procedures. In addition, at least one member of the sampling crew should be certified in basic first aid and Cardiopulmonary Resuscitation (CPR). Sampling personnel should, on an annual basis, practice confined space rescues.

6.4.3 Permit System

If entry into a confined space is necessary, an entry permit system should be developed which includes a written procedure. This permit should include, at a minimum:

· Description of work to be done
· Hazards that may be encountered
· Location and description of the confined space
· Information on atmospheric conditions at confined space
· Personnel training and emergency procedures
· Names of sampling personnel

The manual developed by NIOSH discusses this permit system in more detail. Furthermore, the Occupational Safety and Health Administration (OSHA) proposed a rule on June 5, 1989 (54 FR 24080) that would implement a permit system.

6.5 Chemical Hazards

Sampling personnel can also be at risk of exposure to hazardous chemicals - either chemical in the actual storm water discharge or the chemicals that have been placed in the sample collection containers for sample preservation. Therefore, direct contact with the preservatives and the storm water (if hazardous chemicals are suspected to be present) should be avoided. Sampling personnel should wear gloves and safety glasses to avoid skin and eye exposure to harmful chemicals. Sampling personnel should be trained to avoid exposure and instructed as to what to do if exposure occurs (e.g. flush the eyes, rinse the skin, ventilate the area, etc.).

6.6 Biological Hazards

Storm water sampling personnel may also encounter biological hazards such as rodents, snakes, and insects. The sampling crew should remain alert to these hazards. As mentioned in Section 6.2 necessary sampling equipment, for certain locations, should include repellent and a first aid kit.

6.7 Physical Hazards

The sampling crew should be aware of a number of physical hazards that could cause incidents at the sampling site. These hazards include traffic hazards, sharp edges, falling objects, slippery footing, and lifting injuries from removing manhole covers. Sampling personnel should pay close attention in order to prevent these safety hazards at all times.

If the sample point is in a manhole, a street gutter, or a ditch near the street, particular attention must be given to marking off the work area to warn oncoming traffic of the presence of the sampling crew. Traffic cones, warning signs, and barricades should be placed in appropriate places around the sampling point.

End of Applicable Section

Excerpts from NPDES Storm Water Sampling Guidance Document (Page 67-70; 119-123)
United States Environmental Protection Agency
Office of Water (EN-336)
EPA 833-B-92-001
July 1992

3.2.6 Measuring Rainfall

Many types of instruments have been developed to measure the amount and intensity of precipitation. All forms of precipitation are measured on the basis of depth of the water that would accumulate on a level surface if precipitation remained where it fell. There are two types of rain gauges - standard and recording gauges. A standard rain gauge collects the rainfall so that the amount of rain can be easily measured. The standard gauge for the NWS has a collector, which is 8 inches in diameter. Rain flows from the collector into a cylindrical measuring tube inside the overflow can. The measuring tube has a cross-sectional area one-tenth the size of the collector so that 0.1-inch of rainfall will fill 1 inch of the measuring tube. While this standard gauge is both accurate and easy to use, any open receptacle with vertical sides can be an effective rain gauge. Standard rain gauges are simple and inexpensive; however, with a standard gauge, there is no way to record the changes in the intensity of the rainfall without making frequent observations of the gauge during the storm.

The second type of gauge is the recording rain gauge, which provides a permanent record of the amount of rainfall which accumulates over time. These common types of recording gauges are:

· Tipping Bucket Gauge - Water caught in a collector is funneled into a two-component bucket; a know quantity of rain fills one compartment, overbalancing the bucket and emptying it into a reservoir. This moves the second bucket into place beneath the funnel. The tipping of the bucket engages an electric circuit, which records the event.
· Weighing Type Gauge - Water is weighed when it falls into a bucket placed on the platform of a spring or lever balance. The weight of the contents is recorded on a chart, showing the accumulation of precipitation.
· Float Recording Gauge - Water is measured by the rise of a float that is placed in the receiver. These gauges may be self-siphoning, or may need to be emptied periodically by hand.

Recording rain gauges provide a permanent record of rainfall, and they can be used to determine variations in rainfall intensity over time without making frequent observations during the storm. But recording gauges are more complicated mechanically than standard gauges, making them more costly, less durable, and more difficult to operate.

Although all gauges are subject to error, most errors can be minimized. To minimize errors, the gauge should be placed on a level surface that is not windswept and is away from trees or buildings that might interfere with the path of rainfall. When taking measurements, other factors contributing to error should also be considered: mistakes in reading the scale, dents in the collector rim (which change the receiving area), measuring sticks that may retain some of the water, and water lost to evaporation. In the case of tipping bucket gauges, water may not be collected while the bucket is still tipping. The most common source of inaccuracy is changes in data that are attributable to wind. It is possible to assess wind errors by comparing measurements of gauges that are protected from wind with those that are not.

3.3 Grab Sample Collection

Section 3.1.2 discussed both the parameters that must be monitored by grab samples and the conditions under which grab sampling is required. This section explains how to collect grab samples. The entire sample is collected at an uninterrupted interval (i.e. grabbed at one time). A grab sample provides information on the characterization of storm water at a given time and may be collected either manually or automatically as discussed below.

3.3.1 How to Manually Collect Grab Samples

A manual grab is collected by inserting a container under a downcurrent of a discharge with the container opening facing upstream. Generally, simplified equipment and procedures can be used. In most cases, the sample container itself may be used to collect the sample. Less accessible outfalls may require the use of poles and buckets to collect grab samples. To ensure the manual grab samples are representative of the storm water discharged, the procedure set forth in Exhibit 3-17 should be followed.

Exhibit 3-17. Recommended Operating Procedures for Taking Grab Samples

· Label sample containers before sampling event
· Take a cooler with ice to the sampling point
· Take the grab from the horizontal and vertical center of the channel
· Avoid stirring up the bottom sediments in the channel
· Hold the container so the opening faces upstream
· Avoid touching the inside of the container to prevent contamination
· Keep the sample free from uncharacteristic floating debris
· Transfer samples into proper containers (e.g. from bucket to sample container), however, fecal coliform, fecal streptococcus, phenols, and O&G should remain in original containers
· If taking numerous grabs, keep the samples separate and labeled clearly
· Use safety precautions (see Chapter 6)

Specialized equipment may be needed, particularly in situations where storm water discharges are inaccessible or where certain parameters are monitored. For example:

· When sampling for O&G and VOCs equipment that safely and securely houses O&G bottles or VOC vials should be used. This may be necessary because: (1) O&G will adhere to containers and thus should not be transferred from one container to another; and (2) excessive aeration during sampling may result in the partial escape of VOCs.
· Since facilities sometimes use sample bottles that already contain preservatives (as provided by correct laboratories), extreme care should be taken when filling them to avoid spills, splatters, or washout of preservatives.

All equipment and containers that come into contact with the sample must be clean to avoid contamination. Additionally, sample collection equipment and container materials should be totally unreactive to prevent leaching of pollutants. Cleaning procedures are discussed in detail in Section 3.5.

3.3.2 How to Collect Grab Samples by Automatic Sampler

Grab samples can also be collected using programmed automatic samplers. Automatic samplers come equipped with computers that can be programmed to collect grab samples. Programming for grabs is specific to the type of automatic sampler. Some samplers are portable and have been developed specifically to sample for storm water discharges. These samplers are frequently attached to a rain gauge and/or a flow sensor. Such samplers can be programmed to initiate sample collection by one or more of the following conditions: (1) depth of flow in a channel; (2) rainfall in inches; (3) flow rate; (4) time; (5) external signal; and (6) combinations of the first three conditions. For example, an automatic sampler could be used to collect a sample at 15-minute intervals after its sensors indicate that rainfall has begun.

When using an automatic sampler, planning is very important. First, all equipment must be properly cleaned, particularly the tubing and the sample containers. There are several different types of tubing available, including rubber and Tygon tubing. Tygon tubing is commonly used since it does not leach contaminants. Deionized water should be drawn through the sampler to remove any remaining pollutant residuals prior to taking samples. Tubing should also be drawn through the sampler to remove any remaining pollutant residuals prior to taking samples. Tubing should also be replaced periodically to avoid algae or bacterial growth.

Sampling personnel should also use adequate and appropriate containers to ensure they are properly cleaned. Section 3.5 contains information on cleaning procedures, which should be followed for all equipment. Additionally, the utilization of blanks (a control used to verify the accuracy of analytical results) is recommended to determine if cross-contamination of sampling equipment has occurred. Samplers should also be programmed, set up, and supplied with a source of power. Properly charged batteries should be readily available for portable samplers in advance of a storm event, and as a backup power supply in case of power failure. Finally, although automatic samplers may be useful in some situations, several parameters are not amenable to collection by automatic sampler. These pollutants include fecal streptococcus, fecal coliforms, oil and grease, and VOCs which should be collected manually, not automatically, as discussed in Section 3.1.2.

End of Applicable Section

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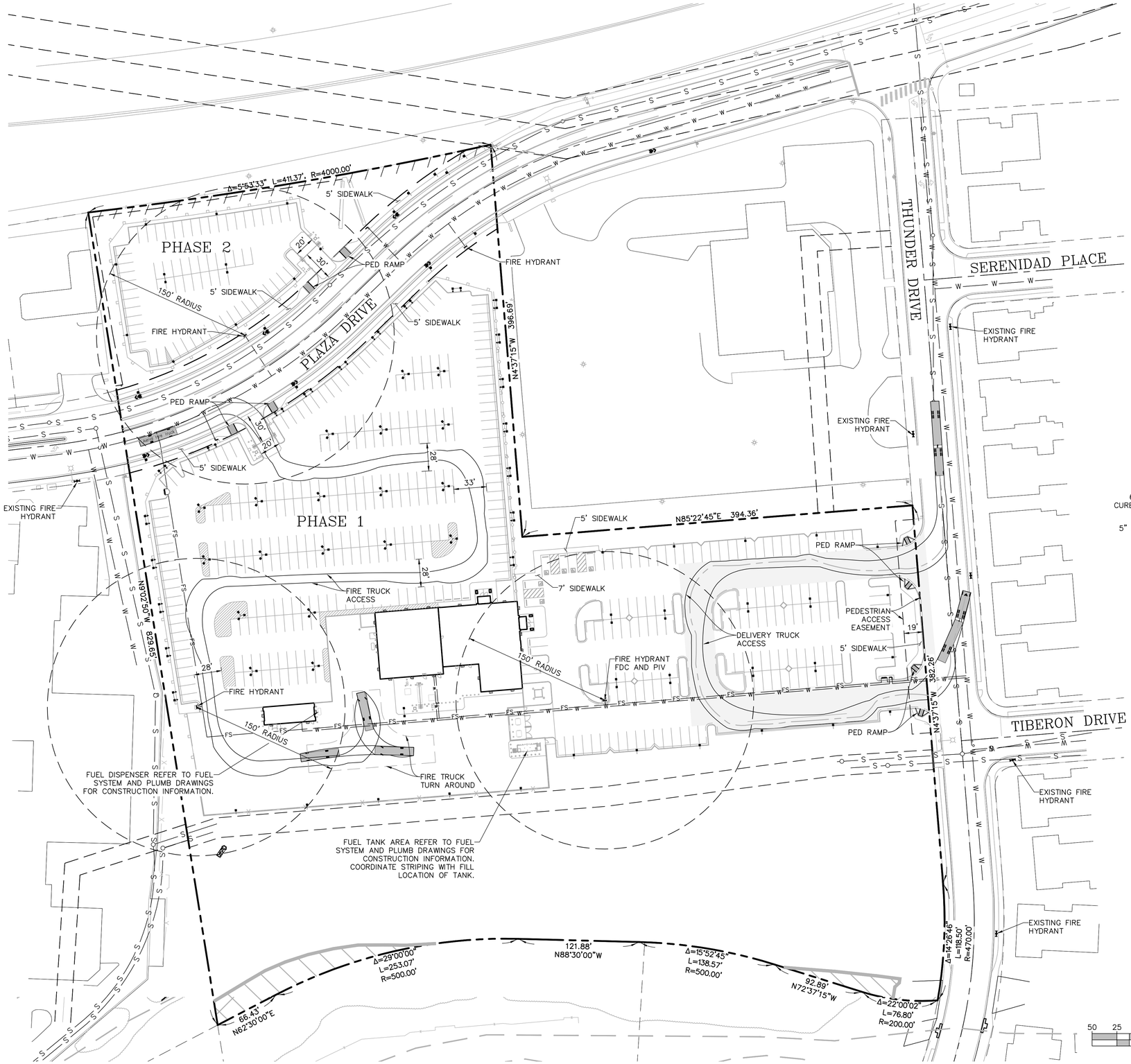

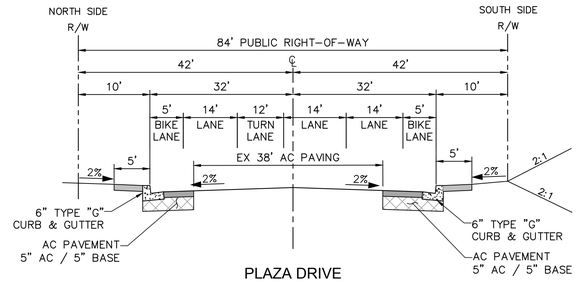

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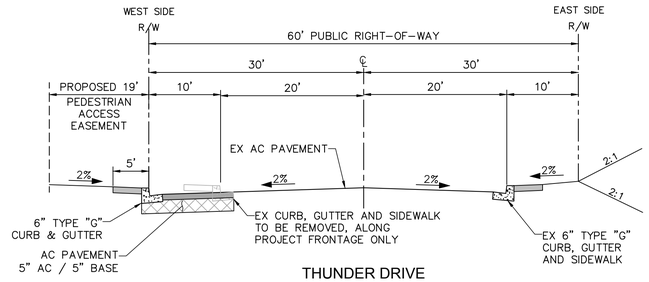

THUNDER DRIVE

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DESIGN GUIDELINES – HIGHWAY ACCESS/DRIVEWAY PLAN

(COORDINATE WITH LOCAL D.O.T. / HIGHWAY DEPT. REQUIREMENTS)

1. 4' SHOULDER SHALL BE REQUIRED BEHIND ALL CURB AND GUTTER SECTIONS.
2. ALL STRIPING IN THE R/W SHALL BE THERMOPLASTIC PER STATE REQUIREMENTS.
3. ANY EXISTING STRIPING IN CONFLICT WITH REQUIRED IMPROVEMENTS SHALL BE IN REMOVED ACCORDING TO STATE D.O.T. SPECIFICATIONS.
4. ALL WORK SHALL CONFORM TO STATE D.O.T. STANDARD SPECIFICATIONS.
5. LANDSCAPING SHALL CONFORM TO STATE D.O.T. STANDARD SPECIFICATION
6. STATE D.O.T. CERTIFIED FLAGGERS ARE REQUIRED WHEN USED IN TRAFFIC CONTROL OPERATIONS ON THIS PERMIT.
7. SILT AND EROSION CONTROLS SHALL BE INSTALLED AND MAINTAINED AS DEEMED NECESSARY BY THE STATE D.O.T. INSPECTOR.
8. DURING THE CONSTRUCTION OF THE DRIVEWAY AS AUTHORIZED BY THE PERMIT, THE APPLICANT SHALL MAINTAIN SUCH SIGNS AND OTHER SAFETY DEVICES AS THE FIELD INSPECTOR MAY DEEM NECESSARY TO PROPERLY PROTECT THE PUBLIC UPON THE HIGHWAY.
9. NO ADVERTISING OR PARKING PERMITTED ON STATE R/W. APPLICANT SHALL REGRASS TO STATE D.O.T. SPECIFICATIONS ALL STATE R/W AREAS WHICH ARE DAMAGED OR DISTURBED DURING WORK AUTHORIZED HEREIN. ALL REQUIRED WORK MUST BE COMPLETED BEFORE OPENING DRIVEWAY FOR PUBLIC USE.
10. CONTRACTOR SHALL CONSTRUCT ACCELERATION & DECELERATION LANE GRADE TO MATCH EXISTING ROADWAY GRADE OF ADJACENT TRAVEL LANE.
11. ALL SIGNS SHALL HAVE A MIN. 7' BOTTOM OF SIGN TO GROUND CLEARANCE AND BE INSTALLED ON A DOT STD. 4" PRESSURE TREATED WOOD POST OR 3" U CHANNEL GALV. STEEL POST.
12. ALL SAWCUTTING OF PAVEMENT REQUIRED TO SATISFY STATE D.O.T. SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
13. SEE DETAIL SHEET FOR PAVEMENT SECTION AND CURB AND GUTTER DETAILS IN THE R/W.
14. NECESSARY BARRICADES, SUFFICIENT LIGHTS, SIGNS AND OTHER TRAFFIC CONTROL METHODS AS MAY BE NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC SHALL BE PROVIDED AND MAINTAINED THROUGHOUT THE WIDENING OF AND CONSTRUCTION ON COUNTY ROADS.

DESIGN GUIDELINES – DEMOLITION PLAN

GENERAL NOTES:

1. DEMOLITION CONTRACTOR SHALL CONSTRUCT EROSION CONTROL MEASURES AS SHOWN ON THE EROSION CONTROL PLAN AS NECESSARY DURING DEMOLITION OPERATIONS OR AS DIRECTED BY THE ENGINEER, CITY OR COUNTY INSPECTOR TO PROTECT ADJACENT PROPERTIES AND WATER RESOURCES FROM SOIL EROSION AND SEDIMENTATION.
2. VARIATIONS TO CONDITIONS OR DISCREPANCIES IN ACTUAL FIELD CONDITIONS AS THEY APPLY TO THE DEMOLITION OR SITE DEVELOPMENT WORK MUST BE BROUGHT TO THE OWNER'S REPRESENTATIVE AND ENGINEER'S ATTENTION PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION.
3. CONTRACTOR SHALL LOCATE, IDENTIFY, PROPERLY TERMINATE, AND MARK ALL EXISTING UTILITIES WITHIN THE DEMOLITION AREA THAT ARE TO REMAIN AND PROTECT THEM FROM DAMAGE.
4. THE DEMOLITION CONTRACTOR MUST NOTIFY ALL UTILITY COMPANIES, FIRE MARSHALL, AND OWNER'S REPRESENTATIVE PRIOR TO INTERUPTION OF ANY UTILITY SERVICE. NOTIFICATION MUST BE MADE PER THE PROJECT SPECIFICATIONS. THE DEMOLITION CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH AND ADHERENCE TO EACH UTILITY COMPANY'S AND FIRE MARSHAL'S REGULATIONS REGARDING SERVICE INTERUPTION.
5. THE DEMOLITION CONTRACTOR MUST PROTECT ALL LANDSCAPING AND OTHER FEATURES DESIGNATED TO REMAIN AND REPLACE SUCH ITEMS IF DISTURBED DURING DEMOLITION.
6. CONTRACTOR SHALL CONDUCT ALL DEMOLITION OPERATIONS WITH MINIMUM INTERFERENCE TO PUBLIC AND/OR PRIVATE ACCESSES AND FACILTIES. ALL AREAS OUTSIDE OF THE PAVEMENT REMOVAL LINE MUST BE MAINTAINED FOR PUBLIC ACCESS.
7. THE DEMOLITION CONTRACTOR MUST PROTECT BENCH MARKS, PROPERTY CORNERS, AND ALL OTHER SURVEY MONUMENTS FROM DAMAGE OR DISPLACEMENT. IF A MARKER MUST BE REMOVED, IT SHALL BE REPLACED BY A LICENSED LAND SURVEYOR AND REPLACED.
8. THE DEMOLITION CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL MEASURES AS REQUIRED IN ACCORDANCE WITH THE U.S. DEPT. OF TRANSPORTATION "MUNUAL OF UNIFORM TRAFFIC CONTROL DEVICES" AND GOVERNING MUNICIPALITY REQUIREMENTS.
9. DEPRESSIONS AND VOID AREAS CAUSED BY DEMOLITION WORK ARE TO BE FILLED TO SUBGRADE AND PROPERLY COMPACTED TO THE EXISTING ELEVATION TO AVOID WATER PONDING.
10. THE DEMOLITION CONTRACTOR SHALL ACQUIRE ALL PERMITS AND PAY ALL ASSOCIATED FEES PERTAINING TO THE DEMOLITION AND DISPOSAL REQUIREMENTS. THE DEMOILITION CONTRACTOR IS RESPONSIBLE FOR ADHERENCE TO ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS REGARDING THIS WORK. IF THERE ARE NO LOCAL, STATE OR FEDERAL REQUIREMENTS THE DEMOLITION CONTRACTOR SHALL ACQUIRE AN ENGINEERS CERTIFICATION THAT THE WORK HAS BEEN DONE IN ACCORDANCE WITH THE PLANS.
11. THE DEMOLITION CONTRACTOR SHALL COORDINATE THE DEMOLITION TO LEAVE ACCESS AND UTILITY SERVICE TO THE NEIGHBORING BUILDINGS AT ALL TIMES.
12. THE DEMOLITION CONTRACTOR SHALL FIELD LOCATE ,MARK AND PROTECT ALL EXISTING UTILITIES.

Civil Engineering · Environmental
Land Surveying
2442 Second Avenue
San Diego, CA 92101
(619)232-9200 (619)232-9210 Fax
R·E·C Consultants, Inc.

NOT **RELEASED FOR CONSTRUCTION**

DESCRIPTION	DRAWN BY:

REVISIONS		
SHT NO.	DATE	

CARMAX

12800 TUCKAHOE CREEK PKWY RICHMOND, VA 23238
804-747-0422 | CARMAX.COM

OCEANSIDE, CALIFORNIA

PROJECT NO

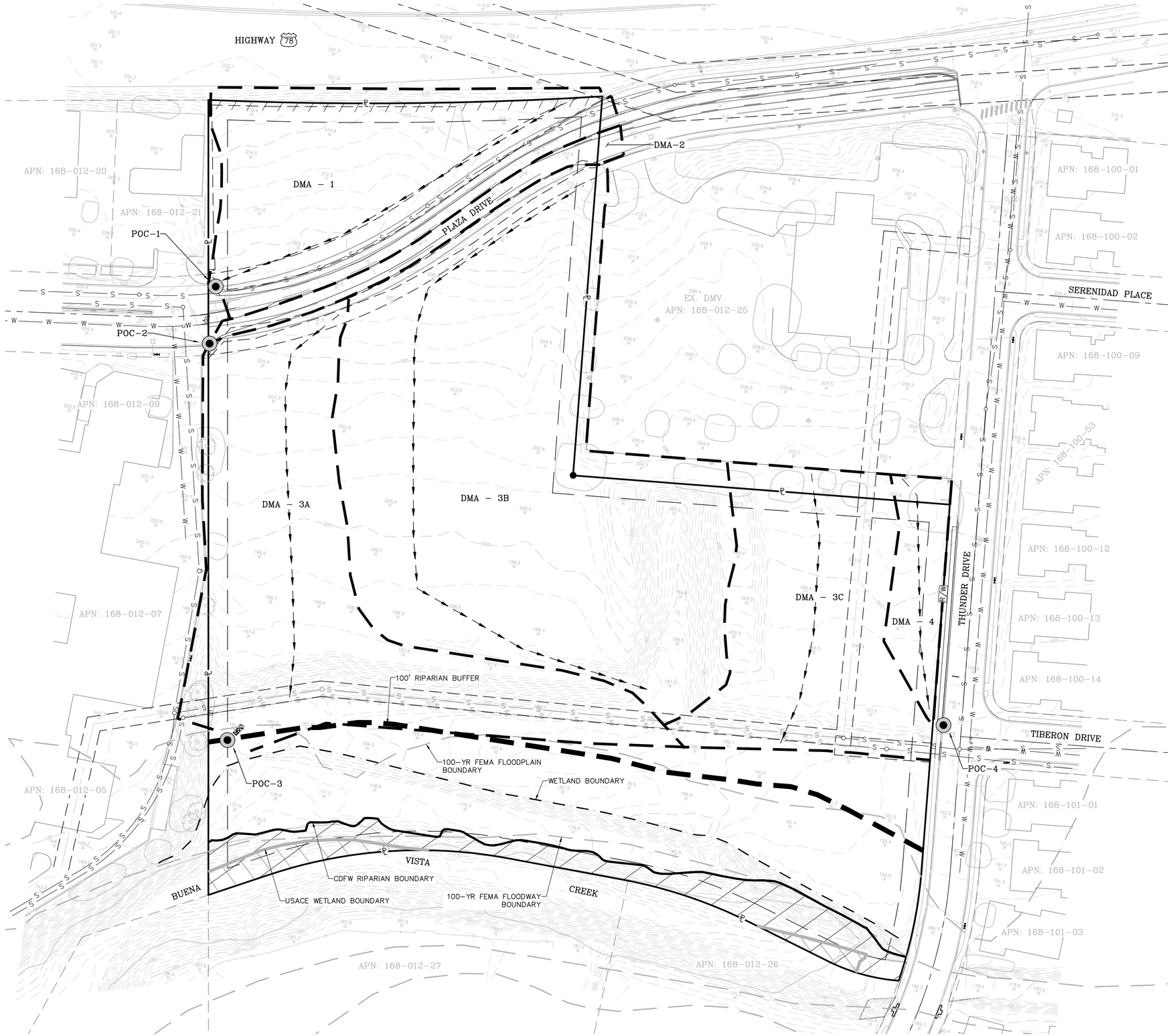
DATE March 6, 2020

SHEET TITLE

MISC REQUIREMENTS

C12.0

SHEET NO



LEGEND:

- EX. PROPERTY BOUNDARY
- DMA BOUNDARY
- POC
- ABUTTERS RIGHTS OF ACCESS RELINQUISHED
- EX. MINOR CONTOUR
- EX. MAJOR CONTOUR

NOTES:

- NO CCYSA'S TO PROTECT
- UNDERLYING SOIL 'TYPE –D'
- DEPTH TO NATURAL GROUNDWATER >20'

EXISTING CONDITIONS				
DMA	DRAINS TO	HARDSCAPE	LANDSCAPE	TOTAL
DMA-1	POC-1	9,667	52,734	62,401
DMA-2	POC-2	9,430	0	9,430
DMA-3A	POC-3	-	90,838	90,838
DMA-3B		-	153,335	153,335
DMA-3C			55,733	55,733
DMA-4	POC-4	-	12,105	12,105
TOTAL				**383,842**

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DATE: 10/25/19
SCALE: 1" = 50'
DRAWN: A.O.
CHECKED: J.R.R.

SHEET TITLE: DMA/HMP EXHIBIT - EXISTING CONDITIONS

PROJECT: CARMAX OCEANSIDE
PLAZA DRIVE & THUNDER DRIVE
OCEANSIDE, CA 92056

SHEET 1 OF 1 SHEETS

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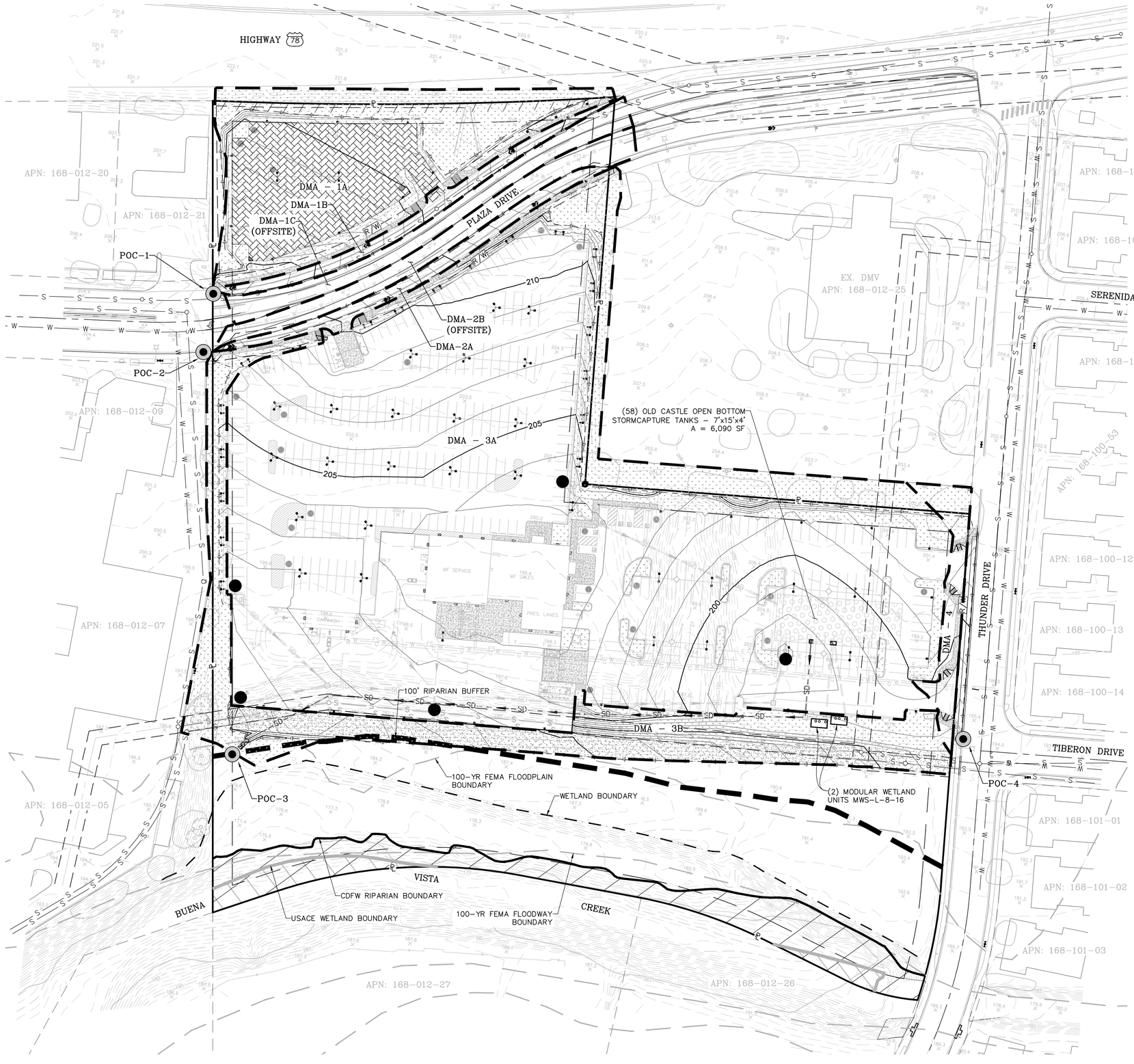

LEGEND:

- EX. PROPERTY BOUNDARY
- DMA BOUNDARY
- POC
- ABUTTERS RIGHTS OF ACCESS RELINQUISHED
- EX. MINOR CONTOUR
- EX. MAJOR CONTOUR
- PROPOSED UNDERGROUND DETENTION
- LANDSCAPE/PERVIOUS AREAS
- PERVIOUS PAVEMENT
- PROPOSED HARDSCAPE AREAS
- PROPOSED ASPHALT IMPERVIOUS AREAS
- MODULAR WETLAND
- PROHIBITIVE SIGNANGE

DMA PROPERTIES

UNDERLYING HYDROLOGIC SOIL GROUP: D
APPROXIMATE DEPTH TO GROUNDWATER: > 20'
EXISTING NATURAL HYDROLOGIC FEATURES:EXISTING BUENA VISTA CREEK ALONG SOUTHERN EDGE OF SITE.
CRITICAL COARSE SEDIMENT YIELD AREAS: NONE

NO DUMPING DRAINS TO OCEAN

SAMPLE PROHIBITIVE SIGNAGE

NTS

PROPOSED CONDITIONS					
DMA	DRAINS TO	IMPERVIOUS	PERVIOUS	TOTAL	TYPE OF STRUCTURAL BMP
DMA-1A	POC-1	0	47,133	47,133	SELF-RETAINING (PERMEABLE PAVEMENT)
DMA-1B		5,601	0	5,601	GREEN STREET (PLAZA DRIVE EXPANSION- NORTH)
DMA-1C		9,667	0	9,667	EXISTING STREET OFFSITE AREA
DMA-2A	POC-2	5,899	0	5,899	GREEN STREET (PLAZA DRIVE EXPANSION- SOUTH)
DMA-2B		9,430	0	9,430	EXISTING STREET OFFSITE AREA
DMA-3A	POC-3	218,927	37,896	256,823	PROPRIETARY RETENTION & BIO-FILTRATION
DMA-3B		-	43,234	43,234	BYPASS
DMA-4	POC-4	3,024	3,028	6,051	DE-MINIMUS (DRIVEWAY AREA)
TOTAL				**383,838**	

50 25 0 50 100 150

SCALE: 1" = 50'

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SHEET TITLE: DMA EXHIBIT - PROPOSED

PROJECT: CARMAX OCEANSIDE
PLAZA DRIVE & THUNDER DRIVE
OCEANSIDE, CA 92056

SHEET 1 OF 2 SHEETS

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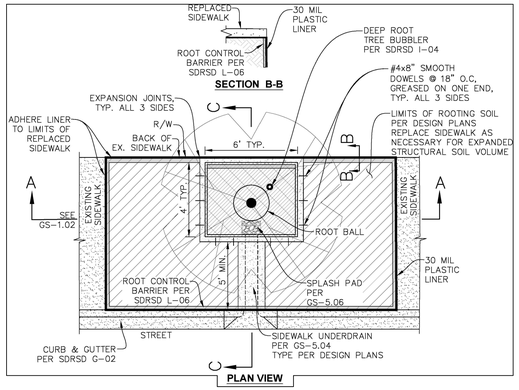
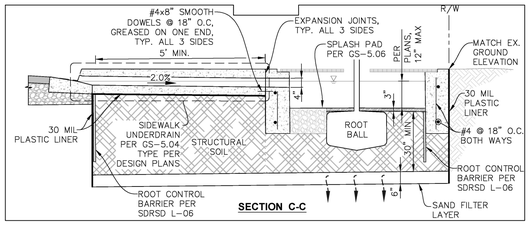
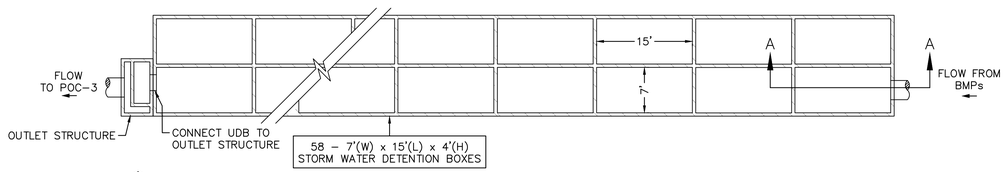




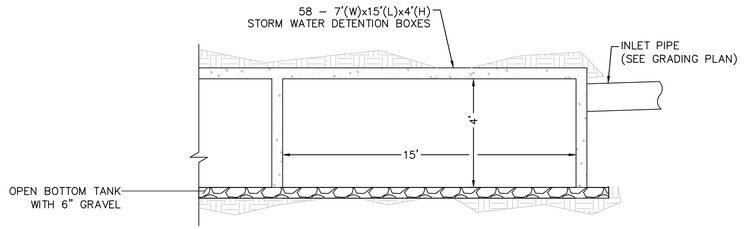
TREE WELL DETAIL

NTS



UNDERGROUND DETENTION BASIN (UDB)

NTS



SECTION A-A: UNDERGROUND DETENTION BASIN

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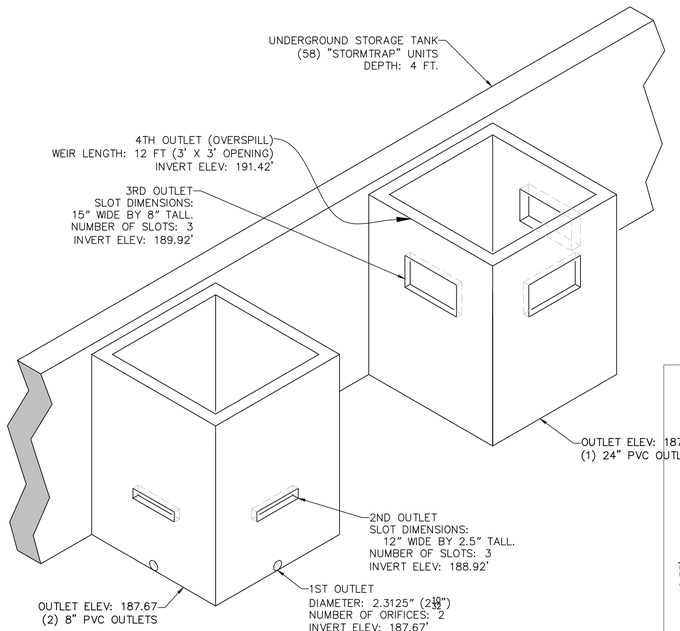
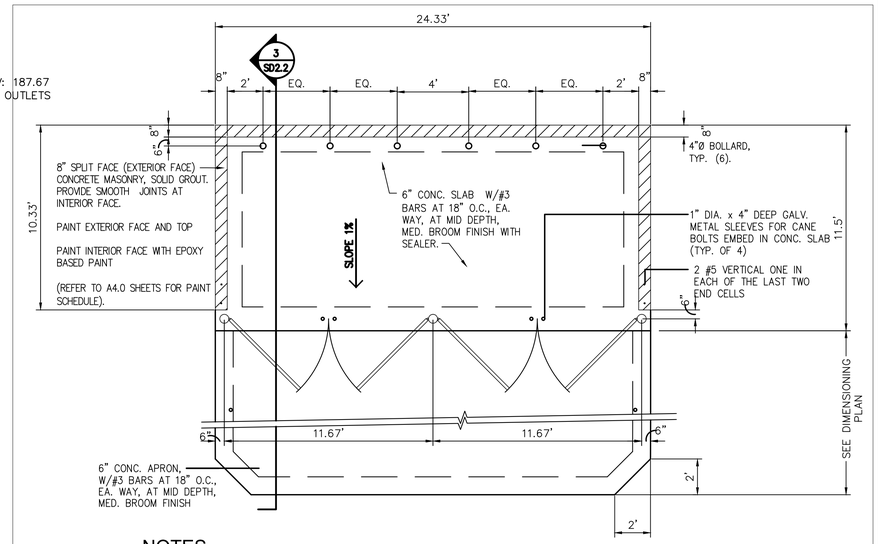


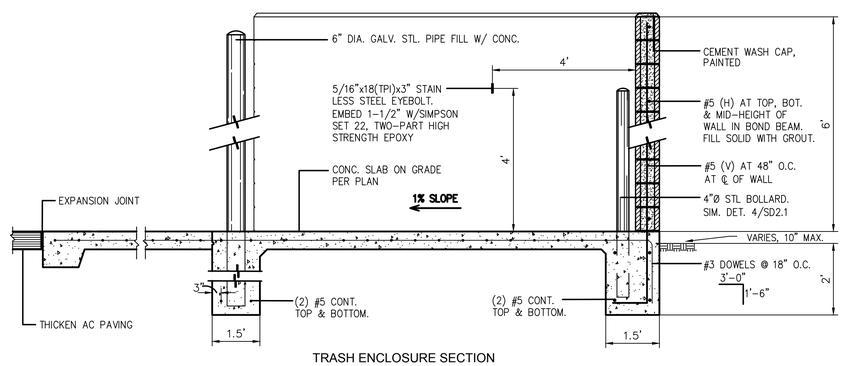
TANK OUTLET STRUCTURES

NOT TO SCALE



NOTES

1. ALL CONC. BLOCK MORTAR JOINTS SHALL BE FLUSH & SMOOTH AT INSIDE FACE.
2. SEE SITE PLAN FOR LOCATION OF TRASH ENCLOSURE.
3. THE TRASH ENCLOSURE PAD SHALL BE SEALED WITH A "NON-PIGMENTED" CLEAR CONCRETE SEALER.



TRASH ENCLOSURE SECTION

SOURCE CONTROL

BMP ID #	BMP TYPE	SYMBOL	CASQA NO.	QUANTITY	INSPECTION FREQUENCY	MAINTENANCE FREQUENCY	MAINTENANCE ACTIVITY
(1)	TRASH ENCLOSURE		SD-32	2	MONTHLY	AS NEEDED	INSPECT REGULARLY. CLEAR TRASH & DEBRIS. REPLACE LEAKING BINS. CLEAN STORAGE AREAS REGULARLY. POST SIGNS INFORMING TO NOT DISPOSE OF LIQUIDS & TO KEEP BIN LIDS CLOSED.
(2)	STENCILS	NO DUMPING	SD-13, SC-2	1 EA	MONTHLY	AS NEEDED	INSPECT AND MAINTAIN/REPLACE AS NEEDED.

BMP ID #	BMP TYPE	INSPECTION FREQUENCY	FREQUENCY MAINTENANCE	MAINTENANCE ACTIVITY
SC-1	PREVENTION OF ILLICIT DISCHARGES INTO MS4	CONTINUOUS	-	A GREASE TRAP HAS BEEN INCOPORATED INTO UTILITY PLAN AND DUMPING OF GREASE DOWN THE STROM DRAIN IS PROHIBITED OTHER GOOD HOUSEKEEPING PRACTICES WILL BE IMPLEMENTED TO DISCOURAGE DISCHARGES OF NON-STORM WATER POLLUTANTS, INCLUDING COLLECTION/RECYCLING USED COOKING OIL, CLEAN UP FOOD AND GREASE WITH ABDORBENTS/DISCARD IN TRASH AND ROUTINE MAINTANACE OF GREASE TRAP.
SC-2	STORM DRAIN STENCILING OR SIGNAGE	CONTINUOUS	REGULARLY	LABELING SHALL BE PROVIDED FOR ALL STORM WATER CONVEYANCE SYSTEM INLETS AND CATCH BASINS WITHIN THE PROJECT AREA. STORM DRAIN PLACARDS SHALL BE USED FOR SIGANGE (STENCILING IS PROHIBITED BY CITY OF OCEANSIDE). INSPECT AND MAINTAIN PLACARDS AS NEEDED.
SC-5	PROTECT TRASH STORAGE AREAS FROM RAINFALL, RUN-ON, RUNOFF, AND WIND DISPERSAL	REGULARLY	REGULARLY	ENSURE TRASH ENCLOSURE AREAS ARE FULLY CONTAINED (THREE WALLS, DOOR, ROOF). PROVIDE ATTACHED LIDS ON ALL TRASH CONTAINERS. KEEP CONTAINERS AWAY FROM STORM DRAIN VICINITY. POST SIGNS ON ALL ENCLOSURES AND/OR DUMPSTERS INFORMING USERS TO KEEP LID CLOSED AND NOT TO DISPOSE OF LIQUIDS OR HAZARDOUS MATERIALS. INSPECT TRASH STORAGE AREAS TO ENSURE INTEGRITY OF CONTAINERS AND THAT AREA IS KEPT CLEAN. REPLACE LEAKING BINS. CLEAN TRASH STORAGE AREAS REGULARLY
SC-6 A THROUGH H	ADDITIONAL BMPS BASED ON POTENTIAL SOURCES OF RUNOFF POLLUTANTS	REGULARLY OR AS DETERMINED NECESSARY	REGULARLY OR AS DETERMINED NECESSARY	SC-A ON-SITE STORM DRAIN INLETS: ON-SITE INLETS SHALL BE PROTECTED FROM ANY ILLICIT DISCHARGES AND DEBRIS. INLETS SHALL HAVE PROHIBITIVE SIGNS. MARK ALL INLETS WITH THE WORDS "NO DUMPING! DISCHARGES TO BAY" OR SIMILAR. INLET MARKINGS SHALL BE MAINTAINED AND PERIODICALLY REPAINTED. MAINTAIN ON A REGULAR BASIS TO REMOVE POLLUTANTS. ENSURE PROPER HYDRAULIC FUNCTION TO PREVENT FLOODING. CLEAN INLETS REGULARLY AND REMOVE SEDIMENTS AND DEBRIS, ESPECIALLY BEFORE START AND END OF WET SEASON. STORE WASTES COLLECTED FROM CLEANING ACTIVITIES OF DRAINAGE SYSTEM IN APPROPRIATE CONTAINERS OF TEMPORARY STORAGE SITES IN A MANNER THAT PREVENTS DISCHARGE TO THE STORM DRAIN. KEEP A RECORD OF CLEANING AND DISPOSAL ACTIVITIES. SC-C INTERIOR PARKING GARAGES: INTERIOR PARKING GARAGE WILL HAVE AN INTERIOR DRAIN THAT IS CONNECTED TO THE STORM DRAIN SYSTEM TO REMOVE NUISANCE WATER. SC-D1 NEED FOR FUTURE INDOOR & STRUCTURAL PEST CONTROL: FUTURE INDOOR & STRUCTURAL PEST CONTROL: BUILDING INCLUDES DOORS AND WINDOWS WITH SEALING THAT DISCOURAGES ENTRY OF PESTS. ANY PESTICIDES SHALL BE APPLIED MINIMALLY IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND CITY/STATE REQUIREMENTS SC-D2 LANDSCAPE/OUTDOOR PESTICIDE USE (SC-41): FINAL LANDSCAPE PLANS WILL PRESERVE EXISTING DROUGHT TOLERANT TREES, SHRUBS, AND GROUND COVER TO THE MAXIMUM EXTENT POSSIBLE, AND INCLUDE LANDSCAPING TO MINIMIZE IRRIGATION AND RUNOFF, TO PROMOTE SURFACE INFILTRATION WHERE APPROPRIATE, AND TO MINIMIZE THE USE OF FERTILIZERS AND PESTICIDES THAT CAN CONTRIBUTE TO STORM WATER POLLUTION. THE LANDSCAPED AREAS THAT WILL BE USED TO DETAIN STORMWATER, WILL HAVE PLANTS TOLERANT OF PERIODIC SATURATED SOIL CONDITIONS. FINAL LANDSCAPE PLANS HAVE BEEN DESIGNED TO ENSURE SUCCESSFUL ESTABLISHMENT, INCLUDING SELECTION OF PLANTS APPROPRIATE TO SITE SOILS, SLOPES, CLIMATE, SUN, WIND, RAIN, LAND USE, AIR MOVEMENT, ECOLOGICAL CONSISTENCY, AND PLANT INTERACTIONS. SC-N FIRE SPRINKLER TEST WATER: FIRE SPRINKLER TEST WATER SHALL BE DRAINED TO SANITARY SEWER SYSTEM. DURING A FIRE SPRINKLER TEST, THE FIRE RISER DISCHARGE SHALL BE CONNECTED BY A HOSE TO THE SEWER CLEANOUT. SC-O MISCELLANEOUS DRAIN OR WASHWATER: BOILER DRAINS SHALL BE DIRECTLY OR INDIRECTLY CONNECTED TO THE SANITARY SEWER SYSTEM AND MAY NOT DISCHARGE TO THE STORM DRAIN. ROOFTOP MOUNTED EQUIPMENT WITH POTENTIAL TO PRODUCE POLLUTANTS SHALL BE ROOFED AND/OR HAVE SECONDARY CONTAINMENT. ANY DRAINAGE SUMPS ONSITE SHALL FEATURE A SEDIMENT SUMP TO REDUCE THE QUANTITY OF SEDIMENT PUMPED WATER. COPPER BASED ROOFING, GUTTERS AND TRIM MATERIALS SHOULD BE AVOIDED. SC-P PLAZAS, SIDEWALKS, AND PARKING LOTS: SWEEP REGULARLY TO PREVENT ACCUMULATION OF LITTER AND DEBRIS, DEBRIS FROM PRESSURE WASHING MUST BE COLLECTED TO PREVENT ENTRY INTO STORM DRAIN SYSTEM. WASHWATER CONTAINING ANY CLEANING AGENT OR DEGREASER MUST BE COLLECTED AND DISCHARGED TO THE SANITARY SEWER AND NOT DISCHARGED TO A STORM DRAIN. CLEAN ALL PAVEMENT AT LEAST ONCE A YEAR.

REVISIONS

NO.	DESCRIPTION	DATE	APP'D

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PROJECT: CARMAX OCEANSIDE
PLAZA DRIVE & THUNDER DRIVE
OCEANSIDE, CA 92056

SHEET 2 OF 2 SHEETS

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ATTACHMENT 5
Drainage Report

This is the cover sheet for Attachment 5.

DRAINAGE STUDY

For

CARMAX OCEANSIDE

Prepared for**:**

Centerpoint Integrated Solutions
355 Union Blvd. Suite 301
Lakewood, CO 80228
(303)679-6975

Prepared by:

Jonathan Raab Rydeen
REC Consultants, Inc
2442 2nd Avenue
San Diego, CA 92101
Telephone: 619-232-9200

Report Prepared:
December 16, 2019

Revised:
March 6, 2020

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CHAPTER 1 - EXECUTIVE SUMMARY

1.1 – Introduction

The Carmax project site is located near the southwest corner of Plaza Drive and Thunder Drive in the City of Oceanside, California.

Runoff from the existing site surface flows to four points of discharge, two of them on Plaza Drive, one on Thunder Drive and the one to Buena Vista Creek.

The study analyzes existing and developed conditions for 100-year peak flowrates from the development to the existing points of discharge.

The southern portion of the property lies within Zone X of the FEMA 100-year floodplain (FEMA FIRM Panel 06073C0758G effective 5/16/19) and riparian buffer. However, development of the property will not encroach on either of these boundaries. Therefore, no Map Revision will be required.

Treatment of storm water runoff from the site has been addressed in a separate report – the “Storm Water Quality Management Plan for Carmax Oceanside”, dated November 2019 by REC. Hydromodification (HMP) analysis has been addressed in a separate report titled “Technical Memorandum: SWMM Modeling for Carmax Oceanside” dated November 2019 by REC.

Per County of San Diego drainage criteria the Modified Rational Method is used to determine peak design flowrates when the contributing drainage area is less than one square mile. Since the total watershed area discharging from the site is less than one square mile, AES computer software was used to model the pre- and post- developed condition runoff response per the Modified Rational Method.

Methodology used for the computation of design rainfall events, runoff coefficients, and rainfall intensity values are consistent with criteria set forth in the “County of San Diego Drainage Design Manual”. A more detailed explanation of methodology used for this analysis is listed in Chapter 2 of this report.

Developed condition peak flows were calculated using AES. The corresponding hydrographs were generated using the RickRat Hydro program by Rick Engineering. Hyraulic Modified-Puls detention basin routing of the AES rational method hydrology was performed using the Army Corps of Engineers HEC-HMS 4.2.1 software.

1.2 – Summary of Existing Conditions

In existing conditions, the Carmax project site is a vacant, previously graded lot. The site is divided into “North” and “South” portions separated by Plaza Drive.

Existing runoff from the north site drains via overland flow to the southwest corner of the site where it sheet flows over the existing berm and onto Plaza Drive. Runoff from the existing south site drains south towards Buena Vista Creek with a small portion draining east over the sidewalk and curb and onto Thunder Drive.

Per NOAA Precipitation Frequency Data Server, the 100-year design rainfall depth for the project site is 3.02 inches. The project runoff coefficient was calculated using the Caltrans Highway Design Manual. Figure 819.2A of the Highway Design Manual determines runoff coefficients for undeveloped areas based on watershed type. This table was used to determine the runoff coefficient of the site, calculations are summarized hereon:

Relief:	10% steep – 0.32 90% Normal – 0.17 (0.1)(0.32) + (0.9)(0.17) = 0.185
Soil Infiltration:	Soil type-D – 0.12
Vegetal Cover:	8% fair to good – 0.07 92% poor to fair – 0.12 (0.08)(0.07) + (0.92)(0.12) = 0.116
Storage:	Negligible – 0.11
Total*:*	(0.185) + (0.12) + (0.116) + (0.11) = 0.531
‘C’ Modification for Q100:	(0.531) $\times$ (1.25) = *0.66*

Thus a site coefficient of 0.66 is used for pre-development conditions.

Table 1 on the following page summarizes the existing condition design 100-year peak flow from the project site.

Table 1 – SUMMARY OF EXISTING CONDITIONS FLOWS

Discharge Location	Drainage Area (Ac)	Runoff Coefficient (C)	100-Year Peak Flow (cfs)
POC-1	1.44	0.66	5.11
POC-2	0.21	0.66	0.82
POC-3	6.89	0.66	23.74
POC-4	0.27	0.66	1.07
TOTAL	**8.81**		

1.3 – Summary of Developed Conditions

The north site is constructed solely of permeable pavement, therefore, pre- and post-development runoff remains constant. Runoff from the south site is directed to a proprietary underground detention system near the southeast corner of the site. Mitigated peak flows are then drained from the detention facility via a 24" storm drain to POC-3, at the southwest corner of the site, where runoff ultimately meets existing Buena Vista Creek.

Per NOAA Precipitation Frequency Data Server the design 100-year rainfall depth for the project site is 3.02 inches. The project runoff coefficient was calculated using the Caltrans Highway Design Manual. Figure 819.2B of the Highway Design Manual determines runoff coefficients for developed areas. This table was used to determine the runoff coefficient of the site, calculations are summarized hereon:

Type of Drainage Area: Parking lot and building – 0.75
(applicable to roofs, business with high density, multi-units, streets)

'C' Modification for Q100: $(0.75) \times (1.25) = \underline{0.94}$

Thus a site coefficient of 0.94 is used for post-development conditions. The developed site has an approximate impervious footprint of 5.798 acres.

Table 2 summarizes the unmitigated developed condition design 100-year peak flow from the project site.

Table 2 – SUMMARY OF UNMITIGATED - DEVELOPED CONDITIONS FLOWS

Discharge Location	Drainage Area (Ac)	Runoff Coefficient (C)	100-Year Peak Flow (cfs)
POC-1	1.44	0.66	5.59
POC-2	0.35	0.94	2.15
POC-3	6.89	0.94	44.38
POC-4	0.13	0.94	1.05
TOTAL	**8.81**		

Prior to discharging from the project site, first flush runoff will be treated via a underground open bottom proprietary BMP in accordance with standards set forth by the Regional Water Quality Control Board and the County of San Diego's BMP Design Manual (see "Storm Water Quality Management Plan for Carmax Oceanside").

Runoff from the developed site drains to a single onsite underground detention system. Peak flows are mitigated via this facility prior to discharging to the proprietary underground water quality system. Once through the proprietary underground water quality system, runoff will discharge to POC-3, the existing point of discharge from the site.

A summary of the detention basin is provided in Table 3.

Table 3 – SUMMARY OF UNDERGROUND BMP DIMENSIONS

1st Outlet:
Diameter: 2.3125"
Number of Orifices: 2
Invert Elev: 0.0' (invert of the tanks is assumed to be 0.0).

2nd Outlet:
Slot Dimensions: 12" wide by 2.5" tall.
Number of Slots: 3
Invert Elev: 1.25'

3rd Outlet:
Slot Dimensions: 15" wide by 8" tall.
Number of Slots: 3
Invert Elev: 2.25'

4th Outlet (Overspill):
Weir Length: 12 ft (3' x 3' opening)
Invert Elev: 3.75'

Notes:
(1): It is assumed WQ volume is to be treated after storm water leaves underground detention system. All elevations measured from the invert of the underground detention system.
(2): Depth of ponding beneath structure emergency spillway.
(3): Overflow length, the internal length of the emergency spillway.
(4): Total depth of underground BMP from soffit to invert.

The developed condition peak flows were calculated using the Modified Rational Method. The corresponding hydrographs were generated using the RickRat Hydro program by Rick Engineering (a 5 minute time step was used to generate the hydrograph as HMS only has time step allowances for 1,2,3,4,5,6 and 10 minute increments). This hydrograph was then routed through the proposed on-site detention facility in HEC-HMS. The HMS Modified-Puls results are summarized in Table 4.

Rational method hydrographs, stage-storage, stage-discharge relationships, outlet structure configurations and HEC-HMS model output is provided in Chapter 5 of this report.

Table 4 summarizes the peak inflow and discharge from the detention facility.

Table 4 – SUMMARY OF DETENTION ROUTING

Detention Basin	100-Year Peak Inflow (cfs)	100-Year Peak Outflow (cfs)	Peak Water Surface Elevation[(1)] (ft)
BMP-1	43.78	23.84	3.75

Notes: (1) Elevation above the first surface inlet invert.

1.4 – Summary of Results

Table 5 summarizes developed and existing condition drainage areas and resultant 100-year peak flow rates at the receiving discharge location from the Carmax site. Per NOAA Precipitation Frequency Data Server, the design 100-year rainfall depth for the site area is 3.02 inches.

Table 5 – SUMMARY OF PEAK FLOWS

Discharge Location	Area (ac)			100 Year Peak Flow (cfs)		
	Existing	Developed	Difference	Existing	Developed	Difference
POC-1	1.44	1.44	0.00	5.11	5.59	0.48
POC-2	0.21	0.35	0.14	0.82	2.15	1.33
POC-3	6.89	6.89	0.00	23.74	22.42	-1.32
POC-4	0.27	0.13	-0.14	1.07	1.05	-0.02

As illustrated in Table 5, the proposed Carmax project site will reduce peak flows for the large majority of the site. POC-1 and POC-2 at Plaza Drive increase slightly due to the widening and expansion of Plaza Drive. Runoff discharging at these POC's will make its way west towards the intersection of Highway 78 and Plaza Drive where said runoff enters curb inlets on the north and south sides of Plaza Drive, respectively. At final engineering the downstream curb inlets and pipes on the north and south sides of Plaza Drive will be examined to ensure existing capacity is adequate for additional runoff resulting from Plaza Drive expansion.

POC-3 is reduced by 1.32 cfs. POC-4 decreases by 0.02 cfs. POC-3 and POC-4 ultimately confluence at POC-3 in Buena Vista Creek, therefore, the total net increase of 0.49 cfs is insignificant as it discharges directly to a receiving water body. There will be no impact to downstream storm drains of flood channels.

All developed runoff will receive water quality treatment in accordance with the site specific SWQMP, whether that be treatment via proprietary BMP or green streets.

Final design details will be provided at the final engineering phase of the development.

1.5 – Hydraulic Analysis

Detailed hydraulic analysis to be provided at final engineering.

1.6 – Conclusions

This report has been prepared in accordance with the County of San Diego Hydrology Manual. This report has evaluated and addressed the potential impacts and proposed mitigation measures. A summary of the facts and findings associated with this project and the measures addressed by this report is as follows:

- The project will not alter drainage patterns on the site or increase net runoff after development.
- The ultimate discharge points will not be changed.
- Graded areas and slopes will be hydroseeded to reduce or eliminate sediment discharge.
- Hydraulic analysis to be provided at final engineering

1.7 – References

"*County of San Diego Hydrology Manual*", June 2003

"Caltrans Highway Design Manual", November 2017

"*San Diego County Hydraulic Design Manual*", September 2014

"*Stormwater Quality Management Plan for Carmax Oceanside*", November 2019, REC Consultants.

1.8 – Declaration of Responsible Charge

THIS PRELIMINARY DRAINAGE STUDY HAS BEEN PREPARED UNDER THE DIRECTION OF THE FOLLOWING REGISTERED CIVIL ENGINEER. THE REGISTERED ENGINEER ATTESTS TO THE TECHNICAL INFORMATION CONTAINED HEREIN AND THE ENGINEERING DATA UPON WHICH RECOMMENDATIONS, CONCLUSIONS, AND DECISIONS ARE BASED.

Jonathan Raab Rydeen R.C.E. 64811

CHAPTER 2 - METHODOLOGY

2.1 – County of San Diego Design Criteria

SECTION 3
RATIONAL METHOD AND MODIFIED RATIONAL METHOD

3.1 THE RATIONAL METHOD

The Rational Method (RM) is a mathematical formula used to determine the maximum runoff rate from a given rainfall. It has particular application in urban storm drainage, where it is used to estimate peak runoff rates from small urban and rural watersheds for the design of storm drains and small drainage structures. The RM is recommended for analyzing the runoff response from drainage areas up to approximately 1 square mile in size. It should not be used in instances where there is a junction of independent drainage systems or for drainage areas greater than approximately 1 square mile in size. In these instances, the Modified Rational Method (MRM) should be used for junctions of independent drainage systems in watersheds up to approximately 1 square mile in size (see Section 3.4); or the NRCS Hydrologic Method should be used for watersheds greater than approximately 1 square mile in size (see Section 4).

The RM can be applied using any design storm frequency (e.g., 100-year, 50-year, 10-year, etc.). The local agency determines the design storm frequency that must be used based on the type of project and specific local requirements. A discussion of design storm frequency is provided in Section 2.3 of this manual. A procedure has been developed that converts the 6-hour and 24-hour precipitation isopluvial map data to an Intensity-Duration curve that can be used for the rainfall intensity in the RM formula as shown in Figure 3-1. The RM is applicable to a 6-hour storm duration because the procedure uses Intensity-Duration Design Charts that are based on a 6-hour storm duration.

3.1.1 Rational Method Formula

The RM formula estimates the peak rate of runoff at any location in a watershed as a function of the drainage area (A), runoff coefficient (C), and rainfall intensity (I) for a duration equal to the time of concentration (T_c), which is the time required for water to

2.2 – Design Rainfall Determination

2.2.1 – NOAA Project Location Maps

NOAA Atlas 14, Volume 6, Version 2
Location name: Oceanside, California, USA*
Latitude: 33.182°, Longitude: -117.2892°
Elevation: 201.38 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.130** (0.109-0.156)	**0.165** (0.138-0.198)	**0.213** (0.179-0.257)	**0.255** (0.212-0.310)	**0.317** (0.254-0.399)	**0.367** (0.288-0.473)	**0.422** (0.322-0.558)	**0.482** (0.357-0.657)	**0.570** (0.404-0.813)	**0.644** (0.440-0.952)
10-min	**0.186** (0.157-0.223)	**0.236** (0.198-0.283)	**0.306** (0.256-0.368)	**0.366** (0.304-0.445)	**0.454** (0.364-0.572)	**0.527** (0.413-0.679)	**0.605** (0.462-0.800)	**0.691** (0.512-0.942)	**0.817** (0.579-1.17)	**0.923** (0.631-1.37)
15-min	**0.225** (0.190-0.270)	**0.285** (0.240-0.343)	**0.369** (0.310-0.445)	**0.443** (0.368-0.538)	**0.549** (0.440-0.692)	**0.637** (0.499-0.821)	**0.732** (0.559-0.968)	**0.836** (0.619-1.14)	**0.988** (0.700-1.41)	**1.12** (0.763-1.65)
30-min	**0.319** (0.269-0.383)	**0.405** (0.340-0.486)	**0.524** (0.440-0.632)	**0.628** (0.522-0.763)	**0.779** (0.624-0.981)	**0.904** (0.708-1.16)	**1.04** (0.793-1.37)	**1.19** (0.879-1.62)	**1.40** (0.994-2.00)	**1.58** (1.08-2.34)
60-min	**0.450** (0.379-0.540)	**0.570** (0.479-0.684)	**0.738** (0.619-0.889)	**0.884** (0.735-1.07)	**1.10** (0.879-1.38)	**1.27** (0.997-1.64)	**1.46** (1.12-1.93)	**1.67** (1.24-2.28)	**1.97** (1.40-2.81)	**2.23** (1.52-3.30)
2-hr	**0.629** (0.530-0.754)	**0.785** (0.660-0.942)	**1.00** (0.840-1.21)	**1.19** (0.989-1.45)	**1.46** (1.17-1.84)	**1.69** (1.32-2.18)	**1.93** (1.48-2.56)	**2.20** (1.63-3.00)	**2.59** (1.84-3.70)	**2.92** (2.00-4.32)
3-hr	**0.756** (0.637-0.907)	**0.941** (0.791-1.13)	**1.20** (1.00-1.44)	**1.42** (1.18-1.72)	**1.74** (1.39-2.19)	**2.00** (1.57-2.58)	**2.28** (1.74-3.02)	**2.59** (1.92-3.53)	**3.04** (2.15-4.33)	**3.41** (2.33-5.04)
6-hr	**1.02** (0.857-1.22)	**1.27** (1.07-1.53)	**1.62** (1.35-1.95)	**1.91** (1.59-2.32)	**2.33** (1.87-2.93)	**2.66** (2.09-3.43)	**3.02** (2.31-4.00)	**3.41** (2.52-4.64)	**3.96** (2.80-5.64)	**4.41** (3.01-6.52)
12-hr	**1.33** (1.12-1.59)	**1.68** (1.41-2.02)	**2.15** (1.81-2.59)	**2.55** (2.12-3.09)	**3.09** (2.48-3.89)	**3.52** (2.76-4.53)	**3.96** (3.02-5.24)	**4.43** (3.28-6.04)	**5.08** (3.60-7.24)	**5.60** (3.83-8.29)
24-hr	**1.66** (1.46-1.91)	**2.13** (1.88-2.47)	**2.76** (2.43-3.21)	**3.27** (2.86-3.83)	**3.97** (3.35-4.79)	**4.50** (3.73-5.54)	**5.05** (4.09-6.36)	**5.62** (4.43-7.26)	**6.39** (4.85-8.60)	**7.00** (5.14-9.74)
2-day	**2.04** (1.80-2.36)	**2.66** (2.34-3.07)	**3.45** (3.04-4.01)	**4.10** (3.58-4.80)	**4.99** (4.22-6.02)	**5.67** (4.70-6.98)	**6.36** (5.16-8.02)	**7.08** (5.59-9.16)	**8.07** (6.12-10.9)	**8.84** (6.49-12.3)
3-day	**2.28** (2.01-2.64)	**2.97** (2.62-3.44)	**3.88** (3.41-4.50)	**4.62** (4.03-5.41)	**5.64** (4.77-6.80)	**6.43** (5.33-7.91)	**7.23** (5.86-9.11)	**8.07** (6.36-10.4)	**9.21** (6.99-12.4)	**10.1** (7.42-14.1)
4-day	**2.50** (2.20-2.89)	**3.27** (2.88-3.78)	**4.28** (3.76-4.96)	**5.11** (4.46-5.97)	**6.25** (5.28-7.54)	**7.13** (5.91-8.78)	**8.04** (6.51-10.1)	**8.98** (7.09-11.6)	**10.3** (7.79-13.8)	**11.3** (8.29-15.7)
7-day	**2.90** (2.56-3.35)	**3.83** (3.38-4.44)	**5.07** (4.45-5.88)	**6.08** (5.31-7.11)	**7.48** (6.32-9.02)	**8.57** (7.10-10.5)	**9.69** (7.85-12.2)	**10.9** (8.57-14.1)	**12.5** (9.47-16.8)	**13.8** (10.1-19.2)
10-day	**3.19** (2.81-3.68)	**4.25** (3.75-4.92)	**5.66** (4.98-6.57)	**6.82** (5.95-7.98)	**8.43** (7.12-10.2)	**9.68** (8.03-11.9)	**11.0** (8.90-13.8)	**12.4** (9.74-16.0)	**14.2** (10.8-19.2)	**15.8** (11.6-21.9)
20-day	**3.89** (3.43-4.49)	**5.24** (4.62-6.06)	**7.04** (6.19-8.17)	**8.54** (7.45-9.99)	**10.6** (9.00-12.8)	**12.3** (10.2-15.1)	**14.1** (11.4-17.7)	**15.9** (12.5-20.6)	**18.5** (14.0-24.9)	**20.6** (15.1-28.7)
30-day	**4.64** (4.10-5.37)	**6.27** (5.52-7.25)	**8.45** (7.43-9.81)	**10.3** (8.98-12.0)	**12.9** (10.9-15.5)	**15.0** (12.4-18.4)	**17.2** (13.9-21.6)	**19.5** (15.4-25.2)	**22.9** (17.4-30.8)	**25.6** (18.8-35.6)
45-day	**5.53** (4.88-6.40)	**7.42** (6.54-8.59)	**10.0** (8.80-11.6)	**12.2** (10.6-14.3)	**15.3** (13.0-18.5)	**17.9** (14.8-22.0)	**20.6** (16.7-26.0)	**23.6** (18.6-30.5)	**27.9** (21.1-37.5)	**31.4** (23.1-43.7)
60-day	**6.46** (5.70-7.47)	**8.59** (7.57-9.94)	**11.5** (10.1-13.4)	**14.1** (12.3-16.4)	**17.7** (15.0-21.4)	**20.7** (17.2-25.5)	**24.0** (19.4-30.2)	**27.6** (21.8-35.7)	**32.8** (24.9-44.2)	**37.3** (27.4-51.8)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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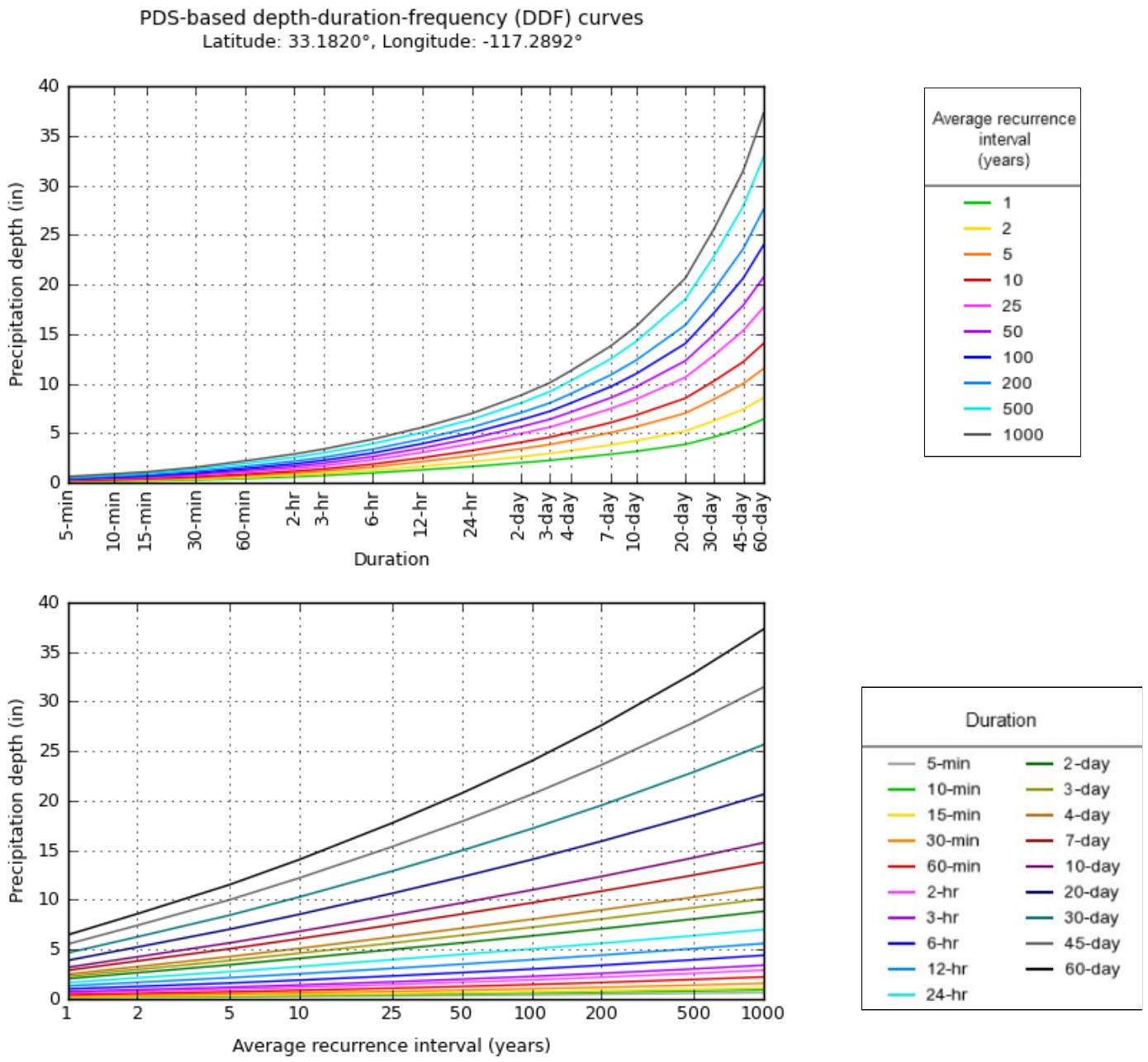
PF graphical



NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Tue Nov 5 19:48:19 2019

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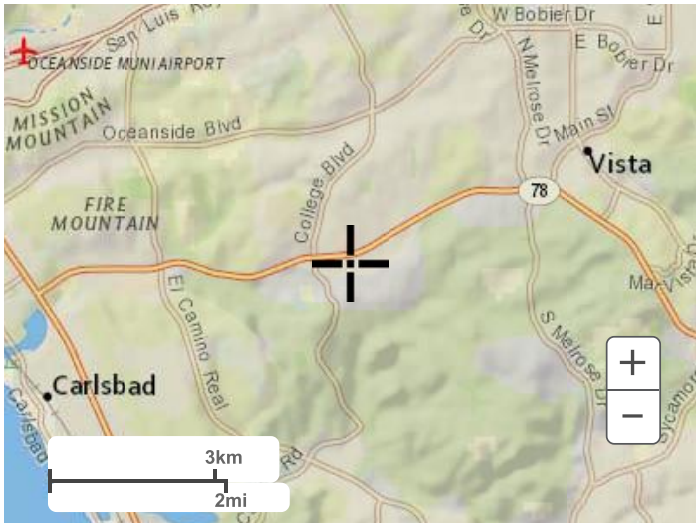
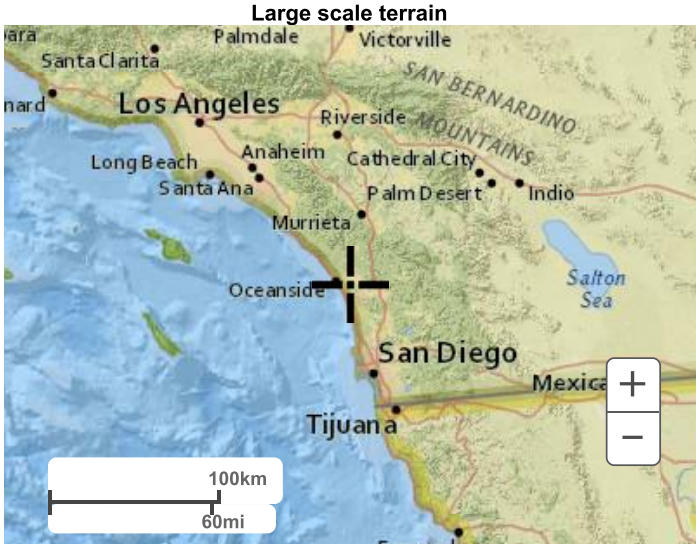
Maps & aerials

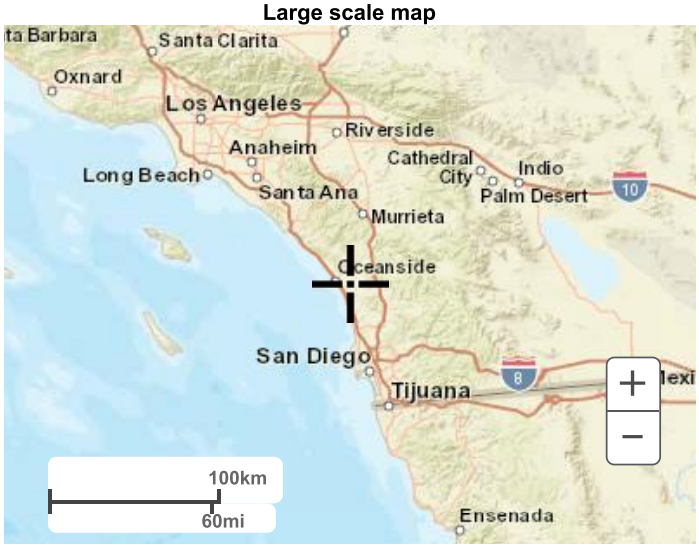
Small scale terrain



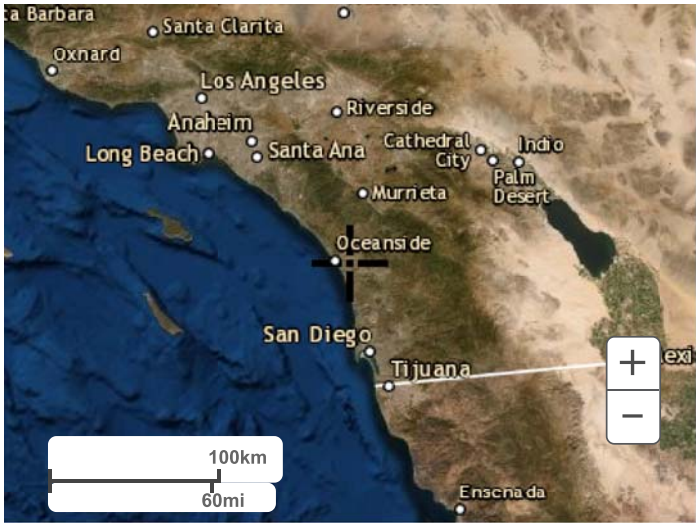
Large scale terrain



Large scale map



Large scale aerial



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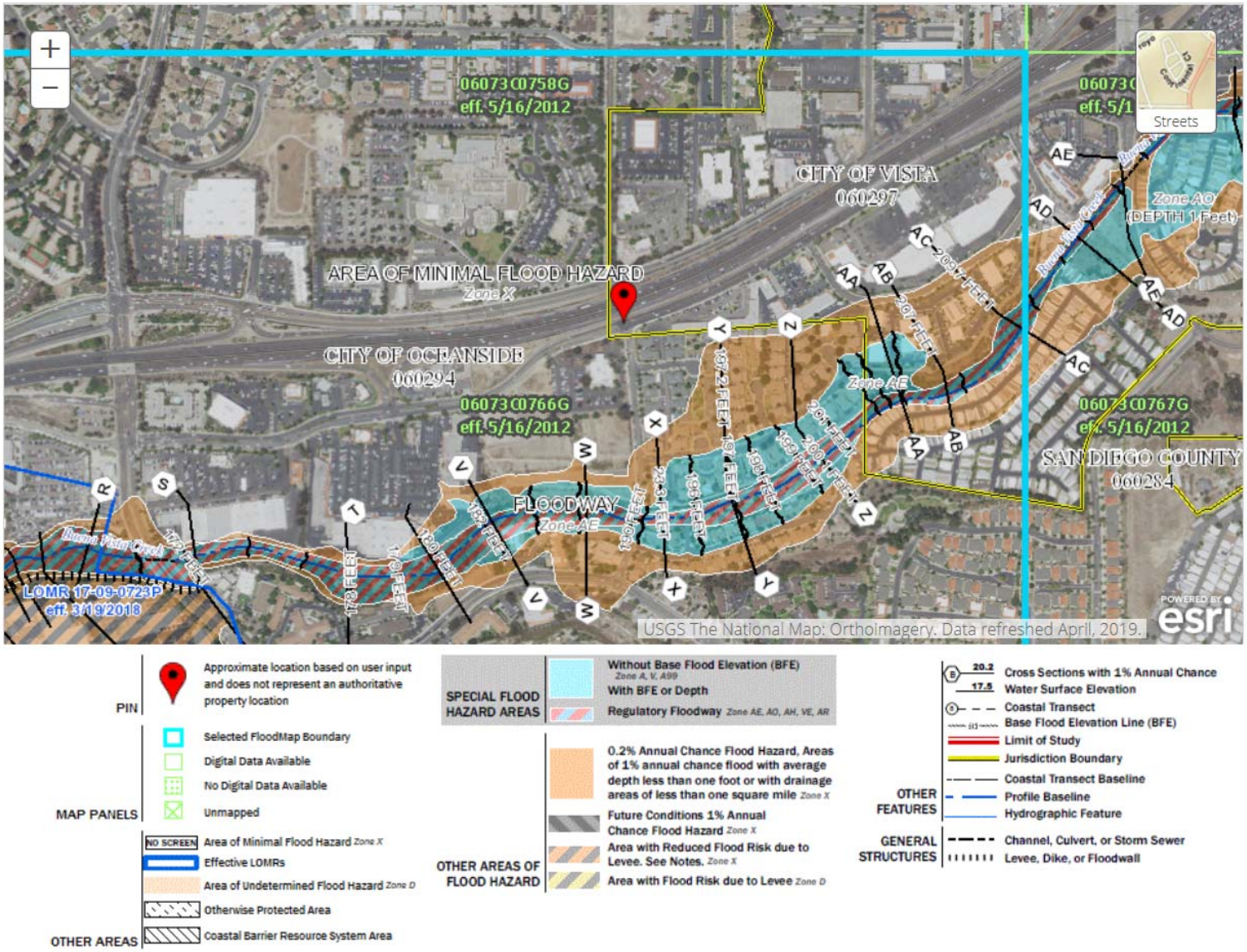
US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

2.3 – FEMA Flood Map

FEMA FLOOD MAP – CARMAX OCEANSIDE



2.4 – Runoff Coefficient Determination

the rainfall intensity, (i) in the equation expressed in inches per hour, requires that the storm duration and the time of concentration (t_c) be equal. Therefore, the first step in estimating (i) is to estimate (t_c). Methods for determining time of concentration are discussed under Index 816.6.

- Once the time of concentration, (t_c), is estimated, the rainfall intensity, (i), corresponding to a storm of equal duration, may be obtained from available sources such as intensity-duration-frequency (IDF) curves. For IDF curve generating software, see http://hdsc.nws.noaa.gov/hdsc/pfds/.

The runoff coefficients given in Figure 819.2A and Table 819.2B are applicable for storms of up to 5 or 10 year frequencies. Less frequent, higher intensity storms usually require modification of the coefficient because infiltration, detention, and other losses have a proportionally smaller effect on the total runoff volume. The adjustment of the rational method for use with major storms can be made by multiplying the coefficient by a frequency factor, C(f). Values of C(f) are given below. Under no circumstances should the product of C(f) times C exceed 1.0.

Frequency (yrs)	C(f)
25	1.1
50	1.2
100	1.25

(2) Regional Analysis Methods. Regional analysis methods utilize records for streams or drainage areas in the vicinity of the stream under consideration which would have similar characteristics to develop peak discharge estimates. These methods provide techniques for estimating annual peak stream discharge at any site, gaged or ungaged, for probability of recurrence from 50 percent (2 years) to 1 percent (100 years). Application of these methods is convenient, but the procedure is subject to some limitations.

Regional Flood - Frequency equations developed by the U.S. Geological Survey for use in California are given in Figure 819.2C and Table 819.7A. These equations are based on regional regression analysis of data from stream gauging stations. The equations in Figure 819.2C were derived from data gathered and analyzed through 2006, while the regions covered by Table 819.7A are reflective of a 1994 study of the Southwestern U.S, which has been supplemented by a more recent 2007 Study of California Desert Region Hydrology. Information on use and development of this method may be found in "Methods for Determining Magnitude and Frequency of Floods in California Based on Data through Water Year 2006" by the U.S. Department of the Interior, Geological Survey.

The Regional Flood-Frequency equations are applicable only to sites within the flood-frequency regions for which they were derived and on streams with virtually natural flows. The equations are not directly applicable to streams in urban areas affected substantially by urban development. In urban areas the equations may be used to estimate peak discharge values under natural conditions and then by use of the techniques described in the publication or HDS No. 2, adjust the discharge values to compensate for urbanization. A method for directly estimating design discharges for some gaged and ungaged streams is also provided in HDS No. 2. The method is applicable to streams on or nearby those for which study data are available.

(3) Flood Frequency Analysis

(a) If there are two gaged sites with similar watershed characteristics but one has a short record and the other has a longer record of peak flows, a two-station comparison analysis can be conducted to extend the equivalent length of record at the shorter gaged site.

(b) Flood-frequency relations at sites near gaged sites on the same stream (or in a similar watershed) can be estimated using a ratio of drainage area for the ungaged and gaged sites.

(c) At a gaged site, weighted estimates of peak discharges based on the station flood-frequency relation and the regional

Figure 819.2A

Runoff Coefficients for Undeveloped Areas

Watershed Types

	Extreme	High	Normal	Low
Relief	.28 -.35 Steep, rugged terrain with average slopes above 30%	.20 -.28 Hilly, with average slopes of 10 to 30%	.14 -.20 Rolling, with average slopes of 5 to 10%	.08 -.14 Relatively flat land, with average slopes of 0 to 5%
Soil Infiltration	.12 -.16 No effective soil cover, either rock or thin soil mantle of negligible infiltration capacity	.08 -.12 Slow to take up water, clay or shallow loam soils of low infiltration capacity, imperfectly or poorly drained	.06 -.08 Normal; well drained light or medium textured soils, sandy loams, silt and silt loams	.04 -.06 High; deep sand or other soil that takes up water readily, very light well drained soils
Vegetal Cover	.12 -.16 No effective plant cover, bare or very sparse cover	.08 -.12 Poor to fair; clean cultivation crops, or poor natural cover, less than 20% of drainage area over good cover	.06 -.08 Fair to good; about 50% of area in good grassland or woodland, not more than 50% of area in cultivated crops	.04 -.06 Good to excellent; about 90% of drainage area in good grassland, woodland or equivalent cover
Surface Storage	.10 -.12 Negligible surface depression few and shallow; drainageways steep and small, no marshes	.08 -.10 Low; well defined system of small drainageways; no ponds or marshes	.06 -.08 Normal; considerable surface depression storage; lakes and pond marshes	.04 -.06 High; surface storage, high; drainage system not sharply defined; large floodplain storage or large number of ponds or marshes
Given	An undeveloped watershed consisting of; 1) rolling terrain with average slopes of 5%, 2) clay type soils, 3) good grassland area, and 4) normal surface depressions.		Solution: Relief 0.14 Soil Infiltration 0.08 Vegetal Cover 0.04 Surface Storage 0.06 C = 0.32	
Find	The runoff coefficient, C, for the above watershed.			

Table 819.2B

Runoff Coefficients for Developed Areas (1)

Type of Drainage Area	Runoff Coefficient
Business:	
Downtown areas	0.70 - 0.95
Neighborhood areas	0.50 - 0.70
Residential:	
Single-family areas	0.30 - 0.50
Multi-units, detached	0.40 - 0.60
Multi-units, attached	0.60 - 0.75
Suburban	0.25 - 0.40
Apartment dwelling areas	0.50 - 0.70
Industrial:	
Light areas	0.50 - 0.80
Heavy areas	0.60 - 0.90
Parks, cemeteries:	0.10 - 0.25
Playgrounds:	0.20 - 0.40
Railroad yard areas:	0.20 - 0.40
Unimproved areas:	0.10 - 0.30
Lawns:	
Sandy soil, flat, 2%	0.05 - 0.10
Sandy soil, average, 2-7%	0.10 - 0.15
Sandy soil, steep, 7%	0.15 - 0.20
Heavy soil, flat, 2%	0.13 - 0.17
Heavy soil, average, 2-7%	0.18 - 0.22
Heavy soil, steep, 7%	0.25 - 0.35
Streets:	
Asphaltic	0.70 - 0.95
Concrete	0.80 - 0.95
Brick	0.70 - 0.85
Drives and walks	0.75 - 0.85
Roofs:	0.75 - 0.95

NOTES:
(1) From HDS No. 2.

regression equations are considered the best estimates of flood frequency and are used to reduce the time-sampling error that may occur in a station flood-frequency estimate.

(d) The flood-frequency flows and the maximum peak discharges at several stations in a region should be used whenever possible for comparison with the peak discharge estimated at an ungaged site using a rainfall-runoff approach or regional regression equation. The watershed characteristics at the ungaged and gaged sites should be similar.

(4) National Resources Conservation Service (NRCS) Methods. The Soil Conservation Service's SCS (former title) National Engineering Handbook, 1972, and their 1975, "Urban Hydrology for Small Watersheds", Technical Release 55 (TR-55), present a graphical method for estimating peak discharge. Most NRCS equations and curves provide results in terms of inches of runoff for unit hydrograph development and are not applicable to the estimation of a peak design discharge unless the design hydrograph is first developed in accordance with prescribed NRCS procedures. NRCS methods and procedures are applicable to drainage areas less than 3 square miles (approx. 2,000 acres) and result in a design hydrograph and design discharge that are functionally acceptable to form the basis for the design of highway drainage facilities.

819.3 Statistical Methods

Statistical methods of predicting stream discharge utilize numerical data to describe the process. Statistical methods, in general, do not require as much subjective judgment to apply as the previously described deterministic methods. They are usually well documented mathematical procedures which are applied to measured or observed data. The accuracy of statistical methods can also be measured quantitatively. However, to assure that statistical method results are valid, the method and procedures used should be verified by an experienced engineer with a thorough knowledge of engineering statistics.

2.5 – Urban Watershed Overland Time of Flow Nomograph

Note that the Initial Time of Concentration should be reflective of the general land-use at the upstream end of a drainage basin. A single lot with an area of two or less acres does not have a significant effect where the drainage basin area is 20 to 600 acres.

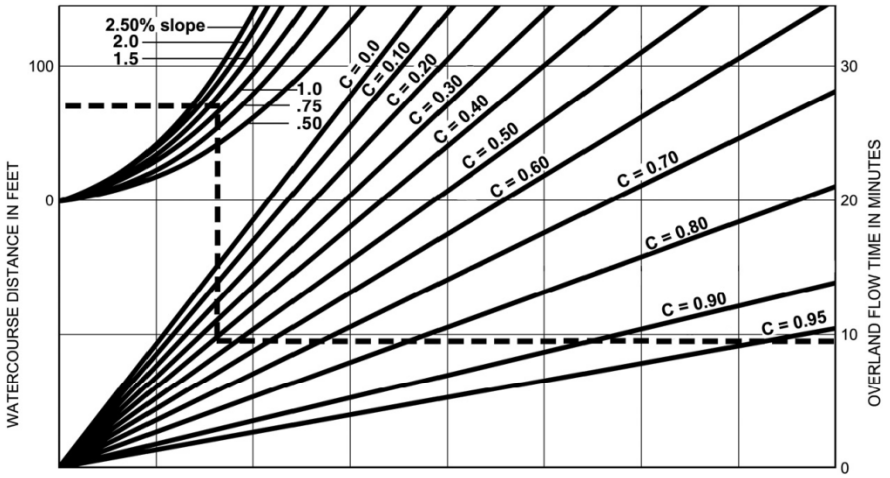
Table 3-2 provides limits of the length (Maximum Length (L_M)) of sheet flow to be used in hydrology studies. Initial T_i values based on average C values for the Land Use Element are also included. These values can be used in planning and design applications as described below. Exceptions may be approved by the "Regulating Agency" when submitted with a detailed study.

Table 3-2

MAXIMUM OVERLAND FLOW LENGTH (L_M)
& INITIAL TIME OF CONCENTRATION (T_i)

Element*	DU/ Acre	.5%		1%		2%		3%		5%		10%	
		L_M	T_i	L_M	T_i	L_M	T_i	L_M	T_i	L_M	T_i	L_M	T_i
Natural		50	13.2	70	12.5	85	10.9	100	10.3	100	8.7	100	6.9
LDR	1	50	12.2	70	11.5	85	10.0	100	9.5	100	8.0	100	6.4
LDR	2	50	11.3	70	10.5	85	9.2	100	8.8	100	7.4	100	5.8
LDR	2.9	50	10.7	70	10.0	85	8.8	95	8.1	100	7.0	100	5.6
MDR	4.3	50	10.2	70	9.6	80	8.1	95	7.8	100	6.7	100	5.3
MDR	7.3	50	9.2	65	8.4	80	7.4	95	7.0	100	6.0	100	4.8
MDR	10.9	50	8.7	65	7.9	80	6.9	90	6.4	100	5.7	100	4.5
MDR	14.5	50	8.2	65	7.4	80	6.5	90	6.0	100	5.4	100	4.3
HDR	24	50	6.7	65	6.1	75	5.1	90	4.9	95	4.3	100	3.5
HDR	43	50	5.3	65	4.7	75	4.0	85	3.8	95	3.4	100	2.7
N. Com		50	5.3	60	4.5	75	4.0	85	3.8	95	3.4	100	2.7
G. Com		50	4.7	60	4.1	75	3.6	85	3.4	90	2.9	100	2.4
O.P./Com		50	4.2	60	3.7	70	3.1	80	2.9	90	2.6	100	2.2
Limited I.		50	4.2	60	3.7	70	3.1	80	2.9	90	2.6	100	2.2
General I.		50	3.7	60	3.2	70	2.7	80	2.6	90	2.3	100	1.9

*See Table 3-1 for more detailed description



EXAMPLE:
Given: Watercourse Distance (D) = 70 Feet
Slope (s) = 1.3%
Runoff Coefficient (C) = 0.41
Overland Flow Time (T) = 9.5 Minutes

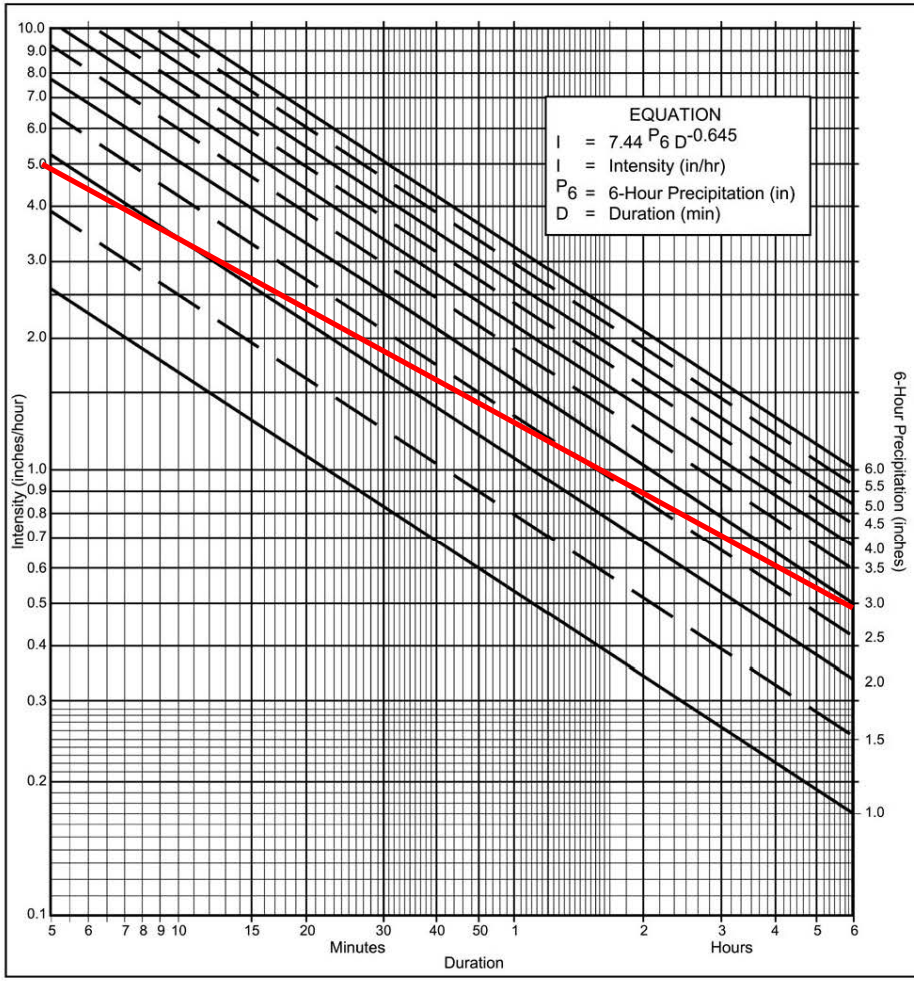
$$T = \frac{1.8\,(1.1-C)\sqrt{D}}{\sqrt[3]{s}}$$

SOURCE: Airport Drainage, Federal Aviation Administration, 1965

Rational Formula - Overland Time of Flow Nomograph

FIGURE
3-3

2.6 – County of San Diego Intensity- Duration Curve



Directions for Application:

(1) From precipitation maps determine 6 hr and 24 hr amounts for the selected frequency. These maps are included in the County Hydrology Manual (10, 50, and 100 yr maps included in the Design and Procedure Manual).

(2) Adjust 6 hr precipitation (if necessary) so that it is within the range of 45% to 65% of the 24 hr precipitation (not applicaple to Desert).

(3) Plot 6 hr precipitation on the right side of the chart.

(4) Draw a line through the point parallel to the plotted lines.

(5) This line is the intensity-duration curve for the location being analyzed.

Application Form:

(a) Selected frequency 100 year

(b) P_6 = 3.02 in., P_{24} = 5.05, $\frac{P_6}{P_{24}}$ = 59.8 %(2)

(c) Adjusted P_6(2) = _____ in.

(d) t_x = _____ min.

(e) I = _____ in./hr.

Note: This chart replaces the Intensity-Duration-Frequency curves used since 1965.

P6	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
Duration	I	I	I	I	I	I	I	I	I	I	I
5	2.63	3.95	5.27	6.59	7.90	9.22	10.54	11.86	13.17	14.49	15.81
7	2.12	3.18	4.24	5.30	6.36	7.42	8.48	9.54	10.60	11.66	12.72
10	1.68	2.53	3.37	4.21	5.05	5.90	6.74	7.58	8.42	9.27	10.11
15	1.30	1.95	2.59	3.24	3.89	4.54	5.19	5.84	6.49	7.13	7.78
20	1.08	1.62	2.15	2.69	3.23	3.77	4.31	4.85	5.39	5.93	6.46
25	0.93	1.40	1.87	2.33	2.80	3.27	3.73	4.20	4.67	5.13	5.60
30	0.83	1.24	1.66	2.07	2.49	2.90	3.32	3.73	4.15	4.56	4.98
40	0.69	1.03	1.38	1.72	2.07	2.41	2.76	3.10	3.45	3.79	4.13
50	0.60	0.90	1.19	1.49	1.79	2.09	2.39	2.69	2.98	3.28	3.58
60	0.53	0.80	1.06	1.33	1.59	1.86	2.12	2.39	2.65	2.92	3.18
90	0.41	0.61	0.82	1.02	1.23	1.43	1.63	1.84	2.04	2.25	2.45
120	0.34	0.51	0.68	0.85	1.02	1.19	1.36	1.53	1.70	1.87	2.04
150	0.29	0.44	0.59	0.73	0.88	1.03	1.18	1.32	1.47	1.62	1.76
180	0.26	0.39	0.52	0.65	0.78	0.91	1.04	1.18	1.31	1.44	1.57
240	0.22	0.33	0.43	0.54	0.65	0.76	0.87	0.98	1.08	1.19	1.30
300	0.19	0.28	0.38	0.47	0.56	0.66	0.75	0.85	0.94	1.03	1.13
360	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75	0.84	0.92	1.00

Intensity-Duration Design Chart - Template

FIGURE 3-1

2.7 – Model Development Summary (from County of San Diego Hydrology Manual)

3.2 DEVELOPING INPUT DATA FOR THE RATIONAL METHOD

This section describes the development of the necessary data to perform RM calculations. Section 3.3 describes the RM calculation process. Input data for calculating peak flows and T_c's with the RM should be developed as follows:

1. On a topographic base map, outline the overall drainage area boundary, showing adjacent drains, existing and proposed drains, and overland flow paths.

2. Verify the accuracy of the drainage map in the field.

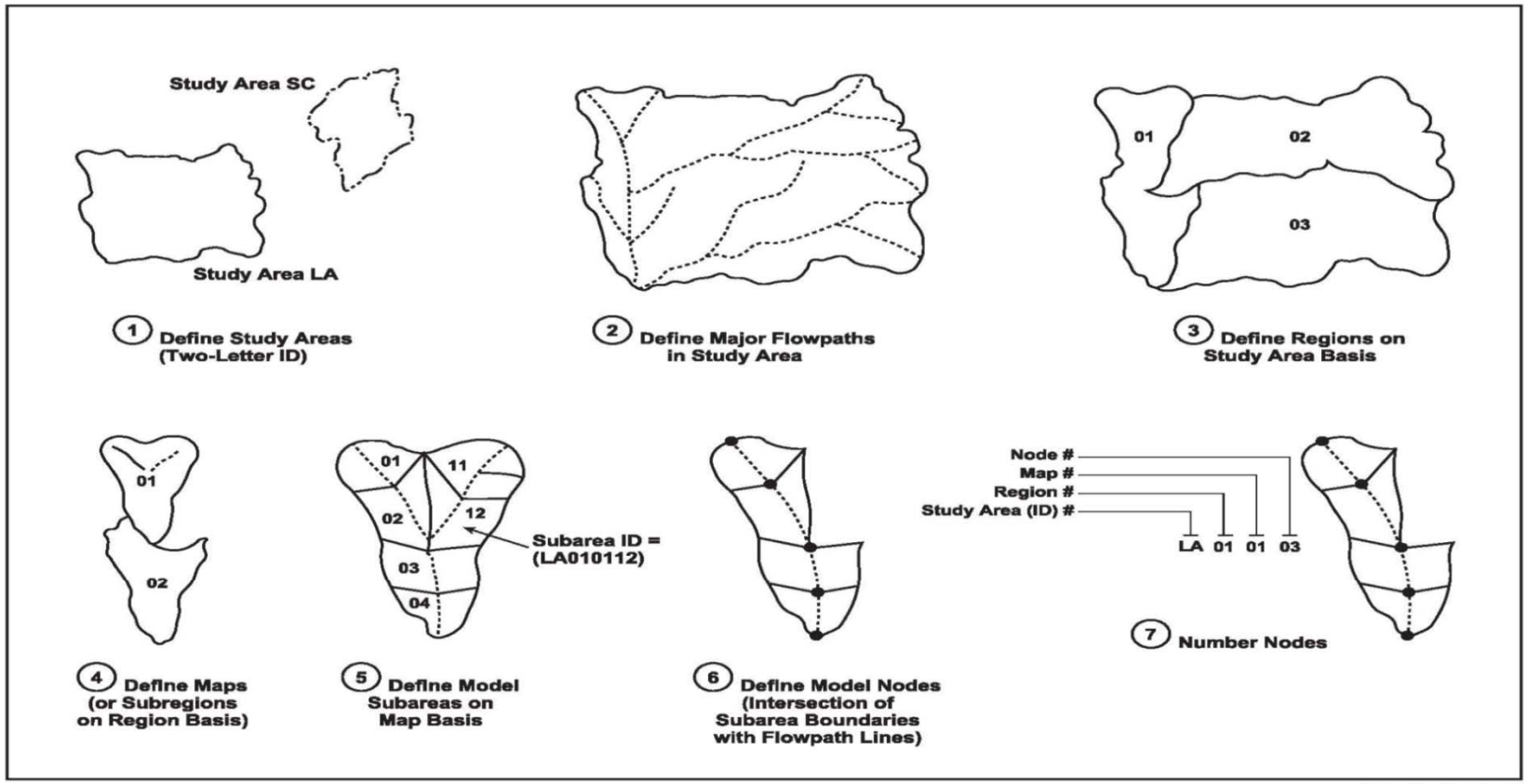
3. Divide the drainage area into subareas by locating significant points of interest. These divisions should be based on topography, soil type, and land use. Ensure that an appropriate first subarea is delineated. For natural areas, the first subarea flow path length should be less than or equal to 4,000 feet plus the overland flow length (Table 3-2). For developed areas, the initial subarea flow path length should be consistent with Table 3-2. The topography and slope within the initial subarea should be generally uniform.

4. Working from upstream to downstream, assign a number representing each subarea in the drainage system to each point of interest. Figure 3-8 provides guidelines for node numbers for geographic information system (GIS)-based studies.

5. Measure each subarea in the drainage area to determine its size in acres (A).

6. Determine the length and effective slope of the flow path in each subarea.

7. Identify the soil type for each subarea.



GIS/Hydrologic Model
Data Base Linkage Setup:
Nodes, Subareas, Links

FIGURE
3-8

8. Determine the runoff coefficient (C) for each subarea based on Table 3-1. If the subarea contains more than one type of development classification, use a proportionate average for C. In determining C for the subarea, use future land use taken from the applicable community plan, Multiple Species Conservation Plan, National Forest land use plan, etc.

9. Calculate the CA value for the subarea.

10. Calculate the Σ(CA) value(s) for the subareas upstream of the point(s) of interest.

11. Determine P_6 and P_{24} for the study using the isopluvial maps provided in Appendix B. If necessary, adjust the value for P_6 to be within 45% to 65% of the value for P_{24}.

See Section 3.3 for a description of the RM calculation process.

3.3 Performing Rational Method Calculations

This section describes the RM calculation process. Using the input data, calculation of peak flows and T_c's should be performed as follows:

1. Determine T_i for the first subarea. Use Table 3-2 or Figure 3-3 as discussed in Section 3.1.4. If the watershed is natural, the travel time to the downstream end of the first subarea can be added to T_i to obtain the T_c. Refer to paragraph 3.1.4.2 (a).

2. Determine I for the subarea using Figure 3-1. If T_i was less than 5 minutes, use the 5 minute time to determine intensity for calculating the flow.

3. Calculate the peak discharge flow rate for the subarea, where $Q_p = \Sigma(CA)\, I$.
In case that the downstream flow rate is less than the upstream flow rate, due to the long travel time that is not offset by the additional subarea runoff, use the upstream peak flow for design purposes until downstream flows increase again.

4. Estimate the T_t to the next point of interest.

5. Add the T_t to the previous T_c to obtain a new T_c.

6. Continue with step 2, above, until the final point of interest is reached.

Note: The MRM should be used to calculate the peak discharge when there is a junction from independent subareas into the drainage system.

3.4 MODIFIED RATIONAL METHOD (FOR JUNCTION ANALYSIS)

The purpose of this section is to describe the steps necessary to develop a hydrology report for a small watershed using the MRM. It is necessary to use the MRM if the watershed contains junctions of independent drainage systems. The process is based on the design manuals of the City/County of San Diego. The general process description for using this method, including an example of the application of this method, is described below.

The engineer should only use the MRM for drainage areas up to approximately 1 square mile in size. If the watershed will significantly exceed 1 square mile then the NRCS method described in Section 4 should be used. The engineer may choose to use either the RM or the MRM for calculations for up to an approximately 1-square-mile area and then transition the study to the NRCS method for additional downstream areas that exceed approximately 1 square mile. The transition process is described in Section 4.

3.4.1 Modified Rational Method General Process Description

The general process for the MRM differs from the RM only when a junction of independent drainage systems is reached. The peak Q, T_c, and I for each of the independent drainage systems at the point of the junction are calculated by the RM. The independent drainage systems are then combined using the MRM procedure described below. The peak Q, T_c, and I for each of the independent drainage systems at the point of the junction must be calculated prior to using the MRM procedure to combine the independent drainage systems, as these

values will be used for the MRM calculations. After the independent drainage systems have been combined, RM calculations are continued to the next point of interest.

3.4.2 Procedure for Combining Independent Drainage Systems at a Junction

Calculate the peak Q, T_c, and I for each of the independent drainage systems at the point of the junction. These values will be used for the MRM calculations.

At the junction of two or more independent drainage systems, the respective peak flows are combined to obtain the maximum flow out of the junction at T_c. Based on the approximation that total runoff increases directly in proportion to time, a general equation may be written to determine the maximum Q and its corresponding T_c using the peak Q, T_c, and I for each of the independent drainage systems at the point immediately before the junction. The general equation requires that contributing Q's be numbered in order of increasing T_c.

Let Q_1, T_1, and I_1 correspond to the tributary area with the shortest T_c. Likewise, let Q_2, T_2, and I_2 correspond to the tributary area with the next longer T_c; Q_3, T_3, and I_3 correspond to the tributary area with the next longer T_c; and so on. When only two independent drainage systems are combined, leave Q_3, T_3, and I_3 out of the equation. Combine the independent drainage systems using the junction equation below:

Junction Equation: $T_1 < T_2 < T_3$

$$Q_{T1} = Q_1 + \frac{T_1}{T_2} Q_2 + \frac{T_1}{T_3} Q_3$$

$$Q_{T2} = Q_2 + \frac{I_2}{I_1} Q_1 + \frac{T_2}{T_3} Q_3$$

$$Q_{T3} = Q_3 + \frac{I_3}{I_1} Q_1 + \frac{I_3}{I_2} Q_2$$

Calculate Q_{T1}, Q_{T2}, and Q_{T3}. Select the largest Q and use the T_c associated with that Q for further calculations (see the three Notes for options). If the largest calculated Q's are equal (e.g., $Q_{T1} = Q_{T2} > Q_{T3}$), use the shorter of the T_c's associated with that Q.

This equation may be expanded for a junction of more than three independent drainage systems using the same concept. The concept is that when Q from a selected subarea (e.g., Q_2) is combined with Q from another subarea with a shorter T_c (e.g., Q_1), the Q from the subarea with the shorter T_c is reduced by the ratio of the I's (I_2/I_1); and when Q from a selected subarea (e.g., Q_2) is combined with Q from another subarea with a longer T_c (e.g., Q_3), the Q from the subarea with the longer T_c is reduced by the ratio of the T_c's (T_2/T_3).

Note #1: At a junction of two independent drainage systems that have the same T_c, the tributary flows may be added to obtain the Q_p.

$$Q_p = Q_1 + Q_2 \text{; when } T_1 = T_2 \text{; and } T_c = T_1 = T_2$$

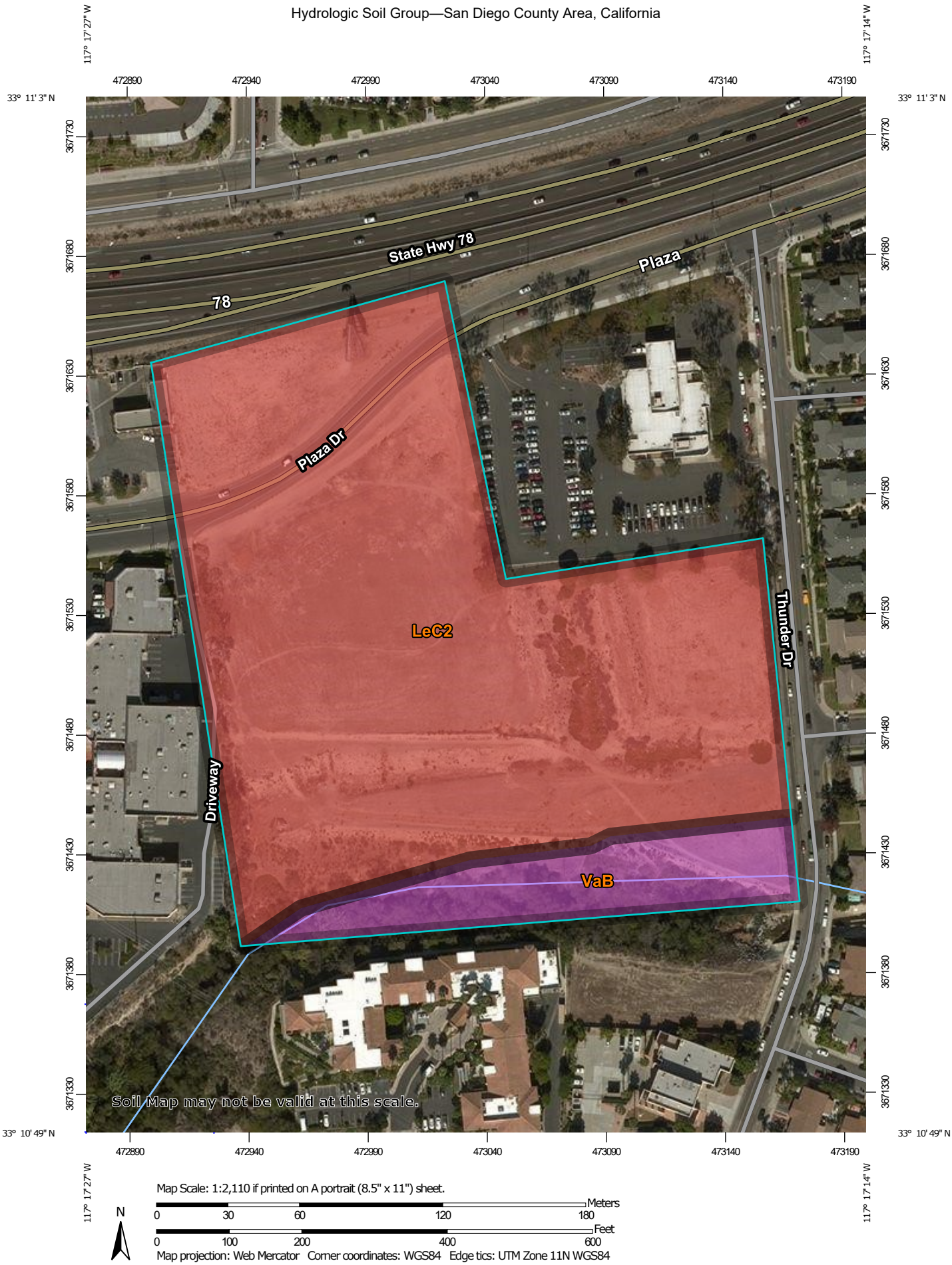
This can be verified by using the junction equation above. Let Q_3, T_3, and $I_3 = 0$. When T_1 and T_2 are the same, I_1 and I_2 are also the same, and T_1/T_2 and $I_2/I_1 = 1$. T_1/T_2 and I_2/I_1 are cancelled from the equations. At this point, $Q_{T1} = Q_{T2} = Q_1 + Q_2$.

Note #2: In the upstream part of a watershed, a conservative computation is acceptable. When the times of concentration (T_c's) are relatively close in magnitude (within 10%), use the shorter T_c for the intensity and the equation $Q = \Sigma(CA)I$.

Note #3: . An optional method of determining the T_c is to use the equation
$T_c = [(\Sigma (CA)7.44\ P_6)/Q]^{1.55}$

This equation is from $Q = \Sigma(CA)I = \Sigma(CA)(7.44\ P_6/T_c^{.645})$ and solving for T_c. The advantage in this option is that the T_c is consistent with the peak flow Q, and avoids inappropriate fluctuation in downstream flows in some cases.

2.8 – Soil Type Map



Map Scale: 1:2,110 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Diego County Area, California
Survey Area Data: Version 14, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 3, 2014—Nov 22, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
LeC2	Las Flores loamy fine sand, 5 to 9 percent slopes, eroded	D	10.9	87.8%
VaB	Visalia sandy loam, 2 to 5 percent slopes	A	1.5	12.2%
Totals for Area of Interest			**12.4**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

CHAPTER 3 - 100 YEAR HYDROLOGIC ANALYSIS FOR EXISTING CONDITIONS

```
******************************************************************************

            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            Reference: SAN DIEGO COUNTY FLOOD CONTROL DISTRICT
                         2003,1985,1981 HYDROLOGY MANUAL
          (c) Copyright 1982-2015 Advanced Engineering Software (aes)
              Ver. 22.0 Release Date: 07/01/2015  License ID 1643

                              Analysis prepared by:

                                   REC Consultants
                                   2442 Second St.
                                 San Diego, Ca 92101


 ************************* DESCRIPTION OF STUDY *************************
* EXISTING CONDITIONS HYDROLOGY                                         *
* 100 YEAR STORM                                                        *
* CARMAX OCEANSIDE                                                      *
 ************************************************************************

  FILE NAME: 1492PRE.DAT
  TIME/DATE OF STUDY: 12:52 02/27/2020
------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
------------------------------------------------------------------------
  2003 SAN DIEGO MANUAL CRITERIA

  USER SPECIFIED STORM EVENT(YEAR) = 100.00
  6-HOUR DURATION PRECIPITATION (INCHES) =   3.020
  SPECIFIED MINIMUM PIPE SIZE(INCH) =   6.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  SAN DIEGO HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: USE MODIFIED RATIONAL METHOD PROCEDURES FOR CONFLUENCE ANALYSIS
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

******************************************************************************
  FLOW PROCESS FROM NODE      1.00 TO NODE      2.00 IS CODE =  21
------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==============================================================================
  *USER SPECIFIED(SUBAREA):
  NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    219.53
  DOWNSTREAM ELEVATION(FEET) =    218.27
  ELEVATION DIFFERENCE(FEET) =      1.26
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    6.304
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
```

```
          THE MAXIMUM OVERLAND FLOW LENGTH =    73.90
          (Reference: Table 3-1B of Hydrology Manual)
          THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.852
 SUBAREA RUNOFF(CFS) =      0.41
 TOTAL AREA(ACRES) =      0.09   TOTAL RUNOFF(CFS) =      0.41

****************************************************************************
 FLOW PROCESS FROM NODE      2.00 TO NODE   1000.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    218.27  DOWNSTREAM(FEET) =    208.26
 CHANNEL LENGTH THRU SUBAREA(FEET) =   316.00   CHANNEL SLOPE =  0.0317
 CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   5.000
 MANNING'S FACTOR = 0.035   MAXIMUM DEPTH(FEET) =   2.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  5.373
 *USER SPECIFIED(SUBAREA):
 NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .6600
 S.C.S. CURVE NUMBER (AMC II) =   0
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       2.42
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   1.82
 AVERAGE FLOW DEPTH(FEET) =   0.12   TRAVEL TIME(MIN.) =   2.89
 Tc(MIN.) =    9.19
 SUBAREA AREA(ACRES) =     1.12       SUBAREA RUNOFF(CFS) =    3.97
 AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
 TOTAL AREA(ACRES) =        1.2         PEAK FLOW RATE(CFS) =       4.29

 END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) =  0.18   FLOW VELOCITY(FEET/SEC.) =   2.21
 LONGEST FLOWPATH FROM NODE      1.00 TO NODE   1000.00 =     416.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =    9.19
 RAINFALL INTENSITY(INCH/HR) =   5.37
 TOTAL STREAM AREA(ACRES) =     1.21
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      4.29

****************************************************************************
 FLOW PROCESS FROM NODE      3.00 TO NODE      4.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
 *USER SPECIFIED(SUBAREA):
 STREETS & ROADS (CURBS/STORM DRAINS) RUNOFF COEFFICIENT = .6600
 S.C.S. CURVE NUMBER (AMC II) =   0
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
 UPSTREAM ELEVATION(FEET) =    220.30
 DOWNSTREAM ELEVATION(FEET) =    219.53
 ELEVATION DIFFERENCE(FEET) =      0.77
 SUBAREA OVERLAND TIME OF FLOW(MIN.) =    6.432
 WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
          THE MAXIMUM OVERLAND FLOW LENGTH =    55.40
          (Reference: Table 3-1B of Hydrology Manual)
          THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.764
```

```
  SUBAREA RUNOFF(CFS) =      0.27
  TOTAL AREA(ACRES) =      0.06   TOTAL RUNOFF(CFS) =      0.27

****************************************************************************
  FLOW PROCESS FROM NODE      4.00 TO NODE   1000.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  219.53  DOWNSTREAM ELEVATION(FEET) =  208.26
  STREET LENGTH(FEET) =   358.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.60
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.85
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.76
  STREET FLOW TRAVEL TIME(MIN.) =   1.55   Tc(MIN.) =    7.98
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  5.885
  *USER SPECIFIED(SUBAREA):
  STREETS & ROADS (CURBS/STORM DRAINS) RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
  SUBAREA AREA(ACRES) =    0.17      SUBAREA RUNOFF(CFS) =    0.66
  TOTAL AREA(ACRES) =        0.2        PEAK FLOW RATE(CFS) =       0.89

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.20   HALFSTREET FLOOD WIDTH(FEET) =   2.00
  FLOW VELOCITY(FEET/SEC.) =  3.85   DEPTH*VELOCITY(FT*FT/SEC.) =   0.76
  LONGEST FLOWPATH FROM NODE      3.00 TO NODE   1000.00 =     458.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    7.98
  RAINFALL INTENSITY(INCH/HR) =   5.89
  TOTAL STREAM AREA(ACRES) =     0.23
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      0.89

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1        4.29     9.19        5.373          1.21
      2        0.89     7.98        5.885          0.23

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.
```

```
  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1        4.62     7.98       5.885
      2        5.11     9.19       5.373

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =       5.11   Tc(MIN.) =    9.19
  TOTAL AREA(ACRES) =        1.4
  LONGEST FLOWPATH FROM NODE      3.00 TO NODE   1000.00 =     458.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      3.00 TO NODE      5.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  STREETS & ROADS (CURBS/STORM DRAINS) RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    220.30
  DOWNSTREAM ELEVATION(FEET) =    219.40
  ELEVATION DIFFERENCE(FEET) =      0.90
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    6.247
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    58.00
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.892
  SUBAREA RUNOFF(CFS) =      0.23
  TOTAL AREA(ACRES) =      0.05   TOTAL RUNOFF(CFS) =      0.23

****************************************************************************
  FLOW PROCESS FROM NODE      5.00 TO NODE   2000.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  219.40  DOWNSTREAM ELEVATION(FEET) =  207.14
  STREET LENGTH(FEET) =   379.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.54
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.91
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.77
  STREET FLOW TRAVEL TIME(MIN.) =   1.62   Tc(MIN.) =    7.86
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  5.941
  *USER SPECIFIED(SUBAREA):
  STREETS & ROADS (CURBS/STORM DRAINS) RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
```

```
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
  SUBAREA AREA(ACRES) =    0.16      SUBAREA RUNOFF(CFS) =    0.63
  TOTAL AREA(ACRES) =        0.2        PEAK FLOW RATE(CFS) =       0.82

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.20   HALFSTREET FLOOD WIDTH(FEET) =   2.00
  FLOW VELOCITY(FEET/SEC.) =  3.91   DEPTH*VELOCITY(FT*FT/SEC.) =   0.77
  LONGEST FLOWPATH FROM NODE      3.00 TO NODE   2000.00 =     479.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      6.00 TO NODE      7.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    205.58
  DOWNSTREAM ELEVATION(FEET) =    202.68
  ELEVATION DIFFERENCE(FEET) =      2.90
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    5.512
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    98.50
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.472
  SUBAREA RUNOFF(CFS) =      0.99
  TOTAL AREA(ACRES) =      0.20   TOTAL RUNOFF(CFS) =      0.99

****************************************************************************
  FLOW PROCESS FROM NODE      7.00 TO NODE   3000.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    202.68  DOWNSTREAM(FEET) =    183.54
  CHANNEL LENGTH THRU SUBAREA(FEET) =   783.00   CHANNEL SLOPE =  0.0244
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   3.000
  MANNING'S FACTOR = 0.035   MAXIMUM DEPTH(FEET) =   2.00
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  5.221
  *USER SPECIFIED(SUBAREA):
  NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      12.83
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   3.18
  AVERAGE FLOW DEPTH(FEET) =   0.36   TRAVEL TIME(MIN.) =   4.10
  Tc(MIN.) =    9.61
  SUBAREA AREA(ACRES) =     6.69       SUBAREA RUNOFF(CFS) =   23.05
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
  TOTAL AREA(ACRES) =        6.9         PEAK FLOW RATE(CFS) =      23.74

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.52   FLOW VELOCITY(FEET/SEC.) =   3.92
  LONGEST FLOWPATH FROM NODE      6.00 TO NODE   3000.00 =     883.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      6.00 TO NODE      8.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .6600
```

```
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    205.58
  DOWNSTREAM ELEVATION(FEET) =    203.28
  ELEVATION DIFFERENCE(FEET) =      2.30
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    5.676
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    89.50
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.332
  SUBAREA RUNOFF(CFS) =      0.53
  TOTAL AREA(ACRES) =      0.11   TOTAL RUNOFF(CFS) =      0.53

****************************************************************************
  FLOW PROCESS FROM NODE      8.00 TO NODE   4000.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    203.28  DOWNSTREAM(FEET) =    197.78
  CHANNEL LENGTH THRU SUBAREA(FEET) =   155.00   CHANNEL SLOPE =  0.0355
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   3.000
  MANNING'S FACTOR = 0.035   MAXIMUM DEPTH(FEET) =   2.00
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.020
  *USER SPECIFIED(SUBAREA):
  NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.85
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   1.27
  AVERAGE FLOW DEPTH(FEET) =   0.07   TRAVEL TIME(MIN.) =   2.03
  Tc(MIN.) =    7.71
  SUBAREA AREA(ACRES) =     0.16       SUBAREA RUNOFF(CFS) =    0.64
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
  TOTAL AREA(ACRES) =        0.3         PEAK FLOW RATE(CFS) =       1.07

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.07   FLOW VELOCITY(FEET/SEC.) =   1.43
  LONGEST FLOWPATH FROM NODE      6.00 TO NODE   4000.00 =     255.00 FEET.
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        0.3  TC(MIN.) =      7.71
  PEAK FLOW RATE(CFS)   =       1.07
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

CHAPTER 4 - 100 YEAR HYDROLOGIC ANALYSIS FOR DEVELOPED CONDITIONS - UNMITIGATED

```
**************************************************************************

            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            Reference: SAN DIEGO COUNTY FLOOD CONTROL DISTRICT
                         2003,1985,1981 HYDROLOGY MANUAL
          (c) Copyright 1982-2015 Advanced Engineering Software (aes)
              Ver. 22.0 Release Date: 07/01/2015  License ID 1643

                            Analysis prepared by:


                                      ←


 ************************* DESCRIPTION OF STUDY *************************
* PROPOSED CONDITIONS - UNMITIGATED HYDROLOGY                            *
* 100 YEAR STORM                                                        *
* CARMAX OCEANSIDE                                                      *
 ************************************************************************

  FILE NAME: 1492PSTU.DAT
  TIME/DATE OF STUDY: 15:18 02/27/2020
------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
------------------------------------------------------------------------
  2003 SAN DIEGO MANUAL CRITERIA

  USER SPECIFIED STORM EVENT(YEAR) = 100.00
  6-HOUR DURATION PRECIPITATION (INCHES) =   3.020
  SPECIFIED MINIMUM PIPE SIZE(INCH) =   6.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  SAN DIEGO HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: USE MODIFIED RATIONAL METHOD PROCEDURES FOR CONFLUENCE ANALYSIS
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

+------------------------------------------------------------------------+
| NODES 1 TO 1000 REPRESENT TRIBUTARY FLOWS TO POC-1.                    |
|                                                                        |
|                                                                        |
+------------------------------------------------------------------------+

**************************************************************************
  FLOW PROCESS FROM NODE      1.00 TO NODE      2.00 IS CODE =  21
------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
========================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
```

```
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    216.88
  DOWNSTREAM ELEVATION(FEET) =    214.07
  ELEVATION DIFFERENCE(FEET) =      2.81
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    5.116
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    83.10
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.840
  SUBAREA RUNOFF(CFS) =      1.03
  TOTAL AREA(ACRES) =      0.20   TOTAL RUNOFF(CFS) =      1.03

****************************************************************************
  FLOW PROCESS FROM NODE      2.00 TO NODE      3.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  214.07  DOWNSTREAM ELEVATION(FEET) =  210.04
  STREET LENGTH(FEET) =   116.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       1.88
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.21
    HALFSTREET FLOOD WIDTH(FEET) =    2.66
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.67
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.77
  STREET FLOW TRAVEL TIME(MIN.) =   0.53   Tc(MIN.) =    5.64
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.359
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
  SUBAREA AREA(ACRES) =    0.35      SUBAREA RUNOFF(CFS) =    1.70
  TOTAL AREA(ACRES) =        0.6        PEAK FLOW RATE(CFS) =       2.67

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.25   HALFSTREET FLOOD WIDTH(FEET) =   4.72
  FLOW VELOCITY(FEET/SEC.) =  3.40   DEPTH*VELOCITY(FT*FT/SEC.) =   0.84
  LONGEST FLOWPATH FROM NODE      1.00 TO NODE      3.00 =     216.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      3.00 TO NODE   1000.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   210.04  DOWNSTREAM(FEET) =   208.26
  FLOW LENGTH(FEET) =    28.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN   9.0 INCH PIPE IS   5.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.81
  ESTIMATED PIPE DIAMETER(INCH) =   9.00    NUMBER OF PIPES =   1
```

```
  PIPE-FLOW(CFS) =       2.67
  PIPE TRAVEL TIME(MIN.) =   0.05    Tc(MIN.) =    5.69
  LONGEST FLOWPATH FROM NODE      1.00 TO NODE   1000.00 =     244.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  4
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    5.69
  RAINFALL INTENSITY(INCH/HR) =   7.32
  TOTAL STREAM AREA(ACRES) =     0.55
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      2.67

****************************************************************************
  FLOW PROCESS FROM NODE      5.00 TO NODE      7.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    218.65
  DOWNSTREAM ELEVATION(FEET) =    217.54
  ELEVATION DIFFERENCE(FEET) =      1.11
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    6.006
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    61.65
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.070
  SUBAREA RUNOFF(CFS) =      0.37
  TOTAL AREA(ACRES) =      0.08   TOTAL RUNOFF(CFS) =      0.37

****************************************************************************
  FLOW PROCESS FROM NODE      7.00 TO NODE   1000.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  217.54  DOWNSTREAM ELEVATION(FEET) =  208.26
  STREET LENGTH(FEET) =   448.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       1.34
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.12
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.62
  STREET FLOW TRAVEL TIME(MIN.) =   2.39   Tc(MIN.) =    8.40
```

```
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  5.696
 *USER SPECIFIED(SUBAREA):
 GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
 S.C.S. CURVE NUMBER (AMC II) =   0
 AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
 SUBAREA AREA(ACRES) =    0.53      SUBAREA RUNOFF(CFS) =    1.99
 TOTAL AREA(ACRES) =        0.6        PEAK FLOW RATE(CFS) =       2.29

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.26   HALFSTREET FLOOD WIDTH(FEET) =   5.22
 FLOW VELOCITY(FEET/SEC.) =  2.62   DEPTH*VELOCITY(FT*FT/SEC.) =   0.67
 LONGEST FLOWPATH FROM NODE      5.00 TO NODE   1000.00 =     548.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  4
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =    8.40
 RAINFALL INTENSITY(INCH/HR) =   5.70
 TOTAL STREAM AREA(ACRES) =     0.61
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      2.29

****************************************************************************
 FLOW PROCESS FROM NODE     50.00 TO NODE      8.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
 *USER SPECIFIED(SUBAREA):
 GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
 S.C.S. CURVE NUMBER (AMC II) =   0
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
 UPSTREAM ELEVATION(FEET) =    220.30
 DOWNSTREAM ELEVATION(FEET) =    219.54
 ELEVATION DIFFERENCE(FEET) =      0.76
 SUBAREA OVERLAND TIME OF FLOW(MIN.) =    6.448
 WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
          THE MAXIMUM OVERLAND FLOW LENGTH =    55.20
          (Reference: Table 3-1B of Hydrology Manual)
          THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.753
 SUBAREA RUNOFF(CFS) =      0.27
 TOTAL AREA(ACRES) =      0.06   TOTAL RUNOFF(CFS) =      0.27

****************************************************************************
 FLOW PROCESS FROM NODE      8.00 TO NODE   1000.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) =  219.54  DOWNSTREAM ELEVATION(FEET) =  208.26
 STREET LENGTH(FEET) =   264.00   CURB HEIGHT(INCHES) =  8.0
 STREET HALFWIDTH(FEET) = 30.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.018
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
```

```
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.70
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.49
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.89
  STREET FLOW TRAVEL TIME(MIN.) =   0.98   Tc(MIN.) =    7.43
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.164
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .8200
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.778
  SUBAREA AREA(ACRES) =    0.17      SUBAREA RUNOFF(CFS) =    0.86
  TOTAL AREA(ACRES) =        0.2        PEAK FLOW RATE(CFS) =       1.10

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.20   HALFSTREET FLOOD WIDTH(FEET) =   2.00
  FLOW VELOCITY(FEET/SEC.) =  4.49   DEPTH*VELOCITY(FT*FT/SEC.) =   0.89
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE   1000.00 =     364.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  4
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  3 ARE:
  TIME OF CONCENTRATION(MIN.) =    7.43
  RAINFALL INTENSITY(INCH/HR) =   6.16
  TOTAL STREAM AREA(ACRES) =     0.23
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      1.10

****************************************************************************
  FLOW PROCESS FROM NODE      5.00 TO NODE      6.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    218.65
  DOWNSTREAM ELEVATION(FEET) =    213.74
  ELEVATION DIFFERENCE(FEET) =      4.91
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    4.415
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    89.77
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      0.11
  TOTAL AREA(ACRES) =      0.02   TOTAL RUNOFF(CFS) =      0.11

****************************************************************************
  FLOW PROCESS FROM NODE      6.00 TO NODE   1000.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    213.74  DOWNSTREAM(FEET) =    208.26
```

```
  CHANNEL LENGTH THRU SUBAREA(FEET) =     0.03   CHANNEL SLOPE = *******
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.015   MAXIMUM DEPTH(FEET) =   1.00
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.18
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =  38.18
  AVERAGE FLOW DEPTH(FEET) =   0.00   TRAVEL TIME(MIN.) =   0.00
  Tc(MIN.) =    4.42
  SUBAREA AREA(ACRES) =     0.03       SUBAREA RUNOFF(CFS) =    0.16
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
  TOTAL AREA(ACRES) =        0.0         PEAK FLOW RATE(CFS) =       0.26

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.00   FLOW VELOCITY(FEET/SEC.) =  54.55
  LONGEST FLOWPATH FROM NODE      5.00 TO NODE   1000.00 =     100.03 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  4
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  4 ARE:
  TIME OF CONCENTRATION(MIN.) =    4.42
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     0.05
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      0.26

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1        2.67     5.69        7.319          0.55
      2        2.29     8.40        5.696          0.61
      3        1.10     7.43        6.164          0.23
      4        0.26     4.42        7.957          0.05

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  4 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1        4.20     4.42       7.957
      2        5.31     5.69       7.319
      3        5.59     7.43       6.164
      4        5.58     8.40       5.696

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =       5.59   Tc(MIN.) =    7.43
  TOTAL AREA(ACRES) =        1.4
  LONGEST FLOWPATH FROM NODE      5.00 TO NODE   1000.00 =     548.00 FEET.

+----------------------------------------------------------------------------+
| NODES 50 TO 2000 REPRESENT TRIBUTARY FLOWS TO POC-2.                       |
|                                                                            |
|                                                                            |
+----------------------------------------------------------------------------+
```

```
****************************************************************************
  FLOW PROCESS FROM NODE     50.00 TO NODE     51.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .8200
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =    83.00
  UPSTREAM ELEVATION(FEET) =    220.30
  DOWNSTREAM ELEVATION(FEET) =    219.26
  ELEVATION DIFFERENCE(FEET) =      1.04
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    3.734
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    63.80
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      0.39
  TOTAL AREA(ACRES) =      0.06   TOTAL RUNOFF(CFS) =      0.39

****************************************************************************
  FLOW PROCESS FROM NODE     51.00 TO NODE   2000.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  219.26  DOWNSTREAM ELEVATION(FEET) =  207.14
  STREET LENGTH(FEET) =   400.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       1.28
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.78
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.75
  STREET FLOW TRAVEL TIME(MIN.) =   1.76   Tc(MIN.) =    5.50
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.484
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .8200
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.820
  SUBAREA AREA(ACRES) =    0.29      SUBAREA RUNOFF(CFS) =    1.78
  TOTAL AREA(ACRES) =        0.3        PEAK FLOW RATE(CFS) =       2.15

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.23   HALFSTREET FLOOD WIDTH(FEET) =   4.03
  FLOW VELOCITY(FEET/SEC.) =  3.17   DEPTH*VELOCITY(FT*FT/SEC.) =   0.74
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE   2000.00 =     483.00 FEET.

+--------------------------------------------------------------------------+
| NODES 52 TO 3000 REPRESENT FLOWS TO POC-3.                               |
```

```
|                                                                            |
|                                                                            |
+----------------------------------------------------------------------------+

****************************************************************************
  FLOW PROCESS FROM NODE     52.00 TO NODE     53.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =    88.00
  UPSTREAM ELEVATION(FEET) =    220.18
  DOWNSTREAM ELEVATION(FEET) =    213.04
  ELEVATION DIFFERENCE(FEET) =      7.14
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.345
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      0.82
  TOTAL AREA(ACRES) =      0.11   TOTAL RUNOFF(CFS) =      0.82

****************************************************************************
  FLOW PROCESS FROM NODE     53.00 TO NODE     54.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  213.04  DOWNSTREAM ELEVATION(FEET) =  203.27
  STREET LENGTH(FEET) =   266.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       6.25
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.31
    HALFSTREET FLOOD WIDTH(FEET) =    8.22
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.92
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.21
  STREET FLOW TRAVEL TIME(MIN.) =   1.13   Tc(MIN.) =    2.48
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    1.45      SUBAREA RUNOFF(CFS) =   10.85
  TOTAL AREA(ACRES) =        1.6        PEAK FLOW RATE(CFS) =      11.67

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.36   HALFSTREET FLOOD WIDTH(FEET) =  11.21
  FLOW VELOCITY(FEET/SEC.) =  4.43   DEPTH*VELOCITY(FT*FT/SEC.) =   1.61
  LONGEST FLOWPATH FROM NODE     52.00 TO NODE     54.00 =     354.00 FEET.

****************************************************************************
```

```
  FLOW PROCESS FROM NODE     54.00 TO NODE     55.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   201.53  DOWNSTREAM(FEET) =   200.98
  FLOW LENGTH(FEET) =    32.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  18.0 INCH PIPE IS  13.0 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   8.55
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      11.67
  PIPE TRAVEL TIME(MIN.) =   0.06    Tc(MIN.) =    2.54
  LONGEST FLOWPATH FROM NODE     52.00 TO NODE     55.00 =     386.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     55.00 TO NODE     56.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   200.78  DOWNSTREAM(FEET) =   194.80
  FLOW LENGTH(FEET) =   220.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  18.0 INCH PIPE IS  11.0 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  10.31
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      11.67
  PIPE TRAVEL TIME(MIN.) =   0.36    Tc(MIN.) =    2.89
  LONGEST FLOWPATH FROM NODE     52.00 TO NODE     56.00 =     606.00 FEET.

+----------------------------------------------------------------------------+
| NODE 56 REPRESENTS BMP                                                     |
| FLOW 1 OF 3                                                                |
|                                                                            |
+----------------------------------------------------------------------------+

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE     59.00 TO NODE     60.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    210.07
  DOWNSTREAM ELEVATION(FEET) =    207.03
  ELEVATION DIFFERENCE(FEET) =      3.04
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.834
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    85.10
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      1.57
  TOTAL AREA(ACRES) =      0.21   TOTAL RUNOFF(CFS) =      1.57
```

```
****************************************************************************
  FLOW PROCESS FROM NODE     60.00 TO NODE     61.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  207.03  DOWNSTREAM ELEVATION(FEET) =  201.19
  STREET LENGTH(FEET) =   299.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       5.42
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.32
    HALFSTREET FLOOD WIDTH(FEET) =    9.03
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.94
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.95
  STREET FLOW TRAVEL TIME(MIN.) =   1.69   Tc(MIN.) =    3.53
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    1.03      SUBAREA RUNOFF(CFS) =    7.70
  TOTAL AREA(ACRES) =        1.2        PEAK FLOW RATE(CFS) =       9.27

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.37   HALFSTREET FLOOD WIDTH(FEET) =  11.68
  FLOW VELOCITY(FEET/SEC.) =  3.28   DEPTH*VELOCITY(FT*FT/SEC.) =   1.22
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     61.00 =     399.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     61.00 TO NODE     62.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   196.82  DOWNSTREAM(FEET) =   196.11
  FLOW LENGTH(FEET) =   128.70   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.25
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       9.27
  PIPE TRAVEL TIME(MIN.) =   0.41    Tc(MIN.) =    3.94
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     62.00 =     527.70 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     62.00 TO NODE     62.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
```

```
  TIME OF CONCENTRATION(MIN.) =    3.94
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     1.24
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      9.27

****************************************************************************
  FLOW PROCESS FROM NODE     63.00 TO NODE     64.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    204.24
  DOWNSTREAM ELEVATION(FEET) =    202.34
  ELEVATION DIFFERENCE(FEET) =      1.90
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.994
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    73.50
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      1.05
  TOTAL AREA(ACRES) =      0.14   TOTAL RUNOFF(CFS) =      1.05

****************************************************************************
  FLOW PROCESS FROM NODE     64.00 TO NODE     65.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  202.34  DOWNSTREAM ELEVATION(FEET) =  200.46
  STREET LENGTH(FEET) =   114.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       2.21
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.26
    HALFSTREET FLOOD WIDTH(FEET) =    5.53
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.36
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.62
  STREET FLOW TRAVEL TIME(MIN.) =   0.80   Tc(MIN.) =    2.80
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    0.31      SUBAREA RUNOFF(CFS) =    2.32
  TOTAL AREA(ACRES) =        0.4        PEAK FLOW RATE(CFS) =       3.37

  END OF SUBAREA STREET FLOW HYDRAULICS:
```

```
  DEPTH(FEET) = 0.29   HALFSTREET FLOOD WIDTH(FEET) =   7.28
  FLOW VELOCITY(FEET/SEC.) =  2.52   DEPTH*VELOCITY(FT*FT/SEC.) =   0.74
  LONGEST FLOWPATH FROM NODE     63.00 TO NODE     65.00 =     214.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     65.00 TO NODE     62.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   198.84  DOWNSTREAM(FEET) =   198.38
  FLOW LENGTH(FEET) =    92.80   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   4.29
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       3.37
  PIPE TRAVEL TIME(MIN.) =   0.36    Tc(MIN.) =    3.16
  LONGEST FLOWPATH FROM NODE     63.00 TO NODE     62.00 =     306.80 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     62.00 TO NODE     62.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    3.16
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     0.45
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      3.37

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1        9.27     3.94        7.957          1.24
      2        3.37     3.16        7.957          0.45

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       10.81     3.16       7.957
      2       12.64     3.94       7.957

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      12.64   Tc(MIN.) =    3.94
  TOTAL AREA(ACRES) =        1.7
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     62.00 =     527.70 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     62.00 TO NODE     66.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   198.38  DOWNSTREAM(FEET) =   197.39
  FLOW LENGTH(FEET) =   105.90   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.15
```

```
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      12.64
  PIPE TRAVEL TIME(MIN.) =   0.25    Tc(MIN.) =    4.18
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     66.00 =     633.60 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     66.00 TO NODE     66.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    4.18
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     1.69
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     12.64

****************************************************************************
  FLOW PROCESS FROM NODE     67.00 TO NODE     68.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    204.42
  DOWNSTREAM ELEVATION(FEET) =    203.78
  ELEVATION DIFFERENCE(FEET) =      0.64
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    2.428
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    52.80
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      2.02
  TOTAL AREA(ACRES) =      0.27   TOTAL RUNOFF(CFS) =      2.02

****************************************************************************
  FLOW PROCESS FROM NODE     68.00 TO NODE     69.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  203.78  DOWNSTREAM ELEVATION(FEET) =  201.26
  STREET LENGTH(FEET) =   100.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       2.99
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.27
    HALFSTREET FLOOD WIDTH(FEET) =    5.91
```

```
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.96
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.79
  STREET FLOW TRAVEL TIME(MIN.) =   0.56   Tc(MIN.) =    2.99
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    0.26      SUBAREA RUNOFF(CFS) =    1.94
  TOTAL AREA(ACRES) =        0.5        PEAK FLOW RATE(CFS) =       3.96

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.29   HALFSTREET FLOOD WIDTH(FEET) =   7.09
  FLOW VELOCITY(FEET/SEC.) =  3.08   DEPTH*VELOCITY(FT*FT/SEC.) =   0.89
  LONGEST FLOWPATH FROM NODE     67.00 TO NODE     69.00 =     200.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     69.00 TO NODE     66.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   198.57  DOWNSTREAM(FEET) =   197.39
  FLOW LENGTH(FEET) =    23.70   MANNING'S N =  0.013
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   6.1 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.92
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       3.96
  PIPE TRAVEL TIME(MIN.) =   0.04    Tc(MIN.) =    3.03
  LONGEST FLOWPATH FROM NODE     67.00 TO NODE     66.00 =     223.70 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     66.00 TO NODE     66.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    3.03
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     0.53
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      3.96

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       12.64     4.18        7.957          1.69
      2        3.96     3.03        7.957          0.53

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       16.60     3.03       7.957
      2       16.60     4.18       7.957

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      16.60   Tc(MIN.) =    4.18
  TOTAL AREA(ACRES) =        2.2
```

```
 LONGEST FLOWPATH FROM NODE     59.00 TO NODE     66.00 =     633.60 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     66.00 TO NODE     70.00 IS CODE =  41
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   197.39  DOWNSTREAM(FEET) =   196.10
 FLOW LENGTH(FEET) =   145.00   MANNING'S N =  0.013
 ASSUME FULL-FLOWING PIPELINE
 PIPE-FLOW VELOCITY(FEET/SEC.) =   9.40
 PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
 GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =      16.60
 PIPE TRAVEL TIME(MIN.) =   0.26    Tc(MIN.) =    4.44
 LONGEST FLOWPATH FROM NODE     59.00 TO NODE     70.00 =     778.60 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     70.00 TO NODE     57.00 IS CODE =  41
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   196.10  DOWNSTREAM(FEET) =   195.07
 FLOW LENGTH(FEET) =   193.00   MANNING'S N =  0.013
 ASSUME FULL-FLOWING PIPELINE
 PIPE-FLOW VELOCITY(FEET/SEC.) =   5.29
 PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
 GIVEN PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =      16.60
 PIPE TRAVEL TIME(MIN.) =   0.61    Tc(MIN.) =    5.05
 LONGEST FLOWPATH FROM NODE     59.00 TO NODE     57.00 =     971.60 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     57.00 TO NODE     56.00 IS CODE =  41
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   195.07  DOWNSTREAM(FEET) =   194.80
 FLOW LENGTH(FEET) =    51.80   MANNING'S N =  0.013
 ASSUME FULL-FLOWING PIPELINE
 PIPE-FLOW VELOCITY(FEET/SEC.) =   9.40
 PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
 GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =      16.60
 PIPE TRAVEL TIME(MIN.) =   0.09    Tc(MIN.) =    5.14
 LONGEST FLOWPATH FROM NODE     59.00 TO NODE     56.00 =    1023.40 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =    5.14
 RAINFALL INTENSITY(INCH/HR) =   7.81
 TOTAL STREAM AREA(ACRES) =     2.22
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     16.60

****************************************************************************
```

```
  FLOW PROCESS FROM NODE     55.00 TO NODE     58.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    204.25
  DOWNSTREAM ELEVATION(FEET) =    201.79
  ELEVATION DIFFERENCE(FEET) =      2.46
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.903
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    79.60
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      2.77
  TOTAL AREA(ACRES) =      0.37   TOTAL RUNOFF(CFS) =      2.77

****************************************************************************
  FLOW PROCESS FROM NODE     58.00 TO NODE     56.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  201.79  DOWNSTREAM ELEVATION(FEET) =  198.58
  STREET LENGTH(FEET) =   143.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       9.39
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.37
    HALFSTREET FLOOD WIDTH(FEET) =   11.37
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.48
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.27
  STREET FLOW TRAVEL TIME(MIN.) =   0.68   Tc(MIN.) =    2.59
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    1.77      SUBAREA RUNOFF(CFS) =   13.24
  TOTAL AREA(ACRES) =        2.1        PEAK FLOW RATE(CFS) =      16.01

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.42   HALFSTREET FLOOD WIDTH(FEET) =  14.34
  FLOW VELOCITY(FEET/SEC.) =  3.94   DEPTH*VELOCITY(FT*FT/SEC.) =   1.65
  LONGEST FLOWPATH FROM NODE     55.00 TO NODE     56.00 =     243.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =   1
```

```
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    2.59
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     2.14
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     16.01

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       16.60     5.14        7.814          2.22
      2       16.01     2.59        7.957          2.14

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       32.31     2.59       7.957
      2       32.32     5.14       7.814

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      32.32   Tc(MIN.) =    5.14
  TOTAL AREA(ACRES) =        4.4
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     56.00 =    1023.40 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
  STREAM     RUNOFF      Tc      INTENSITY     AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
      1       32.32     5.14       7.814        4.36
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     56.00 =    1023.40 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
  STREAM     RUNOFF      Tc      INTENSITY     AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
      1       11.67     2.89       7.957        1.56
  LONGEST FLOWPATH FROM NODE     52.00 TO NODE     56.00 =     606.00 FEET.

  ** PEAK FLOW RATE TABLE **
  STREAM    RUNOFF       Tc      INTENSITY
  NUMBER     (CFS)     (MIN.)   (INCH/HOUR)
      1      29.86       2.89        7.957
      2      43.78       5.14        7.814

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      43.78   Tc(MIN.) =    5.14
  TOTAL AREA(ACRES) =        5.9

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     71.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
```

```
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   191.80  DOWNSTREAM(FEET) =   189.57
  FLOW LENGTH(FEET) =    73.80   MANNING'S N =  0.013
  DEPTH OF FLOW IN  27.0 INCH PIPE IS  18.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  14.77
  ESTIMATED PIPE DIAMETER(INCH) =  27.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      43.78
  PIPE TRAVEL TIME(MIN.) =   0.08    Tc(MIN.) =    5.23
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     71.00 =    1097.20 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     71.00 TO NODE     72.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   189.37  DOWNSTREAM(FEET) =   188.25
  FLOW LENGTH(FEET) =   224.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  36.0 INCH PIPE IS  28.1 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.40
  ESTIMATED PIPE DIAMETER(INCH) =  36.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      43.78
  PIPE TRAVEL TIME(MIN.) =   0.50    Tc(MIN.) =    5.73
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     72.00 =    1321.20 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     72.00 TO NODE     73.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   188.05  DOWNSTREAM(FEET) =   185.48
  FLOW LENGTH(FEET) =   254.30   MANNING'S N =  0.013
  DEPTH OF FLOW IN  33.0 INCH PIPE IS  23.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.78
  ESTIMATED PIPE DIAMETER(INCH) =  33.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      43.78
  PIPE TRAVEL TIME(MIN.) =   0.43    Tc(MIN.) =    6.16
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     73.00 =    1575.50 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     73.00 TO NODE   3000.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   185.28  DOWNSTREAM(FEET) =   183.54
  FLOW LENGTH(FEET) =    93.20   MANNING'S N =  0.013
  DEPTH OF FLOW IN  30.0 INCH PIPE IS  20.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  12.37
  ESTIMATED PIPE DIAMETER(INCH) =  30.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      43.78
  PIPE TRAVEL TIME(MIN.) =   0.13    Tc(MIN.) =    6.29
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE   3000.00 =    1668.70 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     78.00 TO NODE   3000.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.863
  *USER SPECIFIED(SUBAREA):
```

```
  NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT = 0.9400
  SUBAREA AREA(ACRES) =    0.70   SUBAREA RUNOFF(CFS) =    4.52
  TOTAL AREA(ACRES) =        6.6   TOTAL RUNOFF(CFS) =      43.78
  TC(MIN.) =    6.29
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE     79.00 TO NODE   3000.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.863
  *USER SPECIFIED(SUBAREA):
  NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT = 0.9400
  SUBAREA AREA(ACRES) =    0.26   SUBAREA RUNOFF(CFS) =    1.68
  TOTAL AREA(ACRES) =        6.9   TOTAL RUNOFF(CFS) =      44.38
  TC(MIN.) =    6.29

+--------------------------------------------------------------------------+
| NODES 76 TO 4000 REPRESENT TRIBUTARY FLOWS TO POC-4.                     |
|                                                                          |
|                                                                          |
+--------------------------------------------------------------------------+

****************************************************************************
  FLOW PROCESS FROM NODE     76.00 TO NODE     77.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =    79.00
  UPSTREAM ELEVATION(FEET) =    205.25
  DOWNSTREAM ELEVATION(FEET) =    203.12
  ELEVATION DIFFERENCE(FEET) =      2.13
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.839
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      0.37
  TOTAL AREA(ACRES) =      0.05   TOTAL RUNOFF(CFS) =      0.37

****************************************************************************
  FLOW PROCESS FROM NODE     77.00 TO NODE   4000.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  203.12  DOWNSTREAM ELEVATION(FEET) =  197.78
  STREET LENGTH(FEET) =   175.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
```

```
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.71
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.79
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.75
  STREET FLOW TRAVEL TIME(MIN.) =   0.77   Tc(MIN.) =    2.61
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  STREETS & ROADS (CURBS/STORM DRAINS) RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    0.09      SUBAREA RUNOFF(CFS) =    0.67
  TOTAL AREA(ACRES) =        0.1        PEAK FLOW RATE(CFS) =       1.05

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.20   HALFSTREET FLOOD WIDTH(FEET) =   2.00
  FLOW VELOCITY(FEET/SEC.) =  3.79   DEPTH*VELOCITY(FT*FT/SEC.) =   0.75
  LONGEST FLOWPATH FROM NODE     76.00 TO NODE   4000.00 =     254.00 FEET.
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        0.1  TC(MIN.) =      2.61
  PEAK FLOW RATE(CFS)   =       1.05
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

100 YEAR HYDROLOGIC ANALYSIS FOR DEVELOPED CONDITIONS - MITIGATED

```
******************************************************************************

            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            Reference: SAN DIEGO COUNTY FLOOD CONTROL DISTRICT
                         2003,1985,1981 HYDROLOGY MANUAL
          (c) Copyright 1982-2015 Advanced Engineering Software (aes)
              Ver. 22.0 Release Date: 07/01/2015  License ID 1643

                           Analysis prepared by:


                                      ←


 ************************* DESCRIPTION OF STUDY *************************
* PROPOSED CONDITIONS - MITIGATED HYDROLOGY                             *
* 100 YEAR STORM                                                       *
* CARMAX OCEANSIDE                                                     *
 ************************************************************************

  FILE NAME: 1492PSTM.DAT
  TIME/DATE OF STUDY: 15:05 03/06/2020
------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
------------------------------------------------------------------------
  2003 SAN DIEGO MANUAL CRITERIA

  USER SPECIFIED STORM EVENT(YEAR) = 100.00
  6-HOUR DURATION PRECIPITATION (INCHES) =   3.020
  SPECIFIED MINIMUM PIPE SIZE(INCH) =   6.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  SAN DIEGO HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: USE MODIFIED RATIONAL METHOD PROCEDURES FOR CONFLUENCE ANALYSIS
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

+------------------------------------------------------------------------+
| NODES 1 TO 1000 REPRESENT TRIBUTARY FLOWS TO POC-1                     |
|                                                                        |
|                                                                        |
+------------------------------------------------------------------------+

****************************************************************************
  FLOW PROCESS FROM NODE      1.00 TO NODE      2.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
```

```
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    216.88
  DOWNSTREAM ELEVATION(FEET) =    214.07
  ELEVATION DIFFERENCE(FEET) =      2.81
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    5.116
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    83.10
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.840
  SUBAREA RUNOFF(CFS) =      1.03
  TOTAL AREA(ACRES) =      0.20   TOTAL RUNOFF(CFS) =      1.03

****************************************************************************
  FLOW PROCESS FROM NODE      2.00 TO NODE      3.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  214.07  DOWNSTREAM ELEVATION(FEET) =  210.04
  STREET LENGTH(FEET) =   116.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       1.88
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.21
    HALFSTREET FLOOD WIDTH(FEET) =    2.66
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.67
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.77
  STREET FLOW TRAVEL TIME(MIN.) =   0.53   Tc(MIN.) =    5.64
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.359
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
  SUBAREA AREA(ACRES) =    0.35      SUBAREA RUNOFF(CFS) =    1.70
  TOTAL AREA(ACRES) =        0.6        PEAK FLOW RATE(CFS) =       2.67

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.25   HALFSTREET FLOOD WIDTH(FEET) =   4.72
  FLOW VELOCITY(FEET/SEC.) =  3.40   DEPTH*VELOCITY(FT*FT/SEC.) =   0.84
  LONGEST FLOWPATH FROM NODE      1.00 TO NODE      3.00 =     216.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      3.00 TO NODE   1000.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   210.04  DOWNSTREAM(FEET) =   208.26
  FLOW LENGTH(FEET) =    28.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN   9.0 INCH PIPE IS   5.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.81
  ESTIMATED PIPE DIAMETER(INCH) =   9.00    NUMBER OF PIPES =   1
```

```
  PIPE-FLOW(CFS) =       2.67
  PIPE TRAVEL TIME(MIN.) =   0.05    Tc(MIN.) =    5.69
  LONGEST FLOWPATH FROM NODE      1.00 TO NODE   1000.00 =     244.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  4
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    5.69
  RAINFALL INTENSITY(INCH/HR) =   7.32
  TOTAL STREAM AREA(ACRES) =     0.55
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      2.67

****************************************************************************
  FLOW PROCESS FROM NODE      5.00 TO NODE      7.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    218.65
  DOWNSTREAM ELEVATION(FEET) =    217.54
  ELEVATION DIFFERENCE(FEET) =      1.11
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    6.006
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    61.65
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.070
  SUBAREA RUNOFF(CFS) =      0.37
  TOTAL AREA(ACRES) =      0.08   TOTAL RUNOFF(CFS) =      0.37

****************************************************************************
  FLOW PROCESS FROM NODE      7.00 TO NODE   1000.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  217.54  DOWNSTREAM ELEVATION(FEET) =  208.26
  STREET LENGTH(FEET) =   448.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       1.34
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.12
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.62
  STREET FLOW TRAVEL TIME(MIN.) =   2.39   Tc(MIN.) =    8.40
```

```
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  5.696
 *USER SPECIFIED(SUBAREA):
 GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
 S.C.S. CURVE NUMBER (AMC II) =   0
 AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
 SUBAREA AREA(ACRES) =    0.53      SUBAREA RUNOFF(CFS) =    1.99
 TOTAL AREA(ACRES) =        0.6        PEAK FLOW RATE(CFS) =       2.29

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.26   HALFSTREET FLOOD WIDTH(FEET) =   5.22
 FLOW VELOCITY(FEET/SEC.) =  2.62   DEPTH*VELOCITY(FT*FT/SEC.) =   0.67
 LONGEST FLOWPATH FROM NODE      5.00 TO NODE   1000.00 =     548.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  4
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =    8.40
 RAINFALL INTENSITY(INCH/HR) =   5.70
 TOTAL STREAM AREA(ACRES) =     0.61
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      2.29

****************************************************************************
 FLOW PROCESS FROM NODE     50.00 TO NODE      8.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
 *USER SPECIFIED(SUBAREA):
 GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
 S.C.S. CURVE NUMBER (AMC II) =   0
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
 UPSTREAM ELEVATION(FEET) =    220.30
 DOWNSTREAM ELEVATION(FEET) =    219.54
 ELEVATION DIFFERENCE(FEET) =      0.76
 SUBAREA OVERLAND TIME OF FLOW(MIN.) =    6.448
 WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
          THE MAXIMUM OVERLAND FLOW LENGTH =    55.20
          (Reference: Table 3-1B of Hydrology Manual)
          THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.753
 SUBAREA RUNOFF(CFS) =      0.27
 TOTAL AREA(ACRES) =      0.06   TOTAL RUNOFF(CFS) =      0.27

****************************************************************************
 FLOW PROCESS FROM NODE      8.00 TO NODE   1000.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) =  219.54  DOWNSTREAM ELEVATION(FEET) =  208.26
 STREET LENGTH(FEET) =   264.00   CURB HEIGHT(INCHES) =  8.0
 STREET HALFWIDTH(FEET) = 30.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.018
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
```

```
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.70
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.49
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.89
  STREET FLOW TRAVEL TIME(MIN.) =   0.98   Tc(MIN.) =    7.43
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  6.164
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .8200
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.778
  SUBAREA AREA(ACRES) =    0.17      SUBAREA RUNOFF(CFS) =    0.86
  TOTAL AREA(ACRES) =        0.2        PEAK FLOW RATE(CFS) =       1.10

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.20   HALFSTREET FLOOD WIDTH(FEET) =   2.00
  FLOW VELOCITY(FEET/SEC.) =  4.49   DEPTH*VELOCITY(FT*FT/SEC.) =   0.89
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE   1000.00 =     364.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  4
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  3 ARE:
  TIME OF CONCENTRATION(MIN.) =    7.43
  RAINFALL INTENSITY(INCH/HR) =   6.16
  TOTAL STREAM AREA(ACRES) =     0.23
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      1.10

****************************************************************************
  FLOW PROCESS FROM NODE      5.00 TO NODE      6.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    218.65
  DOWNSTREAM ELEVATION(FEET) =    213.74
  ELEVATION DIFFERENCE(FEET) =      4.91
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    4.415
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    89.77
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      0.11
  TOTAL AREA(ACRES) =      0.02   TOTAL RUNOFF(CFS) =      0.11

****************************************************************************
  FLOW PROCESS FROM NODE      6.00 TO NODE   1000.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    213.74  DOWNSTREAM(FEET) =    208.26
```

```
  CHANNEL LENGTH THRU SUBAREA(FEET) =     0.03   CHANNEL SLOPE = *******
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.015   MAXIMUM DEPTH(FEET) =   1.00
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.18
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =  38.18
  AVERAGE FLOW DEPTH(FEET) =   0.00   TRAVEL TIME(MIN.) =   0.00
  Tc(MIN.) =    4.42
  SUBAREA AREA(ACRES) =     0.03       SUBAREA RUNOFF(CFS) =    0.16
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.660
  TOTAL AREA(ACRES) =        0.0         PEAK FLOW RATE(CFS) =       0.26

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.00   FLOW VELOCITY(FEET/SEC.) =  54.55
  LONGEST FLOWPATH FROM NODE      5.00 TO NODE   1000.00 =     100.03 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1000.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  4
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  4 ARE:
  TIME OF CONCENTRATION(MIN.) =    4.42
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     0.05
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      0.26

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1        2.67     5.69        7.319          0.55
      2        2.29     8.40        5.696          0.61
      3        1.10     7.43        6.164          0.23
      4        0.26     4.42        7.957          0.05

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  4 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1        4.20     4.42       7.957
      2        5.31     5.69       7.319
      3        5.59     7.43       6.164
      4        5.58     8.40       5.696

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =       5.59   Tc(MIN.) =    7.43
  TOTAL AREA(ACRES) =        1.4
  LONGEST FLOWPATH FROM NODE      5.00 TO NODE   1000.00 =     548.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     50.00 TO NODE     51.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
```

```
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .8200
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =    83.00
  UPSTREAM ELEVATION(FEET) =    220.30
  DOWNSTREAM ELEVATION(FEET) =    219.26
  ELEVATION DIFFERENCE(FEET) =      1.04
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    3.734
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    63.80
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      0.39
  TOTAL AREA(ACRES) =      0.06   TOTAL RUNOFF(CFS) =      0.39

****************************************************************************
  FLOW PROCESS FROM NODE     51.00 TO NODE   2000.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  219.26  DOWNSTREAM ELEVATION(FEET) =  207.14
  STREET LENGTH(FEET) =   400.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       1.28
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.78
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.75
  STREET FLOW TRAVEL TIME(MIN.) =   1.76   Tc(MIN.) =    5.50
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.484
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .8200
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.820
  SUBAREA AREA(ACRES) =    0.29      SUBAREA RUNOFF(CFS) =    1.78
  TOTAL AREA(ACRES) =        0.3        PEAK FLOW RATE(CFS) =       2.15

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.23   HALFSTREET FLOOD WIDTH(FEET) =   4.03
  FLOW VELOCITY(FEET/SEC.) =  3.17   DEPTH*VELOCITY(FT*FT/SEC.) =   0.74
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE   2000.00 =     483.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     52.00 TO NODE     53.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
```

```
  INITIAL SUBAREA FLOW-LENGTH(FEET) =    88.00
  UPSTREAM ELEVATION(FEET) =    220.18
  DOWNSTREAM ELEVATION(FEET) =    213.04
  ELEVATION DIFFERENCE(FEET) =      7.14
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.345
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      0.82
  TOTAL AREA(ACRES) =      0.11   TOTAL RUNOFF(CFS) =      0.82

****************************************************************************
  FLOW PROCESS FROM NODE     53.00 TO NODE     54.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  213.04  DOWNSTREAM ELEVATION(FEET) =  203.27
  STREET LENGTH(FEET) =   266.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       6.25
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.31
    HALFSTREET FLOOD WIDTH(FEET) =    8.22
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.92
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.21
  STREET FLOW TRAVEL TIME(MIN.) =   1.13   Tc(MIN.) =    2.48
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    1.45      SUBAREA RUNOFF(CFS) =   10.85
  TOTAL AREA(ACRES) =        1.6        PEAK FLOW RATE(CFS) =      11.67

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.36   HALFSTREET FLOOD WIDTH(FEET) =  11.21
  FLOW VELOCITY(FEET/SEC.) =  4.43   DEPTH*VELOCITY(FT*FT/SEC.) =   1.61
  LONGEST FLOWPATH FROM NODE     52.00 TO NODE     54.00 =     354.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     54.00 TO NODE     55.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   201.53  DOWNSTREAM(FEET) =   200.98
  FLOW LENGTH(FEET) =    32.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  18.0 INCH PIPE IS  13.0 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   8.55
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      11.67
  PIPE TRAVEL TIME(MIN.) =   0.06    Tc(MIN.) =    2.54
```

```
 LONGEST FLOWPATH FROM NODE     52.00 TO NODE     55.00 =     386.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     55.00 TO NODE     56.00 IS CODE =  41
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   200.78  DOWNSTREAM(FEET) =   194.80
 FLOW LENGTH(FEET) =   220.00   MANNING'S N =  0.013
 DEPTH OF FLOW IN  18.0 INCH PIPE IS  11.0 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =  10.31
 GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =      11.67
 PIPE TRAVEL TIME(MIN.) =   0.36    Tc(MIN.) =    2.89
 LONGEST FLOWPATH FROM NODE     52.00 TO NODE     56.00 =     606.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =  10
----------------------------------------------------------------------------
 >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
 FLOW PROCESS FROM NODE     59.00 TO NODE     60.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
 *USER SPECIFIED(SUBAREA):
 GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
 S.C.S. CURVE NUMBER (AMC II) =   0
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
 UPSTREAM ELEVATION(FEET) =    210.07
 DOWNSTREAM ELEVATION(FEET) =    207.03
 ELEVATION DIFFERENCE(FEET) =      3.04
 SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.834
 WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
          THE MAXIMUM OVERLAND FLOW LENGTH =    85.10
          (Reference: Table 3-1B of Hydrology Manual)
          THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
 NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
 SUBAREA RUNOFF(CFS) =      1.57
 TOTAL AREA(ACRES) =      0.21   TOTAL RUNOFF(CFS) =      1.57

****************************************************************************
 FLOW PROCESS FROM NODE     60.00 TO NODE     61.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) =  207.03  DOWNSTREAM ELEVATION(FEET) =  201.19
 STREET LENGTH(FEET) =   299.00   CURB HEIGHT(INCHES) =  8.0
 STREET HALFWIDTH(FEET) = 30.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.018
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200
```

```
    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       5.42
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.32
    HALFSTREET FLOOD WIDTH(FEET) =    9.03
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.94
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.95
  STREET FLOW TRAVEL TIME(MIN.) =   1.69   Tc(MIN.) =    3.53
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    1.03      SUBAREA RUNOFF(CFS) =    7.70
  TOTAL AREA(ACRES) =        1.2        PEAK FLOW RATE(CFS) =       9.27

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.37   HALFSTREET FLOOD WIDTH(FEET) =  11.68
  FLOW VELOCITY(FEET/SEC.) =  3.28   DEPTH*VELOCITY(FT*FT/SEC.) =   1.22
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     61.00 =     399.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     61.00 TO NODE     62.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   196.82  DOWNSTREAM(FEET) =   196.11
  FLOW LENGTH(FEET) =   128.70   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.25
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       9.27
  PIPE TRAVEL TIME(MIN.) =   0.41    Tc(MIN.) =    3.94
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     62.00 =     527.70 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     62.00 TO NODE     62.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    3.94
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     1.24
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      9.27

****************************************************************************
  FLOW PROCESS FROM NODE     63.00 TO NODE     64.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    204.24
  DOWNSTREAM ELEVATION(FEET) =    202.34
  ELEVATION DIFFERENCE(FEET) =      1.90
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.994
```

```
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    73.50
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      1.05
  TOTAL AREA(ACRES) =      0.14   TOTAL RUNOFF(CFS) =      1.05

****************************************************************************
  FLOW PROCESS FROM NODE     64.00 TO NODE     65.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  202.34  DOWNSTREAM ELEVATION(FEET) =  200.46
  STREET LENGTH(FEET) =   114.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       2.21
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.26
    HALFSTREET FLOOD WIDTH(FEET) =    5.53
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.36
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.62
  STREET FLOW TRAVEL TIME(MIN.) =   0.80   Tc(MIN.) =    2.80
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    0.31      SUBAREA RUNOFF(CFS) =    2.32
  TOTAL AREA(ACRES) =        0.4        PEAK FLOW RATE(CFS) =       3.37

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.29   HALFSTREET FLOOD WIDTH(FEET) =   7.28
  FLOW VELOCITY(FEET/SEC.) =  2.52   DEPTH*VELOCITY(FT*FT/SEC.) =   0.74
  LONGEST FLOWPATH FROM NODE     63.00 TO NODE     65.00 =     214.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     65.00 TO NODE     62.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   198.84  DOWNSTREAM(FEET) =   198.38
  FLOW LENGTH(FEET) =    92.80   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   4.29
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       3.37
  PIPE TRAVEL TIME(MIN.) =   0.36    Tc(MIN.) =    3.16
```

```
  LONGEST FLOWPATH FROM NODE     63.00 TO NODE     62.00 =     306.80 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     62.00 TO NODE     62.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    3.16
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     0.45
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      3.37

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1        9.27     3.94        7.957          1.24
      2        3.37     3.16        7.957          0.45

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       10.81     3.16       7.957
      2       12.64     3.94       7.957

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      12.64   Tc(MIN.) =    3.94
  TOTAL AREA(ACRES) =        1.7
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     62.00 =     527.70 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     62.00 TO NODE     66.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   198.38  DOWNSTREAM(FEET) =   197.39
  FLOW LENGTH(FEET) =   105.90   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.15
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      12.64
  PIPE TRAVEL TIME(MIN.) =   0.25    Tc(MIN.) =    4.18
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     66.00 =     633.60 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     66.00 TO NODE     66.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    4.18
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     1.69
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     12.64
```

```
****************************************************************************
  FLOW PROCESS FROM NODE     67.00 TO NODE     68.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    204.42
  DOWNSTREAM ELEVATION(FEET) =    203.78
  ELEVATION DIFFERENCE(FEET) =      0.64
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    2.428
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    52.80
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      2.02
  TOTAL AREA(ACRES) =      0.27   TOTAL RUNOFF(CFS) =      2.02

****************************************************************************
  FLOW PROCESS FROM NODE     68.00 TO NODE     69.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  203.78  DOWNSTREAM ELEVATION(FEET) =  201.26
  STREET LENGTH(FEET) =   100.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       2.99
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.27
    HALFSTREET FLOOD WIDTH(FEET) =    5.91
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.96
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.79
  STREET FLOW TRAVEL TIME(MIN.) =   0.56   Tc(MIN.) =    2.99
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    0.26      SUBAREA RUNOFF(CFS) =    1.94
  TOTAL AREA(ACRES) =       0.5        PEAK FLOW RATE(CFS) =       3.96

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.29   HALFSTREET FLOOD WIDTH(FEET) =   7.09
  FLOW VELOCITY(FEET/SEC.) =  3.08   DEPTH*VELOCITY(FT*FT/SEC.) =   0.89
  LONGEST FLOWPATH FROM NODE     67.00 TO NODE     69.00 =     200.00 FEET.

****************************************************************************
```

```
  FLOW PROCESS FROM NODE     69.00 TO NODE     66.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   198.57  DOWNSTREAM(FEET) =   197.39
  FLOW LENGTH(FEET) =    23.70   MANNING'S N =  0.013
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   6.1 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.92
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       3.96
  PIPE TRAVEL TIME(MIN.) =   0.04    Tc(MIN.) =    3.03
  LONGEST FLOWPATH FROM NODE     67.00 TO NODE     66.00 =     223.70 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     66.00 TO NODE     66.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    3.03
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     0.53
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      3.96

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       12.64     4.18        7.957          1.69
      2        3.96     3.03        7.957          0.53

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       16.60     3.03       7.957
      2       16.60     4.18       7.957

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      16.60   Tc(MIN.) =    4.18
  TOTAL AREA(ACRES) =        2.2
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     66.00 =     633.60 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     66.00 TO NODE     70.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   197.39  DOWNSTREAM(FEET) =   196.10
  FLOW LENGTH(FEET) =   145.00   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.40
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      16.60
  PIPE TRAVEL TIME(MIN.) =   0.26    Tc(MIN.) =    4.44
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     70.00 =     778.60 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE     70.00 TO NODE     57.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   196.10  DOWNSTREAM(FEET) =   195.07
  FLOW LENGTH(FEET) =   193.00   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.29
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      16.60
  PIPE TRAVEL TIME(MIN.) =   0.61    Tc(MIN.) =    5.05
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     57.00 =     971.60 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     57.00 TO NODE     56.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   195.07  DOWNSTREAM(FEET) =   194.80
  FLOW LENGTH(FEET) =    51.80   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.40
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      16.60
  PIPE TRAVEL TIME(MIN.) =   0.09    Tc(MIN.) =    5.14
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     56.00 =    1023.40 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    5.14
  RAINFALL INTENSITY(INCH/HR) =   7.81
  TOTAL STREAM AREA(ACRES) =     2.22
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     16.60

****************************************************************************
  FLOW PROCESS FROM NODE     55.00 TO NODE     58.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  UPSTREAM ELEVATION(FEET) =    204.25
  DOWNSTREAM ELEVATION(FEET) =    201.79
  ELEVATION DIFFERENCE(FEET) =      2.46
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.903
  WARNING: INITIAL SUBAREA FLOW PATH LENGTH IS GREATER THAN
           THE MAXIMUM OVERLAND FLOW LENGTH =    79.60
           (Reference: Table 3-1B of Hydrology Manual)
           THE MAXIMUM OVERLAND FLOW LENGTH IS USED IN Tc CALCULATION!
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
```

```
  SUBAREA RUNOFF(CFS) =      2.77
  TOTAL AREA(ACRES) =      0.37   TOTAL RUNOFF(CFS) =      2.77

****************************************************************************
  FLOW PROCESS FROM NODE     58.00 TO NODE     56.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  201.79  DOWNSTREAM ELEVATION(FEET) =  198.58
  STREET LENGTH(FEET) =   143.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       9.39
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.37
    HALFSTREET FLOOD WIDTH(FEET) =   11.37
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.48
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.27
  STREET FLOW TRAVEL TIME(MIN.) =   0.68   Tc(MIN.) =    2.59
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    1.77      SUBAREA RUNOFF(CFS) =   13.24
  TOTAL AREA(ACRES) =        2.1        PEAK FLOW RATE(CFS) =      16.01

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.42   HALFSTREET FLOOD WIDTH(FEET) =  14.34
  FLOW VELOCITY(FEET/SEC.) =  3.94   DEPTH*VELOCITY(FT*FT/SEC.) =   1.65
  LONGEST FLOWPATH FROM NODE     55.00 TO NODE     56.00 =     243.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    2.59
  RAINFALL INTENSITY(INCH/HR) =   7.96
  TOTAL STREAM AREA(ACRES) =     2.14
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     16.01

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       16.60     5.14        7.814          2.22
      2       16.01     2.59        7.957          2.14

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
```

```
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       32.31     2.59       7.957
      2       32.32     5.14       7.814

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      32.32   Tc(MIN.) =    5.14
  TOTAL AREA(ACRES) =        4.4
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     56.00 =    1023.40 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
  STREAM     RUNOFF      Tc      INTENSITY     AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
      1       32.32     5.14       7.814        4.36
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     56.00 =    1023.40 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
  STREAM     RUNOFF      Tc      INTENSITY     AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
      1       11.67     2.89       7.957        1.56
  LONGEST FLOWPATH FROM NODE     52.00 TO NODE     56.00 =     606.00 FEET.

  ** PEAK FLOW RATE TABLE **
  STREAM    RUNOFF       Tc      INTENSITY
  NUMBER     (CFS)     (MIN.)   (INCH/HOUR)
      1      29.86       2.89       7.957
      2      43.78       5.14       7.814

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      43.78   Tc(MIN.) =    5.14
  TOTAL AREA(ACRES) =        5.9

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>USER SPECIFIED HYDROLOGY INFORMATION AT NODE<<<<<
============================================================================
  USER-SPECIFIED VALUES ARE AS FOLLOWS:
  TC(MIN) =   8.00   RAIN INTENSITY(INCH/HOUR) =  5.88
  TOTAL AREA(ACRES) =     5.90   TOTAL RUNOFF(CFS) =     21.13

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     71.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   191.80  DOWNSTREAM(FEET) =   189.57
  FLOW LENGTH(FEET) =    73.80   MANNING'S N =  0.013
  DEPTH OF FLOW IN  21.0 INCH PIPE IS  14.0 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  12.36
  ESTIMATED PIPE DIAMETER(INCH) =  21.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      21.13
  PIPE TRAVEL TIME(MIN.) =   0.10    Tc(MIN.) =    8.10
```

```
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     71.00 =    1097.20 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     71.00 TO NODE     72.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   189.37  DOWNSTREAM(FEET) =   188.25
  FLOW LENGTH(FEET) =   224.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  27.0 INCH PIPE IS  21.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.12
  ESTIMATED PIPE DIAMETER(INCH) =  27.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      21.13
  PIPE TRAVEL TIME(MIN.) =   0.61    Tc(MIN.) =    8.71
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     72.00 =    1321.20 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     72.00 TO NODE     73.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   188.05  DOWNSTREAM(FEET) =   185.48
  FLOW LENGTH(FEET) =   254.30   MANNING'S N =  0.013
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  18.7 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   8.03
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      21.13
  PIPE TRAVEL TIME(MIN.) =   0.53    Tc(MIN.) =    9.24
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE     73.00 =    1575.50 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     73.00 TO NODE   3000.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   185.28  DOWNSTREAM(FEET) =   183.54
  FLOW LENGTH(FEET) =    93.20   MANNING'S N =  0.013
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  14.8 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  10.38
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      21.13
  PIPE TRAVEL TIME(MIN.) =   0.15    Tc(MIN.) =    9.39
  LONGEST FLOWPATH FROM NODE     59.00 TO NODE   3000.00 =    1668.70 FEET.

+--------------------------------------------------------------------------+
| DISCHARGE FROM DETENTION BASIN CONFLUENCING WITH LANDSCAPED BYPASS AREA  |
| - CODE 8                                                                 |
|                                                                          |
+--------------------------------------------------------------------------+

****************************************************************************
  FLOW PROCESS FROM NODE     78.00 TO NODE   3000.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  5.300
  *USER SPECIFIED(SUBAREA):
  NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT = 0.6148
```

```
  SUBAREA AREA(ACRES) =    0.70   SUBAREA RUNOFF(CFS) =    2.45
  TOTAL AREA(ACRES) =        6.6   TOTAL RUNOFF(CFS) =      21.51
  TC(MIN.) =    9.39

****************************************************************************
  FLOW PROCESS FROM NODE     79.00 TO NODE   3000.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  5.300
  *USER SPECIFIED(SUBAREA):
  NATURAL DESERT LANDSCAPING RUNOFF COEFFICIENT = .6600
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT = 0.6166
  SUBAREA AREA(ACRES) =    0.26   SUBAREA RUNOFF(CFS) =    0.91
  TOTAL AREA(ACRES) =        6.9   TOTAL RUNOFF(CFS) =      22.42
  TC(MIN.) =    9.39

****************************************************************************
  FLOW PROCESS FROM NODE     76.00 TO NODE     77.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  *USER SPECIFIED(SUBAREA):
  GENERAL COMMERCIAL RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  INITIAL SUBAREA FLOW-LENGTH(FEET) =    79.00
  UPSTREAM ELEVATION(FEET) =    205.25
  DOWNSTREAM ELEVATION(FEET) =    203.12
  ELEVATION DIFFERENCE(FEET) =      2.13
  SUBAREA OVERLAND TIME OF FLOW(MIN.) =    1.839
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  SUBAREA RUNOFF(CFS) =      0.37
  TOTAL AREA(ACRES) =      0.05   TOTAL RUNOFF(CFS) =      0.37

****************************************************************************
  FLOW PROCESS FROM NODE     77.00 TO NODE   4000.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  203.12  DOWNSTREAM ELEVATION(FEET) =  197.78
  STREET LENGTH(FEET) =   175.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.71
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.20
    HALFSTREET FLOOD WIDTH(FEET) =    2.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.79
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.75
  STREET FLOW TRAVEL TIME(MIN.) =   0.77   Tc(MIN.) =    2.61
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  7.957
```

```
  NOTE: RAINFALL INTENSITY IS BASED ON Tc = 5-MINUTE.
  *USER SPECIFIED(SUBAREA):
  STREETS & ROADS (CURBS/STORM DRAINS) RUNOFF COEFFICIENT = .9400
  S.C.S. CURVE NUMBER (AMC II) =   0
  AREA-AVERAGE RUNOFF COEFFICIENT =  0.940
  SUBAREA AREA(ACRES) =    0.09      SUBAREA RUNOFF(CFS) =    0.67
  TOTAL AREA(ACRES) =        0.1        PEAK FLOW RATE(CFS) =       1.05

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.20   HALFSTREET FLOOD WIDTH(FEET) =   2.00
  FLOW VELOCITY(FEET/SEC.) =  3.79   DEPTH*VELOCITY(FT*FT/SEC.) =   0.75
  LONGEST FLOWPATH FROM NODE     76.00 TO NODE   4000.00 =     254.00 FEET.
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        0.1  TC(MIN.) =      2.61
  PEAK FLOW RATE(CFS)   =       1.05
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

CHAPTER 5 - MODIFIED-PULS DETENTION ROUTING

5.1 – Rational Method Hydrograph

RATIONAL METHOD HYDROGRAPH PROGRAM
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RUN DATE 2/27/2020
HYDROGRAPH FILE NAME Text1
TIME OF CONCENTRATION 5 MIN.
6 HOUR RAINFALL 3.02 INCHES
BASIN AREA 5.9 ACRES
RUNOFF COEFFICIENT 0.94
PEAK DISCHARGE 43.78 CFS

TIME (MIN) = 0	DISCHARGE (CFS) = 0
TIME (MIN) = 5	DISCHARGE (CFS) = 1
TIME (MIN) = 10	DISCHARGE (CFS) = 1
TIME (MIN) = 15	DISCHARGE (CFS) = 1
TIME (MIN) = 20	DISCHARGE (CFS) = 1
TIME (MIN) = 25	DISCHARGE (CFS) = 1.1
TIME (MIN) = 30	DISCHARGE (CFS) = 1.1
TIME (MIN) = 35	DISCHARGE (CFS) = 1.1
TIME (MIN) = 40	DISCHARGE (CFS) = 1.1
TIME (MIN) = 45	DISCHARGE (CFS) = 1.1
TIME (MIN) = 50	DISCHARGE (CFS) = 1.1
TIME (MIN) = 55	DISCHARGE (CFS) = 1.2
TIME (MIN) = 60	DISCHARGE (CFS) = 1.2
TIME (MIN) = 65	DISCHARGE (CFS) = 1.2
TIME (MIN) = 70	DISCHARGE (CFS) = 1.2
TIME (MIN) = 75	DISCHARGE (CFS) = 1.2
TIME (MIN) = 80	DISCHARGE (CFS) = 1.3
TIME (MIN) = 85	DISCHARGE (CFS) = 1.3
TIME (MIN) = 90	DISCHARGE (CFS) = 1.3
TIME (MIN) = 95	DISCHARGE (CFS) = 1.4
TIME (MIN) = 100	DISCHARGE (CFS) = 1.4
TIME (MIN) = 105	DISCHARGE (CFS) = 1.4
TIME (MIN) = 110	DISCHARGE (CFS) = 1.4
TIME (MIN) = 115	DISCHARGE (CFS) = 1.5
TIME (MIN) = 120	DISCHARGE (CFS) = 1.5
TIME (MIN) = 125	DISCHARGE (CFS) = 1.6
TIME (MIN) = 130	DISCHARGE (CFS) = 1.6
TIME (MIN) = 135	DISCHARGE (CFS) = 1.7
TIME (MIN) = 140	DISCHARGE (CFS) = 1.7
TIME (MIN) = 145	DISCHARGE (CFS) = 1.8
TIME (MIN) = 150	DISCHARGE (CFS) = 1.8
TIME (MIN) = 155	DISCHARGE (CFS) = 1.9
TIME (MIN) = 160	DISCHARGE (CFS) = 1.9
TIME (MIN) = 165	DISCHARGE (CFS) = 2
TIME (MIN) = 170	DISCHARGE (CFS) = 2.1
TIME (MIN) = 175	DISCHARGE (CFS) = 2.2
TIME (MIN) = 180	DISCHARGE (CFS) = 2.3
TIME (MIN) = 185	DISCHARGE (CFS) = 2.5
TIME (MIN) = 190	DISCHARGE (CFS) = 2.6
TIME (MIN) = 195	DISCHARGE (CFS) = 2.8
TIME (MIN) = 200	DISCHARGE (CFS) = 2.9
TIME (MIN) = 205	DISCHARGE (CFS) = 3.2
TIME (MIN) = 210	DISCHARGE (CFS) = 3.4
TIME (MIN) = 215	DISCHARGE (CFS) = 3.9
TIME (MIN) = 220	DISCHARGE (CFS) = 4.3
TIME (MIN) = 225	DISCHARGE (CFS) = 5.2
TIME (MIN) = 230	DISCHARGE (CFS) = 6
TIME (MIN) = 235	DISCHARGE (CFS) = 8.7
TIME (MIN) = 240	DISCHARGE (CFS) = 12.7
TIME (MIN) = 245	DISCHARGE (CFS) = 43.78
TIME (MIN) = 250	DISCHARGE (CFS) = 7
TIME (MIN) = 255	DISCHARGE (CFS) = 4.7
TIME (MIN) = 260	DISCHARGE (CFS) = 3.7
TIME (MIN) = 265	DISCHARGE (CFS) = 3.1
TIME (MIN) = 270	DISCHARGE (CFS) = 2.7
TIME (MIN) = 275	DISCHARGE (CFS) = 2.4
TIME (MIN) = 280	DISCHARGE (CFS) = 2.2
TIME (MIN) = 285	DISCHARGE (CFS) = 2
TIME (MIN) = 290	DISCHARGE (CFS) = 1.8
TIME (MIN) = 295	DISCHARGE (CFS) = 1.7
TIME (MIN) = 300	DISCHARGE (CFS) = 1.6
TIME (MIN) = 305	DISCHARGE (CFS) = 1.5
TIME (MIN) = 310	DISCHARGE (CFS) = 1.5
TIME (MIN) = 315	DISCHARGE (CFS) = 1.4
TIME (MIN) = 320	DISCHARGE (CFS) = 1.3
TIME (MIN) = 325	DISCHARGE (CFS) = 1.3
TIME (MIN) = 330	DISCHARGE (CFS) = 1.2
TIME (MIN) = 335	DISCHARGE (CFS) = 1.2
TIME (MIN) = 340	DISCHARGE (CFS) = 1.1
TIME (MIN) = 345	DISCHARGE (CFS) = 1.1
TIME (MIN) = 350	DISCHARGE (CFS) = 1.1
TIME (MIN) = 355	DISCHARGE (CFS) = 1
TIME (MIN) = 360	DISCHARGE (CFS) = 1
TIME (MIN) = 365	DISCHARGE (CFS) = 0

5.2 – Stage-Storage & Stage-Discharge Relationships

Stage- Storage Calculations

ELEVATION	AREA (SF)	VOLUME (FT^3)	VOLUME (AC)
0	6090	0	0
1	6090	6090	0.140
2	6090	12180	0.280
3	6090	18270	0.419
4	6090	24360	0.559

Outlet structure for Discharge of Detention Basin 1

(note: 0' elevation is assumed as surface invert of 6-inch gravel layer)

Low orifice:	2.3125 "	Lower slot		Emergency Weir			
Number:	2	Invert:	1.25 ft	Invert:	3.750 ft		
Cg-low:	0.62	B	3.00 ft	B:	12 ft		
Middle orifice:	1 "	h	0.208 ft				
number of orif:	0	Upper slot					
Cg-middle:	0.62	Invert:	2.25 ft	45.00			
invert elev:	0.75 ft	B:	3.75 ft				
		h	0.670 ft				

h (ft)	H/D-low -	H/D-mid -	Qlow-orif (cfs)	Qlow-weir (cfs)	Qtot-low (cfs)	Qmid-orif (cfs)	Qmid-weir (cfs)	Qtot-med (cfs)	Qslot-low (cfs)	Qslot-upp (cfs)	Qemer (cfs)	Qtot (cfs)	Total H (ft)	Total Q (cfs)	Flow + LID (cfs)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.100	0.519	0.000	0.018	0.027	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.027	0.100	0.027	0.027
0.200	1.038	0.000	0.093	0.090	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.200	0.090	0.090
0.300	1.557	0.000	0.131	0.159	0.131	0.000	0.000	0.000	0.000	0.000	0.000	0.131	0.300	0.131	0.131
0.400	2.076	0.000	0.160	0.209	0.160	0.000	0.000	0.000	0.000	0.000	0.000	0.160	0.400	0.160	0.160
0.500	2.595	0.000	0.184	0.228	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.184	0.500	0.184	0.184
0.600	3.114	0.000	0.206	0.232	0.206	0.000	0.000	0.000	0.000	0.000	0.000	0.206	0.600	0.206	0.206
0.700	3.632	0.000	0.226	0.275	0.226	0.000	0.000	0.000	0.000	0.000	0.000	0.226	0.700	0.226	0.226
0.800	4.151	0.600	0.243	0.463	0.243	0.000	0.000	0.000	0.000	0.000	0.000	0.243	0.800	0.243	0.243
0.900	4.670	1.800	0.260	0.964	0.260	0.000	0.000	0.000	0.000	0.000	0.000	0.260	0.900	0.260	0.260
1.000	5.189	3.000	0.276	2.020	0.276	0.000	0.000	0.000	0.000	0.000	0.000	0.276	1.000	0.276	0.276
1.100	5.708	4.200	0.291	2.908	0.291	0.000	0.000	0.000	0.000	0.000	0.000	0.291	1.100	0.291	0.291
1.200	6.227	5.400	0.305	3.049	0.305	0.000	0.000	0.000	0.000	0.000	0.000	0.305	1.200	0.305	0.305
1.300	6.746	6.600	0.318	3.184	0.318	0.000	0.000	0.000	0.104	0.000	0.000	0.422	1.300	0.422	0.422
1.400	7.265	7.800	0.331	3.314	0.331	0.000	0.000	0.000	0.540	0.000	0.000	0.872	1.400	0.872	0.872
1.500	7.784	9.000	0.344	3.439	0.344	0.000	0.000	0.000	1.163	0.000	0.000	1.506	1.500	1.506	1.506
1.600	8.303	10.200	0.356	3.559	0.356	0.000	0.000	0.000	1.517	0.000	0.000	1.873	1.600	1.873	1.873
1.700	8.822	11.400	0.368	3.675	0.368	0.000	0.000	0.000	1.799	0.000	0.000	2.167	1.700	2.167	2.167
1.800	9.341	12.600	0.379	3.788	0.379	0.000	0.000	0.000	2.043	0.000	0.000	2.422	1.800	2.422	2.422
1.900	9.859	13.800	0.390	3.898	0.390	0.000	0.000	0.000	2.260	0.000	0.000	2.650	1.900	2.650	2.650
2.000	10.378	15.000	0.400	4.005	0.400	0.000	0.000	0.000	2.459	0.000	0.000	2.859	2.000	2.859	2.859
2.100	10.897	16.200	0.411	4.108	0.411	0.000	0.000	0.000	2.642	0.000	0.000	3.053	2.100	3.053	3.053
2.200	11.416	17.400	0.421	4.210	0.421	0.000	0.000	0.000	2.814	0.000	0.000	3.235	2.200	3.235	3.235
2.300	11.935	18.600	0.431	4.309	0.431	0.000	0.000	0.000	2.976	0.130	0.000	3.536	2.300	3.536	3.536
2.400	12.454	19.800	0.441	4.405	0.441	0.000	0.000	0.000	3.129	0.675	0.000	4.245	2.400	4.245	4.245
2.500	12.973	21.000	0.450	4.500	0.450	0.000	0.000	0.000	3.275	1.453	0.000	5.178	2.500	5.178	5.178
2.600	13.492	22.200	0.459	4.592	0.459	0.000	0.000	0.000	3.415	2.407	0.000	6.281	2.600	6.281	6.281
2.700	14.011	23.400	0.468	4.683	0.468	0.000	0.000	0.000	3.549	3.509	0.000	7.527	2.700	7.527	7.527
2.800	14.530	24.600	0.477	4.772	0.477	0.000	0.000	0.000	3.679	4.742	0.000	8.898	2.800	8.898	8.898
2.900	15.049	25.800	0.486	4.860	0.486	0.000	0.000	0.000	3.804	6.092	0.000	10.382	2.900	10.382	10.382
3.000	15.568	27.000	0.495	4.946	0.495	0.000	0.000	0.000	3.925	7.551	0.000	11.970	3.000	11.970	11.970
3.100	16.086	28.200	0.503	5.030	0.503	0.000	0.000	0.000	4.043	8.826	0.000	13.372	3.100	13.372	13.372
3.200	16.605	29.400	0.511	5.113	0.511	0.000	0.000	0.000	4.157	9.645	0.000	14.313	3.200	14.313	14.313
3.300	17.124	30.600	0.519	5.195	0.519	0.000	0.000	0.000	4.268	10.400	0.000	15.187	3.300	15.187	15.187
3.400	17.643	31.800	0.528	5.275	0.528	0.000	0.000	0.000	4.376	11.103	0.000	16.007	3.400	16.007	16.007
3.500	18.162	33.000	0.535	5.355	0.535	0.000	0.000	0.000	4.482	11.765	0.000	16.782	3.500	16.782	16.782
3.600	18.681	34.200	0.543	5.433	0.543	0.000	0.000	0.000	4.585	12.391	0.000	17.519	3.600	17.519	17.519
3.750	19.459	36.000	0.555	5.548	0.555	0.000	0.000	0.000	4.736	13.275	0.000	18.566	3.750	18.566	18.566
3.800	19.719	36.600	0.559	5.586	0.559	0.000	0.000	0.000	4.785	13.557	0.416	19.316	3.800	19.316	19.316
3.900	20.238	37.800	0.566	5.661	0.566	0.000	0.000	0.000	4.882	14.104	2.161	21.713	3.900	21.713	21.713
4.000	20.757	39.000	0.573	5.734	0.573	0.000	0.000	0.000	4.977	14.630	4.650	24.830	4.000	24.830	24.830

5.3 – HEC-HMS Modified-Puls Routing Results

Project: Detention2 Simulation Run: Run 1

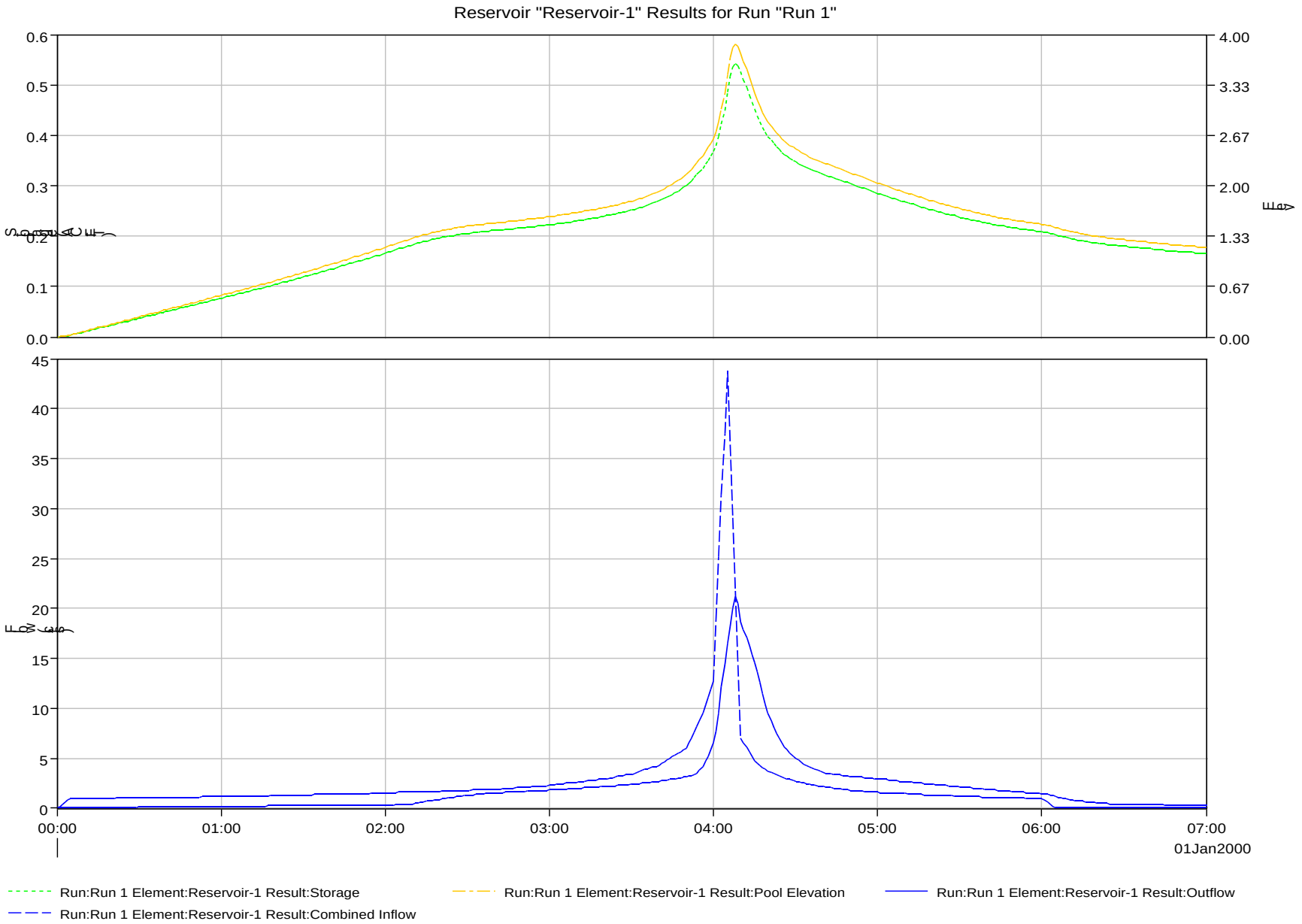
Reservoir: Reservoir-1

Start of Run:	01Jan2000, 00:00	Basin Model:	Basin 1
End of Run:	01Jan2000, 07:00	Meteorologic Model:	Met 1
Compute Time:	27Feb2020, 16:20:51	Control Specifications:	Control 1

Volume Units: IN

Computed Results

Peak Inflow:	43.7800 (CFS)	Date/Time of Peak Inflow:	01Jan2000, 04:05
Peak Discharge:	21.1334 (CFS)	Date/Time of Peak Discharge	01Jan2000, 04:08
Inflow Volume:	n/a	Peak Storage:	0.5418 (AC-FT)
Discharge Volume	n/a	Peak Elevation:	3.8712 (FT)


Reservoir "Reservoir-1" Results for Run "Run 1"
0.6
0.5
0.4
0.3
0.2
0.1
0.0
4.00
3.33
2.67
2.00
1.33
0.67
0.00
45
40
35
30
25
20
15
10
5
0
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
01Jan2000
Run:Run 1 Element:Reservoir-1 Result:Storage
Run:Run 1 Element:Reservoir-1 Result:Pool Elevation
Run:Run 1 Element:Reservoir-1 Result:Outflow
Run:Run 1 Element:Reservoir-1 Result:Combined Inflow

Project: Detention2 Simulation Run: Run 1
Reservoir: Reservoir-1

Start of Run: 01Jan2000, 00:00 Basin Model: Basin 1
End of Run: 01Jan2000, 07:00 Meteorologic Model: Met 1
Compute Time: 27Feb2020, 16:20:51 Control Specifications: Control 1

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	00:00	0.0000	0.0000	0.0000	0.0000
01Jan2000	00:01	0.2000	0.0001	0.0010	0.0003
01Jan2000	00:02	0.4000	0.0005	0.0039	0.0011
01Jan2000	00:03	0.6000	0.0012	0.0088	0.0024
01Jan2000	00:04	0.8000	0.0022	0.0157	0.0042
01Jan2000	00:05	1.0000	0.0034	0.0245	0.0066
01Jan2000	00:06	1.0000	0.0048	0.0342	0.0093
01Jan2000	00:07	1.0000	0.0062	0.0440	0.0119
01Jan2000	00:08	1.0000	0.0075	0.0537	0.0145
01Jan2000	00:09	1.0000	0.0089	0.0634	0.0171
01Jan2000	00:10	1.0000	0.0102	0.0730	0.0197
01Jan2000	00:11	1.0000	0.0116	0.0827	0.0224
01Jan2000	00:12	1.0000	0.0129	0.0923	0.0249
01Jan2000	00:13	1.0000	0.0143	0.1018	0.0283
01Jan2000	00:14	1.0000	0.0156	0.1114	0.0343
01Jan2000	00:15	1.0000	0.0169	0.1208	0.0402
01Jan2000	00:16	1.0000	0.0182	0.1303	0.0462
01Jan2000	00:17	1.0000	0.0195	0.1396	0.0521
01Jan2000	00:18	1.0000	0.0208	0.1489	0.0579
01Jan2000	00:19	1.0000	0.0221	0.1582	0.0638
01Jan2000	00:20	1.0000	0.0234	0.1673	0.0696
01Jan2000	00:21	1.0200	0.0247	0.1766	0.0754
01Jan2000	00:22	1.0400	0.0260	0.1859	0.0813
01Jan2000	00:23	1.0600	0.0274	0.1954	0.0873
01Jan2000	00:24	1.0800	0.0287	0.2051	0.0922
01Jan2000	00:25	1.1000	0.0301	0.2149	0.0962

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	00:26	1.1000	0.0315	0.2247	0.1003
01Jan2000	00:27	1.1000	0.0328	0.2345	0.1043
01Jan2000	00:28	1.1000	0.0342	0.2443	0.1083
01Jan2000	00:29	1.1000	0.0356	0.2541	0.1123
01Jan2000	00:30	1.1000	0.0369	0.2637	0.1163
01Jan2000	00:31	1.1000	0.0383	0.2734	0.1203
01Jan2000	00:32	1.1000	0.0396	0.2830	0.1242
01Jan2000	00:33	1.1000	0.0410	0.2926	0.1281
01Jan2000	00:34	1.1000	0.0423	0.3022	0.1317
01Jan2000	00:35	1.1000	0.0436	0.3117	0.1345
01Jan2000	00:36	1.1000	0.0450	0.3212	0.1373
01Jan2000	00:37	1.1000	0.0463	0.3306	0.1400
01Jan2000	00:38	1.1000	0.0476	0.3400	0.1428
01Jan2000	00:39	1.1000	0.0489	0.3494	0.1455
01Jan2000	00:40	1.1000	0.0502	0.3588	0.1482
01Jan2000	00:41	1.1000	0.0515	0.3682	0.1509
01Jan2000	00:42	1.1000	0.0528	0.3775	0.1536
01Jan2000	00:43	1.1000	0.0542	0.3868	0.1563
01Jan2000	00:44	1.1000	0.0554	0.3961	0.1590
01Jan2000	00:45	1.1000	0.0567	0.4053	0.1614
01Jan2000	00:46	1.1000	0.0580	0.4145	0.1636
01Jan2000	00:47	1.1000	0.0593	0.4237	0.1658
01Jan2000	00:48	1.1000	0.0606	0.4329	0.1680
01Jan2000	00:49	1.1000	0.0619	0.4421	0.1703
01Jan2000	00:50	1.1000	0.0632	0.4512	0.1724
01Jan2000	00:51	1.1200	0.0645	0.4604	0.1747
01Jan2000	00:52	1.1400	0.0658	0.4698	0.1769
01Jan2000	00:53	1.1600	0.0671	0.4794	0.1792
01Jan2000	00:54	1.1800	0.0685	0.4891	0.1816
01Jan2000	00:55	1.2000	0.0699	0.4990	0.1839
01Jan2000	00:56	1.2000	0.0713	0.5090	0.1861

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	00:57	1.2000	0.0727	0.5190	0.1883
01Jan2000	00:58	1.2000	0.0740	0.5289	0.1905
01Jan2000	00:59	1.2000	0.0754	0.5388	0.1927
01Jan2000	01:00	1.2000	0.0768	0.5487	0.1949
01Jan2000	01:01	1.2000	0.0782	0.5586	0.1971
01Jan2000	01:02	1.2000	0.0796	0.5685	0.1992
01Jan2000	01:03	1.2000	0.0810	0.5783	0.2014
01Jan2000	01:04	1.2000	0.0823	0.5881	0.2036
01Jan2000	01:05	1.2000	0.0837	0.5979	0.2057
01Jan2000	01:06	1.2000	0.0851	0.6077	0.2077
01Jan2000	01:07	1.2000	0.0864	0.6174	0.2097
01Jan2000	01:08	1.2000	0.0878	0.6272	0.2116
01Jan2000	01:09	1.2000	0.0892	0.6369	0.2136
01Jan2000	01:10	1.2000	0.0905	0.6466	0.2155
01Jan2000	01:11	1.2000	0.0919	0.6563	0.2174
01Jan2000	01:12	1.2000	0.0932	0.6659	0.2194
01Jan2000	01:13	1.2000	0.0946	0.6756	0.2213
01Jan2000	01:14	1.2000	0.0959	0.6852	0.2232
01Jan2000	01:15	1.2000	0.0973	0.6948	0.2252
01Jan2000	01:16	1.2200	0.0986	0.7045	0.2269
01Jan2000	01:17	1.2400	0.1000	0.7143	0.2286
01Jan2000	01:18	1.2600	0.1014	0.7244	0.2303
01Jan2000	01:19	1.2800	0.1028	0.7346	0.2321
01Jan2000	01:20	1.3000	0.1043	0.7450	0.2338
01Jan2000	01:21	1.3000	0.1058	0.7555	0.2356
01Jan2000	01:22	1.3000	0.1072	0.7659	0.2374
01Jan2000	01:23	1.3000	0.1087	0.7764	0.2392
01Jan2000	01:24	1.3000	0.1102	0.7868	0.2409
01Jan2000	01:25	1.3000	0.1116	0.7972	0.2427
01Jan2000	01:26	1.3000	0.1131	0.8076	0.2445
01Jan2000	01:27	1.3000	0.1145	0.8180	0.2463

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	01:28	1.3000	0.1160	0.8283	0.2480
01Jan2000	01:29	1.3000	0.1174	0.8387	0.2498
01Jan2000	01:30	1.3000	0.1189	0.8490	0.2515
01Jan2000	01:31	1.3200	0.1203	0.8594	0.2533
01Jan2000	01:32	1.3400	0.1218	0.8700	0.2551
01Jan2000	01:33	1.3600	0.1233	0.8808	0.2569
01Jan2000	01:34	1.3800	0.1248	0.8917	0.2588
01Jan2000	01:35	1.4000	0.1264	0.9028	0.2607
01Jan2000	01:36	1.4000	0.1280	0.9140	0.2625
01Jan2000	01:37	1.4000	0.1295	0.9252	0.2642
01Jan2000	01:38	1.4000	0.1311	0.9364	0.2660
01Jan2000	01:39	1.4000	0.1327	0.9475	0.2678
01Jan2000	01:40	1.4000	0.1342	0.9586	0.2696
01Jan2000	01:41	1.4000	0.1358	0.9698	0.2714
01Jan2000	01:42	1.4000	0.1373	0.9809	0.2732
01Jan2000	01:43	1.4000	0.1389	0.9919	0.2749
01Jan2000	01:44	1.4000	0.1404	1.0030	0.2767
01Jan2000	01:45	1.4000	0.1420	1.0140	0.2783
01Jan2000	01:46	1.4000	0.1435	1.0251	0.2800
01Jan2000	01:47	1.4000	0.1451	1.0361	0.2816
01Jan2000	01:48	1.4000	0.1466	1.0471	0.2833
01Jan2000	01:49	1.4000	0.1481	1.0581	0.2849
01Jan2000	01:50	1.4000	0.1497	1.0690	0.2866
01Jan2000	01:51	1.4200	0.1512	1.0801	0.2882
01Jan2000	01:52	1.4400	0.1528	1.0913	0.2899
01Jan2000	01:53	1.4600	0.1544	1.1027	0.2916
01Jan2000	01:54	1.4800	0.1560	1.1143	0.2932
01Jan2000	01:55	1.5000	0.1576	1.1260	0.2949
01Jan2000	01:56	1.5000	0.1593	1.1379	0.2965
01Jan2000	01:57	1.5000	0.1610	1.1497	0.2982
01Jan2000	01:58	1.5000	0.1626	1.1615	0.2998

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	01:59	1.5000	0.1643	1.1733	0.3015
01Jan2000	02:00	1.5000	0.1659	1.1851	0.3032
01Jan2000	02:01	1.5200	0.1676	1.1970	0.3048
01Jan2000	02:02	1.5400	0.1693	1.2090	0.3175
01Jan2000	02:03	1.5600	0.1709	1.2210	0.3317
01Jan2000	02:04	1.5800	0.1726	1.2331	0.3458
01Jan2000	02:05	1.6000	0.1743	1.2453	0.3601
01Jan2000	02:06	1.6000	0.1760	1.2574	0.3743
01Jan2000	02:07	1.6000	0.1777	1.2694	0.3884
01Jan2000	02:08	1.6000	0.1794	1.2813	0.4023
01Jan2000	02:09	1.6000	0.1810	1.2930	0.4160
01Jan2000	02:10	1.6000	0.1826	1.3045	0.4506
01Jan2000	02:11	1.6200	0.1842	1.3156	0.5009
01Jan2000	02:12	1.6400	0.1857	1.3265	0.5499
01Jan2000	02:13	1.6600	0.1872	1.3371	0.5976
01Jan2000	02:14	1.6800	0.1886	1.3474	0.6441
01Jan2000	02:15	1.7000	0.1900	1.3575	0.6895
01Jan2000	02:16	1.7000	0.1914	1.3672	0.7333
01Jan2000	02:17	1.7000	0.1927	1.3765	0.7752
01Jan2000	02:18	1.7000	0.1940	1.3854	0.8153
01Jan2000	02:19	1.7000	0.1952	1.3939	0.8537
01Jan2000	02:20	1.7000	0.1963	1.4021	0.8977
01Jan2000	02:21	1.7200	0.1974	1.4098	0.9469
01Jan2000	02:22	1.7400	0.1984	1.4173	0.9944
01Jan2000	02:23	1.7600	0.1994	1.4245	1.0401
01Jan2000	02:24	1.7800	0.2004	1.4314	1.0843
01Jan2000	02:25	1.8000	0.2013	1.4382	1.1271
01Jan2000	02:26	1.8000	0.2022	1.4446	1.1678
01Jan2000	02:27	1.8000	0.2031	1.4506	1.2061
01Jan2000	02:28	1.8000	0.2039	1.4563	1.2421
01Jan2000	02:29	1.8000	0.2046	1.4616	1.2759

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	02:30	1.8000	0.2053	1.4666	1.3077
01Jan2000	02:31	1.8200	0.2060	1.4714	1.3381
01Jan2000	02:32	1.8400	0.2067	1.4761	1.3679
01Jan2000	02:33	1.8600	0.2073	1.4807	1.3971
01Jan2000	02:34	1.8800	0.2079	1.4852	1.4257
01Jan2000	02:35	1.9000	0.2086	1.4896	1.4539
01Jan2000	02:36	1.9000	0.2091	1.4939	1.4809
01Jan2000	02:37	1.9000	0.2097	1.4979	1.5062
01Jan2000	02:38	1.9000	0.2102	1.5017	1.5201
01Jan2000	02:39	1.9000	0.2108	1.5054	1.5336
01Jan2000	02:40	1.9000	0.2112	1.5089	1.5466
01Jan2000	02:41	1.9200	0.2117	1.5124	1.5596
01Jan2000	02:42	1.9400	0.2122	1.5160	1.5727
01Jan2000	02:43	1.9600	0.2128	1.5197	1.5861
01Jan2000	02:44	1.9800	0.2133	1.5234	1.5997
01Jan2000	02:45	2.0000	0.2138	1.5271	1.6136
01Jan2000	02:46	2.0200	0.2143	1.5310	1.6277
01Jan2000	02:47	2.0400	0.2149	1.5349	1.6420
01Jan2000	02:48	2.0600	0.2154	1.5388	1.6565
01Jan2000	02:49	2.0800	0.2160	1.5428	1.6712
01Jan2000	02:50	2.1000	0.2166	1.5468	1.6860
01Jan2000	02:51	2.1200	0.2171	1.5509	1.7011
01Jan2000	02:52	2.1400	0.2177	1.5551	1.7163
01Jan2000	02:53	2.1600	0.2183	1.5593	1.7317
01Jan2000	02:54	2.1800	0.2189	1.5635	1.7473
01Jan2000	02:55	2.2000	0.2195	1.5678	1.7630
01Jan2000	02:56	2.2200	0.2201	1.5721	1.7789
01Jan2000	02:57	2.2400	0.2207	1.5765	1.7949
01Jan2000	02:58	2.2600	0.2213	1.5809	1.8111
01Jan2000	02:59	2.2800	0.2219	1.5853	1.8274
01Jan2000	03:00	2.3000	0.2226	1.5898	1.8438

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	03:01	2.3400	0.2232	1.5944	1.8607
01Jan2000	03:02	2.3800	0.2239	1.5992	1.8774
01Jan2000	03:03	2.4200	0.2246	1.6043	1.8923
01Jan2000	03:04	2.4600	0.2253	1.6096	1.9079
01Jan2000	03:05	2.5000	0.2261	1.6151	1.9243
01Jan2000	03:06	2.5200	0.2269	1.6208	1.9410
01Jan2000	03:07	2.5400	0.2277	1.6265	1.9578
01Jan2000	03:08	2.5600	0.2285	1.6323	1.9747
01Jan2000	03:09	2.5800	0.2293	1.6380	1.9917
01Jan2000	03:10	2.6000	0.2301	1.6438	2.0088
01Jan2000	03:11	2.6400	0.2310	1.6498	2.0263
01Jan2000	03:12	2.6800	0.2318	1.6559	2.0444
01Jan2000	03:13	2.7200	0.2327	1.6623	2.0631
01Jan2000	03:14	2.7600	0.2336	1.6688	2.0824
01Jan2000	03:15	2.8000	0.2346	1.6756	2.1023
01Jan2000	03:16	2.8200	0.2355	1.6825	2.1225
01Jan2000	03:17	2.8400	0.2365	1.6893	2.1427
01Jan2000	03:18	2.8600	0.2375	1.6962	2.1629
01Jan2000	03:19	2.8800	0.2384	1.7031	2.1810
01Jan2000	03:20	2.9000	0.2394	1.7099	2.1986
01Jan2000	03:21	2.9600	0.2404	1.7171	2.2167
01Jan2000	03:22	3.0200	0.2414	1.7246	2.2359
01Jan2000	03:23	3.0800	0.2425	1.7325	2.2561
01Jan2000	03:24	3.1400	0.2437	1.7408	2.2773
01Jan2000	03:25	3.2000	0.2449	1.7494	2.2995
01Jan2000	03:26	3.2400	0.2462	1.7584	2.3223
01Jan2000	03:27	3.2800	0.2475	1.7675	2.3456
01Jan2000	03:28	3.3200	0.2487	1.7768	2.3693
01Jan2000	03:29	3.3600	0.2501	1.7862	2.3933
01Jan2000	03:30	3.4000	0.2514	1.7958	2.4178
01Jan2000	03:31	3.5000	0.2528	1.8058	2.4412

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	03:32	3.6000	0.2543	1.8166	2.4658
01Jan2000	03:33	3.7000	0.2559	1.8281	2.4921
01Jan2000	03:34	3.8000	0.2577	1.8404	2.5201
01Jan2000	03:35	3.9000	0.2595	1.8533	2.5496
01Jan2000	03:36	3.9800	0.2614	1.8668	2.5805
01Jan2000	03:37	4.0600	0.2633	1.8809	2.6125
01Jan2000	03:38	4.1400	0.2653	1.8953	2.6455
01Jan2000	03:39	4.2200	0.2674	1.9103	2.6772
01Jan2000	03:40	4.3000	0.2696	1.9257	2.7094
01Jan2000	03:41	4.4800	0.2719	1.9420	2.7437
01Jan2000	03:42	4.6600	0.2744	1.9598	2.7809
01Jan2000	03:43	4.8400	0.2771	1.9790	2.8210
01Jan2000	03:44	5.0200	0.2799	1.9996	2.8637
01Jan2000	03:45	5.2000	0.2830	2.0216	2.9062
01Jan2000	03:46	5.3600	0.2862	2.0449	2.9511
01Jan2000	03:47	5.5200	0.2896	2.0693	2.9983
01Jan2000	03:48	5.6800	0.2932	2.0949	3.0475
01Jan2000	03:49	5.8400	0.2969	2.1215	3.0961
01Jan2000	03:50	6.0000	0.3007	2.1492	3.1463
01Jan2000	03:51	6.5400	0.3050	2.1799	3.2018
01Jan2000	03:52	7.0800	0.3099	2.2153	3.2858
01Jan2000	03:53	7.6200	0.3154	2.2549	3.4046
01Jan2000	03:54	8.1600	0.3215	2.2987	3.5357
01Jan2000	03:55	8.7000	0.3280	2.3456	3.8656
01Jan2000	03:56	9.5000	0.3350	2.3957	4.2189
01Jan2000	03:57	10.3000	0.3425	2.4496	4.7103
01Jan2000	03:58	11.1000	0.3504	2.5063	5.2469
01Jan2000	03:59	11.9000	0.3585	2.5651	5.8914
01Jan2000	04:00	12.7000	0.3669	2.6251	6.5851
01Jan2000	04:01	18.9160	0.3789	2.7112	7.6636
01Jan2000	04:02	25.1320	0.3974	2.8442	9.5254

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	04:03	31.3480	0.4213	3.0164	12.1618
01Jan2000	04:04	37.5640	0.4504	3.2228	14.5036
01Jan2000	04:05	43.7800	0.4850	3.4684	16.5462
01Jan2000	04:06	36.4240	0.5164	3.6906	18.1727
01Jan2000	04:07	29.0680	0.5352	3.8241	19.9935
01Jan2000	04:08	21.7120	0.5418	3.8712	21.1334
01Jan2000	04:09	14.3560	0.5380	3.8441	20.4787
01Jan2000	04:10	7.0000	0.5257	3.7569	18.7248
01Jan2000	04:11	6.5400	0.5099	3.6444	17.8479
01Jan2000	04:12	6.0800	0.4945	3.5356	17.0571
01Jan2000	04:13	5.6200	0.4796	3.4301	16.2465
01Jan2000	04:14	5.1600	0.4653	3.3281	15.4168
01Jan2000	04:15	4.7000	0.4514	3.2298	14.5656
01Jan2000	04:16	4.5000	0.4383	3.1367	13.7010
01Jan2000	04:17	4.3000	0.4262	3.0509	12.6500
01Jan2000	04:18	4.1000	0.4153	2.9736	11.5075
01Jan2000	04:19	3.9000	0.4057	2.9046	10.4181
01Jan2000	04:20	3.7000	0.3972	2.8435	9.5142
01Jan2000	04:21	3.5800	0.3897	2.7892	8.7269
01Jan2000	04:22	3.4600	0.3830	2.7408	8.0681
01Jan2000	04:23	3.3400	0.3770	2.6975	7.4817
01Jan2000	04:24	3.2200	0.3715	2.6583	6.9957
01Jan2000	04:25	3.1000	0.3665	2.6225	6.5520
01Jan2000	04:26	3.0200	0.3620	2.5898	6.1626
01Jan2000	04:27	2.9400	0.3578	2.5599	5.8345
01Jan2000	04:28	2.8600	0.3540	2.5323	5.5321
01Jan2000	04:29	2.7800	0.3504	2.5068	5.2525
01Jan2000	04:30	2.7000	0.3471	2.4830	5.0207
01Jan2000	04:31	2.6400	0.3440	2.4608	4.8141
01Jan2000	04:32	2.5800	0.3411	2.4399	4.6204
01Jan2000	04:33	2.5200	0.3384	2.4203	4.4385

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	04:34	2.4600	0.3359	2.4018	4.2672
01Jan2000	04:35	2.4000	0.3334	2.3843	4.1380
01Jan2000	04:36	2.3600	0.3311	2.3674	4.0194
01Jan2000	04:37	2.3200	0.3288	2.3513	3.9060
01Jan2000	04:38	2.2800	0.3267	2.3360	3.7976
01Jan2000	04:39	2.2400	0.3247	2.3212	3.6938
01Jan2000	04:40	2.2000	0.3227	2.3071	3.5944
01Jan2000	04:41	2.1600	0.3208	2.2935	3.5199
01Jan2000	04:42	2.1200	0.3189	2.2800	3.4796
01Jan2000	04:43	2.0800	0.3170	2.2665	3.4393
01Jan2000	04:44	2.0400	0.3152	2.2531	3.3990
01Jan2000	04:45	2.0000	0.3133	2.2396	3.3587
01Jan2000	04:46	1.9600	0.3114	2.2261	3.3184
01Jan2000	04:47	1.9200	0.3096	2.2127	3.2781
01Jan2000	04:48	1.8800	0.3077	2.1992	3.2378
01Jan2000	04:49	1.8400	0.3058	2.1857	3.2122
01Jan2000	04:50	1.8000	0.3039	2.1720	3.1875
01Jan2000	04:51	1.7800	0.3020	2.1583	3.1627
01Jan2000	04:52	1.7600	0.3001	2.1446	3.1379
01Jan2000	04:53	1.7400	0.2982	2.1310	3.1132
01Jan2000	04:54	1.7200	0.2963	2.1174	3.0887
01Jan2000	04:55	1.7000	0.2944	2.1039	3.0642
01Jan2000	04:56	1.6800	0.2926	2.0904	3.0389
01Jan2000	04:57	1.6600	0.2907	2.0769	3.0129
01Jan2000	04:58	1.6400	0.2888	2.0636	2.9871
01Jan2000	04:59	1.6200	0.2870	2.0502	2.9614
01Jan2000	05:00	1.6000	0.2851	2.0370	2.9359
01Jan2000	05:01	1.5800	0.2833	2.0238	2.9104
01Jan2000	05:02	1.5600	0.2815	2.0106	2.8850
01Jan2000	05:03	1.5400	0.2797	1.9975	2.8597
01Jan2000	05:04	1.5200	0.2778	1.9846	2.8327

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	05:05	1.5000	0.2760	1.9717	2.8057
01Jan2000	05:06	1.5000	0.2743	1.9590	2.7791
01Jan2000	05:07	1.5000	0.2725	1.9465	2.7530
01Jan2000	05:08	1.5000	0.2708	1.9343	2.7275
01Jan2000	05:09	1.5000	0.2691	1.9224	2.7025
01Jan2000	05:10	1.5000	0.2675	1.9106	2.6780
01Jan2000	05:11	1.4800	0.2659	1.8991	2.6538
01Jan2000	05:12	1.4600	0.2643	1.8876	2.6278
01Jan2000	05:13	1.4400	0.2627	1.8761	2.6016
01Jan2000	05:14	1.4200	0.2611	1.8647	2.5756
01Jan2000	05:15	1.4000	0.2595	1.8534	2.5497
01Jan2000	05:16	1.3800	0.2579	1.8421	2.5239
01Jan2000	05:17	1.3600	0.2563	1.8309	2.4983
01Jan2000	05:18	1.3400	0.2548	1.8197	2.4728
01Jan2000	05:19	1.3200	0.2532	1.8086	2.4474
01Jan2000	05:20	1.3000	0.2516	1.7975	2.4221
01Jan2000	05:21	1.3000	0.2501	1.7866	2.3943
01Jan2000	05:22	1.3000	0.2486	1.7760	2.3672
01Jan2000	05:23	1.3000	0.2472	1.7656	2.3407
01Jan2000	05:24	1.3000	0.2458	1.7555	2.3149
01Jan2000	05:25	1.3000	0.2444	1.7456	2.2897
01Jan2000	05:26	1.2800	0.2430	1.7359	2.2649
01Jan2000	05:27	1.2600	0.2417	1.7262	2.2402
01Jan2000	05:28	1.2400	0.2403	1.7166	2.2156
01Jan2000	05:29	1.2200	0.2390	1.7070	2.1912
01Jan2000	05:30	1.2000	0.2377	1.6975	2.1668
01Jan2000	05:31	1.2000	0.2363	1.6881	2.1392
01Jan2000	05:32	1.2000	0.2351	1.6790	2.1124
01Jan2000	05:33	1.2000	0.2338	1.6702	2.0863
01Jan2000	05:34	1.2000	0.2326	1.6616	2.0610
01Jan2000	05:35	1.2000	0.2315	1.6532	2.0364

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	05:36	1.1800	0.2303	1.6450	2.0123
01Jan2000	05:37	1.1600	0.2292	1.6368	1.9882
01Jan2000	05:38	1.1400	0.2280	1.6287	1.9643
01Jan2000	05:39	1.1200	0.2269	1.6206	1.9405
01Jan2000	05:40	1.1000	0.2258	1.6126	1.9167
01Jan2000	05:41	1.1000	0.2247	1.6047	1.8934
01Jan2000	05:42	1.1000	0.2236	1.5970	1.8702
01Jan2000	05:43	1.1000	0.2225	1.5895	1.8429
01Jan2000	05:44	1.1000	0.2215	1.5823	1.8165
01Jan2000	05:45	1.1000	0.2206	1.5754	1.7910
01Jan2000	05:46	1.1000	0.2196	1.5687	1.7665
01Jan2000	05:47	1.1000	0.2187	1.5623	1.7428
01Jan2000	05:48	1.1000	0.2179	1.5561	1.7200
01Jan2000	05:49	1.1000	0.2170	1.5501	1.6980
01Jan2000	05:50	1.1000	0.2162	1.5443	1.6767
01Jan2000	05:51	1.0800	0.2154	1.5386	1.6559
01Jan2000	05:52	1.0600	0.2146	1.5330	1.6351
01Jan2000	05:53	1.0400	0.2138	1.5273	1.6143
01Jan2000	05:54	1.0200	0.2130	1.5217	1.5935
01Jan2000	05:55	1.0000	0.2122	1.5160	1.5728
01Jan2000	05:56	1.0000	0.2115	1.5105	1.5525
01Jan2000	05:57	1.0000	0.2107	1.5052	1.5329
01Jan2000	05:58	1.0000	0.2100	1.5000	1.5139
01Jan2000	05:59	1.0000	0.2093	1.4951	1.4884
01Jan2000	06:00	1.0000	0.2087	1.4904	1.4588
01Jan2000	06:01	0.8000	0.2079	1.4851	1.4250
01Jan2000	06:02	0.6000	0.2069	1.4782	1.3810
01Jan2000	06:03	0.4000	0.2058	1.4698	1.3277
01Jan2000	06:04	0.2000	0.2044	1.4600	1.2654
01Jan2000	06:05	0.0000	0.2028	1.4488	1.1948
01Jan2000	06:06	0.0000	0.2012	1.4374	1.1225

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2000	06:07	0.0000	0.1997	1.4267	1.0545
01Jan2000	06:08	0.0000	0.1983	1.4167	0.9906
01Jan2000	06:09	0.0000	0.1970	1.4072	0.9306
01Jan2000	06:10	0.0000	0.1958	1.3983	0.8742
01Jan2000	06:11	0.0000	0.1946	1.3899	0.8357
01Jan2000	06:12	0.0000	0.1935	1.3819	0.7994
01Jan2000	06:13	0.0000	0.1924	1.3742	0.7647
01Jan2000	06:14	0.0000	0.1914	1.3668	0.7316
01Jan2000	06:15	0.0000	0.1904	1.3598	0.6998
01Jan2000	06:16	0.0000	0.1894	1.3531	0.6695
01Jan2000	06:17	0.0000	0.1885	1.3466	0.6404
01Jan2000	06:18	0.0000	0.1877	1.3405	0.6127
01Jan2000	06:19	0.0000	0.1868	1.3346	0.5861
01Jan2000	06:20	0.0000	0.1860	1.3289	0.5607
01Jan2000	06:21	0.0000	0.1853	1.3235	0.5363
01Jan2000	06:22	0.0000	0.1846	1.3184	0.5131
01Jan2000	06:23	0.0000	0.1839	1.3134	0.4908
01Jan2000	06:24	0.0000	0.1832	1.3087	0.4695
01Jan2000	06:25	0.0000	0.1826	1.3042	0.4492
01Jan2000	06:26	0.0000	0.1820	1.2998	0.4297
01Jan2000	06:27	0.0000	0.1814	1.2957	0.4191
01Jan2000	06:28	0.0000	0.1808	1.2916	0.4143
01Jan2000	06:29	0.0000	0.1803	1.2875	0.4096
01Jan2000	06:30	0.0000	0.1797	1.2835	0.4049
01Jan2000	06:31	0.0000	0.1791	1.2796	0.4002
01Jan2000	06:32	0.0000	0.1786	1.2756	0.3956
01Jan2000	06:33	0.0000	0.1780	1.2718	0.3911
01Jan2000	06:34	0.0000	0.1775	1.2679	0.3866
01Jan2000	06:35	0.0000	0.1770	1.2642	0.3822
01Jan2000	06:36	0.0000	0.1765	1.2604	0.3778
01Jan2000	06:37	0.0000	0.1759	1.2567	0.3735

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
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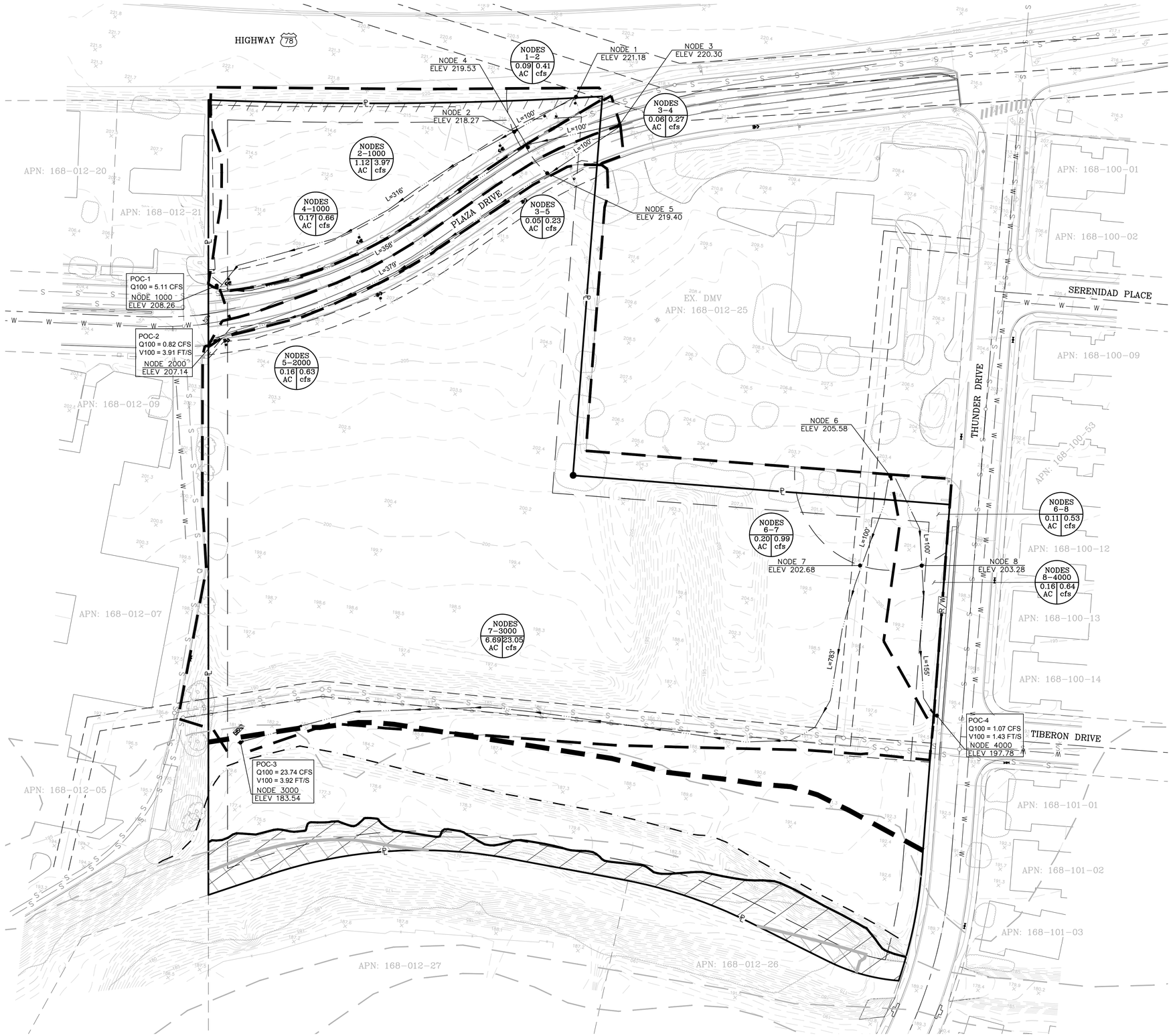
01Jan2000	06:39	0.0000	0.1749	1.2495	0.3650
01Jan2000	06:40	0.0000	0.1744	1.2459	0.3608
01Jan2000	06:41	0.0000	0.1739	1.2424	0.3566
01Jan2000	06:42	0.0000	0.1734	1.2389	0.3526
01Jan2000	06:43	0.0000	0.1730	1.2354	0.3485
01Jan2000	06:44	0.0000	0.1725	1.2320	0.3445
01Jan2000	06:45	0.0000	0.1720	1.2286	0.3406
01Jan2000	06:46	0.0000	0.1715	1.2253	0.3367
01Jan2000	06:47	0.0000	0.1711	1.2220	0.3328
01Jan2000	06:48	0.0000	0.1706	1.2188	0.3290
01Jan2000	06:49	0.0000	0.1702	1.2155	0.3252
01Jan2000	06:50	0.0000	0.1697	1.2124	0.3215
01Jan2000	06:51	0.0000	0.1693	1.2092	0.3178
01Jan2000	06:52	0.0000	0.1689	1.2061	0.3142
01Jan2000	06:53	0.0000	0.1684	1.2030	0.3106
01Jan2000	06:54	0.0000	0.1680	1.2000	0.3070
01Jan2000	06:55	0.0000	0.1676	1.1970	0.3048
01Jan2000	06:56	0.0000	0.1672	1.1940	0.3044
01Jan2000	06:57	0.0000	0.1667	1.1910	0.3040
01Jan2000	06:58	0.0000	0.1663	1.1880	0.3036
01Jan2000	06:59	0.0000	0.1659	1.1850	0.3031
01Jan2000	07:00	0.0000	0.1655	1.1820	0.3027

CHAPTER 6 – WSPG HYDRAULIC ANALYSIS

Carmax Oceanside
Drainage Study

To be provided at final engineering.

CHAPTER 7 - HYDROLOGY MAPS



LEGEND

BASIN INFO — NODE TO NODE; AREA (AC); Q (CFS)

BASIN LIMITS

PROJECT BOUNDARY

FLOW–LINE L=100'

NODE INFO — NODE # / ELEVATION

50 25 0 50 100 150

SCALE: 1" = 50'

NO.	DESCRIPTION	DATE	APP'D
	REVISIONS		

Civil Engineering · Environmental
Land Surveying

2442 Second Avenue
San Diego, CA 92101
(619)232–9200 (619)232–9210 Fax

R·E·C
Consultants, Inc.

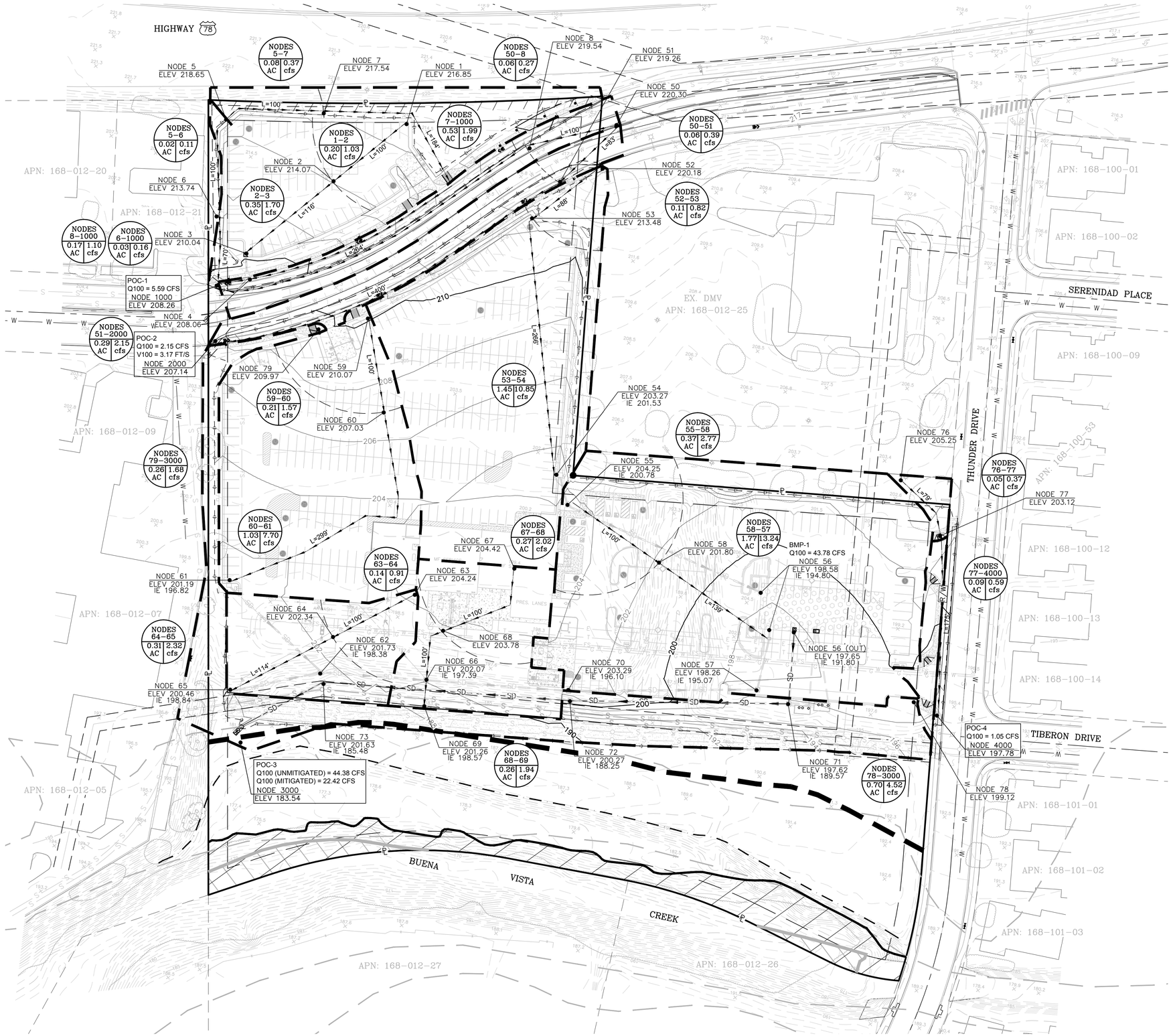
DATE: 10/25/19
SCALE: 1" = 50'
DRAWN: A.O.
CHECKED: J.R.R.

SHEET TITLE: DRAINAGE EXHIBIT - EXISTING CONDITIONS

PROJECT: CARMAX OCEANSIDE
PLAZA DRIVE & THUNDER DRIVE
OCEANSIDE, CA 92056

SHEET 1 OF 1 SHEETS

SAVE DATE: 3/6/2020 ~ PLOT DATE: 3/6/2020 ~ FILE NAME: P:\Accel\1492 CarMax Oceanside\Reports\Drainage Study\Drainage Exhibits.dwg



LEGEND

BASIN INFO — NODE TO NODE / AREA (AC) / Q (CFS)

BASIN LIMITS

PROJECT BOUNDARY

FLOW-LINE — L=100'

NODE INFO — NODE # / ELEVATION

NO.	DESCRIPTION	DATE	APP'D
	REVISIONS		

R·E·C Consultants, Inc.
Civil Engineering · Environmental
Land Surveying
2442 Second Avenue
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DATE: 10/25/19
SCALE: 1" = 50'
DRAWN: A.O.
CHECKED: J.R.R.

SHEET TITLE: DRAINAGE EXHIBIT - PROPOSED CONDITIONS

PROJECT: CARMAX OCEANSIDE
PLAZA DRIVE & THUNDER DRIVE
OCEANSIDE, CA 92056

SHEET 1 OF 1 SHEETS

SAVE DATE: 3/6/2020 ~ PLOT DATE: 3/6/2020 ~ FILE NAME: P:\Accel\1492 CarMax Oceanside\Reports\Drainage Study\Drainage Exhibits.dwg

ATTACHMENT 6
Geotechnical and Groundwater Investigation Report

This is the cover sheet for Attachment 6.

August 8, 2019

CenterPoint Integrated Solutions, LLC
355 Union Boulevard, Suite 301
Lakewood, Colorado 80228
Attention: Stacey Haggerson

Via Email: shaggerson@centerpoint-is.com

Subject: **Preliminary Geotechnical Recommendations**
Proposed Auto Dealership
Plaza Drive & Hacienda Drive
Oceanside, San Diego County, California
EEI Project CIS-72940.7

Dear Ms. Haggerson:

In accordance with your authorization, EEI has conducted a geotechnical investigation for the proposed new Car Max facilities, in the City of Oceanside, California. The purpose of our investigation was to evaluate the subsurface conditions and develop geotechnical recommendations for the project design and construction.

Results of our investigation indicated that the proposed improvements are geotechnically feasible, provided the recommendations presented in our report are properly incorporated into project design and construction.

The purpose of this preliminary / draft report is to present our preliminary recommendations to aid client for the development of the preliminary construction cost analysis and schedules. Our final recommendations will be provided in our final report upon completion of the laboratory testing and supplemental engineering analysis.

SITE AND PROJECT DESCRIPTION

The subject site is located in the City of Oceanside, County of San Diego, California. It is an undeveloped lot that is bordered by Highway 78, Plaza Drive, and Hacienda Drive on the north; Thunder Drive and the existing Oceanside DMV on the east; commercial developments on the west; and the Buena Vista Creek

watershed on the south. The surface slopes gently towards Buena Vista Creek along the southern boundary, with elevations varying from 212 to 185 feet above mean sea level. A north-south trending channel cuts across the central part of the property. The center of the subject property is approximately situated at 33.1821° north latitude and 117.2890° west longitude (Google Earth™, 2016).

Based on conceptual information provided by the Client (CarMax, 2019), we understand that the current proposed development will consist of a new CarMax sales building (5,005 ft^2), service building (4309 ft^2), presentation building (1,197 ft^2), carwash (936 ft^2), paved parking and drive areas, associated landscaping, and other improvements. No grading plans have been provided to us at this time, but grading is expected to consist of cut-and-fill of no greater than 5 feet, exclusive of remedial grading. No foundation plans are available at this time.

Site History

Historic aerial photographs show that the subject site and surroundings were undeveloped until the mid-1960s when light grading occurred along the northern part of the property, related to the expansion of Highway 78. Further grading occurred due to development of the residential properties to the east in the 1970s and the commercial developments to the northeast and the west in the 1990s. A prior geotechnical evaluation report was prepared by NorCal Engineering for proposed developments on the subject site (NorCal Engineering, 2007). EEI obtained and reviewed this document and we present a brief summary of the report and its general finding here.

NorCal Engineering (hereafter referred to as NorCal) performed a preliminary geotechnical engineering study in 2007. Their study consisted of drilling nine borings across the property to depths of 10 to 50 feet below ground surface. In their borings, NorCal encountered 1 to 4 feet of fill consisting of silty sand and sandy clay overlying alluvium consisting of clayey sand and sandy clay. Bedrock was encountered at depths greater than 18 feet below ground surface and consisted of siltstone and sandstone. They did not encounter groundwater during their subsurface exploration. NorCal's lab testing indicated that the subsurface fill and alluvial soils were moderately expansive; negligibly corrosive to metal and concrete; corrosive to ferrous metals; and an R-Value of 33. NorCal concluded that the project was feasible from a geotechnical standpoint and provided grading and foundation recommendations.

Regional Geology

Regionally, the subject property lies within the Peninsular Ranges Geomorphic Province of southern California. This province consists of a series of ranges separated by northwest trending valleys; sub parallel to branches of the San Andreas Fault (CGS, 2002). The Peninsular Ranges geomorphic province, one of the largest geomorphic units in western North America, extends from the Transverse Ranges geomorphic province and the Los Angeles Basin, south to Baja California. It is bound on the west by the Pacific Ocean, on the south by the Gulf of California and on the east by the Colorado Desert Province. The Peninsular Ranges are essentially a series of northwest-southeast oriented fault blocks (CGS, 2002). Major fault zones and subordinate fault zones found in the Peninsular Ranges Province typically trend in a northwest-southeast direction. Regional geologic maps of the subject property and vicinity (Kennedy & Tan, 2007) indicate the property is underlain by late Pleistocene to Holocene Young Alluvial Flood Plain deposits (map symbol Qya). These deposits consist of poorly sorted sands, gravels, silts and clay that were deposited by the San Luis Rey River.

Subsurface Investigation

Our subsurface investigation was conducted on July 9, 29, 30, and 31, 2019, and consisted of advancing eleven (11) CPT soundings and excavating twenty-one (21) backhoe test trenches across the subject site.

The subsurface materials encountered in our exploratory trenches consisted of artificial fill, Quaternary-aged alluvium, and Eocene-aged Santiago Formation. A brief description of the subsurface conditions is provided below.

Artificial Fill – The surface of the subject site is covered by artificial fill. The fill consists of silty to sandy clay, clayey sand, and clayey silt that was grayish to reddish-brown mottled, damp to slightly moist, and medium stiff to stiff at the time of our subsurface exploration. Brick fragments and other detritus are common in the fill. The fill varies in depth across the property from 2 to 12 feet, being shallowest in the northern part of the property along Plaza/Hacienda Dr. and increasing in thickness towards the southern part of the property. The thickest fill deposits occur along the north-south trending channel in the central part of the property.

Quaternary Alluvial Flood Plain Deposits – Quaternary-aged older alluvium was encountered in all of the trenches except T-19 and T-20 underlying the fill. The alluvium consists of sandy clay that was light grayish brown mottled, slightly moist, and medium stiff to hard at the time of our subsurface exploration. Caliche stringers are common and the alluvium also contains trace fine-grained sand. The thickness of the alluvium varies from one to at least 11 feet, with the thickest sections of alluvium being located in the central parts of the subject property.

Eocene Santiago Formation – Eocene-aged Santiago Formation was encountered in test pits T-1, T-2, T-3, T-4, T-5, T-7, T-12, T-16, T-17, T-18, T-19, T-20, and T-21 underlying the fill and alluvium. The Santiago Formation consists of clayey sandstone that was light yellowish-brown to light grayish-brown mottled, slightly moist to moist, and soft to hard at the time of our subsurface exploration. The sandstone was massive and friable. It was encountered at depths varying from 3 to 11 feet below ground surface.

Groundwater

Groundwater was not encountered in any of our trenches or CPT soundings at the time of subsurface exploration to the maximum explored depth of 38 feet below ground surface. Additionally; the previous investigation at the site did not encounter ground water to the maximum depth of 50 below ground surface.

However; our review of nearby monitoring wells to the west indicates that groundwater can vary in depth from 12 to 20 feet below ground surface. It should be noted that fluctuations in groundwater may result from variations in the ground surface topography, subsurface stratification, precipitation, irrigation and other factors that may not be currently evident. In general, groundwater is often expected to follow the direction of surface topography. Based on topography, local groundwater flow is expected to be in a southerly to westerly direction.

PRELIMINARY RECOMMENDATIONS

California Building Code Seismic Design Parameters

EEI utilized seismic design criteria provided in Tables 3.3(1) and 3.3(2) in Section 1613A3.3 of the CBC (2016) and ASCE 7-10. Final selection of the appropriate seismic design coefficients should be made by the structural consultant based on the local laws and ordinances, expected building response, and desired level of conservatism. The site coefficients and adjusted maximum considered earthquake spectral response accelerations in accordance with the 2016 California Building Code are presented in **Table 1**.

Table 1
ASCE 7-10 Seismic Design Values

Parameter	Value
Site Coordinats	Latitude 33.1821° Longitude -117.2890°
Mapped Spectral Acceleration Value at Short Period: S_s	1.058g.
Mapped Spectral Acceleration Value at 1-Second Period: S_1	0.411g.
Site Soil Classification	D
Short Period Site Coefficient: F_a	1.077
1-Second Period Site Coefficient: F_v	1.589
Adjusted Maximum Considered Earthquake (MCE_R) Spectral Response Acceleration at Short Period: S_{MS}	1.139g.
Adjusted Maximum Considered Earthquake (MCE_R) Spectral Response Acceleration at 1-Second Period: S_{M1}	0.653g.
Design Spectral Response Acceleration at Short Periods: S_{DS}	0.759g.
Design Spectral Response Acceleration at 1-Second Period: S_{D1}	0.435g.
Peak Ground Acceleration Adjusted For Site Class Effects: PGA_M	0.441g.

Earthwork

When grading is conducted, it should be performed in accordance with good construction practice, applicable Code requirements, and the following recommendations.

Prior to the start of grading operations, utility lines within the project area, if any, should be located and marked in the field so they can be rerouted or protected during the site development. All debris and perishable material should be removed from the site.

The area of site preparation should extend at least five feet beyond any proposed improvements (e.g., building foot print, appurtenant structures, sidewalks, walkways, pavement areas, etc.). Any existing fill soil and perishable material should be excavated to contact with the firm underlying alluvial/bedrock deposits. A minimum of 12 feet of removal and recompaction should be anticipated.

To minimize the effect of differential settlement on the proposed improvements; foundation systems of the proposed improvements should be supported on a minimum five-foot thick of properly compacted fill blanket. Additionally; the differential fill thickness under each individual building should not exceed 10 feet.

When excavations deeper than five feet are made, temporary construction slopes should be no steeper than 1:1 (horizontal to vertical). Temporary construction slopes, sheeting and bracing should be provided by the contractor, as necessary, to protect workers in the excavation. Where excavations undermine existing improvements, temporary structural support should be provided to reduce risk of damage resulting from undercutting. Permanent cut and fill slopes should not be constructed steeper than 2:1.

Where fill is to be placed, the upper 6 to 8 inches of surface exposed by the excavation should be scarified, moisture-conditioned to 2 percent to 4 percent over optimum moisture content, and compacted to minimum 95 percent relative compaction[1]. The fill soil should then be placed in layers less than 8 inches in loose thickness and moisture conditioned to 2 to 4 percent over optimum moisture content, and compacted to minimum 90 percent relative compaction. If localized areas of relatively loose soil prevent proper compaction, over-excavation and re-compaction will be necessary.

The on-site soils are generally suitable for use as compacted fill and backfill. Import fill soils (if planned), should conform to the specifications presented in this report.

Import Fill and Select Backfill Material

The import fill and select backfill material should be free of perishable material and should meet the following criteria:

a.	Maximum particle size	1 inch
b.	Maximum Liquid Limit (LL)	5%
c.	Maximum Plasticity Index (PI)	0%
d.	Maximum percentage passing No. 200 sieve	20%
e.	Minimum sand equivalent	30
f.	Maximum Expansive Index (EI) (ASTM D-2849)	20

The earthwork contractor should ensure that all proposed fill materials are approved by the Geotechnical Engineer prior to use. Representative soil samples should be made available for testing at least ten working days prior to import to allow for laboratory tests.

Yielding Subgrade Conditions

The soils encountered at the subject property can exhibit “pumping” or yielding if they become saturated. This can often occur in response to periods of significant precipitation, such as during the winter rainy season. If this occurs and in order to help stabilize the yielding subgrade soils within the bottom of the removal areas, the contractor can consider the placement of stabilization fabric or geo-grid over the yielding areas, depending on the relative severity.

[1] Relative compaction refers to the in-place dry density of soil expressed as a percentage of the maximum dry density of the same material, as determined by the ASTM (D1557) test method. Optimum moisture content corresponding to the maximum dry density, as determined by the ASTM (D1557) test method.

Mirafi 600X (or approved equivalent) stabilization fabric may be used for areas with low to moderate yielding conditions. Geo-grid such as Tensar TX-5 may be used for areas with moderate to severe yielding conditions. Uniform sized, ¾- to 2-inch crushed rock should be placed over the stabilization fabric or geo-grid. A 12-inch thick section of crushed rock will typically be necessary to stabilize yielding ground. A filter fabric should be placed over the crushed rock to prevent migration of fines into the rock and subsequent settlement of the overlying fill. Fill soils, which should be placed and compacted in accordance with the recommendations presented herein, should then be placed over the filter fabric until design finish grades are reached. The crushed rock and stabilization fabric or geo-grid should extend at least five feet laterally beyond the limits of the yielding areas.

These operations should be performed under the observation and testing of a representative of the project Geotechnical Engineer in order to evaluate the effectiveness of these measures and to provide additional recommendations for mitigation, as necessary.

Shrinkage and Bulking

Several factors will impact earthwork balancing on the subject property, including shrinkage, bulking, subsidence, trench spoils from utilities and footing excavations, and final pavement section thickness as well as the accuracy of topography. Shrinkage, bulking and subsidence are primarily dependent upon the degree of compactive effort achieved during construction. Shrinkage, bulking and subsidence should be considered by the project civil engineer relative to final site balancing. It is recommended that the site development be planned to include an area that could be raised or lowered to accommodate final site balancing.

PRELIMINARY FOUNDATION RECOMMENDATIONS

General

The preliminary foundation recommendations provided herein are based on the proposed commercial development information provided by the Client. EEI should be provided with grading and foundation plans once they are available so that we can determine if the preliminary recommendations provided in this preliminary/draft remain applicable. Recommendations by the project's structural engineer and/or architect may exceed the following minimum preliminary recommendations. However; if analyses by the structural engineer result in less critical details than are provided herein as minimums, the minimums presented herein should be adopted.

Foundation Design

Foundation support for the proposed building could be derived by utilizing continuous interconnected foundations embedded within the newly placed compacted fill.

Allowable design parameters for foundations are as follow:

- Minimum depth for interior and exterior footing……. 3 feet
  (Measured from lowest adjacent soil grade)

- Minimum footing width…….. 1.5 feet
- No isolated pad footing is allowed
- Allowable bearing capacity (pounds per square foot), (FS ≥ 3)
    a. Sustained loads ……..2,000 psf
    b. Total loads (1/3 allowable increase for wind and seismic)……2,650 psf
- Resistance to lateral loads
    a. Passive soil resistance (pounds per cubic foot)……..200 pcf
    b. Coefficient of sliding friction……..0.35

Footings can be designed to resist lateral loads by using a combination of sliding friction and passive resistance. The coefficient of friction should be applied to dead load forces only; and Passive resistance should be reduced by one third. For foundations with no sliding friction at the base (foundations resisting uplift loads), 100% of passive resistance could be utilizes. The upper one foot of passive resistance should be neglected where the soil is not confined by the slabs or pavement.

For the properly constructed foundations in accordance with the foregoing criteria, total static post-construction settlement from the anticipated structural loads is estimated to be on the order of 1 inch. Differential settlement on the order of ½ of total settlement should be anticipated between the similarly loaded adjacent footings.

Footing Setbacks

Footings adjacent to unlined drainage swales or underground utilities (if any) should be deepened to a minimum of 6-inches below the invert of the adjacent unlined swale or utilities. This distance is measured from the footing face at the bearing elevation. Footings for structures adjacent to retaining walls should be deepened so as to extend below a 1:1 projection from the heel of the wall. Alternatively, walls may be designed to accommodate structural loads from buildings or appurtenances.

Interior Slabs-on-Grade

The subgrade beneath the slab-on-grade floors should be compacted by rolling with a smooth-wheeled rubber tired, or vibratory roller to produce a uniformly dense, non-yielding surface. The project Structural Engineer should design the interior concrete slab-on-grade floor. For the preliminary design of the slab, project structural engineer could utilize acceptable design methods by California Building Code (CBC) such as Wire Reinforcement Institute (WRI) design method. On a preliminary basis, for WRI method a minimum of site soil Plasticity Index (PI) and site soil Expansion Index (EI) of 25 percent and 85 respectively should be utilized. However; as a minimum it is recommended that a 5-inch thick slab, reinforced with No. 4 bars located at 12-inches on center, both ways, be constructed. A layer of free draining, clean ¾-inch crushed rock, at least 6-inches thick should be placed below the slab.

In addition, the soil subgrade in the upper three feet should be thoroughly pre-saturated to 30 percent above optimum moisture content.

A moisture vapor retarder/barrier should be placed beneath slabs where moisture sensitive floor coverings will be installed. Typically, plastic is used as a vapor retardant. If plastic is used, a minimum 15-mil is recommended. The plastic should comply with ASTM E1745. Plastic installation should comply with ASTM E1643.

Current construction practice typically includes placement of a 2-inch thick sand cushion between the bottom of the concrete slab and the moisture vapor retarder/barrier. This cushion can provide some protection to the vapor retarder/barrier during construction, and may assist in reducing the potential for edge curling in the slab during curing. However, the sand layer also provides a source of moisture vapor to the underside of the slab that can increase the time required to reduce moisture vapor emissions to limits acceptable for the type of floor covering placed on top of the slab. The slab can be placed directly on the vapor retarder/barrier. The floor covering manufacturer should be contacted to determine the volume of moisture vapor allowable and any treatment needed to reduce moisture vapor emissions to acceptable limits for the particular type of floor covering installed. The project team should determine the appropriate treatment for the specific application.

Exterior Slabs-on-Grade (Hardscape)

It is recommended that a minimum 5-inch thick slab reinforced with No.4 bars located at 18-inches on center, both ways, be constructed. At the exterior edges of the flatwork, a thickened edge is recommended. The thickened edges should be a minimum of 8-inches deep and 6-inches wide and reinforced with two No.4 bars at top and bottom.

Slabs should be provided with weakened plane joints. Joints should be placed in accordance with the American Concrete Institute (ACI) guidelines. Proper control joints should be provided to reduce the potential for damage resulting from shrinkage. Subgrade materials should not be allowed to desiccate between grading and the construction of the concrete slabs. The floor slab subgrade should be thoroughly and uniformly moistened prior to placing concrete.

All dedicated exterior flatwork should conform to standards provided by the governing agency including section composition, supporting material thickness and any requirements for reinforcing steel. Concrete mix proportions and construction techniques, including the addition of water and improper curing, can adversely affect the finished quality of the concrete and result in cracking and spalling of the slab. We recommend that all placement and curing be performed in accordance with procedures outlined by the American Concrete Institute and/or Portland Cement Association. Special consideration should be given to concrete placed and cured during hot or cold weather conditions.

Conventional Retaining Walls

Foundations

The recommendations provided in the foundation section of this report are also applicable to conventional retaining walls.

Lateral Earth Pressures

The active earth pressure for the design of unrestrained earth retaining structures with level backfills can be taken as equivalent to the pressure of a fluid weighing 40 pcf. The at-rest earth pressure for the design of restrained earth retaining structures (such as basement walls or re-entrant corners) with level backfills can be taken as equivalent to the pressure of a fluid weighing 60 pcf. The above values assume a granular and drained backfill condition. If expansive soils are used to backfill the proposed walls, increased active and at-rest earth pressures will need to be utilized for retaining wall design, and can be provided upon request. An additional 20 pcf should be added to these values for walls with a 2:1 H: V sloping backfill.

If required, the seismic earth pressures can be taken as equivalent to the pressure of a fluid weighing 13 pounds per cubic foot (pcf) for flexible walls and 25 pcf for restrained walls. These values are for level backfill conditions and do not include a factor of safety. Appropriate factors of safety should be incorporated into the design. This pressure is in addition to the un-factored static pressures.

An increase in earth pressure equivalent to an additional 2 feet of retained soil can be used to account for surcharge loads from light traffic. The above values do not include a factor of safety. Appropriate factors of safety should be incorporated into the design. If any other surcharge loads are anticipated, EEI should be contacted for the necessary increase in soil pressure.

Retaining Wall Drainage

Retaining walls should be designed to resist hydrostatic pressures or be provided with a backdrain to reduce the accumulation of hydrostatic pressures. Backdrains may consist of a 2-foot wide zone of ¾-inch crushed rock. The backdrain should be separated from the adjacent soils using a non-woven filter fabric, such as Mirafi 140N or equivalent. Weep holes should be provided or a perforated pipe (Schedule 40 PVC) should be installed at the base of the backdrain and sloped to discharge to a suitable storm drain facility. As an alternative, a geocomposite drainage system such as Miradrain 6000 or equivalent placed behind the wall and connected to a suitable storm drain facility can be used. The project architect should provide waterproofing specifications and details.

Backfill

All backfill soils should be compacted to at least 90 percent relative compaction. Backfill soils should consist of granular, free-draining material having an expansion index of 50 or less determined in accordance with ASTM D4829. Expansive or clayey soil should not be used for backfill material. Additionally, fill within 3 feet from the back of the wall should not contain rocks greater than 3-inches in any dimension. The wall should not be backfilled until it has reached an adequate strength.

Corrosivity

Presently, representative samples of the onsite soils are being tested for their corrosion potential. However; based on the results of the previous investigation at the site it appears that the onsite soils are none corrosive to metal and concrete and highly corrosive to ferrous metals.

On a preliminary basis it is recommended the concrete should utilize at least type II cement with maximum 0.5 water/cement ratio in accordance with California building Code (CBC) Standard 1904.3.1. Concrete mix design, materials, placement, curing, and finishing should be in conformance with the standard specifications for public works construction "Green book", and American Concrete Institute (ACI) specifications.

PRELIMINARY PAVEMENT DESIGN

Deleterious material, excessively wet or dry pockets, concentrated zones of oversized rock fragments, and any other unsuitable yielding materials encountered during grading should be removed. Once compacted fill and/or native soils are brought to the proposed pavement subgrade elevations, the subgrade should be proof-rolled in order to check for a uniform firm and unyielding surface. Representatives of the project Geotechnical Engineer should observe all grading and fill placement.

The upper 24-inches of pavement subgrade soils should be scarified; moisture conditioned to at least two percent above optimum moisture content and compacted to at least 90 percent of the laboratory standard (ASTM D1557). If loose or yielding materials are encountered during subgrade preparation, evaluation should be performed by EEI. Aggregate base materials should be properly prepared (i.e., processed and moisture conditioned) and compacted to at least 95 percent of the maximum dry density as determined by ASTM D1557. Aggregate base materials should conform to Caltrans specifications for Class 2 aggregate base.

All pavement section changes should be properly transitioned. Although not anticipated, if adverse conditions are encountered during the preparation of subgrade materials, special construction methods may need to be employed. A representative of the project Geotechnical Engineer should be present for the preparation of subgrade and aggregate base.

For the preliminary design purposes we have assumed a Traffic Index (TI) of 5.0 for the parking stalls and a Traffic Index (TI) of 6.0 for drive areas and entrance apron at the subject property. This assumed TI should be verified as necessary by the Civil Engineer or Traffic Engineer. Additionally; on a preliminary basis we have utilized an R-Value of 5 for the pavement subgrade during our calculations of pavement structural sections.

TABLE 2
Preliminary Pavement Design Recommendations

Traffic Index (TI) / Intended Use	Pavement Surface	Aggregate Base Material (1)
5	4.0-inches Asphalt Concrete	8.0-inches
6	4.0-inches Asphalt Concrete	11.0-inches
Concrete Pavement Section	6.0-inches Portland Cement Concrete	6.0-inches

(1) R-Value of 78 for Caltrans Class 2 aggregate base

Closure

As was mentioned in the previous sections of this report the recommendations presented herein are preliminary in nature. Our final conclusions and recommendations will be provided upon completion of the laboratory testing and supplemental engineering analysis.

We trust this is the information requested at this time. Please contact us should you need further information.

Sincerely,
EEI

Mohammed Joolzadeh, Ph.D., M.E., GE 2199
Senior Registered Geologist

REGISTERED PROFESSIONAL ENGINEER
MOHAMMAD JOOLAZADEH
GE 2199
GEOTECHNICAL
STATE OF CALIFORNIA

P:\EEI Projects\CENTERPOINT INTEGRATED (CIS)\CIS-72940 Plaza Hacienda Oceanside CA\Geotechnical\CIS-72940.7 Preliminary Report (FNL MJ cea 08.03.19).docx

PRELIMINARY PERCOLATION EVALUATION

CenterPoint Integrated Solutions, LLC
Proposed Automotive Dealership
Plaza Hacienda
SW Corner of Plaza Drive & Hacienda Drive
Oceanside, San Diego County, California

October 25, 2019

EEI Project CIS-72940.4

3146 Tiger Run Court., Suite 118, Carlsbad, CA 92010 * Ph: (760) 431-3747 www.eeitiger.com

PRELIMINARY PERCOLATION EVALUATION

Prepared for:

CenterPoint Integrated Solutions, LLC
355 Union Boulevard, Suite 301
Lakewood, Colorado 80228

Subject Property Location:

SW Corner of Plaza Drive & Hacienda Drive
Oceanside, San Diego County, California
92056

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EEI Project CIS-72940.4

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Figure 2 – Aerial Site Map
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APPENDICES

Appendix A – Soil Classification Chart and Boring Logs
Appendix B – Percolation Tables

Distribution: (2) Addressee one electronic copy

1.0 INTRODUCTION

1.1 Purpose

The purpose of this Preliminary Percolation Evaluation is to provide preliminary percolation information to CenterPoint Integrated Solutions, LLC regarding the subject property in the City of Oceanside, San Diego County, California (**Figure 1** -Site Vicinity Map, **Figure 2**-Aerial Site Map), for onsite stormwater design purposes.

This evaluation has been conducted in general accordance with accepted geotechnical engineering principles and in general conformance with the approved proposal and cost estimate for the project by EEI, dated August 26th, 2019.

1.2 Project Description

Based on the information provided by the Client in the RFP, including a "SP-01" drawing prepared by CarMax (dated May 17, 2018), the proposed development of the subject property involves construction of a new CarMax automotive dealership. Planned buildings include a sales building (4,909 sf), a retail service area (4,309 sf), a car wash (936 sf), and a presentation area (1,197 sf). The balance of the developable portion of the site is to be developed with parking and related improvements.

1.3 Scope of Services

The scope of our services included:

- A review of readily available data pertinent to the subject property, including published and unpublished geologic reports/maps, and soils data for the area (**References**).
- Conducting a geotechnical reconnaissance of the subject property and nearby vicinity.
- Coordination with Underground Service Alert (USA) to identify the presence of underground utilities for clearance of proposed boring locations.
- Drilling and logging of five (5) 6-inch diameter borings with a truck-mounted mobile B-53 drill rig. Borings were advanced at depths of approximately 8 feet to 10 feet below the ground surface (bgs).
- Conducting percolation testing at each of the five (5) boring locations. The approximate locations of each of the borings and percolation tests are presented on **Figure 3** (Percolation Locations Map).
- Preparation of this report to presents our preliminary findings.

2.0 BACKGROUND

2.1 Subject Property Description

The subject property is located SW corner of Plaza Drive and Thunder Drive, in the City of Oceanside, San Diego County, California (Site Vicinity Map**, Figure 1;** Aerial Site Map**, Figure 2**). The subject property lies within the Peninsular Ranges Geomorphic Province and is underlain by Tertiary-aged claystone, siltstone, and sandstone deposits. The subject property is also designated as APN: 1680124300.

The property is undeveloped and encompasses approximately 10.28-acres, of which 6.33 are to be developed. The property is bound by City of Oceanside Fire Department Station 4 and Buena Vista Creek to the south, Thunder Drive to the east, commercial developments to the west and Plaza Drive to the north.

2.2 Topography

The subject property is located on the U.S. Geological Survey 7.5-minute quadrangle map for San Luis Rey, CA (2018). The center of the property has approximate coordinates of 33.182276° north latitude and -117.289277° west longitude. The property elevation varies from 174 to 200 feet above mean sea level (amsl) (Google Earth 2018). The overall subject property appears to have a generally flat surface with drainage by sheet flow, however, based solely on topography; surface drainage on the property appears to flow to the south towards Buena Vista Creek.

3.0 FIELD EXPLORATION AND PERCOLATION TESTING

3.1 Field Exploration

Field work for our Geotechnical Evaluation was conducted on September 30 and October 1st, 2019. A total of five (5) hollow-stem auger borings were advanced at the subject property in readily accessible areas (designated as borings B-1 through B-5). Boring depths ranged from approximately 8 to 10 feet below ground surface (bgs) and were logged under the supervision of a Registered Professional Engineer and Certified Engineering Geologist at EEI. The approximate locations of the borings are shown on **Figure 3**. Boring logs are presented in Appendix A of this report. A truck mounted B-53 hollow-stem auger (HSA) drill rig was used to advance borings B-1 through B-5. Blow count (N) values were determined utilizing a 140-pound hammer, falling 30-inches onto a Standard Penetration Test (SPT) split-spoon sampler and a Modified California split-tube sampler.

EEI conducted percolation testing in all five (5) exploratory borings. The presoaking and percolation testing were performed in general accordance with San Diego County BMP Design Manual for Permanent Site Design, Storm Water Treatment and Hydromodification Management (2016).

3.2 Percolation Testing

Percolation test wells were constructed by inserting 3-inch-diameter perforated PVC pipes in the borings and backfilling the annular space with 3/8-inch gravel to prevent caving during the percolation test. Following construction of the percolation test wells, they were filled with water and pre-saturated for a minimum of 24-hour period prior to the start of percolation testing. The percolation testing was then performed. Percolation testing was performed until consistent results were obtained. Upon conclusion of testing, the perforated PVC pipe was removed from the test holes and the test excavations were backfilled.

Table 1 presents the measured percolation rate and corresponding infiltration rate calculated for the test holes using the Porchet Method. Field percolation test results are presented in Appendix B.

TABLE 1
Summary of Percolation Testing

Location	Depth (ft)	Pre-Adjusted (Percolation Rate (in/hr)	Infiltration Rate (in/hr)*
B-1/P-1	10.5	0.00	0.00
B-2/P-2	9.5	9.60	0.17
B-3/P-3	11.5	4.80	0.06
B-4/P-4	8.5	12.00	2.5
B-5/P-5	10.5	7.20	0.19

*Feasibility factor of safety of 2.0 is included

3.3 Groundwater

Groundwater was not encountered in any of the exploratory borings to the maximum explored depth of 11.5 feet bgs. In our previous geotechnical investigation performed for the site (September 6, 2019) Groundwater was also not encountered in any of our trenches and the CPT soundings at the time of our subsurface exploration to the maximum explored depth of 38 feet bgs. Additionally; groundwater was not encountered in NorCal borings to the maximum depth of their exploration of 50 feet at the time of their subsurface investigation (2007).

It should be noted that fluctuations in groundwater may result from variations in the ground surface topography, subsurface stratification, precipitation, irrigation and other factors that may not be currently evident. In general, groundwater is often expected to follow the direction of surface topography. Based on topography, local groundwater flow is expected to be in a westerly direction.

3.4 Structure Setback from Retention Devices

We recommend that stormwater disposal systems be situated at least three times their depth, or a minimum of 15 feet (whichever is greater), from the outside bottom edge of structural foundations. Structural foundations include (but are not limited to) buildings, loading docks, retaining walls, and screen walls. The invert of stormwater infiltration should be outside a 1:1 (H:V) plane projected from the bottom of adjacent foundations.

Stormwater disposal systems should be checked and maintained on regular intervals. Stormwater devices including bio-swales that are located closer than 10 feet from any foundations/footings should be lined with an impermeable membrane to reduce the potential for saturation of foundation soils. Foundations may also need to be deepened.

Stormwater infiltration should not be located near utility lines where the introduction of stormwater could cause damage to utilities or settlement of trench backfill.

4.0 LIMITATIONS

This report has been conducted in accordance with generally accepted geotechnical engineering principles and practices. Findings provided herein are cursory in nature, and have been derived in accordance with current standards of practice, and no warranty is expressed or implied.

Standards of practice are subject to change with time. This report has been prepared for the sole use CenterPoint Integrated Solutions, LLC within a reasonable time from its authorization. Site conditions, land use (both onsite and offsite), or other factors may change as a result of manmade influences, and additional work may be required with the passage of time. EEI's field observations are reflective of conditions encountered in each location. As with any site, subsurface conditions are known to vary from place to place due in part to the accuracy and consistency of the equipment.

This report should not be relied upon by other parties without the express written consent of EEI and the Client; therefore, any use or reliance upon this geotechnical report by a party other than the Client shall be solely at the risk of such third party and without legal recourse against EEI, its employees, officers, or directors, regardless of whether the action in which recovery of damages is brought or based upon contract, tort, statue, or otherwise. This report is not designed as a specification document, and may not contain sufficient information for use without additional assessment. EEI assumes no responsibility or liability for work or testing performed by others.

5.0 REFERENCES

American Society of Civil Engineers (ASCE), 2010, Minimum Design Loads for Buildings and Other Structures, ASCE Document ASCE/SEI 7-10.

American Society for Testing and Materials (ASTM), 2015, Annual Book of ASTM Standards, Volume 04.08, Construction: Soil and Rock (I), Standards D 420 - D 5876.

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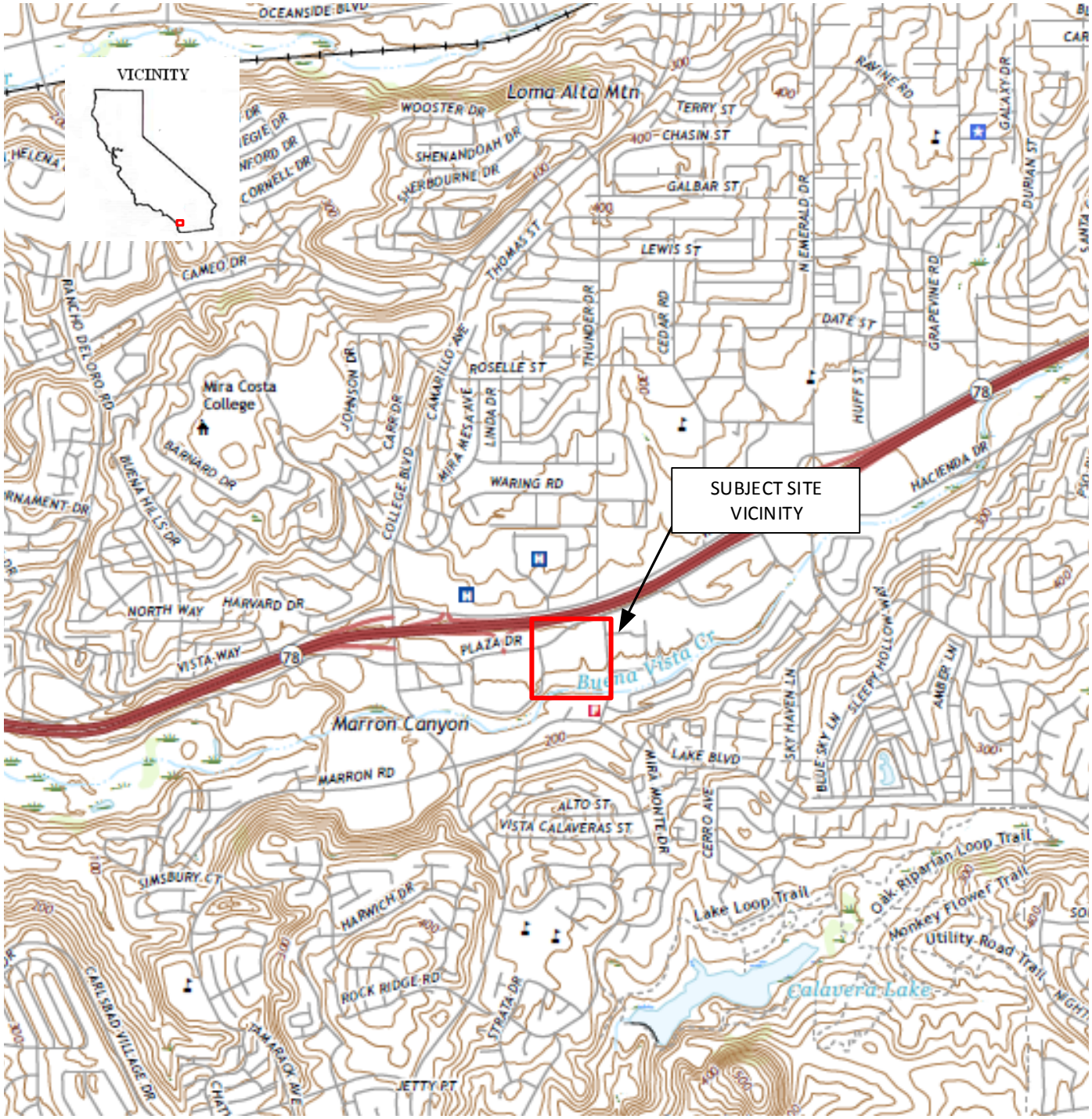
FIGURES



Source: USGS, San Luis Rey, California 7.5-minute quadrangle, 2018

LEGEND

N

Scale: 1" = 1,800'

0 1,800 ft 3,600 ft

Note: All Locations Are Approximate

SITE VICINITY MAP

Centerpoint Integrated Solutions, LLC

CarMax Retail Development

North of Plaza and and West of Thunder Drive

Oceanside, California

EEI Project CIS-72940.4

Created October 2019

EEI Engineering Solutions

FIGURE 1

Source: Google Earth, Image Date: Aug, 2018

LEGEND

N

Scale: 1" = 150'

0 150 ft 300 ft

Note: All Locations Are Approximate

AERIAL SITE MAP

Centerpoint Integrated Solutions, LLC

CarMax Retail Development

North of Plaza and and West of Thunder Drive

Oceanside, California

EEI Project CIS-72940.4

Created October 2019

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FIGURE 2

Source: Google Earth, Image Date: Aug, 2018

LEGEND

B-1 to B-5 *Approximate Location of Exploratory Borings/Percolation Tests*

Af *Artificial Fill*

Qal *Quaternary-age Alluvium*

N

Scale: 1" = 150'

0 150 ft 300 ft

Note: All Locations Are Approximate

GEOTECHNICAL MAP

Centerpoint Integrated Solutions, LLC

Carmax Retail Development

North of Plaza and Hacienda Drive and West of Thunder Drive

Oceanside, California

EEI Project CIS-72940.4

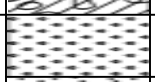
Created October 2019

EEI Engineering Solutions

FIGURE 3

APPENDIX A
SOIL CLASSIFICATION CHART AND BORING LOGS

UNIFIED SOIL CLASSIFICATION (ASTM D-2487-98)

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL- SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL-SAND- CLAY MIXTURES
MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS,GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION REATINED ON NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY-SANDS, SAND – SILT MIXTURES
				SC	CLAYEY SANDS, SAND – CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS

SAMPLER TYPES

SPT

Modified California (2.5" I.D.)

Bulk

Rock Core

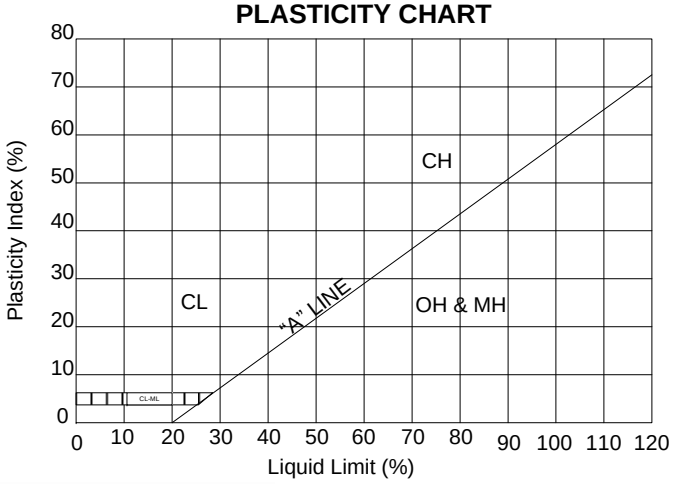
Shelby Tube

Water Level

OTHER TESTS

ATT – Atterberg Limit (Plasticity Index)
CD – Consolidated Drained Triaxial
CON – Consolidation
COR – Corrosivity)
DS – Direct Shear
EI – Expansion Index
MAX – Maximum Density
RV – R-Value
SA – Sieve Analysis
-#200 - Percent Passing #200 Sieve
TV – Torvane Shear
UU – Unconsolidated Undrained Triaxial

PLASTICITY CHART



PENETRATION RESISTANCE (Recorded As Blows/Foot)				
SAND & GRAVEL		SILT & CLAY		
Relative Density	Blows/Foot* N_{60}	Consistency	Blows/Foot* N_{60}	Strength** (KSF)
Very Loose	0-4	Very Soft	0 - 2	0 – 0.5
Loose	4-10	Soft	2 - 4	0.5 – 1.0
Medium Dense	10-30	Medium Stiff	4 - 8	1.0 – 2.0
Dense	30-50	Stiff	8 - 15	2.0 – 4.0
Very Dense	Over 50	Very Stiff	15 - 30	4.0 – 8.0
		Hard	Over 30	Over 8.0

* Number of blows of 140LB hammer falling 30 inches to drive a 2 inch O.D. (1-3/8 inch I.D.) split barrel sampler the last 12 inches of an 18-inch drive (ASTM-1586 Standard Penetration Test)

** Undrained shear strength in kips/sq. ft. As determined by laboratory testing or approximated by the standard penetration test, pocket penetrometer, torvane, or visual observation

BORING NUMBER B-1

CLIENT CenterPoint Integrated Solutions, LLC
PROJECT NAME Proposed "CarMax" Commercial Development
PROJECT NUMBER CIS-72940.4
PROJECT LOCATION Plaza Drive and Hacienda Drive, Oceanside, CA
DATE STARTED 9/30/19 **COMPLETED** 9/30/19
GROUND ELEVATION 212 feet **BORING DIAMETER** 6"
EQUIPMENT / RIG Mobile B-53
HAMMER EFFICIENCY (%) 60
METHOD 6.0" Hollow Stem Auger 140 lb Auto Hammer
SPT CORRECTION 1.00 **CAL CORRECTION** 0.55
LOGGED BY EHJ **CHECKED BY** CCC
GROUNDWATER DEPTH (ft) Not Encountered
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	USCS SYMBOL	SAMPLE TYPE	PENETRATION RESISTANCE (blows/6-inches)	SPT N60	POCKET PEN (tsf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	ATTERBERG LIMITS (PI:LL)	FINES CONTENT (%)	OTHER TESTS
0		**ARTIFICIAL FILL**										
1		@0-5' Sandy CLAY, light grayish brown, moist, hard, very fine grained, high plasticity.	CL	BULK								
2												
3												
4												
5		**ALLUVIUM**										
6		@7' Sandy CLAY, light gray, slightly moist, hard, fine grained, high plasticity.	CL	MC	12 30 48	43						
7												
8		@9' Sandy CLAY, dark gray, slightly moist, hard, very fine grained, high plasticity, trace oxides.	CL	MC	25 50 50 for 5"							
9												
10				MC	21 50 50 for 5"							

Total depth: 10.5
No grownwater encountered
Backfilled with native soil
Percolation test performed

BORING NUMBER B-2

CLIENT CenterPoint Integrated Solutions, LLC
PROJECT NAME Proposed "CarMax" Commercial Development
PROJECT NUMBER CIS-72940.4
PROJECT LOCATION Plaza Drive and Hacienda Drive, Oceanside, CA
DATE STARTED 9/30/19 **COMPLETED** 9/30/19
GROUND ELEVATION 200 feet **BORING DIAMETER** 6"
EQUIPMENT / RIG Mobile B-53
HAMMER EFFICIENCY (%) 60
METHOD 6.0" Hollow Stem Auger 140 lb Auto Hammer
SPT CORRECTION 1.00 **CAL CORRECTION** 0.55
LOGGED BY EHJ **CHECKED BY** CCC
GROUNDWATER DEPTH (ft) Not Encountered
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	USCS SYMBOL	SAMPLE TYPE	PENETRATION RESISTANCE (blows/6-inches)	SPT N60	POCKET PEN (tsf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	ATTERBERG LIMITS (PI:LL)	FINES CONTENT (%)	OTHER TESTS
0		**ARTIFICIAL FILL**										
1		@0-2.5' Clayey SAND, light grayish brown, slightly moist, medium dense, fine grained, trace coarse, low plasticity.	SC	BULK								
2												
3												
4		@3' Clayey SAND, brown, slightly moist, medium dense, fine to medium grained, trace coarse, low plasticity.	SC	MC	10 13 17	17						
5												
6		**ALLUVIUM**										
7		@6' Clayey SAND, brown, sligthly moist, medium dense, fine grained, low plasticity.	SC	MC	5 7 16	13						
8												
9		@8' Sandy CLAY, light brown, slightly moist, hard, fine to medium grained, high plasticity.	CL	MC	14 20 27	26						

Total depth: 9.5
No grownwater encountered
Backfilled with native soil
Percolation test performed

BORING NUMBER B-3

CLIENT CenterPoint Integrated Solutions, LLC
PROJECT NAME Proposed "CarMax" Commercial Development
PROJECT NUMBER CIS-72940.4
PROJECT LOCATION Plaza Drive and Hacienda Drive, Oceanside, CA
DATE STARTED 9/30/19 **COMPLETED** 9/30/19
GROUND ELEVATION 198 feet **BORING DIAMETER** 6"
EQUIPMENT / RIG Mobile B-53
HAMMER EFFICIENCY (%) 60
METHOD 6.0" Hollow Stem Auger 140 lb Auto Hammer
SPT CORRECTION 1.00 **CAL CORRECTION** 0.55
LOGGED BY EHJ **CHECKED BY** CCC
GROUNDWATER DEPTH (ft) Not Encountered
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	USCS SYMBOL	SAMPLE TYPE	PENETRATION RESISTANCE (blows/6-inches)	SPT N60	POCKET PEN (tsf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	ATTERBERG LIMITS (PI:LL)	FINES CONTENT (%)	OTHER TESTS
0		**ARTIFICIAL FILL**										
1		@0-3.5' Silty SAND, light brown, sligthly moist, dense, fine grained, trace clay.	SM									
2												
3												
4		**ALLUVIUM**			9 12 23	19						
5		@4' Sandy CLAY, light brown to grayish brown, sligthly moist, hard, fine grained, low plasticity.	CL									
6												
7					9 13 18	17						
8		@7' Sandy CLAY, light brown to gray, sligthly moist, hard, fine grained, low plasticity.										
9			CL									
10					8 12 25	20						
11												

Total depth: 11.5
No grownwater encountered
Backfilled with native soil
Percolation test performed

BORING NUMBER B-4

CLIENT CenterPoint Integrated Solutions, LLC
PROJECT NAME Proposed "CarMax" Commercial Development
PROJECT NUMBER CIS-72940.4
PROJECT LOCATION Plaza Drive and Hacienda Drive, Oceanside, CA
DATE STARTED 9/30/19 **COMPLETED** 9/30/19
GROUND ELEVATION 199 feet **BORING DIAMETER** 6"
EQUIPMENT / RIG Mobile B-53
HAMMER EFFICIENCY (%) 60
METHOD 6.0" Hollow Stem Auger 140 lb Auto Hammer
SPT CORRECTION 1.00 **CAL CORRECTION** 0.55
LOGGED BY EHJ **CHECKED BY** CCC
GROUNDWATER DEPTH (ft) Not Encountered
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	USCS SYMBOL	SAMPLE TYPE	PENETRATION RESISTANCE (blows/6-inches)	SPT N60	POCKET PEN (tsf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	ATTERBERG LIMITS (PI:LL)	FINES CONTENT (%)	OTHER TESTS
0		**ARTIFICIAL FILL**										
1		@0-2' Silty SAND, light brown, sligthly moist, dense, fine grained, trace clay.	SM	BULK								
2												
3		@2' Sandy CLAY, light gray, slightly moist, very stiff, very fine grained, low plasticity.	CL	MC	12 13 13	14						
4												
5		**ALLUVIUM**										
6		@5' Clayey SAND, brown, slightly moist, dense, fine grained, low plasticity.	SC	MC	8 13 22	19						
7												
8		@7' Sandy CLAY, light gray, slightly moist, hard, fine grained, low plasticity.	CL	MC	15 25 30	30						

Total depth: 8.5
No grownwater encountered
Backfilled with native soil
Percolation test performed

BORING NUMBER B-5

CLIENT CenterPoint Integrated Solutions, LLC
PROJECT NAME Proposed "CarMax" Commercial Development
PROJECT NUMBER CIS-72940.4
PROJECT LOCATION Plaza Drive and Hacienda Drive, Oceanside, CA
DATE STARTED 9/30/19 **COMPLETED** 9/30/19
GROUND ELEVATION 197 feet **BORING DIAMETER** 6"
EQUIPMENT / RIG Mobile B-53
HAMMER EFFICIENCY (%) 60
METHOD 6.0" Hollow Stem Auger 140 lb Auto Hammer
SPT CORRECTION 1.00 **CAL CORRECTION** 0.55
LOGGED BY EHJ **CHECKED BY** CCC
GROUNDWATER DEPTH (ft) Not Encountered
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	USCS SYMBOL	SAMPLE TYPE	PENETRATION RESISTANCE (blows/6-inches)	SPT N60	POCKET PEN (tsf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	ATTERBERG LIMITS (PI:LL)	FINES CONTENT (%)	OTHER TESTS
0		**ARTIFICIAL FILL**										
1		@0-3' Silty SAND, brown to dark brown, sligthly moist, medium dense, fine to medium grained, trace clay, low plasticity.	SM									
2												
3												
4		@3' Clayey SAND, greenish brown, sligthly moist, medium dense, fine grained, low plasticity.	SC	MC	8 10 14	13						
5												
6		**ALLUVIUM**										
7		@6' Sandy CLAY, brown, slightly moist, very stiff, fine grained, low plasticity.	CL	MC	4 7 14	12						
8												
9												
10		@9' Clayey SAND, brown, sligthly moist, dense, fine grained, low plasticity.		MC	12 20 27	26						

Total depth: 10.5
No grownwater encountered
Backfilled with native soil
Percolation test performed

APPENDIX B

PERCOLATION TABLES

EEI Geotechnical & Environmental Solutions

Project: Proposed Carmax Plaza Dr. | By: EHJ

Client: CenterPoint Integrated Solutions, LLC | Date: 10/1/2019

Proj. No.: CIS-72940.7 | Page: 1 of 1

PERCOLATION TEST

Borehole ID	B-5/P-5	Contractor	CalPac Drilling
		Equipment/Rig	Mobile B-53
Presoak Start	11:00 AM (09/30/19)	Boring Diameter	6-inches
Testing Start	2:00 PM (10/01/19)	Boring Depth	10.5-feet
Testing Completion	4:30 PM (10/01/19)	Well Installed?	☐ Yes ■ No
Notes			

Reading	Time		Depth to Water		Elapsed Time	Water Drop	Perc. Rate
	Start	Finish	Start	Finish			
			ft.	ft.	min.	in.	in./hr.
1	14:00	14:15	4.80	5.00	15	2.40	9.60
2	14:15	14:30	5.00	5.30	15	3.60	14.40
3	14:30	14:45	5.30	5.30	15	0.00	0.00
4	14:45	15:00	5.30	5.45	15	1.80	7.20
5	15:00	15:15	5.45	5.55	15	1.20	4.80
6	15:15	15:30	5.55	5.72	15	2.04	8.16
7	15:30	15:45	5.72	6.15	15	5.16	20.64
8	15:45	16:00	6.15	6.50	15	4.20	16.80
9	16:00	16:15	6.50	6.70	15	2.40	9.60
10	16:15	16:30	6.70	6.85	15	1.80	7.20

Stabilized Percolation Rate = 7.20 in/hr

INFILTRATION RATE CONVERSION

Project name: Proposed Carmax Thunder Dr. Date: 10/1/2019

Project No.: PWD-72940

B1/P-1

Δt = (min)	**15**		TIME INTERVAL (min)
	ft.	in.	
Do =	**2.30**	27.60	INITIAL DEPTH TO WATER (ft) / (in)
Df =	**2.30**	27.60	FINAL DEPTH TO WATER (ft) / (in)
Dt =	**10.50**	126.00	TOTAL DEPTH OF TEST HOLE (ft) / (in)
r =		**3.00**	TEST HOLE RADIUS (in)

$$It = \frac{\Delta H*60*r}{\Delta t\,(r+(2Havg))}$$

It = Tested Infiltration Rate

Ho = Initial height of water at the selected time interval

Ho = Dt - Do = 126 - 27.6 = **98.40 in.**

Hf = Final height of water at the selected time interval

Hf = Dt - Df = 126 - 27.6 = **98.40 in.**

ΔH = Change in height of water over the time interval

ΔH=ΔD = Ho - Hf = 98.40 - 98.40 = **0.00 in.**

H avg. = Is the average head height over the time interval

$$H_{avg} = (Ho + Hf)/2 = \frac{98.40 + 98.40}{2} = 98.40 \text{ in.}$$

It = Tested Infiltration Rate:

$$It = \frac{\Delta H*60*r}{\Delta t\,(r+(2Havg))} = \frac{0}{2997}$$

0.00 *in/hr*

= **0.00**

INFILTRATION RATE CONVERSION

Project name: Proposed Carmax Thunder Dr. Date: 10/1/2019

Project No.: PWD-72940

B-2/P-2

Δt = (min)	**15**		TIME INTERVAL (min)
	ft.	in.	
Do =	**4.45**	53.40	INITIAL DEPTH TO WATER (ft) / (in)
Df =	**4.65**	55.80	FINAL DEPTH TO WATER (ft) / (in)
Dt =	**9.50**	114.00	TOTAL DEPTH OF TEST HOLE (ft) / (in)
r =		**3.00**	TEST HOLE RADIUS (in)

$$It = \frac{\Delta H*60*r}{\Delta t\,(r+(2Havg))}$$

It = Tested Infiltration Rate

Ho = Initial height of water at the selected time interval

Ho = Dt - Do = 114 - 53.4 = 60.60 in.

Hf = Final height of water at the selected time interval

Hf = Dt - Df = 114 - 55.8 = 58.20 in.

ΔH = Change in height of water over the time interval

ΔH=ΔD = Ho - Hf = 60.60 - 58.20 = 2.40 in.

H avg. = Is the average head height over the time interval

$$H_{avg} = (Ho + Hf)/2 = \frac{60.60 + 58.20}{2} = 59.40 \text{ in.}$$

It = Tested Infiltration Rate:

$$It = \frac{\Delta H*60*r}{\Delta t\,(r+(2Havg))} = \frac{432}{1827}$$

0.24 *in/hr*

= **0.24**

INFILTRATION RATE CONVERSION

Project name: Proposed Carmax Thunder Dr. Date: 10/1/2019

Project No.: PWD-72940

B-3/P-3

Δt = (min)	**15**		TIME INTERVAL (min)
	ft.	in.	
Do =	**4.90**	58.80	INITIAL DEPTH TO WATER (ft) / (in)
Df =	**5.00**	60.00	FINAL DEPTH TO WATER (ft) / (in)
Dt =	**11.50**	138.00	TOTAL DEPTH OF TEST HOLE (ft) / (in)
r =		**3.00**	TEST HOLE RADIUS (in)

$$It = \frac{\Delta H*60*r}{\Delta t\,(r+(2Havg))}$$

It = Tested Infiltration Rate

Ho = Initial height of water at the selected time interval

Ho = Dt - Do = 138 - 58.8 = 79.20 in.

Hf = Final height of water at the selected time interval

Hf = Dt - Df = 138 - 60 = 78.00 in.

ΔH = Change in height of water over the time interval

ΔH=ΔD = Ho - Hf = 79.20 - 78.00 = 1.20 in.

H avg. = Is the average head height over the time interval

$$H_{avg} = (Ho + Hf)/2 = \frac{79.20 + 78.00}{2} = 78.60 \text{ in.}$$

It = Tested Infiltration Rate:

$$It = \frac{\Delta H*60*r}{\Delta t\,(r+(2Havg))} = \frac{216}{2403}$$

0.09 *in/hr*

= **0.09**

INFILTRATION RATE CONVERSION

Project name: Proposed Carmax Thunder Dr. Date: 10/1/2019

Project No.: PWD-72940

B-4/P-4

Δt = (min)	**15**		TIME INTERVAL (min)
	ft.	in.	
Do =	**6.70**	80.40	INITIAL DEPTH TO WATER (ft) / (in)
Df =	**6.95**	83.40	FINAL DEPTH TO WATER (ft) / (in)
Dt =	**8.50**	102.00	TOTAL DEPTH OF TEST HOLE (ft) / (in)
r =		**3.00**	TEST HOLE RADIUS (in)

$$It = \frac{\Delta H*60*r}{\Delta t\,(r+(2Havg))}$$

It = Tested Infiltration Rate

Ho = Initial height of water at the selected time interval

Ho = Dt - Do = 102 - 80.4 = 21.60 in.

Hf = Final height of water at the selected time interval

Hf = Dt - Df = 102 - 83.4 = 18.60 in.

ΔH = Change in height of water over the time interval

ΔH=ΔD = Ho - Hf = 21.60 - 18.60 = 3.00 in.

H avg. = Is the average head height over the time interval

$$H_{avg} = (Ho + Hf)/2 = \frac{21.60 + 18.60}{2} = 20.10 \text{ in.}$$

It = Tested Infiltration Rate:

$$It = \frac{\Delta H*60*r}{\Delta t\,(r+(2Havg))} = \frac{540}{648}$$

0.83 *in/hr*

= **0.83**

INFILTRATION RATE CONVERSION

Project name: Proposed Carmax Thunder Dr. Date: 10/1/2019

Project No.: PWD-72940

B-5/P-5

Δt = (min)	**15**		TIME INTERVAL (min)
	ft.	in.	
Do =	**6.70**	80.40	INITIAL DEPTH TO WATER (ft) / (in)
Df =	**6.85**	82.20	FINAL DEPTH TO WATER (ft) / (in)
Dt =	**10.50**	126.00	TOTAL DEPTH OF TEST HOLE (ft) / (in)
r =		**3.00**	TEST HOLE RADIUS (in)

$$It = \frac{\Delta H*60*r}{\Delta t\,(r+(2Havg))}$$

It = Tested Infiltration Rate

Ho = Initial height of water at the selected time interval

Ho = Dt - Do = 126 - 80.4 = 45.60 in.

Hf = Final height of water at the selected time interval

Hf = Dt - Df = 126 - 82.2 = 43.80 in.

ΔH = Change in height of water over the time interval

ΔH=ΔD = Ho - Hf = 45.60 - 43.80 = 1.80 in.

H avg. = Is the average head height over the time interval

$$H_{avg} = (Ho + Hf)/2 = \frac{45.60 + 43.80}{2} = 44.70 \text{ in.}$$

It = Tested Infiltration Rate:

$$It = \frac{\Delta H*60*r}{\Delta t\,(r+(2Havg))} = \frac{324}{1386}$$

0.23 *in/hr*

= **0.23**

ATTACHMENT 7
Storm Water Quality Assessment Form

This is the cover sheet for Attachment 7.

City of Oceanside – Engineering Division – Clean Water Program

STORM WATER QUALITY ASSESSMENT FOR PLANNING, ENGINEERING, AND BUILDING PERMIT APPLICATIONS

All applications for Planning, Engineering, or Building Division permits are required to complete this assessment form and include it as part of the initial permit application submittal. Staff will review the permit application content to determine the applicability of State and City storm water requirements. Please note a storm water assessment cannot be provided without a complete permit application package.

Section 1 – Project Information	
Applicant Name: Stacey Haggerson	Phone Number: (303) 679-6975
Project Name: Carmax Oceanside	Email Address (Optional): shaggerson@centerpoint-is.com
Project Site Address: SWC Plaza Drive & Thunder Drive	Street Intersection: Plaza Drive & Thunder Drive
Assessor Parcel Number(s): 168-012-42,-43	Total Parcel Area (acres or square feet): 478,210 SF
Project Description: Proposed Carmax dealership	Proposed Project Impervious Area (acres or square feet): 274,241 SF

Section 2 – Identify Project Type	
☒	New Development Project – go to Section 3
☐	Redevelopment Project go to Section 3
☐	None of the above – Skip Section 3 and go to Section 4

Section 3 – Identify Applicable Priority Development Project Categories	
☒	**New Development Project** – A project that creates 10,000 square feet or more of impervious surfaces (collectively over the entire project site). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.
☐	**Redevelopment Project** – A project that creates and/or replaces 5,000 square feet or more of impervious surface (collectively over the entire project site on an existing site of 10,000 square feet or more of impervious surfaces). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.
☐	**Restaurants** – Category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812); where new or redevelopment projects that create and/or replace 5,000 square feet or more impervious surface (collectively over the entire project site).
☐	**Hillside Development** – Category includes development on any natural slope that is twenty-five percent or greater; where new or redevelopment projects that create and/or replace 5,000 square feet or more impervious surface (collectively over the entire project site).
☐	**Parking Lots** – Category is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce; where new or redevelopment projects that create and/or replace 5,000 square feet or more impervious surface (collectively over the entire project site).
☐	**Streets, Roads, Highways, Freeways, and Driveways** – Category is defined as any paved impervious surface used for the transportation of automobiles, trucks, motorcycles, and other vehicles; where new or redevelopment projects that create and/or replace 5,000 square feet or more impervious surface (collectively over the entire project site).
☐	**Water Quality Environmentally Sensitive Area** – New or redevelopment projects that create and/or replace 2,500 square feet or more of impervious surface (collectively over the entire project site), and discharging directly to a Water Quality Environmentally Sensitive Area (WQESA). "Discharging directly to" includes flow that is conveyed overland a distance of 200 feet or less from the project to the WQESA, or conveyed in a pipe or open channel any distance as an isolated flow from the project to the ESA (i.e. not commingled with flows from adjacent lands).
☐	**Automotive Repair Shop** – Category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539, where new or redevelopment projects that create and/or replace 5,000 square feet or more impervious surface (collectively over the entire project site).
☐	**Retail Gasoline Outlet (RGOs)** – Category includes RGOs that meet the following criteria (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day; where new or redevelopment projects that create and/or replace 5,000 square feet or more impervious surface (collectively over the entire project site).
☒	**Development Projects greater than one acre** – New or redevelopment projects that result in the disturbance of one or more acres of land and are expected to generate pollutants post construction.
☐	**None of the Above**

STORM WATER QUALITY ASSESSMENT FOR PLANNING, ENGINEERING, AND BUILDING PERMIT APPLICATIONS

Section 4 – Identify Permit Application Type	
☒	**Discretionary Permit Application**: Specific Plan (S), General Plan Amendment (GPA), Zone Amendment (ZA), Tentative Map (T), Tentative Parcel Map (P), Development Plan (D), Conditional Use Permit (CUP), Variance (V), Regular Coastal Permit (RC), Historic Permit (H), Reclamation Plan, Planned Development Permit, Planned Unit Development Permit, Planning Commission Approval of Plans, Site Plan Review, Tentative Map Amendments to Conditions of Approval or Time Extension, Variance.
☐	**Administrative Permit Application**: Administrative Clearing Permit, Lot Line Adjustment, Final Map Modification, Grading Plan (including modification or renewal), Improvement Plan (including modification), Landscape Plan, Building Permit, Construction Right-of-Way Permit, Encroachment Permit, Excavation Permit, On-site Wastewater System Permit, Underground Tank Permit, Well Permit, or etc.

Section 5 – Applicant Certification	
Name of Responsible Party: Stacey Haggerson	Phone Number: (303) 679-6975
Email Address (optional) shaggerson@centerpoint-is.com	FAX Number (optional):
I understand and acknowledge the City of Oceanside has adopted minimum requirements, as mandated by the San Diego Regional Water Quality Control Board – Order No. R9-2013-0001, as amended by Order Nos. R9-2015-0001 and R9-2015-0100 (NPDES NO. CAS0109266) for mitigating impacts associated with urban runoff, including storm water from construction and land development activities. I certify this assessment has been accurately completed to the best of my knowledge and is consistent with the proposed project. I acknowledge that non-compliance with the City Best Management Practice (BMP) Design Manual, Grading Ordinance, and Erosion Control Ordinance may result in enforcement action by the City, the California State Water Resources Control Board, and/or the San Diego Regional Water Quality Control Board. Enforcement action may include stop work orders, notice of violation, fines, or other actions.	
Applicant Signature:	Date:

Completion Guidance

Please note – the Applicant is requested to complete this form and submit as part of the project application. For assistance, please contact Development Services at (760) 435-4373.

Section 1 – Project Information

1. Applicant Name – provide name of Individual completing form, i.e. Owner or Owner Representative
2. Phone Number – provide phone number of Individual completing form, i.e. Owner or Owner Representative
3. Project Name – provide project name (consistent with project application) i.e. Jones Residence, Example Commercial Development, and etc
4. Email Address (Optional) – provide email address if you want to receive a digital copy of the project Storm Water Determination
5. Project Site Address – provide a physical address for the proposed project
6. Street Intersection – provide nearest intersecting streets
7. Assessor Parcel Number(s) – provide Assessor Parcel Number(s); refer to title documents or contact City Staff for assistance
8. Total Parcel Area (acres or square feet) – provide the parcel area; refer to title documents
9. Project Description – provide a brief project description (e.g. single-family dwelling, retail business, repair shop, and etc)
10. Approximate Proposed Project Impervious Area (acres or square feet) – provide the approximate total area of all impervious surfaces (includes roofs, sidewalk, patios, driveways, and etc)

Section 2 – Identify Project Type

1. New Development – check box if proposed project is a new development (i.e. the parcel is undeveloped and there are no existing paved surfaces or structures on the site) – if project is a new development go to Section 3.
2. Redevelopment – check box if proposed project includes the redevelopment of an existing site (i.e. replacement, rehabilitation, or reconfiguring of existing structures or paved surfaces) – if project is a "redevelopment" go to Section 3
3. None of the above – check box if proposed project is not a new development or a redevelopment; skip Section 3 and go to Section 4

Section 3 – Identify Applicable Priority Development Project Categories

1. Review each category and check the appropriate boxes that apply to your project.
2. General identification of Automotive Repair Shop SIC (Standard Industrial Classifications) as follows:
   - 5013 – Motor vehicle supplies and new parts
   - 5014 – Tires and tubes
   - 5541 – Gasoline service stations
   - 7532 – Top and body repair, and paint shops
   - 7533 – Auto exhaust system repair shops
   - 7534 – Tire retreading and repair shops
   - 7536 – Automotive glass replacement shops
   - 7537 – Automotive transmission repair shops
   - 7538 – General automotive repair shops
   - 7539 – Automotive repair shops-not elsewhere classified
3. Contact Storm Water Development Review Staff at (760) 435-5164 for assistance in determining applicability of Water Quality Environmentally Sensitive Area (WQESA) category
4. If no categories apply, check "None of the above"

Section 4 – Identify Permit Application Type

1. Identify the applicable permit application type. In general, Discretionary permits applications require a public hearing, whereas Administrative permits may be approved by Staff. Suggest obtaining assistance at the City Development Services Counter Staff and from City Planning Staff. Guidance may be obtained by telephone at (760) 435-4373.

Section 5 – Applicant Certification

1. Name of Responsible Party – provide name of Owner
2 Phone Number – provide phone number of Owner
3. Email Address (Optional) – provide email address if you want to receive a digital copy of the project Storm Water Determination
4. FAX Number (Optional) – provide FAX number if you want to receive a digital copy of the project Storm Water Determination
5. Applicant Signature – provide signature of Individual completing form, i.e. Owner or Owner Representative
6. Date – provide date current date

APPENDIX L

Technical Memorandum: SWMM Modeling for Hydromodification Compliance of: CarMax Oceanside

TECHNICAL MEMORANDUM:

SWMM Modeling for Hydromodification Compliance of:

Carmax Oceanside

Prepared For:

REC Consultants, Inc.

Prepared by:

Luis Parra, PhD, CPSWQ, ToR, D.WRE.
R.C.E. 66377

REC Consultants
2442 Second Avenue
San Diego, CA 92101
Telephone: (619) 232-9200

TECHNICAL MEMORANDUM

TO: REC Consultants, Inc.

FROM: Luis Parra, PhD, PE, CPSWQ, ToR, D.WRE, CFM.
David Edwards, MS, PE, CFM.

DATE: December 17, 2019 (revised February 26, 2020)

RE: Summary of SWMM Modeling for Hydromodification Compliance for Oceanside Carmax, City of Oceanside, CA.

INTRODUCTION

This memorandum summarizes the approach used to model the proposed commercial site in the City of Oceanside using the Environmental Protection Agency (EPA) Storm Water Management Model 5.0 (SWMM). SWMM models were prepared for the pre and post-developed conditions at the site in order to determine if the proposed HMP detention facilities have sufficient volume to meet Order R9-2013-001 requirements of the California Regional Water Quality Control Board San Diego Region (SDRWQCB), as explained in the Final Hydromodification Management Plan (HMP), dated March 2011, prepared for the County of San Diego by Brown and Caldwell.

SWMM MODEL DEVELOPMENT

The Oceanside Carmax project proposes a commercial auto sales lot on the currently vacant site. Two (2) SWMM models were prepared for this study: the first for the predevelopment and the second for the post-developed conditions. The project site drains to four (4) Points of Compliance; POC-1 and POC-2 are located to the northwest of the site at Plaza Drive, POC-3 located to the south at Buena Vista Creek and POC-4 to the east of the site at Thunder Drive.

Per Section G1.2 in Appendix G of the 2016 City of Oceanside BMP Design Manual, the EPA SWMM model was used to perform the continuous hydrologic simulation. For both SWMM models, flow duration curves were prepared to determine if the proposed HMP facilities are sufficient to meet the current HMP requirements.

The inputs required to develop SWMM models include rainfall, watershed characteristics, and BMP configurations. The Oceanside Gage from the Project Clean Water website was used for this study since it is the most representative of the project site precipitation due to elevation and proximity to the project site.

Per the California Irrigation Management Information System “Reference Evaporation Zones” (CIMIS ETo Zone Map), the project site is located within the Zone 4 Evapotranspiration Area. Thus evapotranspiration vales for the site were modeled using Zone 4 average monthly values from Table G.1-1 from the 2019 BMP Design Manual. Per the NRCS web soil survey and site specific geotechnical investigation, the project site is situated upon D soils. Soils have been assumed to be compacted in the existing condition to represent the current mass graded condition of the site, while fully compacted in

the post developed conditions. Other SWMM inputs for the subareas are discussed in the appendices to this document, where the selection of parameters is explained in detail.

HMP MODELING

It should be noted that for POC-1 the pre-developed and post-developed areas tributary to the POC will be equal as there is no diversion of flow in the post developed condition, in addition, the pervious percentage (i.e. 0% impervious due to the pervious surfaces proposed within DMA-1) assures that there will no change in the FDC at POC-1. Additionally, areas tributary to POC-2 (DMA-2) are part of the green street improvements proposed to Plaza Drive. As such, no HMP analysis is proposed for POC's 1 and 2.

PRE DEVELOPED CONDITIONS

The current site is a single developed lot that is bifurcated by Plaza Drive to the north-west of the project site. Runoff drains via overland flow to the west of the project site to the existing Plaza Drive, to the south to the adjacent Buena Vista Creek and to the Thunder Drive to the east of the project site. Table 1 below illustrates the pre-developed areas and impervious percentage accordingly. It should be noted that POC's 1 and 2 includes the portion of the existing Plaza Drive that is to be improved as part of this project site.

TABLE 1 – SUMMARY OF PRE-DEVELOPED CONDITIONS

POC	DMA	Tributary Area, A (Ac)	Impervious Percentage, Ip[(1)]
POC-1	DMA-1	1.433	0%
POC-2	DMA-2	0.216	0%
POC-3	DMA-3A	2.085	0%
	DMA-3B	3.520	0%
	DMA-3C	1.279	0%
POC-4	DMA-4	0.278	0%
TOTAL	**--**	**8.812**	0%

Notes: (1) – Per the 2013 RWQCB permit, existing condition impervious surfaces are not to be accounted for in existing conditions analysis.

DEVELOPED CONDITIONS

In developed conditions, runoff from the central project site is drained to one (1) onsite receiving HMP underground detention facility. Once flows are routed via the proposed detention basin, onsite flows are then discharged to the adjacent Buena Vista Creek at POC-3. A small portion of the project site drains to the receiving curb and gutter within the adjacent Thunder Drive to the east of the project site at POC-4.

Runoff tributary to POC's 1 and 2 are not analyzed for HMP compliance given that areas and the imperviousness remains constant in both pre and post developed conditions. Plaza Drive will incorporate green street LID principles that will address water quality and HMP requirements accordingly.

Table 2 summarizes the post-developed area and impervious percentage accordingly.

TABLE 2 – SUMMARY OF POST-DEVELOPED CONDITIONS

POC	DMA	STRUCTURAL BMP	Tributary Area, A (Ac)	Impervious Percentage, Ip
POC-1	DMA-1A	SELF-TREATING	1.082	0.0%
	DMA-1B	GREEN STREET	0.129	100%
	DMA-1C		0.229	100%
POC-2	DMA-2A	GREEN STREET	0.135	100%
	DMA-2B		0.216	100%
POC-3	DMA-3A	DETENTION	5.893	85.28%
	DMA-3B	SELF-TREATING	0.993	0.00%
POC-4	DMA-4	SELF-TREATING	0.146	50.4%
TOTAL	**--**	**--**	**8.823**	--

Notes: (1) – The DMA includes Drainage Area D as flows mix and discharge directly at the BMP.

One underground detention system is located within the project site and is responsible for handling hydromodification requirements for the project. In developed conditions, the underground detention basin will comprise of footprint of 6,090 square feet and a depth of 4 feet. The vault will feature an open bottom and an underlying 6-inch layer of gravel to provide additional storage for retention volume.

A riser spillway structure with an outlet slot (see dimensions in Table 4) will be located at the downstream end of the system to control the flows. Flows will discharge from the underground basin via a riser outlet structure within the detention system and then discharge directly to the adjacent Buena Vista Creek. A small self-treating area (DMA-3B) confluences directly at this point with the detained flows at POC-3. The riser structure will act as a spillway such that peak flows can be safely discharged to the receiving POC.

Water Quality BMP Sizing

It is assumed all storm water quality requirements for the project will be met by the BMPs detailed in the SWQMP and other BMPs included within the site design. However, detailed water quality requirements are not discussed within this technical memo. For further information in regards to storm water quality requirements for the project (including sizing and drawdown) please refer to the site specific Storm Water Quality Management Plan (SWQMP).

BMP MODELING FOR HMP PURPOSES

Modeling of dual purpose Water Quality/HMP BMPs

One underground detention system will be used for hydromodification conformance for the project site. Tables 3 & 4 illustrate the dimensions required for HMP compliance according to the SWMM model that was undertaken for the project.

TABLE 4 – SUMMARY OF DEVELOPED DUAL PURPOSE BMPs

BMP	Tributary Area (Ac)	DIMENSIONS		
		BMP Area (ft^2)	Basin Depth (ft)[(1)]	Total Volume. (ft^3)
Basin 1	5.893	6090	4.2	24,360

Notes: (1) The depth includes the 6-inches (0.5') of gravel beneath the vault surface which has been reduced to represent the volume of voids available (0.4 X 0.5' = 0.2')

TABLE 5 – SUMMARY OF RISER DETAILS:

BASIN	Lower Orifice		Lower Slot		Middle Slot		Upper Weir	
	Diam. (in)	Elev. (ft)	B x h (in)	Elev.[(1)] (ft)	B x h (in)	Elev.[(1)] (ft)	Length[(2)] (ft)	Elev.[(1)] (ft)
Basin 1	2 x 2.3125	0.0	36 x 2.5	1.25	45 x 8	2.25	12.0	3.75

Notes: (2) Invert of the underground system elevation assumed to be 0.00 ft elevation.
(3) Overflow length.

FLOW DURATION CURVE COMPARISON

The Flow Duration Curve (FDC) for the site was compared at the POCs by exporting the hourly runoff time series results from SWMM to a spreadsheet.

Q_2 and Q_{10} were determined with a partial duration statistical analysis of the runoff time series in an Excel spreadsheet using the Cunnane plotting position method (which is the preferred plotting methodology in the HMP Permit). As the SWMM Model includes a statistical analysis based on the Weibull Plotting Position Method, the Weibull Method was also used within the spreadsheet to ensure that the results were similar to those obtained by the SWMM Model.

The range between 10% of Q_2 and Q_{10} was divided into 100 equal time intervals; the number of hours that each flow rate was exceeded was counted from the hourly series. Additionally, the intermediate peaks with a return period "i" were obtained (Q_i with i=3 to 9). For the purpose of the plot, the values were presented as percentage of time exceeded for each flow rate. FDC comparison at each POC is illustrated in Figures 1 and 2 in both normal and logarithmic scale. Attachment 5 provides a detailed drainage exhibit for the post-developed condition.

As can be seen in Figure 1, the FDC for the proposed condition with the HMP BMPs is within 110% of the curve for the existing condition in both peak flows and durations. The additional runoff volume generated from developing the site will be released to the existing point of discharge at a flow rate below the 10% Q_2 lower threshold for the POC's. Additionally, the project will also not increase peak flow rates between the Q_2 and the Q_{10}, as shown in the peak flow tables in Attachment 1.

Discussion of the Manning's coefficient (Pervious Areas) for Pre and Post-Development Conditions

Typically the Manning's coefficient is selected as n = 0.10 for pervious areas and n = 0.012 for impervious areas. Due to the complexity of the model carried out in pre and post-development

conditions, a more accurate value of the Manning's coefficient for pervious areas has been chosen. Taken into consideration the "Handouts on Supplemental Guidance – Handout #2: Manning's "n" Values for Overland Flow Using EPA SWMM V.5" by the County of San Diego (Reference [6]) a more accurate value of n = 0.05 has been selected (see Table 1 of Reference [6] included in Attachment 7). An average n value between pasture and shrubs and bushes (which is also the value of dense grass) has been selected per the reference cited, for light rain (<0.8 in/hr) as more than 99% of the rainfall has been measured with this intensity.

DRAWDOWN TIME

To ensure compliance with the 96 hour drawdown requirements per Section 6.4.6 of the Final HMP dated March 2011, drawdown calculations are provided in Attachment 4 of this report. Per the drawdown calculations, the drying time of BMP-A is approximately 24 hours, satisfying drawdown time requirements.

SUMMARY

This study has demonstrated that the proposed HMP BMPs provided for Oceanside Carmax project site is sufficient to meet the current HMP criteria if the cross-section areas and volumes recommended within this technical memorandum, and the respective orifice and outlet structure are incorporated as specified within the proposed project site.

KEY ASSUMPTIONS

1. Type D Soils is representative of the existing condition site.

ATTACHMENTS

1. Q_2 to Q_{10} Comparison Tables
2. FDC Plots (log and natural "x" scale) and Flow Duration Table.
3. List of the "n" largest Peaks: Pre-Development and Post-Development Conditions
4. Elevations vs. Discharge Curves to be used in SWMM
5. Pre & Post Development Maps, Project plan and section sketches
6. SWMM Input Data in Input Format (Existing and Proposed Models)
7. SWMM Screens and Explanation of Significant Variables
8. Geotechnical Documentation
9. Summary files from the SWMM Model

REFERENCES

[1] – *"Review and Analysis of San Diego County Hydromodification Management Plan (HMP): Assumptions, Criteria, Methods, & Modeling Tools – Prepared for the Cities of San Marcos, Oceanside & Vista",* May 2012, TRW Engineering.

[2] – *"Final Hydromodification Management Plan (HMP) prepared for the County of San Diego",* March 2011, Brown and Caldwell.

[3] - Order R9-20013-001, California Regional Water Quality Control Board San Diego Region (SDRWQCB).

[4] – "*Handbook of Hydrology*", David R. Maidment, Editor in Chief. 1992, McGraw Hill.

[5] – "*City of Oceanside BMP Design Manual*", 2016.

[6] – "*Improving Accuracy in Continuous Hydrologic Modeling: Guidance for Selecting Pervious Overland Flow Manning's n Values in the San Diego Region*", 2016, TRW Engineering.

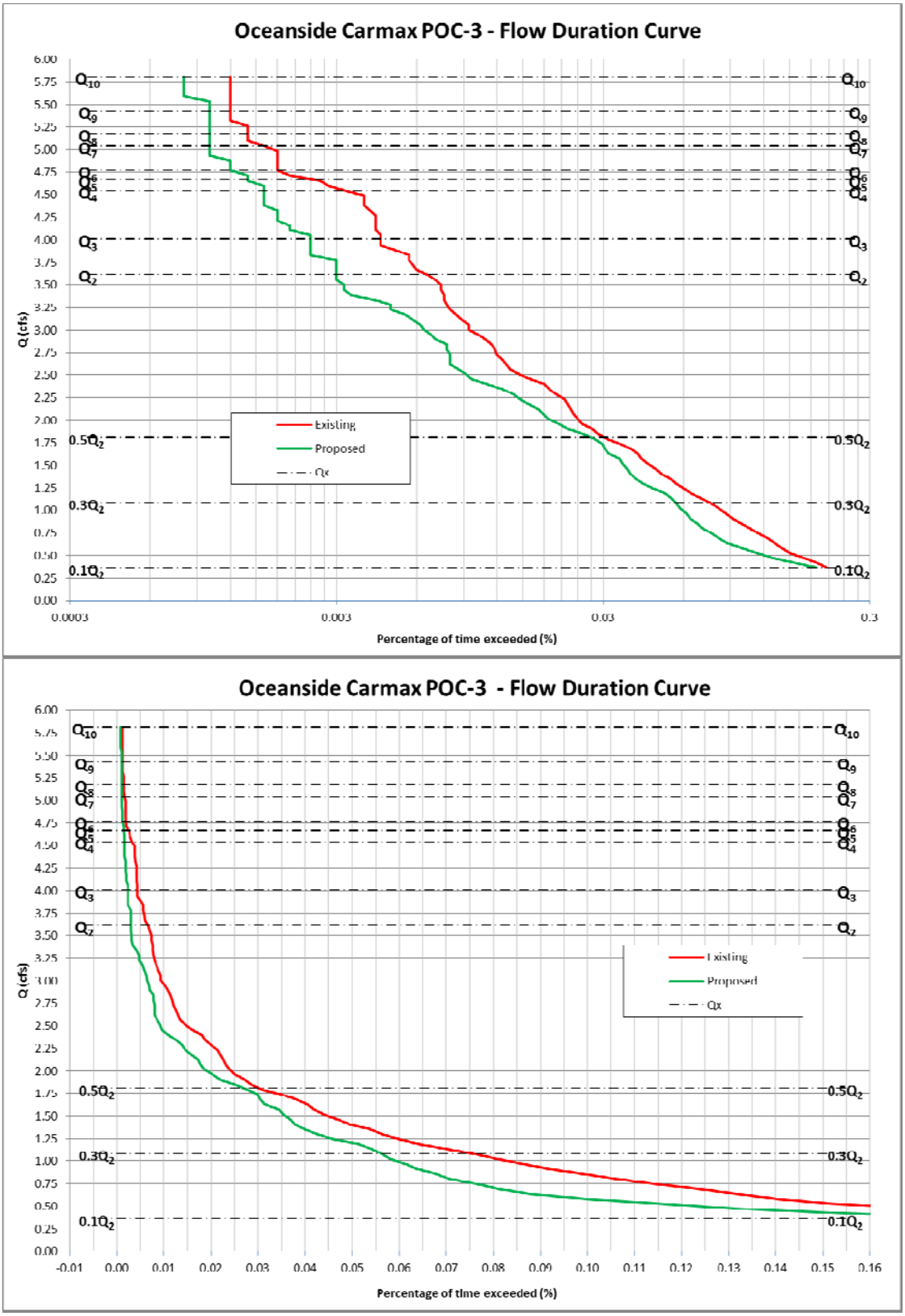


Figure 1a and 1b. Flow Duration Curve Comparison (logarithmic and normal "x" scale)

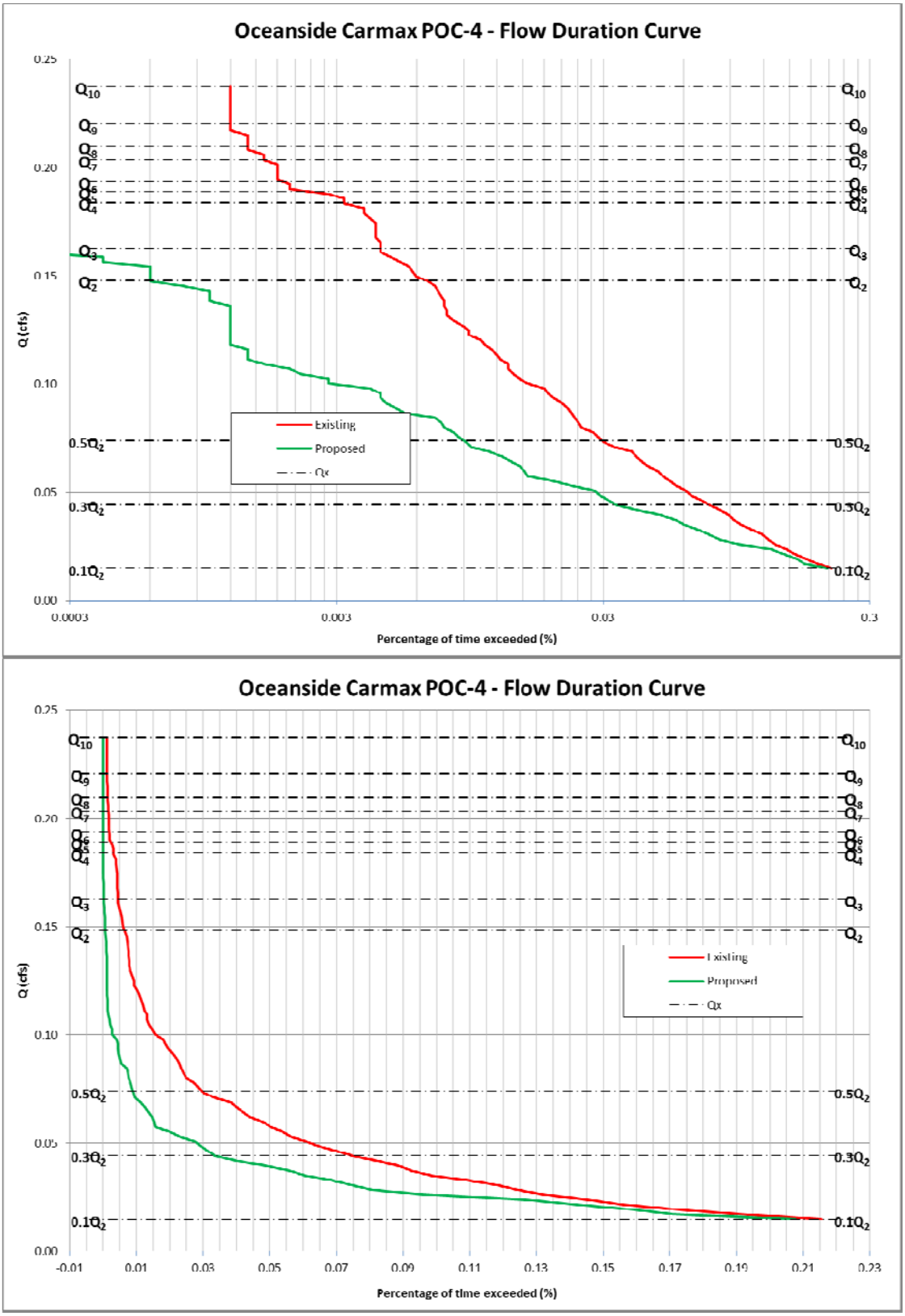


Figure 2a and 2b. Flow Duration Curve Comparison (logarithmic and normal "x" scale)

ATTACHMENT 1.

Q_2 to Q_{10} Comparison Table – POC 3

Return Period	Existing Condition (cfs)	Mitigated Condition (cfs)	Reduction, Exist - Mitigated (cfs)
2-year	3.620	2.935	0.685
3-year	4.009	3.339	0.670
4-year	4.543	3.437	1.106
5-year	4.665	3.826	0.839
6-year	4.767	4.059	0.708
7-year	5.038	4.125	0.914
8-year	5.177	4.264	0.913
9-year	5.431	4.454	0.977
10-year	5.813	4.825	0.989

Q_2 to Q_{10} Comparison Table – POC 4

Return Period	Existing Condition (cfs)	Mitigated Condition (cfs)	Reduction, Exist - Mitigated (cfs)
2-year	0.146	0.086	0.060
3-year	0.162	0.094	0.069
4-year	0.183	0.100	0.083
5-year	0.188	0.104	0.084
6-year	0.193	0.107	0.086
7-year	0.203	0.109	0.094
8-year	0.209	0.113	0.095
9-year	0.219	0.122	0.098
10-year	0.235	0.135	0.100

ATTACHMENT 2

FLOW DURATION CURVE ANALYSIS

1) Flow duration curve shall not exceed the existing conditions by more than 10%, neither in peak flow nor duration.

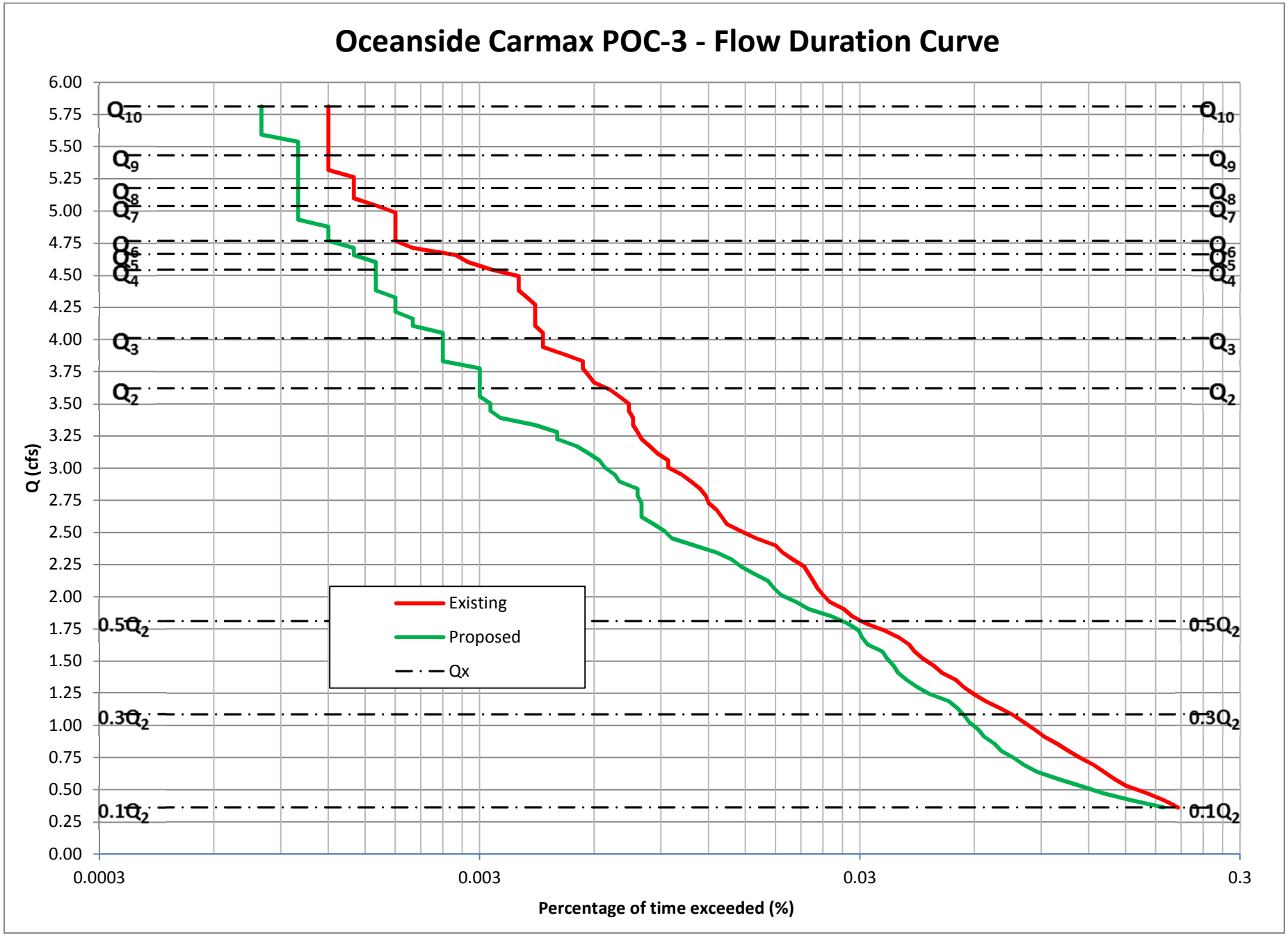
The figures on the following pages illustrate that the flow duration curve in post-development conditions after the proposed BMP is below the existing flow duration curve. The flow duration curve table following the curve shows that if the interval $0.10Q_2 - Q_{10}$ is divided in 100 sub-intervals, then a) the post development divided by pre-development durations are never larger than 110% (the permit allows up to 110%); and b) there are no more than 10 intervals in the range 101%-110% which would imply an excess over 10% of the length of the curve (the permit allows less than 10% of excesses measured as 101-110%).

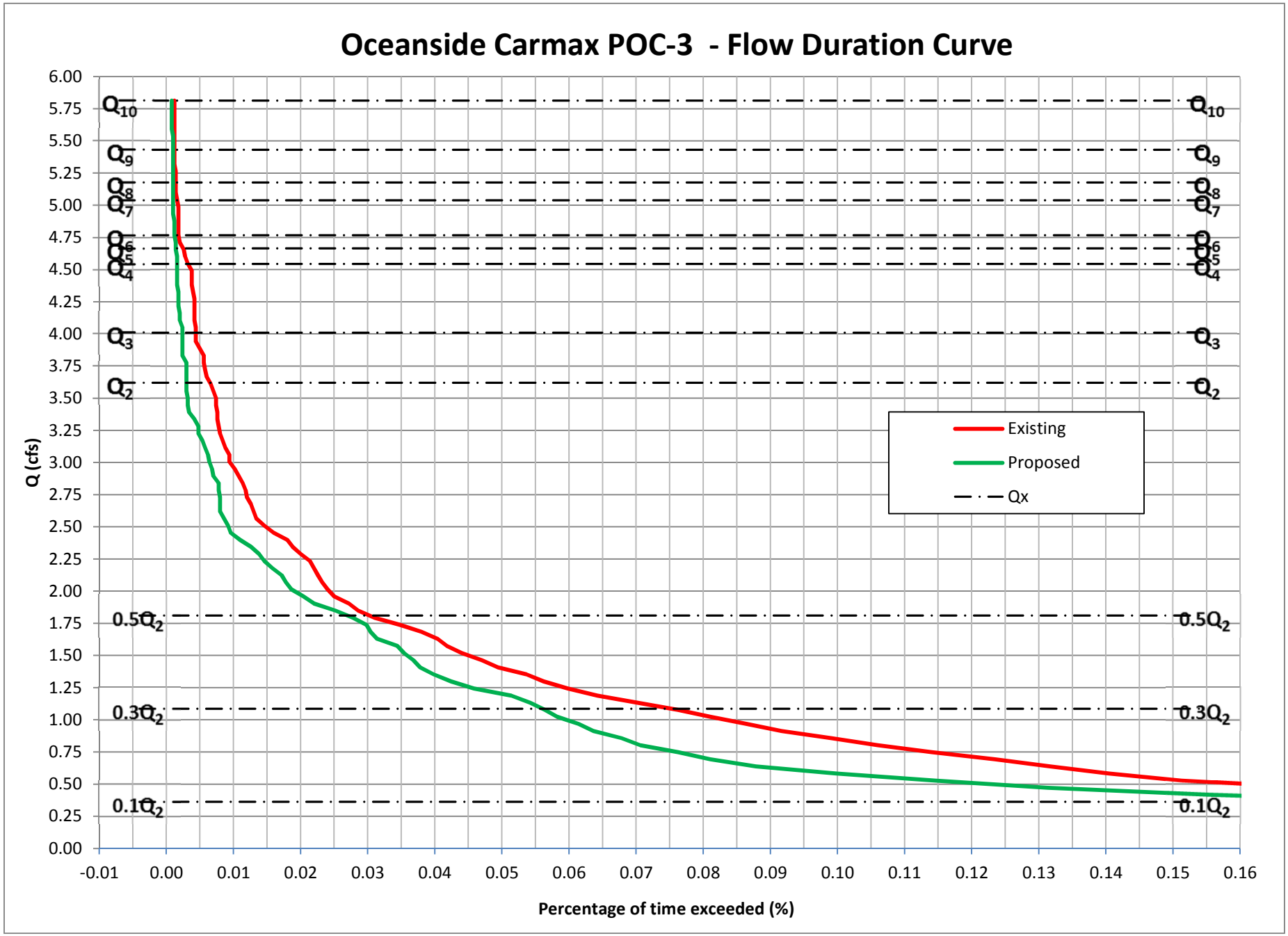
Consequently, the design passes the hydromodification test.

It is important to note that the flow duration curve can be expressed in the "x" axis as percentage of time, hours per year, total number of hours, or any other similar time variable. As those variables only differ by a multiplying constant, their plot in logarithmic scale is going to look exactly the same, and compliance can be observed regardless of the variable selected. However, in order to satisfy the City of Oceanside HMP example, % of time exceeded is the variable of choice in the flow duration curve. The selection of a logarithmic scale in lieu of the normal scale is preferred, as differences between the pre-development and post-development curves can be seen more clearly in the entire range of analysis. Both graphics are presented just to prove the difference.

In terms of the "y" axis, the peak flow value is the variable of choice. As an additional analysis performed by REC, not only the range of analysis is clearly depicted (10% of Q_2 to Q_{10}) but also all intermediate flows are shown (Q_2, Q_3, Q_4, Q_5, Q_6, Q_7, Q_8 and Q_9) in order to demonstrate compliance at any range $Q_x - Q_{x+1}$. It must be pointed out that one of the limitations of both the SWMM and SDHM models is that the intermediate analysis is not performed (to obtain Q_i from i = 2 to 10). REC performed the analysis using the Cunnane Plotting position Method (the preferred method in the HMP permit) from the "n" largest independent peak flows obtained from the continuous time series.

The largest "n" peak flows are attached in this appendix, as well as the values of Q_i with a return period "i", from i=2 to 10. The Q_i values are also added into the flow-duration plot.


Oceanside Carmax POC-3 - Flow Duration Curve
Q (cfs)
6.00
5.75
5.50
5.25
5.00
4.75
4.50
4.25
4.00
3.75
3.50
3.25
3.00
2.75
2.50
2.25
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
Q_{10}
Q_9
Q_8
Q_7
Q_6
Q_5
Q_4
Q_3
Q_2
$0.5Q_2$
$0.3Q_2$
$0.1Q_2$
Existing
Proposed
Qx
0.0003
0.003
0.03
0.3
Percentage of time exceeded (%)


Oceanside Carmax POC-3 - Flow Duration Curve
Q (cfs)
Percentage of time exceeded (%)
Existing
Proposed
Qx
Q_{10}
Q_9
Q_8
Q_7
Q_6
Q_5
Q_4
Q_3
Q_2
$0.5Q_2$
$0.3Q_2$
$0.1Q_2$
6.00
5.75
5.50
5.25
5.00
4.75
4.50
4.25
4.00
3.75
3.50
3.25
3.00
2.75
2.50
2.25
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
-0.01
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10
0.11
0.12
0.13
0.14
0.15
0.16

Flow Duration Curve Data for Oceanside Carmax, POC-3, Oceanside

Q2 =	3.62	cfs	Fraction	10 %
Q10 =	5.81	cfs		
Step =	0.0551	cfs		
Count =	499679	hours		
	57.00	years		

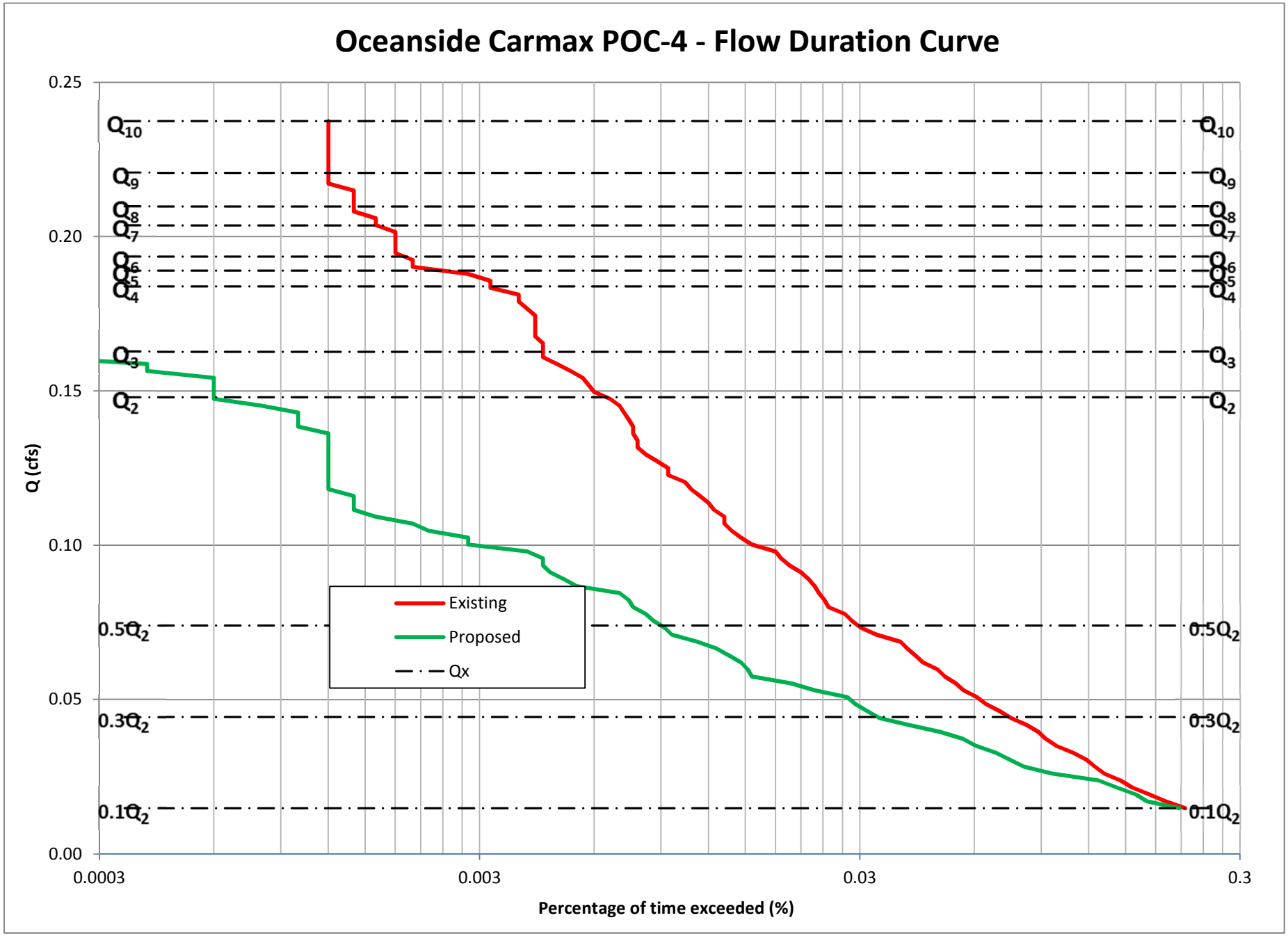
	Existing Condition			Detention Optimized			Pass or
Interval	Q (cfs)	Hours > Q	% time	Hours>Q	% time	Post/Pre	Fail?
1	0.362	1032	2.07E-01	942	1.89E-01	91%	Pass
2	0.417	945	1.89E-01	775	1.55E-01	82%	Pass
3	0.472	855	1.71E-01	656	1.31E-01	77%	Pass
4	0.527	756	1.51E-01	573	1.15E-01	76%	Pass
5	0.582	702	1.40E-01	499	9.99E-02	71%	Pass
6	0.637	658	1.32E-01	439	8.79E-02	67%	Pass
7	0.692	617	1.23E-01	405	8.11E-02	66%	Pass
8	0.747	570	1.14E-01	381	7.62E-02	67%	Pass
9	0.802	530	1.06E-01	353	7.06E-02	67%	Pass
10	0.858	495	9.91E-02	339	6.78E-02	68%	Pass
11	0.913	458	9.17E-02	318	6.36E-02	69%	Pass
12	0.968	432	8.65E-02	307	6.14E-02	71%	Pass
13	1.023	405	8.11E-02	291	5.82E-02	72%	Pass
14	1.078	381	7.62E-02	282	5.64E-02	74%	Pass
15	1.133	351	7.02E-02	271	5.42E-02	77%	Pass
16	1.188	321	6.42E-02	257	5.14E-02	80%	Pass
17	1.243	299	5.98E-02	229	4.58E-02	77%	Pass
18	1.298	281	5.62E-02	212	4.24E-02	75%	Pass
19	1.353	268	5.36E-02	199	3.98E-02	74%	Pass
20	1.408	247	4.94E-02	189	3.78E-02	77%	Pass
21	1.463	235	4.70E-02	184	3.68E-02	78%	Pass
22	1.518	220	4.40E-02	177	3.54E-02	80%	Pass
23	1.573	209	4.18E-02	172	3.44E-02	82%	Pass
24	1.628	202	4.04E-02	157	3.14E-02	78%	Pass
25	1.683	190	3.80E-02	152	3.04E-02	80%	Pass
26	1.739	174	3.48E-02	149	2.98E-02	86%	Pass
27	1.794	155	3.10E-02	139	2.78E-02	90%	Pass
28	1.849	143	2.86E-02	126	2.52E-02	88%	Pass
29	1.904	136	2.72E-02	110	2.20E-02	81%	Pass
30	1.959	125	2.50E-02	102	2.04E-02	82%	Pass
31	2.014	120	2.40E-02	93	1.86E-02	78%	Pass
32	2.069	116	2.32E-02	89	1.78E-02	77%	Pass
33	2.124	113	2.26E-02	86	1.72E-02	76%	Pass
34	2.179	110	2.20E-02	79	1.58E-02	72%	Pass
35	2.234	107	2.14E-02	73	1.46E-02	68%	Pass
36	2.289	100	2.00E-02	69	1.38E-02	69%	Pass

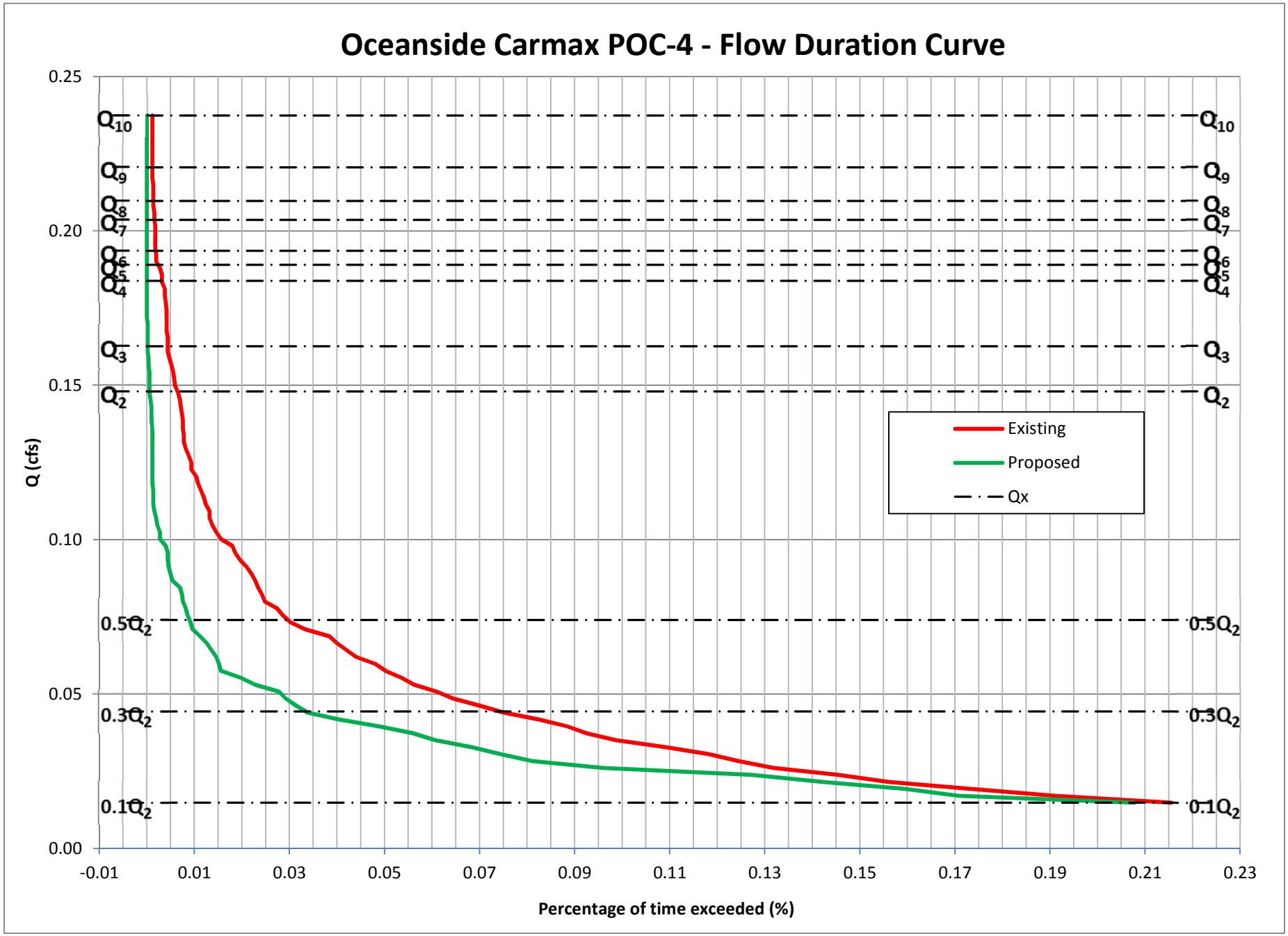
Interval	Existing Condition			Detention Optimized			Pass or Fail?
	Q (cfs)	Hours > Q	% time	Hours>Q	% time	Post/Pre	
37	2.344	94	1.88E-02	63	1.26E-02	67%	Pass
38	2.399	90	1.80E-02	55	1.10E-02	61%	Pass
39	2.454	80	1.60E-02	48	9.61E-03	60%	Pass
40	2.509	73	1.46E-02	46	9.21E-03	63%	Pass
41	2.564	67	1.34E-02	43	8.61E-03	64%	Pass
42	2.620	65	1.30E-02	40	8.01E-03	62%	Pass
43	2.675	63	1.26E-02	40	8.01E-03	63%	Pass
44	2.730	60	1.20E-02	40	8.01E-03	67%	Pass
45	2.785	59	1.18E-02	39	7.81E-03	66%	Pass
46	2.840	57	1.14E-02	39	7.81E-03	68%	Pass
47	2.895	54	1.08E-02	35	7.00E-03	65%	Pass
48	2.950	51	1.02E-02	34	6.80E-03	67%	Pass
49	3.005	47	9.41E-03	32	6.40E-03	68%	Pass
50	3.060	47	9.41E-03	31	6.20E-03	66%	Pass
51	3.115	44	8.81E-03	29	5.80E-03	66%	Pass
52	3.170	42	8.41E-03	27	5.40E-03	64%	Pass
53	3.225	40	8.01E-03	24	4.80E-03	60%	Pass
54	3.280	39	7.81E-03	24	4.80E-03	62%	Pass
55	3.335	38	7.60E-03	21	4.20E-03	55%	Pass
56	3.390	38	7.60E-03	17	3.40E-03	45%	Pass
57	3.445	37	7.40E-03	16	3.20E-03	43%	Pass
58	3.501	37	7.40E-03	16	3.20E-03	43%	Pass
59	3.556	35	7.00E-03	15	3.00E-03	43%	Pass
60	3.611	33	6.60E-03	15	3.00E-03	45%	Pass
61	3.666	30	6.00E-03	15	3.00E-03	50%	Pass
62	3.721	29	5.80E-03	15	3.00E-03	52%	Pass
63	3.776	28	5.60E-03	15	3.00E-03	54%	Pass
64	3.831	28	5.60E-03	12	2.40E-03	43%	Pass
65	3.886	25	5.00E-03	12	2.40E-03	48%	Pass
66	3.941	22	4.40E-03	12	2.40E-03	55%	Pass
67	3.996	22	4.40E-03	12	2.40E-03	55%	Pass
68	4.051	22	4.40E-03	12	2.40E-03	55%	Pass
69	4.106	21	4.20E-03	10	2.00E-03	48%	Pass
70	4.161	21	4.20E-03	10	2.00E-03	48%	Pass
71	4.216	21	4.20E-03	9	1.80E-03	43%	Pass
72	4.271	21	4.20E-03	9	1.80E-03	43%	Pass
73	4.326	20	4.00E-03	9	1.80E-03	45%	Pass
74	4.382	19	3.80E-03	8	1.60E-03	42%	Pass
75	4.437	19	3.80E-03	8	1.60E-03	42%	Pass
76	4.492	19	3.80E-03	8	1.60E-03	42%	Pass
77	4.547	16	3.20E-03	8	1.60E-03	50%	Pass
78	4.602	14	2.80E-03	8	1.60E-03	57%	Pass
79	4.657	13	2.60E-03	7	1.40E-03	54%	Pass
80	4.712	10	2.00E-03	7	1.40E-03	70%	Pass
81	4.767	9	1.80E-03	6	1.20E-03	67%	Pass

Interval	Existing Condition			Detention Optimized			Pass or Fail?
	Q (cfs)	Hours > Q	% time	Hours>Q	% time	Post/Pre	
82	4.822	9	1.80E-03	6	1.20E-03	67%	Pass
83	4.877	9	1.80E-03	6	1.20E-03	67%	Pass
84	4.932	9	1.80E-03	5	1.00E-03	56%	Pass
85	4.987	9	1.80E-03	5	1.00E-03	56%	Pass
86	5.042	8	1.60E-03	5	1.00E-03	63%	Pass
87	5.097	7	1.40E-03	5	1.00E-03	71%	Pass
88	5.152	7	1.40E-03	5	1.00E-03	71%	Pass
89	5.207	7	1.40E-03	5	1.00E-03	71%	Pass
90	5.263	7	1.40E-03	5	1.00E-03	71%	Pass
91	5.318	6	1.20E-03	5	1.00E-03	83%	Pass
92	5.373	6	1.20E-03	5	1.00E-03	83%	Pass
93	5.428	6	1.20E-03	5	1.00E-03	83%	Pass
94	5.483	6	1.20E-03	5	1.00E-03	83%	Pass
95	5.538	6	1.20E-03	5	1.00E-03	83%	Pass
96	5.593	6	1.20E-03	4	8.01E-04	67%	Pass
97	5.648	6	1.20E-03	4	8.01E-04	67%	Pass
98	5.703	6	1.20E-03	4	8.01E-04	67%	Pass
99	5.758	6	1.20E-03	4	8.01E-04	67%	Pass
100	5.813	6	1.20E-03	4	8.01E-04	67%	Pass

Peak Flows calculated with Cunnane Plotting Position

Return Period (years)	Pre-dev. Q (cfs)	Post-Dev. Q (cfs)	Reduction (cfs)
10	5.813	4.825	0.989
9	5.431	4.454	0.977
8	5.177	4.264	0.913
7	5.038	4.125	0.914
6	4.767	4.059	0.708
5	4.665	3.826	0.839
4	4.543	3.437	1.106
3	4.009	3.339	0.670
2	3.620	2.935	0.685


Oceanside Carmax POC-4 - Flow Duration Curve
0.25
0.20
0.15
0.10
0.05
0.00
Q (cfs)
Q_{10}
Q_9
Q_8
Q_7
Q_6
Q_5
Q_4
Q_3
Q_2
$0.5Q_2$
$0.3Q_2$
$0.1Q_2$
Existing
Proposed
Qx
0.0003
0.003
0.03
0.3
Percentage of time exceeded (%)


Oceanside Carmax POC-4 - Flow Duration Curve
Q (cfs)
0.25
0.20
0.15
0.10
0.05
0.00
Q10
Q9
Q8
Q7
Q6
Q5
Q4
Q3
Q2
0.5Q2
0.3Q2
0.1Q2
Existing
Proposed
Qx
-0.01
0.01
0.03
0.05
0.07
0.09
0.11
0.13
0.15
0.17
0.19
0.21
0.23
Percentage of time exceeded (%)

Flow Duration Curve Data for Oceanside Carmax, POC-4, Oceanside

Q2 =	0.15	cfs	Fraction	10 %
Q10 =	0.23	cfs		
Step =	0.0022	cfs		
Count =	499679	hours		
	57.00	years		

	Existing Condition			Detention Optimized			Pass or
Interval	Q (cfs)	Hours > Q	% time	Hours>Q	% time	Post/Pre	Fail?
1	0.015	1037	2.08E-01	1023	2.05E-01	99%	Pass
2	0.017	968	1.94E-01	881	1.76E-01	91%	Pass
3	0.019	833	1.67E-01	776	1.55E-01	93%	Pass
4	0.021	754	1.51E-01	699	1.40E-01	93%	Pass
5	0.023	703	1.41E-01	621	1.24E-01	88%	Pass
6	0.026	662	1.32E-01	542	1.08E-01	82%	Pass
7	0.028	622	1.24E-01	409	8.19E-02	66%	Pass
8	0.030	564	1.13E-01	363	7.26E-02	64%	Pass
9	0.032	528	1.06E-01	340	6.80E-02	64%	Pass
10	0.035	497	9.95E-02	310	6.20E-02	62%	Pass
11	0.037	462	9.25E-02	289	5.78E-02	63%	Pass
12	0.039	426	8.53E-02	239	4.78E-02	56%	Pass
13	0.041	403	8.07E-02	198	3.96E-02	49%	Pass
14	0.043	380	7.60E-02	174	3.48E-02	46%	Pass
15	0.046	354	7.08E-02	158	3.16E-02	45%	Pass
16	0.048	328	6.56E-02	149	2.98E-02	45%	Pass
17	0.050	298	5.96E-02	137	2.74E-02	46%	Pass
18	0.052	281	5.62E-02	119	2.38E-02	42%	Pass
19	0.055	268	5.36E-02	107	2.14E-02	40%	Pass
20	0.057	247	4.94E-02	83	1.66E-02	34%	Pass
21	0.059	232	4.64E-02	76	1.52E-02	33%	Pass
22	0.061	217	4.34E-02	72	1.44E-02	33%	Pass
23	0.064	209	4.18E-02	70	1.40E-02	33%	Pass
24	0.066	202	4.04E-02	64	1.28E-02	32%	Pass
25	0.068	190	3.80E-02	57	1.14E-02	30%	Pass
26	0.070	169	3.38E-02	49	9.81E-03	29%	Pass
27	0.072	154	3.08E-02	48	9.61E-03	31%	Pass
28	0.075	143	2.86E-02	45	9.01E-03	31%	Pass
29	0.077	137	2.74E-02	41	8.21E-03	30%	Pass
30	0.079	122	2.44E-02	39	7.81E-03	32%	Pass
31	0.081	120	2.40E-02	37	7.40E-03	31%	Pass
32	0.084	116	2.32E-02	36	7.20E-03	31%	Pass
33	0.086	113	2.26E-02	33	6.60E-03	29%	Pass
34	0.088	111	2.22E-02	27	5.40E-03	24%	Pass
35	0.090	106	2.12E-02	24	4.80E-03	23%	Pass
36	0.092	100	2.00E-02	22	4.40E-03	22%	Pass

Interval	Existing Condition			Detention Optimized			Pass or Fail?
	Q (cfs)	Hours > Q	% time	Hours>Q	% time	Post/Pre	
37	0.095	94	1.88E-02	22	4.40E-03	23%	Pass
38	0.097	93	1.86E-02	21	4.20E-03	23%	Pass
39	0.099	80	1.60E-02	17	3.40E-03	21%	Pass
40	0.101	72	1.44E-02	14	2.80E-03	19%	Pass
41	0.104	67	1.34E-02	12	2.40E-03	18%	Pass
42	0.106	65	1.30E-02	11	2.20E-03	17%	Pass
43	0.108	63	1.26E-02	9	1.80E-03	14%	Pass
44	0.110	59	1.18E-02	8	1.60E-03	14%	Pass
45	0.112	59	1.18E-02	7	1.40E-03	12%	Pass
46	0.115	57	1.14E-02	7	1.40E-03	12%	Pass
47	0.117	54	1.08E-02	7	1.40E-03	13%	Pass
48	0.119	51	1.02E-02	6	1.20E-03	12%	Pass
49	0.121	47	9.41E-03	6	1.20E-03	13%	Pass
50	0.124	47	9.41E-03	6	1.20E-03	13%	Pass
51	0.126	44	8.81E-03	6	1.20E-03	14%	Pass
52	0.128	43	8.61E-03	6	1.20E-03	14%	Pass
53	0.130	40	8.01E-03	6	1.20E-03	15%	Pass
54	0.132	39	7.81E-03	6	1.20E-03	15%	Pass
55	0.135	38	7.60E-03	6	1.20E-03	16%	Pass
56	0.137	38	7.60E-03	6	1.20E-03	16%	Pass
57	0.139	37	7.40E-03	5	1.00E-03	14%	Pass
58	0.141	36	7.20E-03	5	1.00E-03	14%	Pass
59	0.144	34	6.80E-03	4	8.01E-04	12%	Pass
60	0.146	33	6.60E-03	4	8.01E-04	12%	Pass
61	0.148	31	6.20E-03	3	6.00E-04	10%	Pass
62	0.150	29	5.80E-03	3	6.00E-04	10%	Pass
63	0.152	28	5.60E-03	3	6.00E-04	11%	Pass
64	0.155	28	5.60E-03	3	6.00E-04	11%	Pass
65	0.157	26	5.20E-03	2	4.00E-04	8%	Pass
66	0.159	22	4.40E-03	1	2.00E-04	5%	Pass
67	0.161	22	4.40E-03	1	2.00E-04	5%	Pass
68	0.164	22	4.40E-03	1	2.00E-04	5%	Pass
69	0.166	21	4.20E-03	1	2.00E-04	5%	Pass
70	0.168	21	4.20E-03	1	2.00E-04	5%	Pass
71	0.170	21	4.20E-03	1	2.00E-04	5%	Pass
72	0.172	21	4.20E-03	0	0.00E+00	0%	Pass
73	0.175	20	4.00E-03	0	0.00E+00	0%	Pass
74	0.177	19	3.80E-03	0	0.00E+00	0%	Pass
75	0.179	19	3.80E-03	0	0.00E+00	0%	Pass
76	0.181	19	3.80E-03	0	0.00E+00	0%	Pass
77	0.184	16	3.20E-03	0	0.00E+00	0%	Pass
78	0.186	15	3.00E-03	0	0.00E+00	0%	Pass
79	0.188	14	2.80E-03	0	0.00E+00	0%	Pass
80	0.190	10	2.00E-03	0	0.00E+00	0%	Pass
81	0.192	9	1.80E-03	0	0.00E+00	0%	Pass

Interval	Existing Condition			Detention Optimized			Pass or Fail?
	Q (cfs)	Hours > Q	% time	Hours>Q	% time	Post/Pre	
82	0.195	9	1.80E-03	0	0.00E+00	0%	Pass
83	0.197	9	1.80E-03	0	0.00E+00	0%	Pass
84	0.199	9	1.80E-03	0	0.00E+00	0%	Pass
85	0.201	9	1.80E-03	0	0.00E+00	0%	Pass
86	0.204	8	1.60E-03	0	0.00E+00	0%	Pass
87	0.206	7	1.40E-03	0	0.00E+00	0%	Pass
88	0.208	7	1.40E-03	0	0.00E+00	0%	Pass
89	0.210	7	1.40E-03	0	0.00E+00	0%	Pass
90	0.212	7	1.40E-03	0	0.00E+00	0%	Pass
91	0.215	6	1.20E-03	0	0.00E+00	0%	Pass
92	0.217	6	1.20E-03	0	0.00E+00	0%	Pass
93	0.219	6	1.20E-03	0	0.00E+00	0%	Pass
94	0.221	6	1.20E-03	0	0.00E+00	0%	Pass
95	0.224	6	1.20E-03	0	0.00E+00	0%	Pass
96	0.226	6	1.20E-03	0	0.00E+00	0%	Pass
97	0.228	6	1.20E-03	0	0.00E+00	0%	Pass
98	0.230	6	1.20E-03	0	0.00E+00	0%	Pass
99	0.232	6	1.20E-03	0	0.00E+00	0%	Pass
100	0.235	6	1.20E-03	0	0.00E+00	0%	Pass

Peak Flows calculated with Cunnane Plotting Position

Return Period (years)	Pre-dev. Q (cfs)	Post-Dev. Q (cfs)	Reduction (cfs)
10	0.235	0.135	0.100
9	0.219	0.122	0.098
8	0.209	0.113	0.095
7	0.203	0.109	0.094
6	0.193	0.107	0.086
5	0.188	0.104	0.084
4	0.183	0.100	0.083
3	0.162	0.094	0.069
2	0.146	0.086	0.060

ATTACHMENT 3

List of the "n" Largest Peaks: Pre & Post-Developed Conditions

Basic Probabilistic Equation:

R = 1/P R: Return period (years).

P: Probability of a flow to be equaled or exceeded any given year (dimensionless).

Cunnane Equation:

$$P = \frac{i-0.4}{n+0.2}$$

Weibull Equation:

$$P = \frac{i}{n+1}$$

i: Position of the peak whose probability is desired (sorted from large to small)

n: number of years analyzed.

Explanation of Variables for the Tables in this Attachment

Peak: Refers to the peak flow at the date given, taken from the continuous simulation hourly results of the n year analyzed.

Posit: If all peaks are sorted from large to small, the position of the peak in a sorting analysis is included under the variable Posit.

Date: Date of the occurrence of the peak at the outlet from the continuous simulation

Note: all peaks are not annual maxima; instead they are defined as event maxima, with a threshold to separate peaks of at least 12 hours. In other words, any peak P in a time series is defined as a value where dP/dt = 0, and the peak is the largest value in 25 hours (12 hours before, the hour of occurrence and 12 hours after the occurrence, so it is in essence a daily peak).

List of Peak events and Determination of Q2 and Q10 (Pre-Development)
Oceanside Carmax, POC-3

T (Year)	Cunnane (cfs)	Weibull (cfs)
10	**5.81**	**5.97**
9	**5.43**	**5.61**
8	**5.18**	**5.24**
7	**5.04**	**5.06**
6	**4.77**	**4.83**
5	**4.67**	**4.67**
4	**4.54**	**4.56**
3	**4.01**	**4.03**
2	**3.62**	**3.62**

Note:
Cunnane is the preferred method by the HMP permit.

Peaks (cfs)	Date	Posit	Period of Return (Years)	
			Weibull	Cunnane
2.628	2/27/1991	57	1.02	1.01
2.66	4/28/2005	56	1.04	1.03
2.71	2/22/1998	55	1.05	1.05
2.733	8/17/1977	54	1.07	1.07
2.805	3/1/1991	53	1.09	1.09
2.824	2/8/1993	52	1.12	1.11
2.855	4/27/1960	51	1.14	1.13
2.881	3/19/1981	50	1.16	1.15
2.884	2/14/1998	49	1.18	1.18
2.93	2/12/1992	48	1.21	1.20
2.931	12/22/1982	47	1.23	1.23
2.937	2/22/2008	46	1.26	1.25
2.98	1/16/1972	45	1.29	1.28
2.984	3/15/1986	44	1.32	1.31
3.072	2/15/1986	43	1.35	1.34
3.079	3/11/1995	42	1.38	1.38
3.098	3/17/1963	41	1.41	1.41
3.144	1/29/1980	40	1.45	1.44
3.164	1/6/2008	39	1.49	1.48
3.183	12/2/1961	38	1.53	1.52
3.2	1/18/1993	37	1.57	1.56
3.244	1/16/1978	36	1.61	1.61
3.311	2/4/1994	35	1.66	1.65
3.432	2/17/1998	34	1.71	1.70
3.501	10/20/2004	33	1.76	1.75
3.552	2/18/1993	32	1.81	1.81
3.556	11/15/1952	31	1.87	1.87
3.596	2/27/1983	30	1.93	1.93
3.62	11/11/1985	29	2.00	2.00
3.651	2/16/1980	28	2.07	2.07
3.665	2/23/1998	27	2.15	2.15
3.716	1/27/2008	26	2.23	2.23
3.765	12/30/1991	25	2.32	2.33
3.849	1/29/1983	24	2.42	2.42
3.851	11/22/1965	23	2.52	2.53
3.889	2/3/1998	22	2.64	2.65
3.903	12/19/1970	21	2.76	2.78
3.93	2/10/1978	20	2.90	2.92
4.082	3/2/1980	19	3.05	3.08
4.309	4/1/1958	18	3.22	3.25
4.498	3/1/1978	17	3.41	3.45
4.518	1/16/1952	16	3.63	3.67
4.521	3/17/1982	15	3.87	3.92
4.599	2/20/1980	14	4.14	4.21
4.656	1/14/1993	13	4.46	4.54
4.664	2/18/2005	12	4.83	4.93
4.674	10/29/2000	11	5.27	5.40
4.752	10/27/2004	10	5.80	5.96
5.006	2/25/1969	9	6.44	6.65
5.087	2/4/1958	8	7.25	7.53
5.304	2/25/2003	7	8.29	8.67
5.895	9/23/1986	6	9.67	10.21
6.339	1/4/1995	5	11.60	12.43
6.584	1/15/1979	4	14.50	15.89
7.019	10/1/1983	3	19.33	22.00
7.263	1/4/1978	2	29.00	35.75
7.807	4/14/2003	1	58.00	95.33

List of Peak events and Determination of Q2 and Q10 (Post-Development)
Oceanside Carmax, POC-3

T (Year)	Cunnane (cfs)	Weibull (cfs)
10	**4.82**	**5.01**
9	**4.45**	**4.63**
8	**4.26**	**4.30**
7	**4.12**	**4.17**
6	**4.06**	**4.06**
5	**3.83**	**3.83**
4	**3.44**	**3.46**
3	**3.34**	**3.34**
2	**2.94**	**2.94**

Note:
Cunnane is the preferred method by the HMP permit.

Peaks (cfs)	Date	Posit	Period of Return (Years) Weibull	Cunnane
2.27	11/18/1986	57	1.02	1.01
2.309	10/20/2004	56	1.04	1.03
2.311	2/16/1980	55	1.05	1.05
2.327	1/11/2005	54	1.07	1.07
2.332	1/13/1997	53	1.09	1.09
2.349	12/24/1988	52	1.12	1.11
2.352	12/25/1983	51	1.14	1.13
2.36	2/18/1980	50	1.16	1.15
2.365	1/20/1962	49	1.18	1.18
2.379	1/6/2008	48	1.21	1.20
2.38	1/11/1980	47	1.23	1.23
2.385	2/6/1969	46	1.26	1.25
2.417	1/15/1978	45	1.29	1.28
2.435	2/8/1993	44	1.32	1.31
2.436	2/14/1998	43	1.35	1.34
2.443	3/8/1968	42	1.38	1.38
2.45	2/23/2005	41	1.41	1.41
2.486	1/6/1979	40	1.45	1.44
2.52	12/2/1961	39	1.49	1.48
2.524	3/17/1963	38	1.53	1.52
2.556	3/1/1991	37	1.57	1.56
2.576	2/15/1986	36	1.61	1.61
2.586	2/27/1983	35	1.66	1.65
2.593	4/27/1960	34	1.71	1.70
2.768	11/15/1952	33	1.76	1.75
2.849	1/16/1972	32	1.81	1.81
2.888	11/11/1985	31	1.87	1.87
2.891	2/22/2008	30	1.93	1.93
2.935	2/17/1998	29	2.00	2.00
2.992	8/17/1977	28	2.07	2.07
3.04	1/16/1978	27	2.15	2.15
3.078	12/19/1970	26	2.23	2.23
3.107	1/29/1980	25	2.32	2.33
3.148	4/1/1958	24	2.42	2.42
3.172	2/23/1998	23	2.52	2.53
3.204	10/29/2000	22	2.64	2.65
3.295	1/14/1993	21	2.76	2.78
3.332	2/3/1998	20	2.90	2.92
3.346	3/2/1980	19	3.05	3.08
3.368	11/22/1965	18	3.22	3.25
3.371	2/10/1978	17	3.41	3.45
3.388	12/30/1991	16	3.63	3.67
3.399	3/17/1982	15	3.87	3.92
3.532	2/18/2005	14	4.14	4.21
3.808	2/20/1980	13	4.46	4.54
3.826	1/16/1952	12	4.83	4.93
3.826	3/1/1978	11	5.27	5.40
4.059	2/4/1958	10	5.80	5.96
4.064	10/27/2004	9	6.44	6.65
4.216	9/23/1986	8	7.25	7.53
4.331	2/25/1969	7	8.29	8.67
4.904	2/25/2003	6	9.67	10.21
5.538	1/4/1978	5	11.60	12.43
6.497	1/4/1995	4	14.50	15.89
6.767	1/15/1979	3	19.33	22.00
7.246	10/1/1983	2	29.00	35.75
8.029	4/14/2003	1	58.00	95.33

List of Peak events and Determination of Q2 and Q10 (Pre-Development)
Oceanside Carmax, POC-4

T (Year)	Cunnane (cfs)	Weibull (cfs)
10	**0.23**	**0.24**
9	**0.22**	**0.23**
8	**0.21**	**0.21**
7	**0.20**	**0.20**
6	**0.19**	**0.20**
5	**0.19**	**0.19**
4	**0.18**	**0.18**
3	**0.16**	**0.16**
2	**0.15**	**0.15**

Note:
Cunnane is the preferred method by the HMP permit.

Peaks (cfs)	Date	Posit	Period of Return (Years) Weibull	Cunnane
0.106	2/27/1991	57	1.02	1.01
0.107	4/28/2005	56	1.04	1.03
0.109	2/22/1998	55	1.05	1.05
0.11	8/17/1977	54	1.07	1.07
0.113	3/1/1991	53	1.09	1.09
0.114	2/8/1993	52	1.12	1.11
0.115	4/27/1960	51	1.14	1.13
0.116	3/19/1981	50	1.16	1.15
0.116	2/14/1998	49	1.18	1.18
0.118	12/22/1982	48	1.21	1.20
0.118	2/12/1992	47	1.23	1.23
0.119	2/22/2008	46	1.26	1.25
0.12	1/16/1972	45	1.29	1.28
0.12	3/15/1986	44	1.32	1.31
0.124	2/15/1986	43	1.35	1.34
0.124	3/11/1995	42	1.38	1.38
0.125	3/17/1963	41	1.41	1.41
0.127	1/29/1980	40	1.45	1.44
0.128	12/2/1961	39	1.49	1.48
0.128	1/6/2008	38	1.53	1.52
0.129	1/18/1993	37	1.57	1.56
0.131	1/16/1978	36	1.61	1.61
0.134	2/4/1994	35	1.66	1.65
0.139	2/17/1998	34	1.71	1.70
0.141	10/20/2004	33	1.76	1.75
0.143	11/15/1952	32	1.81	1.81
0.143	2/18/1993	31	1.87	1.87
0.145	2/27/1983	30	1.93	1.93
0.146	11/11/1985	29	2.00	2.00
0.147	2/16/1980	28	2.07	2.07
0.148	2/23/1998	27	2.15	2.15
0.15	1/27/2008	26	2.23	2.23
0.152	12/30/1991	25	2.32	2.33
0.155	11/22/1965	24	2.42	2.42
0.155	1/29/1983	23	2.52	2.53
0.157	2/3/1998	22	2.64	2.65
0.158	12/19/1970	21	2.76	2.78
0.159	2/10/1978	20	2.90	2.92
0.165	3/2/1980	19	3.05	3.08
0.174	4/1/1958	18	3.22	3.25
0.182	1/16/1952	17	3.41	3.45
0.182	3/1/1978	16	3.63	3.67
0.182	3/17/1982	15	3.87	3.92
0.186	2/20/1980	14	4.14	4.21
0.188	1/14/1993	13	4.46	4.54
0.188	2/18/2005	12	4.83	4.93
0.189	10/29/2000	11	5.27	5.40
0.192	10/27/2004	10	5.80	5.96
0.202	2/25/1969	9	6.44	6.65
0.205	2/4/1958	8	7.25	7.53
0.214	2/25/2003	7	8.29	8.67
0.238	9/23/1986	6	9.67	10.21
0.256	1/4/1995	5	11.60	12.43
0.266	1/15/1979	4	14.50	15.89
0.283	10/1/1983	3	19.33	22.00
0.293	1/4/1978	2	29.00	35.75
0.315	4/14/2003	1	58.00	95.33

List of Peak events and Determination of Q2 and Q10 (Post-Development)
Oceanside Carmax, POC-4

T (Year)	Cunnane (cfs)	Weibull (cfs)	Peaks (cfs)	Date	Posit	Period of Return (Years)	
10	**0.14**	**0.14**				Weibull	Cunnane
9	**0.12**	**0.13**	0.065	8/17/1977	57	1.02	1.01
8	**0.11**	**0.12**	0.066	2/8/1993	56	1.04	1.03
7	**0.11**	**0.11**	0.066	2/14/1998	55	1.05	1.05
6	**0.11**	**0.11**	0.067	12/24/1983	54	1.07	1.07
5	**0.10**	**0.10**	0.067	2/22/2008	53	1.09	1.09
4	**0.10**	**0.10**	0.068	3/19/1981	52	1.12	1.11
3	**0.09**	**0.09**	0.069	1/16/1972	51	1.14	1.13
2	**0.09**	**0.09**	0.069	3/1/1991	50	1.16	1.15
			0.07	1/29/1980	49	1.18	1.18
			0.07	2/15/1986	48	1.21	1.20
			0.07	3/15/1986	47	1.23	1.23
			0.07	2/12/1992	46	1.26	1.25
			0.071	1/16/1978	45	1.29	1.28
			0.073	3/11/1995	44	1.32	1.31
			0.073	1/6/2008	43	1.35	1.34
			0.074	3/17/1963	42	1.38	1.38
			0.075	12/2/1961	41	1.41	1.41
			0.075	1/18/1993	40	1.45	1.44
			0.075	1/30/2007	39	1.49	1.48
			0.076	2/17/1998	38	1.53	1.52
			0.079	12/22/1982	37	1.57	1.56
			0.079	2/4/1994	36	1.61	1.61
			0.08	2/23/1998	35	1.66	1.65
			0.08	4/28/2005	34	1.71	1.70
			0.083	10/20/2004	33	1.76	1.75
			0.084	2/27/1983	32	1.81	1.81
			0.085	11/22/1965	31	1.87	1.87
			0.085	2/16/1980	30	1.93	1.93
			0.086	2/10/1978	29	2.00	2.00
			0.086	1/29/1983	28	2.07	2.07
			0.086	12/30/1991	27	2.15	2.15
			0.086	2/3/1998	26	2.23	2.23
			0.086	1/27/2008	25	2.32	2.33
			0.088	11/15/1952	24	2.42	2.42
			0.088	2/27/1991	23	2.52	2.53
			0.09	12/19/1970	22	2.64	2.65
			0.091	2/18/1993	21	2.76	2.78
			0.092	11/11/1985	20	2.90	2.92
			0.095	3/2/1980	19	3.05	3.08
			0.097	4/1/1958	18	3.22	3.25
			0.099	1/16/1952	17	3.41	3.45
			0.099	3/1/1978	16	3.63	3.67
			0.1	2/20/1980	15	3.87	3.92
			0.1	3/17/1982	14	4.14	4.21
			0.103	2/18/2005	13	4.46	4.54
			0.104	1/14/1993	12	4.83	4.93
			0.106	10/29/2000	11	5.27	5.40
			0.107	10/27/2004	10	5.80	5.96
			0.108	2/25/1969	9	6.44	6.65
			0.111	2/4/1958	8	7.25	7.53
			0.117	2/25/2003	7	8.29	8.67
			0.138	1/4/1995	6	9.67	10.21
			0.143	1/15/1979	5	11.60	12.43
			0.147	9/23/1986	4	14.50	15.89
			0.155	10/1/1983	3	19.33	22.00
			0.159	1/4/1978	2	29.00	35.75
			0.171	4/14/2003	1	58.00	95.33

Note:
Cunnane is the preferred method by the HMP permit.

ATTACHMENT 4

AREA VS ELEVATION

The storage provided within the detention basin is located within the basin module in SWMM. Given that the basin is a vault with a constant area footprint (i.e. the area remains constant as the depth increases), no stage-storage calculation is required.

DISCHARGE VS ELEVATION

The orifices have been selected to maximize their size while still restricting flows to conform with the required 10% of the Q2 event flow as mandated in the Final Hydromodification Management Plan by Brown & Caldwell, dated March 2011. While REC acknowledges that these orifices are small, to increase the size of these outlets would impact the basin's ability to restrict flows beneath the HMP thresholds, thus preventing the BMP from conformance with HMP requirements.

In order to further reduce the risk of blockage of the orifices, regular maintenance of the riser and orifices must be performed to ensure potential blockages are minimized. A detail of the orifice and riser structure is provided in Attachment 5 of this memorandum.

The LID low flow orifice discharge relationship is addressed within the LID Module within SWMM – please refer to Attachment 7 for further information.

DRAWDOWN CALCULATIONS

Surface drawdown calculations are provided on the following pages for reference and proof of draining within 24 hours. It is assumed the basin is full to the invert of the first surface outlet structure such that the only discharge mechanism available is the LID orifice. The HMS analysis provided on the following pages indicates the basin is dry within approximately 24 hours.

DISCHARGE EQUATIONS

1) Weir:

$$Q_W = C_W \cdot L \cdot H^{3/2} \quad (1)$$

2) Slot:

As an orifice: $$Q_s = B_s \cdot h_s \cdot c_g \cdot \sqrt{2g\left(H - \frac{h_s}{2}\right)} \quad (2.a)$$

As a weir: $$Q_s = C_W \cdot B_s \cdot H^{3/2} \quad (2.b)$$

For H > h_s slot works as weir until orifice equation provides a smaller discharge. The elevation such that equation (2.a) = equation (2.b) is the elevation at which the behavior changes from weir to orifice.

3) Vertical Orifices

As an orifice: $$Q_o = 0.25 \cdot \pi D^2 \cdot c_g \cdot \sqrt{2g\left(H - \frac{D}{2}\right)} \quad (3.a)$$

As a weir: Critical depth and geometric family of circular sector must be solved to determined Q as a function of H:

$$\frac{Q_O^2}{g} = \frac{A_{cr}^3}{T_{cr}}; \quad H = y_{cr} + \frac{A_{cr}}{2 \cdot T_{cr}}; \; T_{cr} = 2\sqrt{y_{cr}(D - y_{cr})}\,; \quad A_{cr} = \frac{D^2}{8}[\alpha_{cr} - sin(\alpha_{cr})]\,;$$

$$y_{cr} = \frac{D}{2}[1 - sin(0.5 \cdot \alpha_{cr})] \quad \text{(3.b.1, 3.b.2, 3.b.3, 3.b.4 and 3.b.5)}$$

There is a value of H (approximately H = 110% D) from which orifices no longer work as weirs as critical depth is not possible at the entrance of the orifice. This value of H is obtained equaling the discharge using critical equations and equations (3.b).

A mathematical model is prepared with the previous equations depending on the type o discharge.

The following are the variables used above:

Q_W, Q_s, Q_O = Discharge of weir, slot or orifice (cfs)

C_W, c_g : Coefficients of discharge of weir (typically 3.1) and orifice (0.61 to 0.62)

L, B_s, D, h_s : Length of weir, width of slot, diameter of orifice and height of slot, respectively; (ft)

H: Level of water in the pond over the invert of slot, weir or orifice (ft)

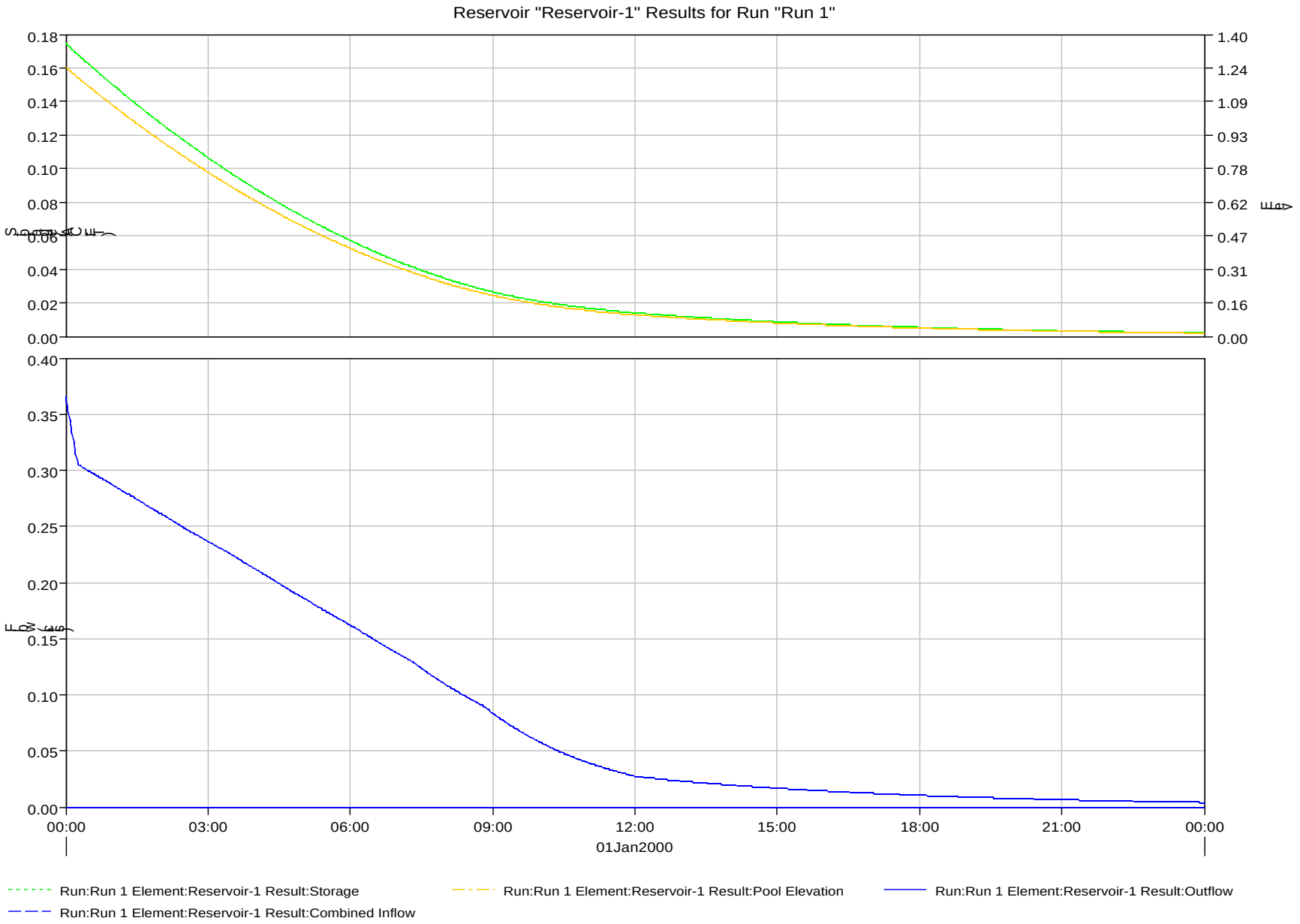
A_{cr}, T_{cr}, y_{cr}, α_{cr}: Critical variables for circular sector: area (sq-ft), top width (ft), critical depth (ft), and angle to the center, respectively.

Outlet structure for Discharge of Detention Basin 1

(note: 0' elevation is assumed as surface invert of 6-inch gravel layer)

Low orifice:	2.3125 "	Lower slot		Emergency Weir			
Number:	2	Invert:	1.25 ft	Invert:	3.750 ft		
Cg-low:	0.62	B	3.00 ft	B:	12 ft		
Middle orifice:	1 "	h	0.208 ft				
number of orif:	0	Upper slot					
Cg-middle:	0.62	Invert:	2.25 ft	45.00			
invert elev:	0.75 ft	B:	3.75 ft				
		h	0.670 ft				

h (ft)	H/D-low -	H/D-mid -	Qlow-orif (cfs)	Qlow-weir (cfs)	Qtot-low (cfs)	Qmid-orif (cfs)	Qmid-weir (cfs)	Qtot-med (cfs)	Qslot-low (cfs)	Qslot-upp (cfs)	Qemer (cfs)	Qtot (cfs)	Total H (ft)	Total Q (cfs)	Flow + LID (cfs)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.100	0.519	0.000	0.018	0.027	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.027	0.100	0.027	0.027
0.200	1.038	0.000	0.093	0.090	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.200	0.090	0.090
0.300	1.557	0.000	0.131	0.159	0.131	0.000	0.000	0.000	0.000	0.000	0.000	0.131	0.300	0.131	0.131
0.400	2.076	0.000	0.160	0.209	0.160	0.000	0.000	0.000	0.000	0.000	0.000	0.160	0.400	0.160	0.160
0.500	2.595	0.000	0.184	0.228	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.184	0.500	0.184	0.184
0.600	3.114	0.000	0.206	0.232	0.206	0.000	0.000	0.000	0.000	0.000	0.000	0.206	0.600	0.206	0.206
0.700	3.632	0.000	0.226	0.275	0.226	0.000	0.000	0.000	0.000	0.000	0.000	0.226	0.700	0.226	0.226
0.800	4.151	0.600	0.243	0.463	0.243	0.000	0.000	0.000	0.000	0.000	0.000	0.243	0.800	0.243	0.243
0.900	4.670	1.800	0.260	0.964	0.260	0.000	0.000	0.000	0.000	0.000	0.000	0.260	0.900	0.260	0.260
1.000	5.189	3.000	0.276	2.020	0.276	0.000	0.000	0.000	0.000	0.000	0.000	0.276	1.000	0.276	0.276
1.100	5.708	4.200	0.291	2.908	0.291	0.000	0.000	0.000	0.000	0.000	0.000	0.291	1.100	0.291	0.291
1.200	6.227	5.400	0.305	3.049	0.305	0.000	0.000	0.000	0.000	0.000	0.000	0.305	1.200	0.305	0.305
1.300	6.746	6.600	0.318	3.184	0.318	0.000	0.000	0.000	0.104	0.000	0.000	0.422	1.300	0.422	0.422
1.400	7.265	7.800	0.331	3.314	0.331	0.000	0.000	0.000	0.540	0.000	0.000	0.872	1.400	0.872	0.872
1.500	7.784	9.000	0.344	3.439	0.344	0.000	0.000	0.000	1.163	0.000	0.000	1.506	1.500	1.506	1.506
1.600	8.303	10.200	0.356	3.559	0.356	0.000	0.000	0.000	1.517	0.000	0.000	1.873	1.600	1.873	1.873
1.700	8.822	11.400	0.368	3.675	0.368	0.000	0.000	0.000	1.799	0.000	0.000	2.167	1.700	2.167	2.167
1.800	9.341	12.600	0.379	3.788	0.379	0.000	0.000	0.000	2.043	0.000	0.000	2.422	1.800	2.422	2.422
1.900	9.859	13.800	0.390	3.898	0.390	0.000	0.000	0.000	2.260	0.000	0.000	2.650	1.900	2.650	2.650
2.000	10.378	15.000	0.400	4.005	0.400	0.000	0.000	0.000	2.459	0.000	0.000	2.859	2.000	2.859	2.859
2.100	10.897	16.200	0.411	4.108	0.411	0.000	0.000	0.000	2.642	0.000	0.000	3.053	2.100	3.053	3.053
2.200	11.416	17.400	0.421	4.210	0.421	0.000	0.000	0.000	2.814	0.000	0.000	3.235	2.200	3.235	3.235
2.300	11.935	18.600	0.431	4.309	0.431	0.000	0.000	0.000	2.976	0.130	0.000	3.536	2.300	3.536	3.536
2.400	12.454	19.800	0.441	4.405	0.441	0.000	0.000	0.000	3.129	0.675	0.000	4.245	2.400	4.245	4.245
2.500	12.973	21.000	0.450	4.500	0.450	0.000	0.000	0.000	3.275	1.453	0.000	5.178	2.500	5.178	5.178
2.600	13.492	22.200	0.459	4.592	0.459	0.000	0.000	0.000	3.415	2.407	0.000	6.281	2.600	6.281	6.281
2.700	14.011	23.400	0.468	4.683	0.468	0.000	0.000	0.000	3.549	3.509	0.000	7.527	2.700	7.527	7.527
2.800	14.530	24.600	0.477	4.772	0.477	0.000	0.000	0.000	3.679	4.742	0.000	8.898	2.800	8.898	8.898
2.900	15.049	25.800	0.486	4.860	0.486	0.000	0.000	0.000	3.804	6.092	0.000	10.382	2.900	10.382	10.382
3.000	15.568	27.000	0.495	4.946	0.495	0.000	0.000	0.000	3.925	7.551	0.000	11.970	3.000	11.970	11.970
3.100	16.086	28.200	0.503	5.030	0.503	0.000	0.000	0.000	4.043	8.826	0.000	13.372	3.100	13.372	13.372
3.200	16.605	29.400	0.511	5.113	0.511	0.000	0.000	0.000	4.157	9.645	0.000	14.313	3.200	14.313	14.313
3.300	17.124	30.600	0.519	5.195	0.519	0.000	0.000	0.000	4.268	10.400	0.000	15.187	3.300	15.187	15.187
3.400	17.643	31.800	0.528	5.275	0.528	0.000	0.000	0.000	4.376	11.103	0.000	16.007	3.400	16.007	16.007
3.500	18.162	33.000	0.535	5.355	0.535	0.000	0.000	0.000	4.482	11.765	0.000	16.782	3.500	16.782	16.782
3.600	18.681	34.200	0.543	5.433	0.543	0.000	0.000	0.000	4.585	12.391	0.000	17.519	3.600	17.519	17.519
3.750	19.459	36.000	0.555	5.548	0.555	0.000	0.000	0.000	4.736	13.275	0.000	18.566	3.750	18.566	18.566
3.800	19.719	36.600	0.559	5.586	0.559	0.000	0.000	0.000	4.785	13.557	0.416	19.316	3.800	19.316	19.316
3.900	20.238	37.800	0.566	5.661	0.566	0.000	0.000	0.000	4.882	14.104	2.161	21.713	3.900	21.713	21.713
4.000	20.757	39.000	0.573	5.734	0.573	0.000	0.000	0.000	4.977	14.630	4.650	24.830	4.000	24.830	24.830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0.06
0.04
0.02
0.00
1.40
1.24
1.09
0.93
0.78
0.62
0.47
0.31
0.16
0.00
0.40
0.35
0.30
0.25
0.20
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0.10
0.05
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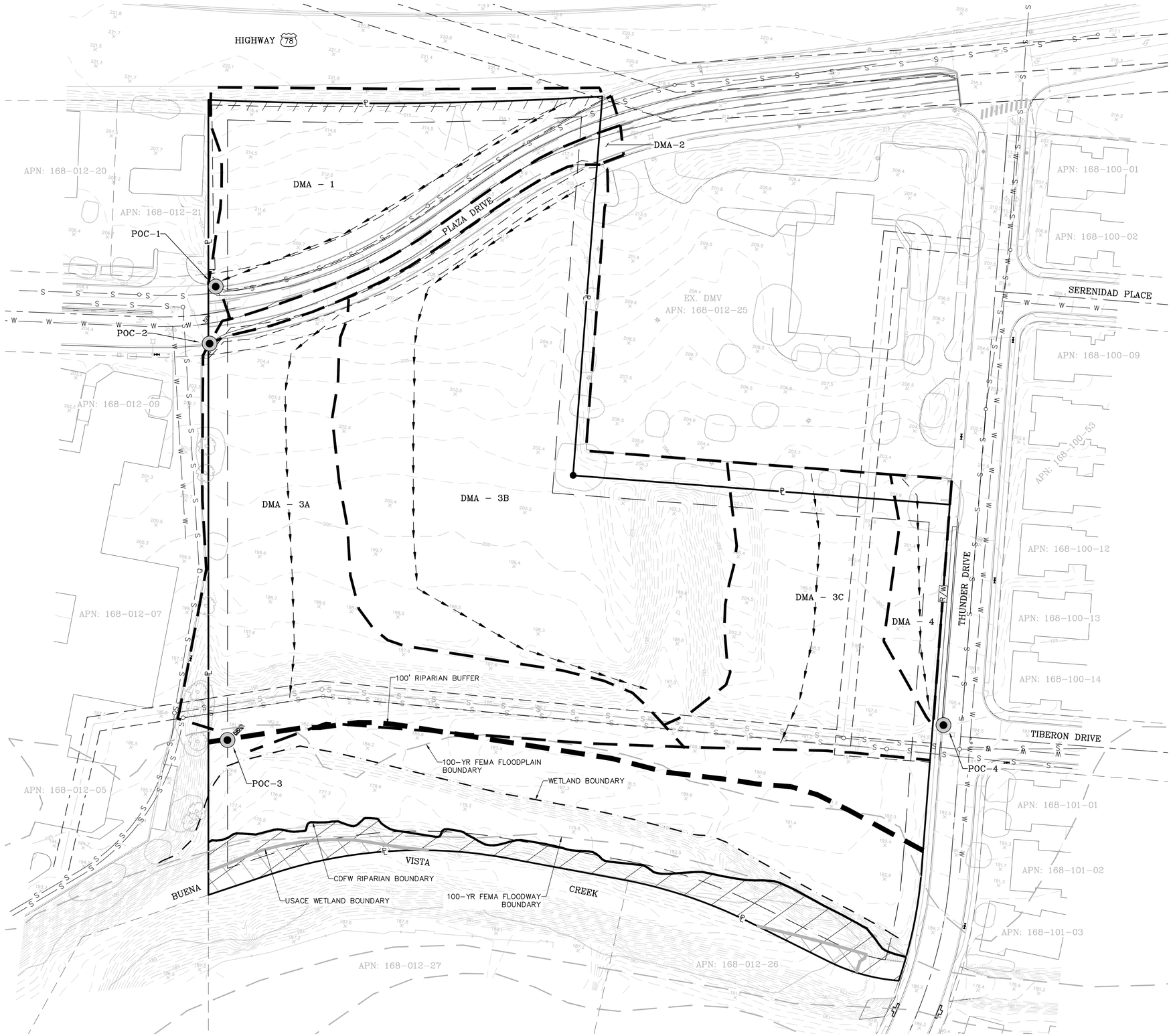
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
01Jan2000
Run:Run 1 Element:Reservoir-1 Result:Storage
Run:Run 1 Element:Reservoir-1 Result:Pool Elevation
Run:Run 1 Element:Reservoir-1 Result:Outflow
Run:Run 1 Element:Reservoir-1 Result:Combined Inflow

ATTACHMENT 5

Pre & Post-Developed Maps, Project Plan and Detention

Section Sketches



LEGEND:

- EX. PROPERTY BOUNDARY
- DMA BOUNDARY
- POC
- ABUTTERS RIGHTS OF ACCESS RELINQUISHED
- EX. MINOR CONTOUR
- EX. MAJOR CONTOUR

NOTES:

- NO CCYSA'S TO PROTECT
- UNDERLYING SOIL 'TYPE –D'
- DEPTH TO NATURAL GROUNDWATER >20'

EXISTING CONDITIONS				
DMA	DRAINS TO	HARDSCAPE	LANDSCAPE	TOTAL
DMA-1	POC-1	9,667	52,734	62,401
DMA-2	POC-2	9,430	0	9,430
DMA-3A	POC-3	-	90,838	90,838
DMA-3B		-	153,335	153,335
DMA-3C			55,733	55,733
DMA-4	POC-4	-	12,105	12,105
TOTAL				**383,842**

NO.	DESCRIPTION	DATE	APP'D
REVISIONS			

R·E·C Consultants, Inc.
Civil Engineering · Environmental
Land Surveying
2442 Second Avenue
San Diego, CA 92101
(619)232-9200 (619)232-9210 Fax

DATE: 10/25/19
SCALE: 1" = 50'
DRAWN: A.O.
CHECKED: J.R.R.

SHEET TITLE: DMA/HMP EXHIBIT - EXISTING CONDITIONS

PROJECT: CARMAX OCEANSIDE
PLAZA DRIVE & THUNDER DRIVE
OCEANSIDE, CA 92056

SHEET 1 OF 1 SHEETS

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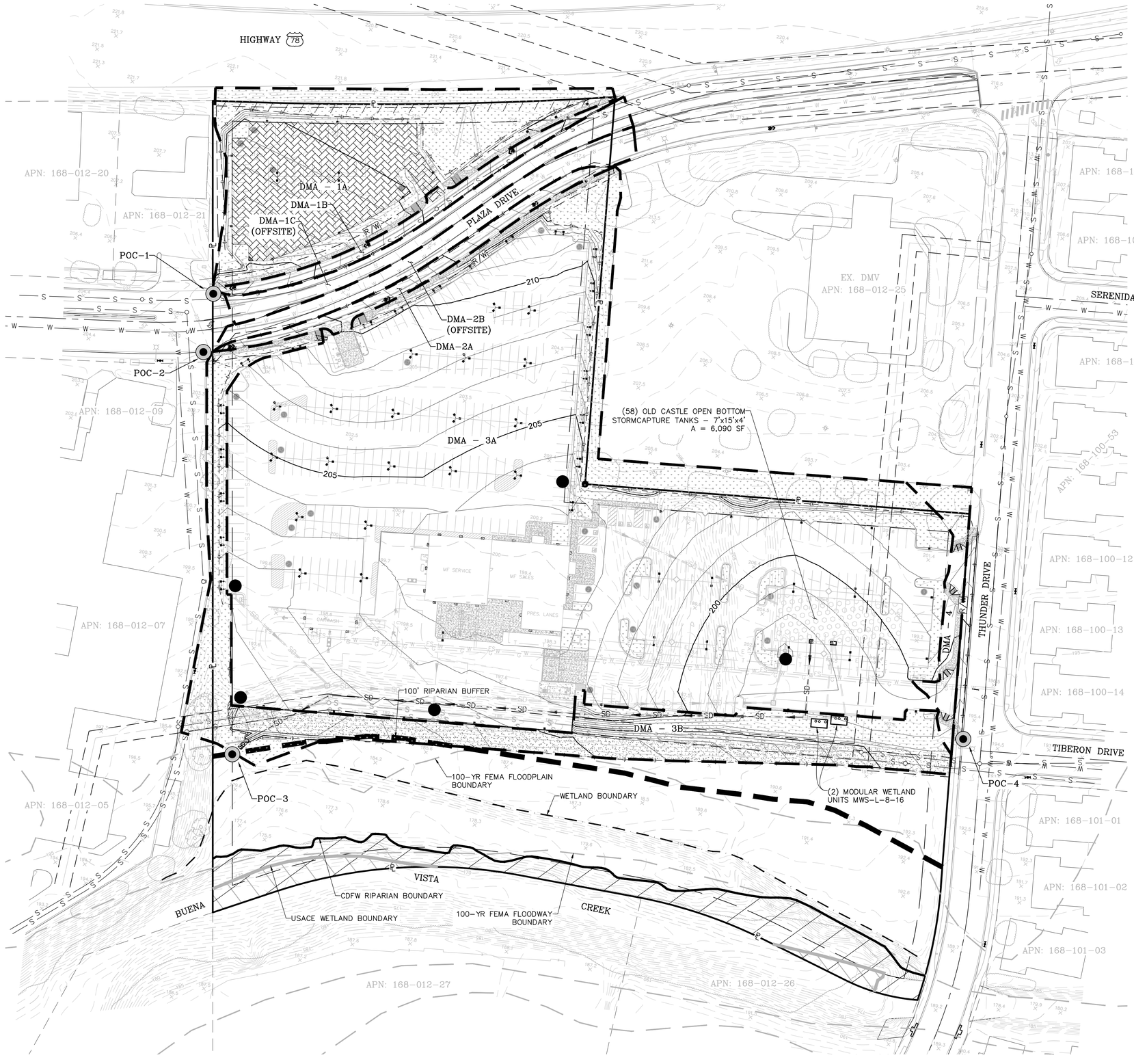

LEGEND:

- EX. PROPERTY BOUNDARY
- DMA BOUNDARY
- POC
- ABUTTERS RIGHTS OF ACCESS RELINQUISHED
- EX. MINOR CONTOUR
- EX. MAJOR CONTOUR
- PROPOSED UNDERGROUND DETENTION
- LANDSCAPE/PERVIOUS AREAS
- PERVIOUS PAVEMENT
- PROPOSED HARDSCAPE AREAS
- PROPOSED ASPHALT IMPERVIOUS AREAS
- MODULAR WETLAND
- PROHIBITIVE SIGNANGE

DMA PROPERTIES

UNDERLYING HYDROLOGIC SOIL GROUP: D
APPROXIMATE DEPTH TO GROUNDWATER: > 20'
EXISTING NATURAL HYDROLOGIC FEATURES:EXISTING BUENA VISTA CREEK ALONG SOUTHERN EDGE OF SITE.
CRITICAL COARSE SEDIMENT YIELD AREAS: NONE

NO DUMPING DRAINS TO OCEAN

SAMPLE PROHIBITIVE SIGNAGE

NTS

PROPOSED CONDITIONS					
DMA	DRAINS TO	IMPERVIOUS	PERVIOUS	TOTAL	TYPE OF STRUCTURAL BMP
DMA-1A	POC-1	0	47,133	47,133	SELF-RETAINING (PERMEABLE PAVEMENT)
DMA-1B		5,601	0	5,601	GREEN STREET (PLAZA DRIVE EXPANSION- NORTH)
DMA-1C		9,667	0	9,667	EXISTING STREET OFFSITE AREA
DMA-2A	POC-2	5,899	0	5,899	GREEN STREET (PLAZA DRIVE EXPANSION- SOUTH)
DMA-2B		9,430	0	9,430	EXISTING STREET OFFSITE AREA
DMA-3A	POC-3	218,927	37,896	256,823	PROPRIETARY RETENTION & BIO-FILTRATION
DMA-3B		-	43,234	43,234	BYPASS
DMA-4	POC-4	3,024	3,028	6,051	DE-MINIMUS (DRIVEWAY AREA)
TOTAL				**383,838**	

50 25 0 50 100 150

SCALE: 1" = 50'

NO.	DESCRIPTION	DATE	APP'D
	REVISIONS		

Civil Engineering · Environmental
Land Surveying
2442 Second Avenue
San Diego, CA 92101
(619)232-9200 (619)232-9210 Fax
R·E·C Consultants, Inc.

DATE: 10/25/19
SCALE: 1" = 50'
DRAWN: A.O.
CHECKED: J.R.R.

SHEET TITLE: DMA EXHIBIT - PROPOSED

PROJECT: CARMAX OCEANSIDE
PLAZA DRIVE & THUNDER DRIVE
OCEANSIDE, CA 92056

SHEET 1 OF 2 SHEETS

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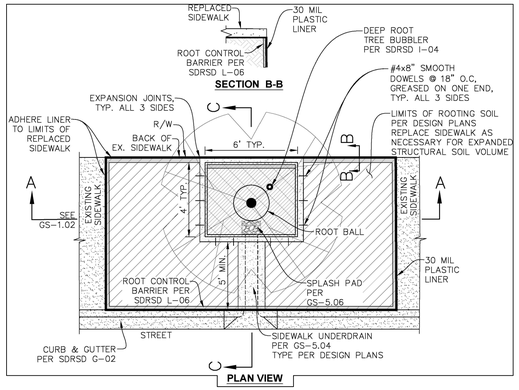
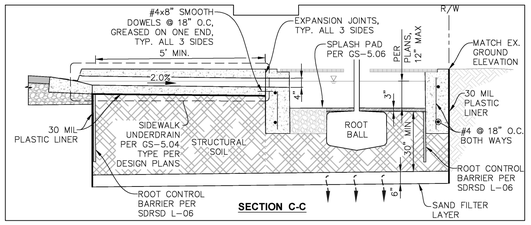
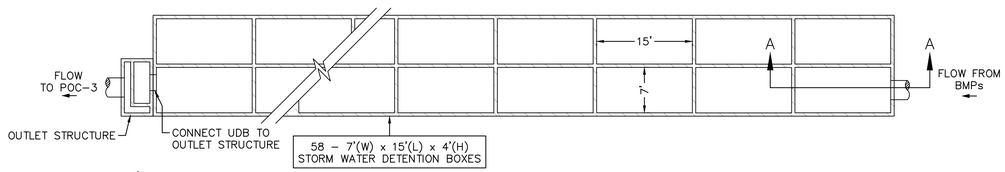




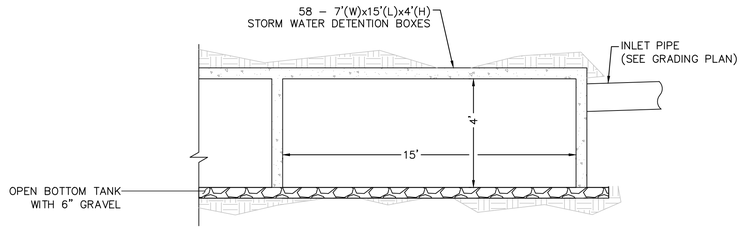
TREE WELL DETAIL

NTS



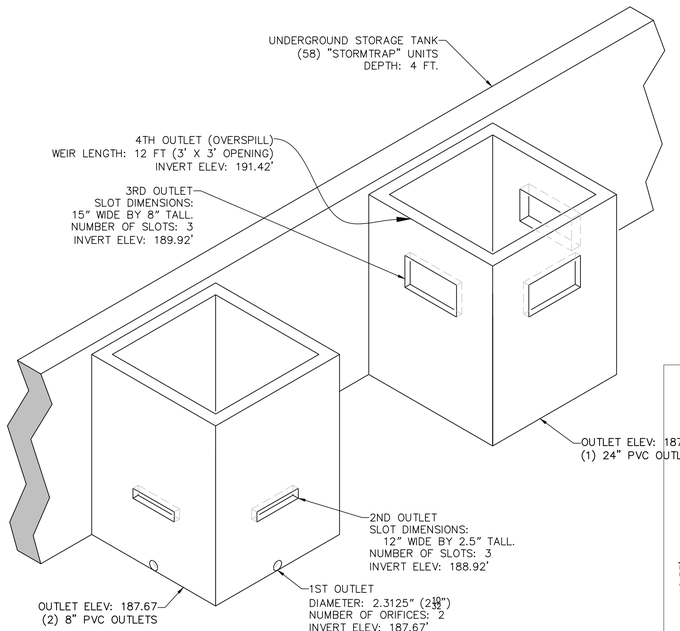
UNDERGROUND DETENTION BASIN (UDB)

NTS



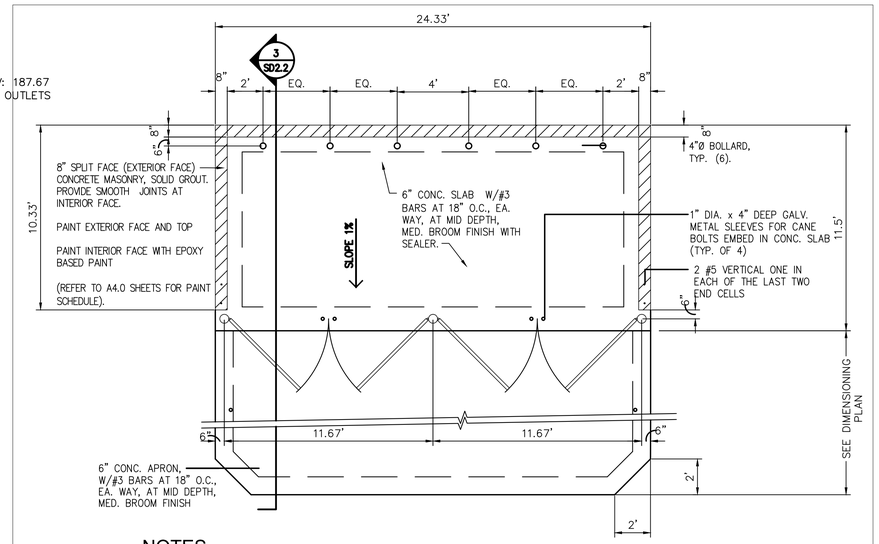
SECTION A-A: UNDERGROUND DETENTION BASIN

NTS



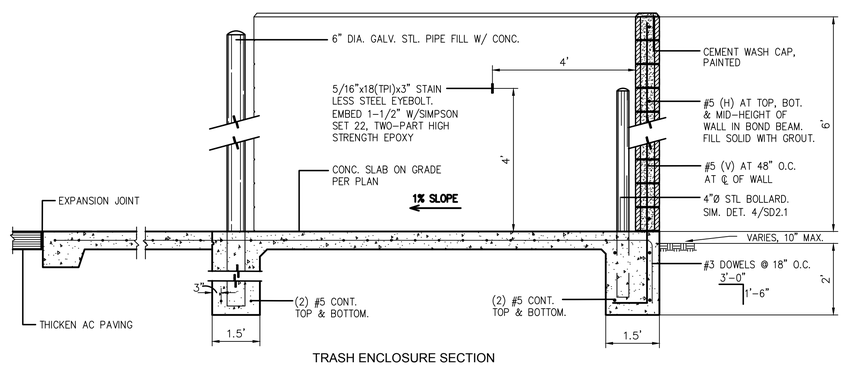
TANK OUTLET STRUCTURES

NOT TO SCALE



NOTES

1. ALL CONC. BLOCK MORTAR JOINTS SHALL BE FLUSH & SMOOTH AT INSIDE FACE.
2. SEE SITE PLAN FOR LOCATION OF TRASH ENCLOSURE.
3. THE TRASH ENCLOSURE PAD SHALL BE SEALED WITH A "NON-PIGMENTED" CLEAR CONCRETE SEALER.



TRASH ENCLOSURE SECTION

SOURCE CONTROL

BMP ID #	BMP TYPE	SYMBOL	CASQA NO.	QUANTITY	INSPECTION FREQUENCY	MAINTENANCE FREQUENCY	MAINTENANCE ACTIVITY
(1)	TRASH ENCLOSURE		SD-32	2	MONTHLY	AS NEEDED	INSPECT REGULARLY. CLEAR TRASH & DEBRIS. REPLACE LEAKING BINS. CLEAN STORAGE AREAS REGULARLY. POST SIGNS INFORMING TO NOT DISPOSE OF LIQUIDS & TO KEEP BIN LIDS CLOSED.
(2)	STENCILS	NO DUMPING	SD-13, SC-2	1 EA	MONTHLY	AS NEEDED	INSPECT AND MAINTAIN/REPLACE AS NEEDED.

BMP ID #	BMP TYPE	INSPECTION FREQUENCY	FREQUENCY MAINTENANCE	MAINTENANCE ACTIVITY
SC-1	PREVENTION OF ILLICIT DISCHARGES INTO MS4	CONTINUOUS	-	A GREASE TRAP HAS BEEN INCOPORATED INTO UTILITY PLAN AND DUMPING OF GREASE DOWN THE STROM DRAIN IS PROHIBITED OTHER GOOD HOUSEKEEPING PRACTICES WILL BE IMPLEMENTED TO DISCOURAGE DISCHARGES OF NON-STORM WATER POLLUTANTS, INCLUDING COLLECTION/RECYCLING USED COOKING OIL, CLEAN UP FOOD AND GREASE WITH ABDORBENTS/DISCARD IN TRASH AND ROUTINE MAINTANACE OF GREASE TRAP.
SC-2	STORM DRAIN STENCILING OR SIGNAGE	CONTINUOUS	REGULARLY	LABELING SHALL BE PROVIDED FOR ALL STORM WATER CONVEYANCE SYSTEM INLETS AND CATCH BASINS WITHIN THE PROJECT AREA. STORM DRAIN PLACARDS SHALL BE USED FOR SIGANGE (STENCILING IS PROHIBITED BY CITY OF OCEANSIDE). INSPECT AND MAINTAIN PLACARDS AS NEEDED.
SC-5	PROTECT TRASH STORAGE AREAS FROM RAINFALL, RUN-ON, RUNOFF, AND WIND DISPERSAL	REGULARLY	REGULARLY	ENSURE TRASH ENCLOSURE AREAS ARE FULLY CONTAINED (THREE WALLS, DOOR, ROOF). PROVIDE ATTACHED LIDS ON ALL TRASH CONTAINERS. KEEP CONTAINERS AWAY FROM STORM DRAIN VICINITY. POST SIGNS ON ALL ENCLOSURES AND/OR DUMPSTERS INFORMING USERS TO KEEP LID CLOSED AND NOT TO DISPOSE OF LIQUIDS OR HAZARDOUS MATERIALS. INSPECT TRASH STORAGE AREAS TO ENSURE INTEGRITY OF CONTAINERS AND THAT AREA IS KEPT CLEAN. REPLACE LEAKING BINS. CLEAN TRASH STORAGE AREAS REGULARLY
SC-6 A THROUGH H	ADDITIONAL BMPS BASED ON POTENTIAL SOURCES OF RUNOFF POLLUTANTS	REGULARLY OR AS DETERMINED NECESSARY	REGULARLY OR AS DETERMINED NECESSARY	SC-A ON-SITE STORM DRAIN INLETS: ON-SITE INLETS SHALL BE PROTECTED FROM ANY ILLICIT DISCHARGES AND DEBRIS. INLETS SHALL HAVE PROHIBITIVE SIGNS. MARK ALL INLETS WITH THE WORDS "NO DUMPING! DISCHARGES TO BAY" OR SIMILAR. INLET MARKINGS SHALL BE MAINTAINED AND PERIODICALLY REPAINTED. MAINTAIN ON A REGULAR BASIS TO REMOVE POLLUTANTS. ENSURE PROPER HYDRAULIC FUNCTION TO PREVENT FLOODING. CLEAN INLETS REGULARLY AND REMOVE SEDIMENTS AND DEBRIS, ESPECIALLY BEFORE START AND END OF WET SEASON. STORE WASTES COLLECTED FROM CLEANING ACTIVITIES OF DRAINAGE SYSTEM IN APPROPRIATE CONTAINERS OF TEMPORARY STORAGE SITES IN A MANNER THAT PREVENTS DISCHARGE TO THE STORM DRAIN. KEEP A RECORD OF CLEANING AND DISPOSAL ACTIVITIES. SC-C INTERIOR PARKING GARAGES: INTERIOR PARKING GARAGE WILL HAVE AN INTERIOR DRAIN THAT IS CONNECTED TO THE STORM DRAIN SYSTEM TO REMOVE NUISANCE WATER. SC-D1 NEED FOR FUTURE INDOOR & STRUCTURAL PEST CONTROL: FUTURE INDOOR & STRUCTURAL PEST CONTROL: BUILDING INCLUDES DOORS AND WINDOWS WITH SEALING THAT DISCOURAGES ENTRY OF PESTS. ANY PESTICIDES SHALL BE APPLIED MINIMALLY IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND CITY/STATE REQUIREMENTS SC-D2 LANDSCAPE/OUTDOOR PESTICIDE USE (SC-41): FINAL LANDSCAPE PLANS WILL PRESERVE EXISTING DROUGHT TOLERANT TREES, SHRUBS, AND GROUND COVER TO THE MAXIMUM EXTENT POSSIBLE, AND INCLUDE LANDSCAPING TO MINIMIZE IRRIGATION AND RUNOFF, TO PROMOTE SURFACE INFILTRATION WHERE APPROPRIATE, AND TO MINIMIZE THE USE OF FERTILIZERS AND PESTICIDES THAT CAN CONTRIBUTE TO STORM WATER POLLUTION. THE LANDSCAPED AREAS THAT WILL BE USED TO DETAIN STORMWATER, WILL HAVE PLANTS TOLERANT OF PERIODIC SATURATED SOIL CONDITIONS. FINAL LANDSCAPE PLANS HAVE BEEN DESIGNED TO ENSURE SUCCESSFUL ESTABLISHMENT, INCLUDING SELECTION OF PLANTS APPROPRIATE TO SITE SOILS, SLOPES, CLIMATE, SUN, WIND, RAIN, LAND USE, AIR MOVEMENT, ECOLOGICAL CONSISTENCY, AND PLANT INTERACTIONS. SC-N FIRE SPRINKLER TEST WATER: FIRE SPRINKLER TEST WATER SHALL BE DRAINED TO SANITARY SEWER SYSTEM. DURING A FIRE SPRINKLER TEST, THE FIRE RISER DISCHARGE SHALL BE CONNECTED BY A HOSE TO THE SEWER CLEANOUT. SC-O MISCELLANEOUS DRAIN OR WASHWATER: BOILER DRAINS SHALL BE DIRECTLY OR INDIRECTLY CONNECTED TO THE SANITARY SEWER SYSTEM AND MAY NOT DISCHARGE TO THE STORM DRAIN. ROOFTOP MOUNTED EQUIPMENT WITH POTENTIAL TO PRODUCE POLLUTANTS SHALL BE ROOFED AND/OR HAVE SECONDARY CONTAINMENT. ANY DRAINAGE SUMPS ONSITE SHALL FEATURE A SEDIMENT SUMP TO REDUCE THE QUANTITY OF SEDIMENT PUMPED WATER. COPPER BASED ROOFING, GUTTERS AND TRIM MATERIALS SHOULD BE AVOIDED. SC-P PLAZAS, SIDEWALKS, AND PARKING LOTS: SWEEP REGULARLY TO PREVENT ACCUMULATION OF LITTER AND DEBRIS, DEBRIS FROM PRESSURE WASHING MUST BE COLLECTED TO PREVENT ENTRY INTO STORM DRAIN SYSTEM. WASHWATER CONTAINING ANY CLEANING AGENT OR DEGREASER MUST BE COLLECTED AND DISCHARGED TO THE SANITARY SEWER AND NOT DISCHARGED TO A STORM DRAIN. CLEAN ALL PAVEMENT AT LEAST ONCE A YEAR.

REVISIONS

NO.	DESCRIPTION	DATE	APP'D

Civil Engineering · Environmental
Land Surveying
2442 Second Avenue
San Diego, CA 92101
(619)232-9200 (619)232-9210 Fax
R·E·C Consultants, Inc.

DATE: 10/25/19
SCALE: 1" = 50'
DRAWN: A.O.
CHECKED: J.R.R.

SHEET TITLE: DMA EXHIBIT - PROPOSED
PROJECT: CARMAX OCEANSIDE
PLAZA DRIVE & THUNDER DRIVE
OCEANSIDE, CA 92056

SHEET 2 OF 2 SHEETS

SAVE DATE: 3/6/2020 ~ PLOT DATE: 3/6/2020 ~ FILE NAME: P:\Acad\1492 CarMax Oceanside\Reports\SWQMP\DMA Exhibits.dwg

ATTACHMENT 6

SWMM Input Data in Input Format (Existing & Proposed Models)

PRE_DEV

```
[TITLE]

[OPTIONS]
FLOW_UNITS           CFS
INFILTRATION         GREEN_AMPT
FLOW_ROUTING         KINWAVE
START_DATE           10/01/1951
START_TIME           00:00:00
REPORT_START_DATE    10/01/1951
REPORT_START_TIME    00:00:00
END_DATE             09/30/2008
END_TIME             23:00:00
SWEEP_START          01/01
SWEEP_END            12/31
DRY_DAYS             0
REPORT_STEP          01:00:00
WET_STEP             00:15:00
DRY_STEP             04:00:00
ROUTING_STEP         0:01:00
ALLOW_PONDING        NO
INERTIAL_DAMPING     PARTIAL
VARIABLE_STEP        0.75
LENGTHENING_STEP     0
MIN_SURFAREA         0
NORMAL_FLOW_LIMITED  BOTH
SKIP_STEADY_STATE    NO
FORCE_MAIN_EQUATION  H-W
LINK_OFFSETS         DEPTH
MIN_SLOPE            0

[EVAPORATION]
;;Type       Parameters
;;---------- ----------
MONTHLY      0.06   .08    0.11   0.15   0.17   0.19   0.19   0.18   0.15   0.11   0.08   0.06
DRY_ONLY     NO

[RAINGAGES]
;;               Rain      Time   Snow   Data
;;Name           Type      Intrvl Catch  Source
;;-------------- --------- ------ ------ ----------
Oceanside        INTENSITY 1:00   1.0    TIMESERIES Oceanside

[SUBCATCHMENTS]
;;                                            Total    Pcnt.             Pcnt.    Curb     Snow
;;Name           Raingage         Outlet           Area     Imperv   Width    Slope    Length   Pack
;;-------------- ---------------- ---------------- -------- -------- -------- -------- -------- --------
DMA-3A           Oceanside        POC-3            2.085    0        363      1        0
DMA-3B           Oceanside        POC-3            3.52     0        615      1        0
DMA-4            Oceanside        POC-4            0.278    0        48       1        0
DMA-3C           Oceanside        POC-3            1.279    0        223      1        0

[SUBAREAS]
;;Subcatchment   N-Imperv   N-Perv     S-Imperv   S-Perv     PctZero    RouteTo    PctRouted
;;-------------- ---------- ---------- ---------- ---------- ---------- ---------- ----------
DMA-3A           0.012      0.05       0.05       0.1        25         OUTLET
DMA-3B           0.012      0.05       0.05       0.1        25         OUTLET
DMA-4            0.012      0.05       0.05       0.1        25         OUTLET
DMA-3C           0.012      0.05       0.05       0.1        25         OUTLET

[INFILTRATION]
;;Subcatchment   Suction    HydCon     IMDmax
;;-------------- ---------- ---------- ----------
```

```
DMA-3A           9          0.01875    0.33
DMA-3B           9          0.01875    0.33
DMA-4            9          0.01875    0.33
DMA-3C           9          0.01875    0.33

[OUTFALLS]
;;               Invert     Outfall    Stage/Table      Tide
;;Name           Elev.      Type       Time Series      Gate
;;-------------- ---------- ---------- ---------------- ----
POC-3            0          FREE                        NO
POC-4            0          FREE                        NO

[TIMESERIES]
;;Name           Date       Time       Value
;;-------------- ---------- ---------- ----------
Oceanside        FILE "OsideRain.prn"

[REPORT]
INPUT      NO
CONTROLS   NO
SUBCATCHMENTS ALL
NODES ALL
LINKS ALL

[TAGS]

[MAP]
DIMENSIONS -13900.000 2750.000 -5100.000 8250.000
Units      None

[COORDINATES]
;;Node           X-Coord            Y-Coord
;;-------------- ------------------ ------------------
POC-3            -9500.000          3000.000
POC-4            -11016.553         2985.714

[VERTICES]
;;Link           X-Coord            Y-Coord
;;-------------- ------------------ ------------------

[Polygons]
;;Subcatchment   X-Coord            Y-Coord
;;-------------- ------------------ ------------------
DMA-3A           -9509.977          4252.834
DMA-3B           -8582.086          4212.925
DMA-4            -11016.553         4043.311
DMA-3C           -8302.721          3474.603

[SYMBOLS]
;;Gage           X-Coord            Y-Coord
;;-------------- ------------------ ------------------
Oceanside        -9789.342          5529.932
```

POST_DEV_1

```
[TITLE]

[OPTIONS]
FLOW_UNITS           CFS
INFILTRATION         GREEN_AMPT
FLOW_ROUTING         KINWAVE
START_DATE           10/01/1951
START_TIME           00:00:00
REPORT_START_DATE    10/01/1951
REPORT_START_TIME    00:00:00
END_DATE             09/30/2008
END_TIME             23:00:00
SWEEP_START          01/01
SWEEP_END            12/31
DRY_DAYS             0
REPORT_STEP          01:00:00
WET_STEP             00:15:00
DRY_STEP             04:00:00
ROUTING_STEP         0:01:00
ALLOW_PONDING        NO
INERTIAL_DAMPING     PARTIAL
VARIABLE_STEP        0.75
LENGTHENING_STEP     0
MIN_SURFAREA         0
NORMAL_FLOW_LIMITED  BOTH
SKIP_STEADY_STATE    NO
FORCE_MAIN_EQUATION  H-W
LINK_OFFSETS         DEPTH
MIN_SLOPE            0

[EVAPORATION]
;;Type       Parameters
;;---------- ----------
MONTHLY      0.06   .08    0.11   0.15   0.17   0.19   0.19   0.18   0.15   0.11   0.08   0.06
DRY_ONLY     NO

[RAINGAGES]
;;               Rain      Time   Snow   Data
;;Name           Type      Intrvl Catch  Source
;;-------------- --------- ------ ------ ----------
Oceanside        INTENSITY 1:00   1.0    TIMESERIES Oceanside

[SUBCATCHMENTS]
;;                                              Total    Pcnt.             Pcnt.    Curb     Snow
;;Name           Raingage         Outlet          Area     Imperv   Width    Slope    Length   Pack
;;-------------- ---------------- --------------- -------- -------- -------- -------- -------- --------
DMA-3A           Oceanside        BASIN           5.896    85.24    2568     1        0
DMA-3B           Oceanside        POC-3           0.993    0        432      1        0
DMA-4            Oceanside        POC-4           0.146    50.4     63       1        0

[SUBAREAS]
;;Subcatchment   N-Imperv   N-Perv     S-Imperv   S-Perv     PctZero    RouteTo    PctRouted
;;-------------- ---------- ---------- ---------- ---------- ---------- ---------- ----------
DMA-3A           0.012      0.05       0.05       0.1        25         OUTLET
DMA-3B           0.012      0.05       0.05       0.1        25         OUTLET
DMA-4            0.012      0.05       0.05       0.1        25         OUTLET

[INFILTRATION]
;;Subcatchment   Suction    HydCon     IMDmax
;;-------------- ---------- ---------- ----------
DMA-3A           9          0.01875    0.33
DMA-3B           9          0.01875    0.33
DMA-4            9          0.01875    0.33

[OUTFALLS]
;;               Invert     Outfall    Stage/Table      Tide
;;Name           Elev.      Type       Time Series      Gate
;;-------------- ---------- ---------- ---------------- ----
POC-3            0          FREE                        NO
POC-4            0          FREE                        NO
```

POST_DEV_1

```
[STORAGE]
;;               Invert   Max.     Init.    Storage    Curve                    Ponded   Evap.
;;Name          Elev.    Depth    Depth    Curve      Params                   Area     Frac.    Infiltration
Parameters
;;-------------- -------- -------- -------- ---------- -------- -------- -------- -------- -------- -----------------
------
BASIN            0        4.2      0        TABULAR    BASIN1                   6090     0        9        0.265
0.33

[OUTLETS]
;;               Inlet            Outlet           Outflow    Outlet          Qcoeff/                     Flap
;;Name          Node             Node             Height     Type            QTable           Qexpon     Gate
;;-------------- ---------------- ---------------- ---------- --------------- ---------------- ---------- ----
OUTLET           BASIN            POC-3            0          TABULAR/HEAD    OUT1                        NO

[CURVES]
;;Name          Type       X-Value    Y-Value
;;-------------- ---------- ---------- ----------
OUT1             Rating     0          0
OUT1                        0.1        0
OUT1                        0.2        0
OUT1                        0.3        0.027
OUT1                        0.4        0.09
OUT1                        0.5        0.131
OUT1                        0.6        0.16
OUT1                        0.7        0.184
OUT1                        0.8        0.206
OUT1                        0.9        0.226
OUT1                        1          0.243
OUT1                        1.1        0.26
OUT1                        1.2        0.276
OUT1                        1.3        0.291
OUT1                        1.4        0.305
OUT1                        1.5        0.422
OUT1                        1.6        0.872
OUT1                        1.7        1.506
OUT1                        1.8        1.873
OUT1                        1.9        2.167
OUT1                        2          2.422
OUT1                        2.1        2.65
OUT1                        2.2        2.859
OUT1                        2.3        3.053
OUT1                        2.4        3.235
OUT1                        2.5        3.536
OUT1                        2.6        4.245
OUT1                        2.7        5.178
OUT1                        2.8        6.281
OUT1                        2.9        7.527
OUT1                        3          8.898
OUT1                        3.1        10.382
OUT1                        3.2        11.97
OUT1                        3.3        13.372
OUT1                        3.4        14.313
OUT1                        3.5        15.187
OUT1                        3.6        16.007
OUT1                        3.75       16.782
OUT1                        3.8        17.519
OUT1                        3.9        18.566
OUT1                        4          19.316
OUT1                        4.1        21.713
OUT1                        4.2        24.83

BASIN1           Storage    0          6090
BASIN1                      4.2        6090

[TIMESERIES]
;;Name          Date       Time       Value
;;-------------- ---------- ---------- ----------
Oceanside        FILE "OsideRain.prn"

[REPORT]
```

POST_DEV_1

```
INPUT      NO
CONTROLS   NO
SUBCATCHMENTS ALL
NODES ALL
LINKS ALL

[TAGS]

[MAP]
DIMENSIONS -13900.000 2750.000 -5100.000 8250.000
Units      None

[COORDINATES]
;;Node           X-Coord            Y-Coord
;;-------------- ------------------ ------------------
POC-3            -9500.000          3000.000
POC-4            -11016.553         2985.714
BASIN            -9509.977          4143.084

[VERTICES]
;;Link           X-Coord            Y-Coord
;;-------------- ------------------ ------------------

[Polygons]
;;Subcatchment   X-Coord            Y-Coord
;;-------------- ------------------ ------------------
DMA-3A           -9509.977          4871.429
DMA-3B           -8342.630          2995.692
DMA-4            -11016.553         4043.311

[SYMBOLS]
;;Gage           X-Coord            Y-Coord
;;-------------- ------------------ ------------------
Oceanside        -9789.342          5529.932
```

ATTACHMENT 7

EPA SWMM FIGURES AND EXPLANATIONS

Per the attached, the reader can see the screens associated with the EPA-SWMM Model in both pre-development and post-development conditions. Each portion, i.e., sub-catchments, outfalls, storage units, weir as a discharge, and outfalls (point of compliance), are also shown.

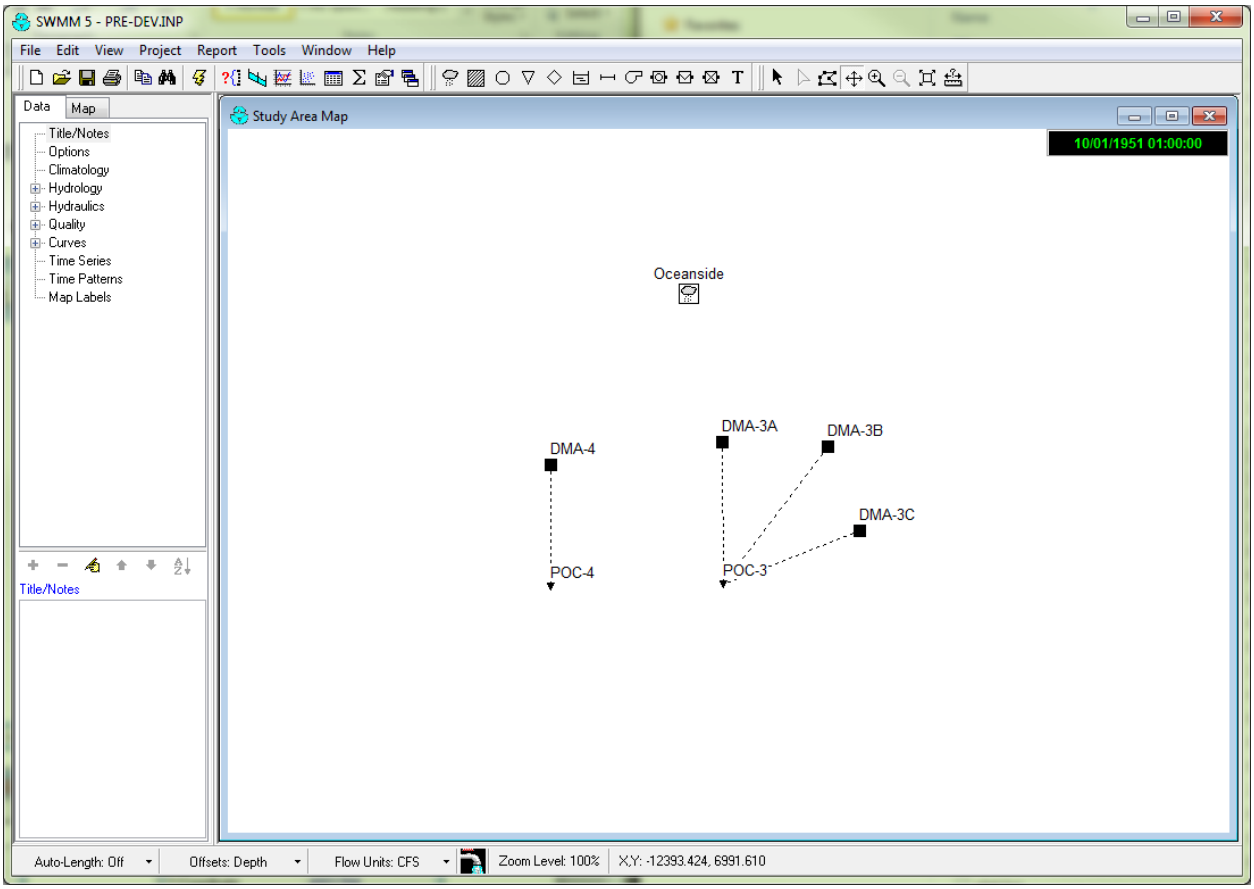
Variables for modeling are associated with typical recommended values by the EPA-SWMM model, typical values found in technical literature (such as Maidment's Handbook of Hydrology). Recommended values for the SWMM model have been attained from Appendix G of the 2016 City of Oceanside BMP Design Manual.

Soil characteristics of the existing soils were determined from the NRCS Web Soil Survey and site specific geotechnical report (located in Attachment 8 of this report).

A Technical document prepared by Tory R Walker Engineering for the Cities of San Marcos, Oceanside and Vista (Reference [1]) can also be consulted for additional information regarding typical values for SWMM parameters.

Manning's roughness coefficients have been based upon the findings of the "*Improving Accuracy in Continuous Hydrologic Modeling: Guidance for Selecting Pervious Overland Flow Manning's n Values in the San Diego Region*" date 2016 by TRW Engineering (Reference [6]).

PRE-DEVELOPED CONDITIONS



Outfall POC-4

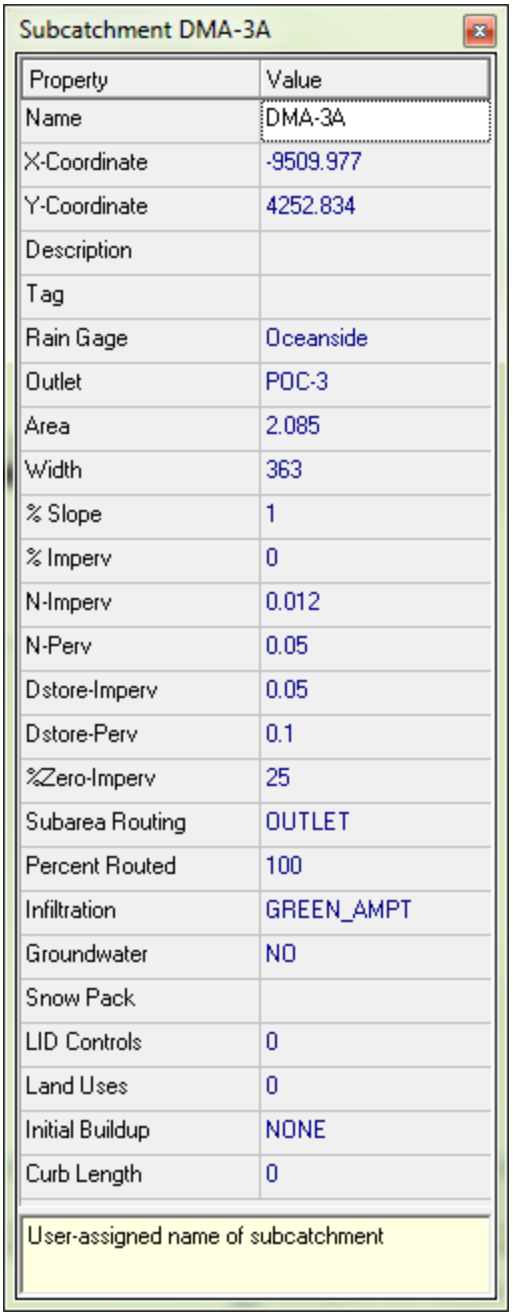
Property	Value
Name	POC-4
X-Coordinate	-11016.553
Y-Coordinate	2985.714
Description	
Tag	
Inflows	NO
Treatment	NO
Invert El.	0
Tide Gate	NO
Type	FREE
Fixed Outfall	
Fixed Stage	0
Tidal Outfall	
Curve Name	*
Time Series Outfall	
Series Name	*

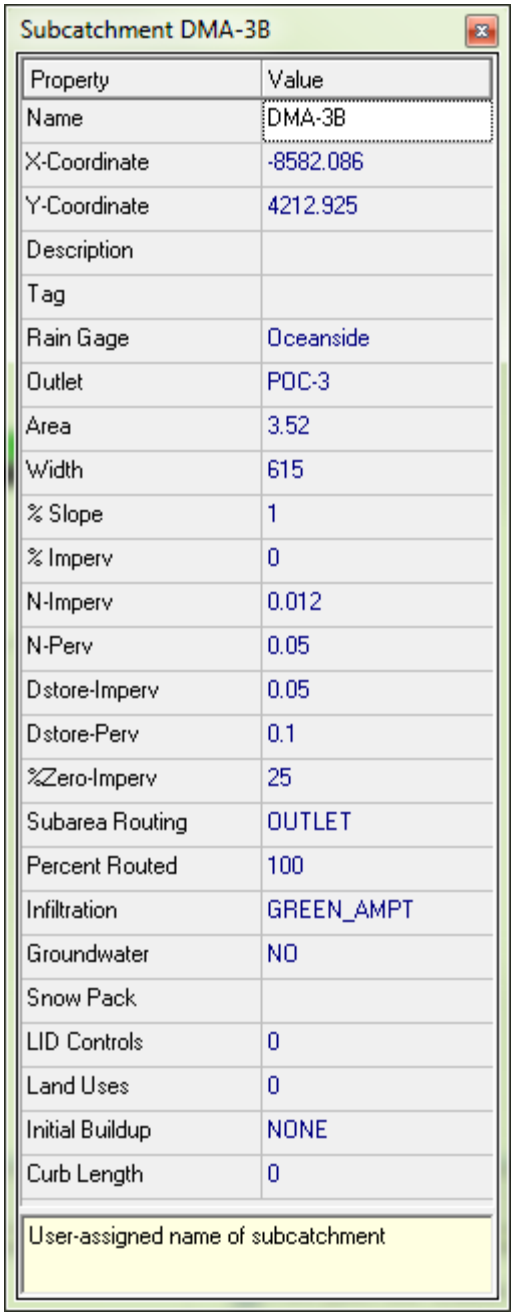
User-assigned name of outfall

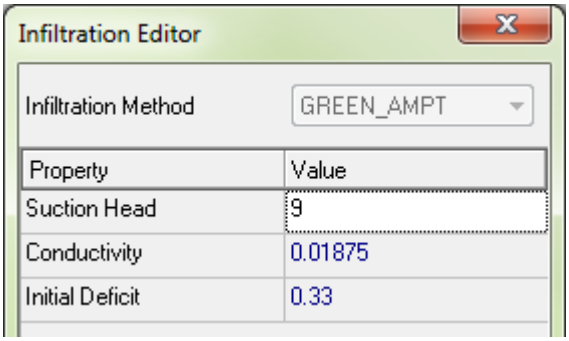
Outfall POC-3

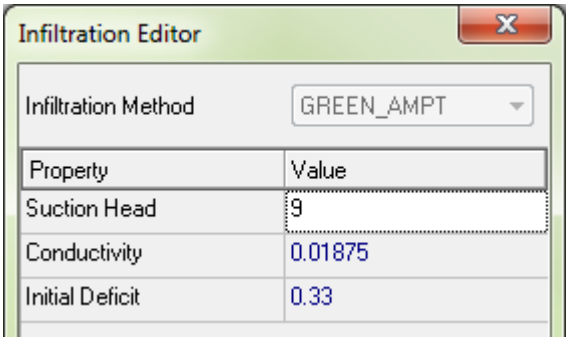
Property	Value
Name	POC-3
X-Coordinate	-9500.000
Y-Coordinate	3000.000
Description	
Tag	
Inflows	NO
Treatment	NO
Invert El.	0
Tide Gate	NO
Type	FREE
Fixed Outfall	
Fixed Stage	0
Tidal Outfall	
Curve Name	*
Time Series Outfall	
Series Name	*

User-assigned name of outfall


Subcatchment DMA-3A
Property
Value
Name
DMA-3A
X-Coordinate
-9509.977
Y-Coordinate
4252.834
Description
Tag
Rain Gage
Oceanside
Outlet
POC-3
Area
2.085
Width
363
% Slope
1
% Imperv
0
N-Imperv
0.012
N-Perv
0.05
Dstore-Imperv
0.05
Dstore-Perv
0.1
%Zero-Imperv
25
Subarea Routing
OUTLET
Percent Routed
100
Infiltration
GREEN_AMPT
Groundwater
NO
Snow Pack
LID Controls
0
Land Uses
0
Initial Buildup
NONE
Curb Length
0
User-assigned name of subcatchment


Subcatchment DMA-3B
Property
Value
Name
DMA-3B
X-Coordinate
-8582.086
Y-Coordinate
4212.925
Description
Tag
Rain Gage
Oceanside
Outlet
POC-3
Area
3.52
Width
615
% Slope
1
% Imperv
0
N-Imperv
0.012
N-Perv
0.05
Dstore-Imperv
0.05
Dstore-Perv
0.1
%Zero-Imperv
25
Subarea Routing
OUTLET
Percent Routed
100
Infiltration
GREEN_AMPT
Groundwater
NO
Snow Pack
LID Controls
0
Land Uses
0
Initial Buildup
NONE
Curb Length
0
User-assigned name of subcatchment


Infiltration Editor
Infiltration Method
GREEN_AMPT
Property
Value
Suction Head
9
Conductivity
0.01875
Initial Deficit
0.33


Infiltration Editor
Infiltration Method
GREEN_AMPT
Property
Value
Suction Head
9
Conductivity
0.01875
Initial Deficit
0.33

Subcatchment DMA-3C

Property	Value
Name	DMA-3C
X-Coordinate	-8302.721
Y-Coordinate	3474.603
Description	
Tag	
Rain Gage	Oceanside
Outlet	POC-3
Area	1.279
Width	223
% Slope	1
% Imperv	0
N-Imperv	0.012
N-Perv	0.05
Dstore-Imperv	0.05
Dstore-Perv	0.1
%Zero-Imperv	25
Subarea Routing	OUTLET
Percent Routed	100
Infiltration	GREEN_AMPT
Groundwater	NO
Snow Pack	
LID Controls	0
Land Uses	0
Initial Buildup	NONE
Curb Length	0

User-assigned name of subcatchment

Subcatchment DMA-4

Property	Value
Name	DMA-4
X-Coordinate	-11016.553
Y-Coordinate	4043.311
Description	
Tag	
Rain Gage	Oceanside
Outlet	POC-4
Area	0.278
Width	48
% Slope	1
% Imperv	0
N-Imperv	0.012
N-Perv	0.05
Dstore-Imperv	0.05
Dstore-Perv	0.1
%Zero-Imperv	25
Subarea Routing	OUTLET
Percent Routed	100
Infiltration	GREEN_AMPT
Groundwater	NO
Snow Pack	
LID Controls	0
Land Uses	0
Initial Buildup	NONE
Curb Length	0

User-assigned name of subcatchment

Infiltration Editor

Infiltration Method: GREEN_AMPT

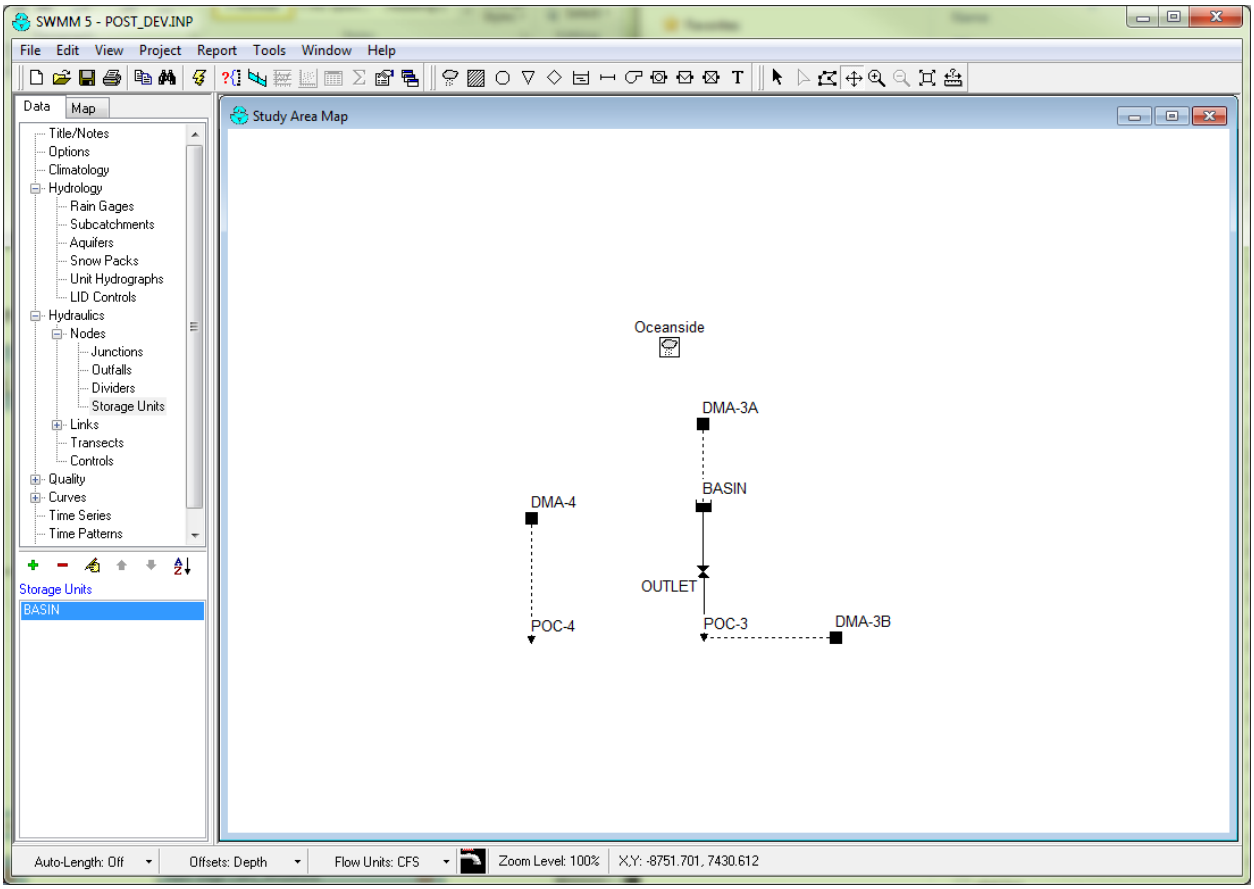
Property	Value
Suction Head	9
Conductivity	0.01875
Initial Deficit	0.33

Infiltration Editor

Infiltration Method: GREEN_AMPT

Property	Value
Suction Head	9
Conductivity	0.01875
Initial Deficit	0.33

POST-DEVELOPED CONDITIONS



Outfall POC-4

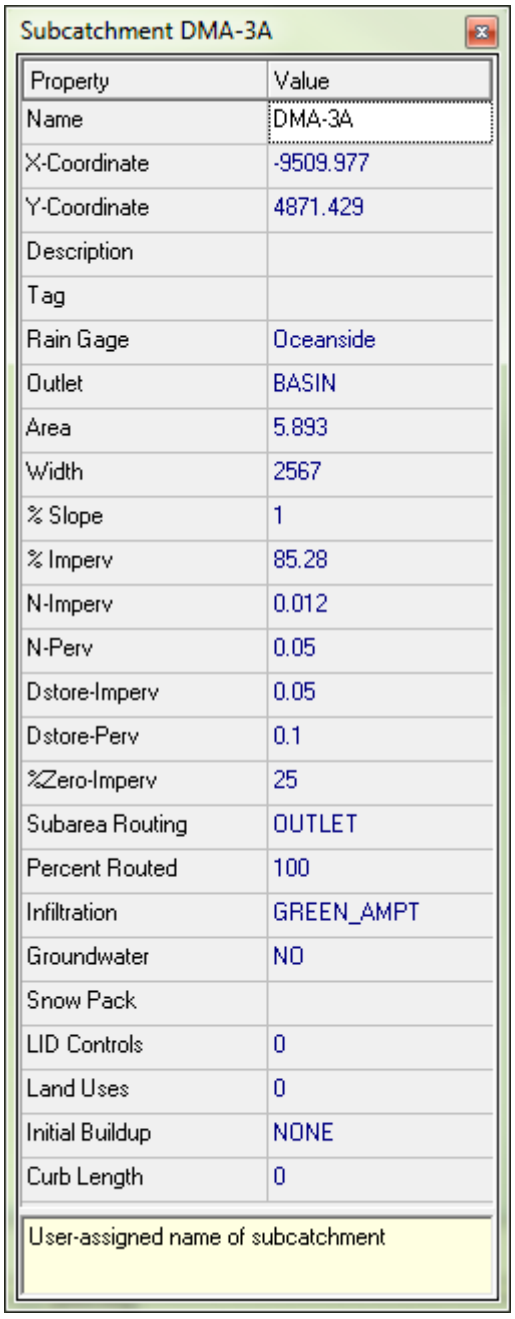
Property	Value
Name	POC-4
X-Coordinate	-11016.553
Y-Coordinate	2985.714
Description	
Tag	
Inflows	NO
Treatment	NO
Invert El.	0
Tide Gate	NO
Type	FREE
Fixed Outfall	
Fixed Stage	0
Tidal Outfall	
Curve Name	*
Time Series Outfall	
Series Name	*

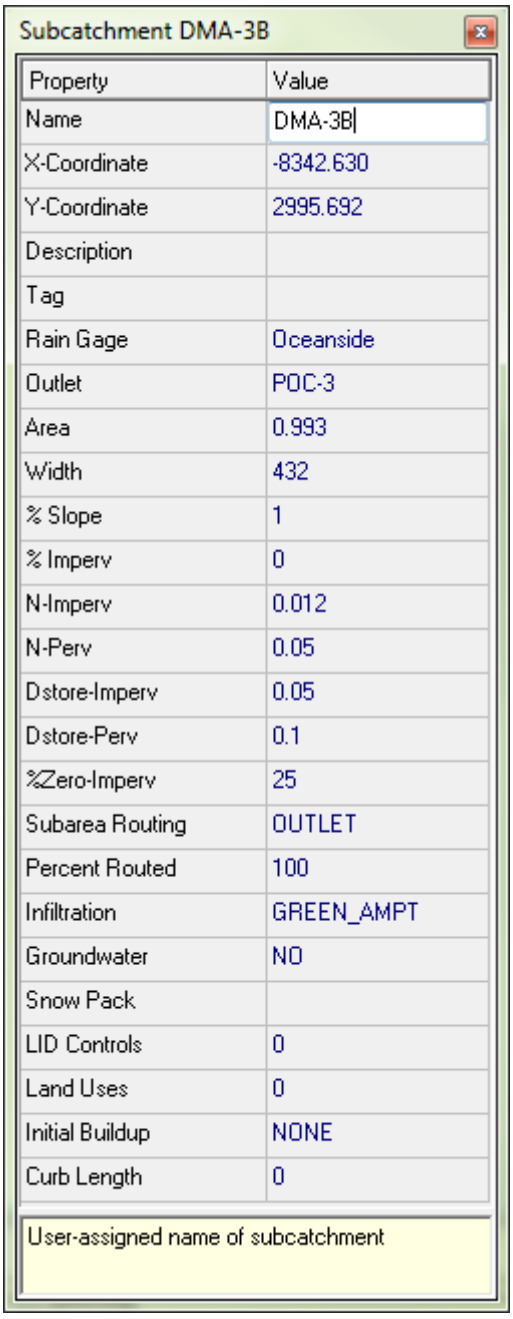
User-assigned name of outfall

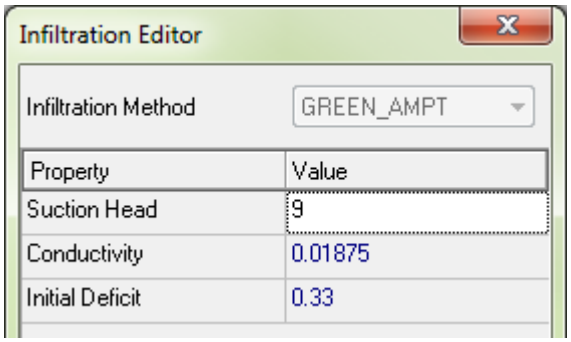
Outfall POC-3

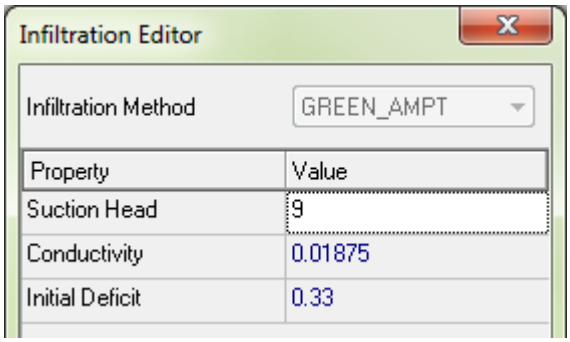
Property	Value
Name	POC-3
X-Coordinate	-9500.000
Y-Coordinate	3000.000
Description	
Tag	
Inflows	NO
Treatment	NO
Invert El.	0
Tide Gate	NO
Type	FREE
Fixed Outfall	
Fixed Stage	0
Tidal Outfall	
Curve Name	*
Time Series Outfall	
Series Name	*

User-assigned name of outfall


Subcatchment DMA-3A
Property
Value
Name
DMA-3A
X-Coordinate
-9509.977
Y-Coordinate
4871.429
Description
Tag
Rain Gage
Oceanside
Outlet
BASIN
Area
5.893
Width
2567
% Slope
1
% Imperv
85.28
N-Imperv
0.012
N-Perv
0.05
Dstore-Imperv
0.05
Dstore-Perv
0.1
%Zero-Imperv
25
Subarea Routing
OUTLET
Percent Routed
100
Infiltration
GREEN_AMPT
Groundwater
NO
Snow Pack
LID Controls
0
Land Uses
0
Initial Buildup
NONE
Curb Length
0
User-assigned name of subcatchment


Subcatchment DMA-3B
Property
Value
Name
DMA-3B
X-Coordinate
-8342.630
Y-Coordinate
2995.692
Description
Tag
Rain Gage
Oceanside
Outlet
POC-3
Area
0.993
Width
432
% Slope
1
% Imperv
0
N-Imperv
0.012
N-Perv
0.05
Dstore-Imperv
0.05
Dstore-Perv
0.1
%Zero-Imperv
25
Subarea Routing
OUTLET
Percent Routed
100
Infiltration
GREEN_AMPT
Groundwater
NO
Snow Pack
LID Controls
0
Land Uses
0
Initial Buildup
NONE
Curb Length
0
User-assigned name of subcatchment


Infiltration Editor
Infiltration Method
GREEN_AMPT
Property
Value
Suction Head
9
Conductivity
0.01875
Initial Deficit
0.33


Infiltration Editor
Infiltration Method
GREEN_AMPT
Property
Value
Suction Head
9
Conductivity
0.01875
Initial Deficit
0.33

Subcatchment DMA-4

Property	Value
Name	DMA-4
X-Coordinate	-11016.553
Y-Coordinate	4043.311
Description	
Tag	
Rain Gage	Oceanside
Outlet	POC-4
Area	0.146
Width	63
% Slope	1
% Imperv	50.4
N-Imperv	0.012
N-Perv	0.05
Dstore-Imperv	0.05
Dstore-Perv	0.1
%Zero-Imperv	25
Subarea Routing	OUTLET
Percent Routed	100
Infiltration	GREEN_AMPT
Groundwater	NO
Snow Pack	
LID Controls	0
Land Uses	0
Initial Buildup	NONE
Curb Length	0

User-assigned name of subcatchment

Infiltration Editor

Infiltration Method: GREEN_AMPT

Property	Value
Suction Head	9
Conductivity	0.01875
Initial Deficit	0.33

Detention Basin

Storage Unit BASIN

Property	Value
Name	BASIN
X-Coordinate	-9509.977
Y-Coordinate	4143.084
Description	
Tag	
Inflows	NO
Treatment	NO
Invert El.	0
Max. Depth	4.2
Initial Depth	0
Ponded Area	6090
Evap. Factor	0
Infiltration	YES
Storage Curve	TABULAR
Functional Curve	
Coefficient	1000
Exponent	0
Constant	0
Tabular Curve	
Curve Name	BASIN1

Outlet OUTLET

Property	Value
Name	OUTLET
Inlet Node	BASIN
Outlet Node	POC-1
Description	
Tag	
Inlet Offset	0
Flap Gate	NO
Rating Curve	TABULAR/HEAD
Functional Curve	
Coefficient	10.0
Exponent	0.5
Tabular Curve	
Curve Name	OUT-1

User-assigned name of outlet

Storage Curve Editor

Curve Name: BASIN1

Description:

	Depth (ft)	Area (ft2)
1	0	6090
2	4.2	6090
3		
4		
5		
6		
7		
8		
9		

View... Load... Save... OK Cancel Help

Rating Curve Editor

Curve Name: OUT1

Description:

	Head (ft)	Outflow (CFS)
1	0	0
2	0.1	0
3	0.2	0
4	0.3	0.027
5	0.4	0.09
6	0.5	0.131
7	0.6	0.16
8	0.7	0.184
9	0.8	0.206

View... Load... Save... OK Cancel Help

EXPLANATION OF SELECTED VARIABLES

Sub Catchment Areas:

Please refer to the attached diagrams that indicate the DMA and detention BMPs (BMP) sub areas modeled within the project site at both the pre and post developed conditions draining to the POC.

Parameters for the pre- and post-developed models include soil type D as determined from the NRCS websoil survey review (attached at the end of this appendix). Suction head, conductivity and initial deficit corresponds to average values expected for these soils types, according to Appendix G of the 2016 City of Oceanside BMP Design Manual.

For surface runoff infiltration values, REC selected infiltration values per Appendix G of the 2016 City of Oceanside BMP Design Manual corresponding to hydrologic soil type.

Selection of a Kinematic Approach: As the continuous model is based on hourly rainfall, and the time of concentration for the pre-development and post-development conditions is significantly smaller than 60 minutes, precise routing of the flows through the impervious surfaces, the underdrain pipe system, and the discharge pipe was considered unnecessary. The truncation error of the precipitation into hourly steps is much more significant than the precise routing in a system where the time of concentration is much smaller than 1 hour.

Infiltration:

Per the SWQMP, a factored design infiltration rate of 0.265 in/hr has been applied to the base of the detention vault.

Overland Flow Manning's Coefficient per TRWE (Reference [6])

appeal of a de facto value, we anticipate that jurisdictions will not be inclined to approve land surfaces other than short prairie grass. Therefore, in order to provide SWMM users with a wider range of land surfaces suitable for local application and to provide Copermittees with confidence in the design parameters, we recommend using the values published by Yen and Chow in Table 3-5 of the EPA SWMM Reference Manual Volume I – Hydrology.

SWMM-Endorsed Values Will Improve Model Quality

In January 2016, the EPA released the SWMM Reference Manual Volume I – Hydrology (SWMM Hydrology Reference Manual). The SWMM Hydrology Reference Manual complements the SWMM 5 User's Manual and SWMM 5 Applications Manual by providing an in-depth description of the program's hydrologic components (EPA 2016). Table 3-5 of the SWMM Hydrology Reference Manual expounds upon SWMM 5 User's Manual Table A.6 by providing Manning's *n* values for additional overland flow surfaces[3]. The values are provided in Table 1:

Table 1: Manning's *n* Values for Overland Flow (EPA, 2016; Yen 2001; Yen and Chow, 1983).

Overland Surface	Light Rain (< 0.8 in/hr)	Moderate Rain (0.8-1.2 in/hr)	Heavy Rain (> 1.2 in/hr)
Smooth asphalt pavement	0.010	0.012	0.015
Smooth impervious surface	0.011	0.013	0.015
Tar and sand pavement	0.012	0.014	0.016
Concrete pavement	0.014	0.017	0.020
Rough impervious surface	0.015	0.019	0.023
Smooth bare packed soil	0.017	0.021	0.025
Moderate bare packed soil	0.025	0.030	0.035
Rough bare packed soil	0.032	0.038	0.045
Gravel soil	0.025	0.032	0.045
Mowed poor grass	0.030	0.038	0.045
Average grass, closely clipped sod	0.040	0.050	0.060
Pasture	0.040	0.055	0.070
Timberland	0.060	0.090	0.120
Dense grass	0.060	0.090	0.120
Shrubs and bushes	0.080	0.120	0.180
Land Use			
Business	0.014	0.022	0.035
Semibusiness	0.022	0.035	0.050
Industrial	0.020	0.035	0.050
Dense residential	0.025	0.040	0.060
Suburban residential	0.030	0.055	0.080
Parks and lawns	0.040	0.075	0.120

For purposes of local hydromodification management BMP design, these Manning's *n* values are an improvement upon the values presented by Engman (1986) in SWMM 5 User's Manual Table A.6. Values from SWMM 5 User's Manual Table A.6, while completely suitable for the intended application to certain agricultural land covers, comes with the disclaimer that the provided Manning's *n* values are valid for shallow-depth overland flow that match the conditions in the experimental plots (Engman,

[3] Further discussion is provided on page 6 under "Discussion of Differences Between Manning's *n* Values"

ATTACHMENT 8

Geotechnical Documentation

Map Scale: 1:1,980 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 25 50 100 150

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Diego County Area, California
Survey Area Data: Version 14, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 3, 2014—Nov 22, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
LeC2	Las Flores loamy fine sand, 5 to 9 percent slopes, eroded	D	10.1	99.8%
VaB	Visalia sandy loam, 2 to 5 percent slopes	A	0.0	0.2%
Totals for Area of Interest			**10.1**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

ATTACHMENT 9

Summary Files from the SWMM Model

PRE_DEV

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)

****
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
****

****
Analysis Options
****
Flow Units ..... CFS
Process Models:
  Rainfall/Runoff ..... YES
  Snowmelt ..... NO
  Groundwater ..... NO
  Flow Routing ..... NO
  Water Quality ..... NO
Infiltration Method ..... GREEN_AMPT
Starting Date OCT-01-1951 00:00:00
Ending Date SEP-30-2008 23:00:00
Antecedent Dry Days 0.0
Report Time Step 01:00:00
Wet Time Step 00:15:00
Dry Time Step 04:00:00

Runoff Quantity Continuity	Volume acre-feet	Depth inches
Total Precipitation	402.481	674.360
Evaporation Loss	17.697	29.652
Infiltration Loss	294.999	494.274
Surface Runoff	98.630	165.256
Final Surface Storage	0.000	0.000
Continuity Error (%)	-2.198	

Flow Routing Continuity	Volume acre-feet	Volume 10^6 gal
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	98.630	32.140
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	98.630	32.140
Internal Outflow	0.000	0.000
Storage Losses	0.000	0.000
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
DMA-3A	674.36	0.00	29.65	494.29	165.24	9.35	2.36	0.245
DMA-3B	674.36	0.00	29.65	494.26	165.28	15.80	3.99	0.245
DMA-4	674.36	0.00	29.66	494.35	165.16	1.25	0.32	0.245
DMA-3C	674.36	0.00	29.65	494.28	165.25	5.74	1.45	0.245

PRE_DEV

```
Analysis begun on:  Wed Feb 26 15:40:39 2020
Analysis ended on:  Wed Feb 26 15:40:55 2020
Total elapsed time: 00:00:16
```

POST_DEV

```
EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

***********************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
***********************************************************

****************
Analysis Options
****************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ NO
  Water Quality .......... NO
Infiltration Method ...... GREEN_AMPT
Flow Routing Method ...... KINWAVE
Starting Date ............ OCT-01-1951 00:00:00
Ending Date .............. SEP-30-2008 23:00:00
Antecedent Dry Days ...... 0.0
Report Time Step ......... 01:00:00
Wet Time Step ............ 00:15:00
Dry Time Step ............ 04:00:00
Routing Time Step ........ 60.00 sec


*************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
*************************     ---------       -------
Total Precipitation ......       395.344       674.360
Evaporation Loss .........        47.628        81.241
Infiltration Loss ........        78.009       133.065
Surface Runoff ...........       276.332       471.355
Final Surface Storage ....         0.000         0.000
Continuity Error (%) .....        -1.676


*************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
*************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......       276.332        90.047
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........       174.386        56.826
Internal Outflow .........         0.000         0.000
Storage Losses ...........       101.850        33.189
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.000         0.000
Continuity Error (%) .....         0.034


*******************************
Highest Flow Instability Indexes
*******************************
All links are stable.


************************
Routing Time Step Summary
************************
Minimum Time Step           :    60.00 sec
Average Time Step           :    60.00 sec
```

Maximum Time Step : 60.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 1.00

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
DMA-3A	674.36	0.00	90.95	70.90	523.73	83.85	7.04	0.777
DMA-3B	674.36	0.00	26.18	486.48	173.37	4.67	1.13	0.257
DMA-4	674.36	0.00	63.73	239.75	383.00	1.52	0.17	0.568

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
POC-3	OUTFALL	0.00	0.00	0.00	0 00:00
POC-4	OUTFALL	0.00	0.00	0.00	0 00:00
BASIN	STORAGE	0.02	2.85	2.85	18823 17:00

****
Node Inflow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
POC-3	OUTFALL	1.13	8.03	18823 17:00	4.675	55.304
POC-4	OUTFALL	0.17	0.17	18823 17:00	1.518	1.518
BASIN	STORAGE	7.04	7.04	18823 17:00	83.847	83.847

****
Node Surcharge Summary
****

Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Feet	Min. Depth Below Rim Feet
BASIN	STORAGE	499679.02	2.850	1.350

****
Node Flooding Summary
****

No nodes were flooded.

****
Storage Volume Summary
****

Storage Unit	Average Volume 1000 ft3	Avg Pcnt Full	E&I Pcnt Loss	Maximum Volume 1000 ft3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CFS
BASIN	0.096	0	40	17.358	68	18823 17:00	6.90

****
Outfall Loading Summary
****

Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
POC-3	2.36	0.17	8.03	55.304
POC-4	1.26	0.01	0.17	1.518
System	1.81	0.18	8.20	56.822

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
OUTLET	DUMMY	6.90	18823 17:00			

****
Conduit Surcharge Summary
****

No conduits were surcharged.

Analysis begun on: Wed Feb 26 15:02:40 2020
Analysis ended on: Wed Feb 26 15:03:07 2020
Total elapsed time: 00:00:27

APPENDIX M
Noise Study

NOISE STUDY

CarMax Auto Store
City of Oceanside, CA

Prepared By:

Ldn Consulting, Inc.

42428 Chisolm Trail
Murrieta, California 92562
760-473-1253

Prepared For:

REC Consultants
2442 Second Avenue
San Diego, CA 92101

October 1, 2020

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GLOSSARY OF TERMS

Sound Pressure Level (SPL): a ratio of one sound pressure to a reference pressure (L_{ref}) of 20 µPa. Because of the dynamic range of the human ear, the ratio is calculated logarithmically by 20 log (L/L_{ref}).

A-weighted Sound Pressure Level (dBA): Some frequencies of noise are more noticeable than others. To compensate for this fact, different sound frequencies are weighted more.

Minimum Sound Level (L_{min}): Minimum SPL or the lowest SPL measured over the time interval using the A-weighted network and slow time weighting.

Maximum Sound Level (L_{max}): Maximum SPL or the highest SPL measured over the time interval the A-weighted network and slow time weighting.

Equivalent sound level (L_{eq}): the true equivalent sound level measured over the run time. Leq is the A-weighted steady sound level that contains the same total acoustical energy as the actual fluctuating sound level.

Day Night Sound Level (LDN): Representing the Day/Night sound level, this measurement is a 24 –hour average sound level where 10 dB is added to all the readings that occur between 10 pm and 7 am. This is primarily used in community noise regulations where there is a 10 dB "Penalty" for nighttime noise. Typically, LDN's are measured using A weighting.

Community Noise Exposure Level (CNEL): The accumulated exposure to sound measured in a 24-hour sampling interval and artificially boosted during certain hours. For CNEL, samples taken between 7 pm and 10 pm are boosted by 5 dB; samples taken between 10 pm and 7 am are boosted by 10 dB.

Octave Band: An octave band is defined as a frequency band whose upper band-edge frequency is twice the lower band frequency.

Third-Octave Band: A third-octave band is defined as a frequency band whose upper band-edge frequency is 1.26 times the lower band frequency.

Response Time (F,S,I): The response time is a standardized exponential time weighting of the input signal according to fast (F), slow (S) or impulse (I) time response relationships. Time response can be described with a time constant. The time constants for fast, slow and impulse responses are 1.0 seconds, 0.125 seconds and 0.35 milliseconds, respectively.

EXECUTIVE SUMMARY

This noise study has been completed to determine the noise impacts associated with the proposed project. The project known as "CarMax Auto Center" consists of a 10.98-Acre project site located on the southside of the 4000 block of Plaza Drive west of the Oceanside DMV in Oceanside, California. The project site is 10.98 acres.

Operational Noise Levels

Based upon the property line noise levels determined for the Project none of the proposed noise sources directly or cumulatively exceeds the property line standards at the residential property lines. Therefore, the proposed development related operational noise levels comply with the City's daytime noise standards at surrounding residences. No impacts are anticipated and no mitigation is required.

Traffic Noise Levels

The Project does not create a noise increase of more than 3 dBA CNEL on any roadway segment. Therefore, the project's contributions to off-site roadway noise increases will not cause any significant impacts to any existing or future noise sensitive land uses.

Construction Noise Levels

It was determined that none of the proposed equipment will exceed the City of Oceanside 85 dBA standard at 100 feet from the source. The project will also meet the County of San Diego's 75 dBA standard from all proposed equipment. No impacts will occur and no mitigation measures are required.

1.0 PROJECT INTRODUCTION

1.1 Purpose of this Study

The purpose of this Noise study is to determine both operational impacts (if any) generated from the proposed project to offsite uses. Should impacts be determined, the intent of this study would be to recommend suitable mitigation measures classify impacts as less then significant.

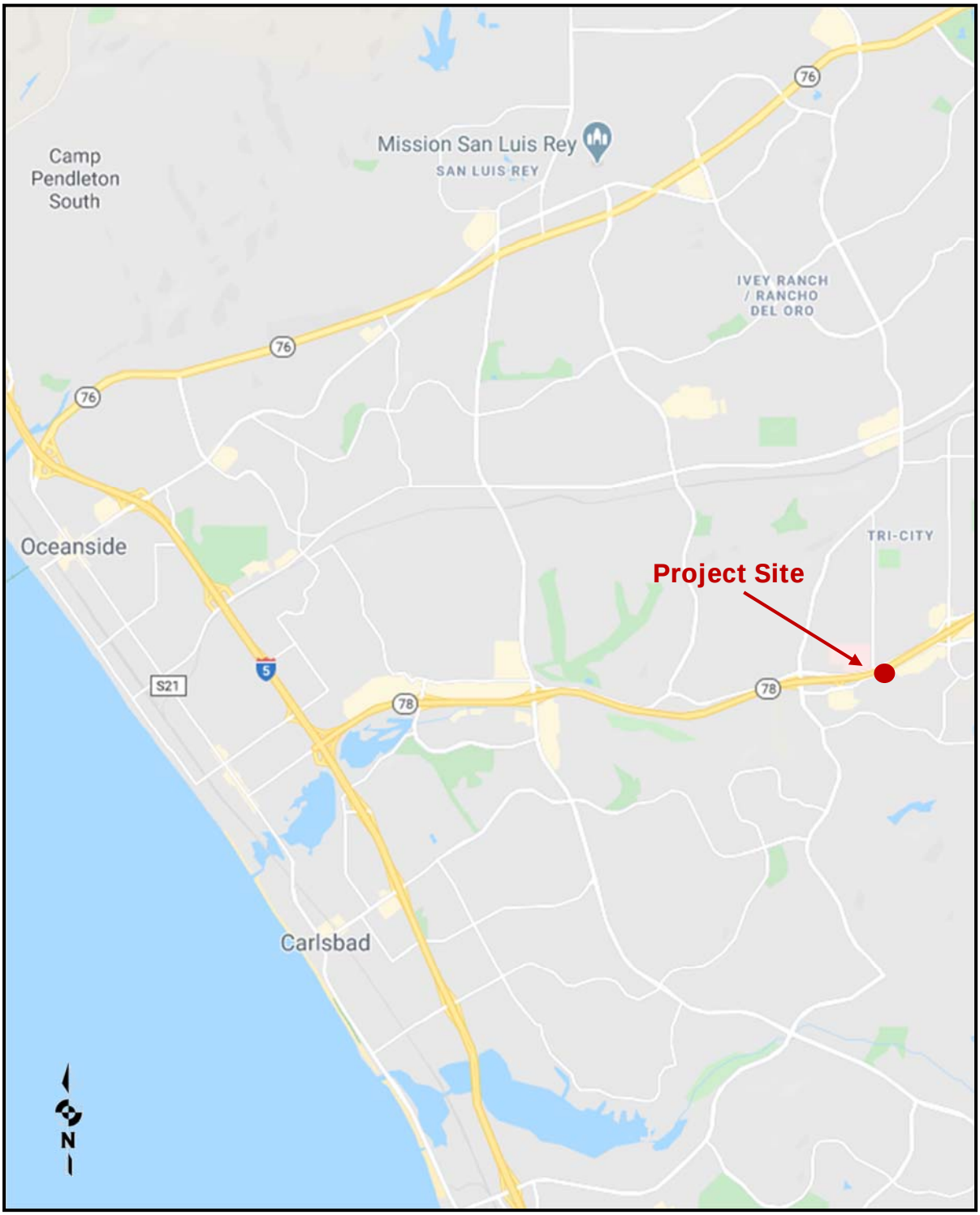
1.2 Project Location

The project is located on the south side of the 4000 block of Plaza Drive west of the Oceanside DMV in Oceanside, California. The project site is south of State Route 78 and approximately 4 miles east of Interstate 5. Locally, the project site is located south of the intersection of Plaza Drive and Thunder Drive. The project site is more specifically situated just south of the Tri-City Hospital. A general project vicinity map is shown in Figure 1-A.

1.3 Project Description

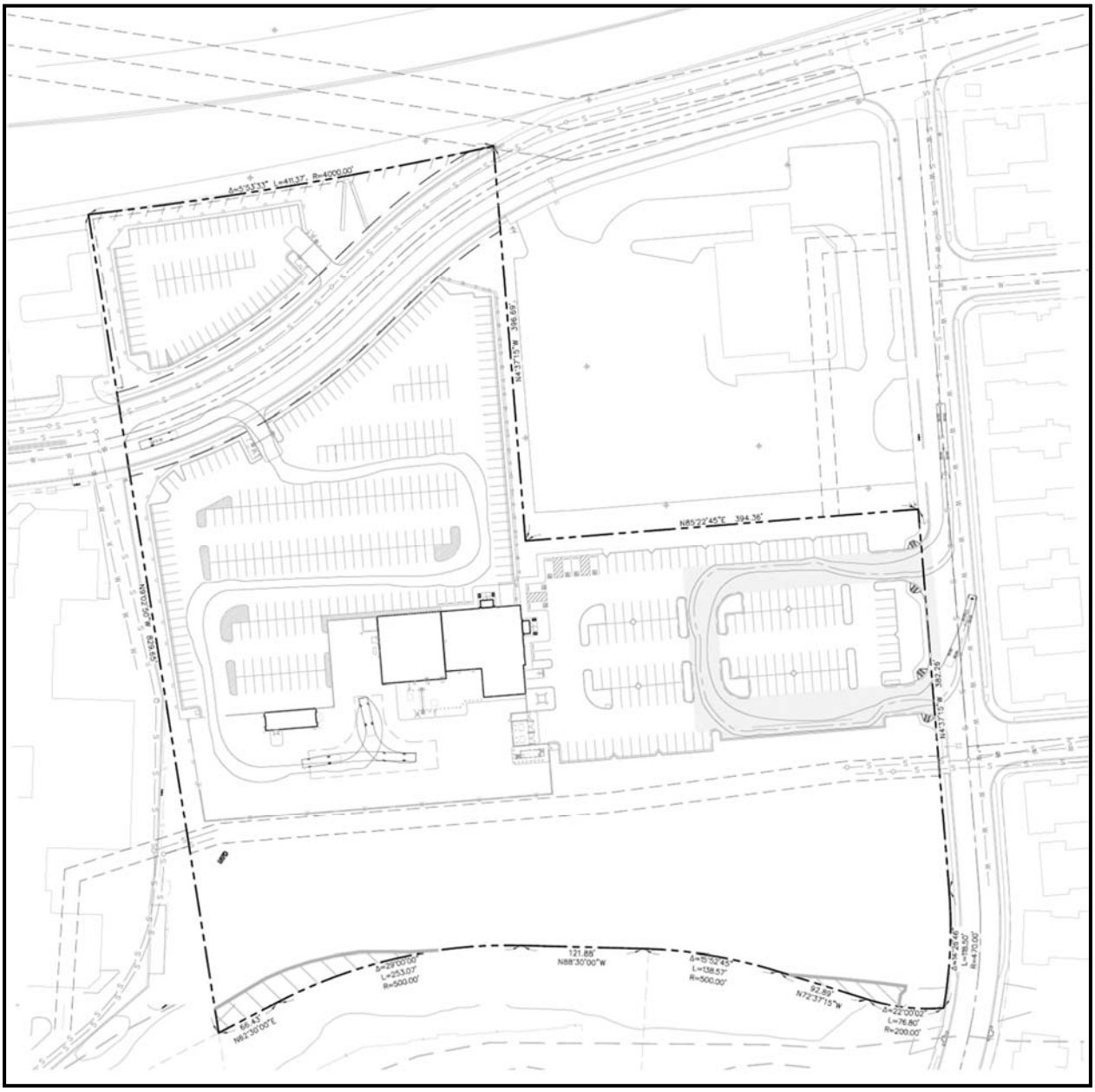
The proposed CarMax project would be situated on an overall vacant site which is 10.98 acres in total size. The project would consist of roughly 11,450 square feet (SF) of facilities and 476 parking spaces of which the majority of the locations would be for car sales. The project would also have roughly 2.34 acres of open space and landscaped areas. Construction of the project would begin early 2021 and be completed in just over one year. A site development plan is shown in Figure 1-B.

Figure 1-A: Project Vicinity Map



Source: Google 2020

Figure 1-B: Proposed Project Site Plan



Source: REC Consultants, 2020

2.0 ACOUSTICAL FUNDAMENTALS

Noise is defined as unwanted or annoying sound which interferes with or disrupts normal activities. Exposure to high noise levels has been demonstrated to cause hearing loss. The individual human response to environmental noise is based on the sensitivity of that individual, the type of noise that occurs and when the noise occurs.

Sound is measured on a logarithmic scale consisting of sound pressure levels known as a decibel (dB). The sounds heard by humans typically do not consist of a single frequency but of a broadband of frequencies having different sound pressure levels. The method for evaluating all the frequencies of the sound is to apply an A-weighting to reflect how the human ear responds to the different sound levels at different frequencies. The A-weighted sound level adequately describes the instantaneous noise whereas the equivalent sound level depicted as Leq represents a steady sound level containing the same total acoustical energy as the actual fluctuating sound level over a given time interval.

The Community Noise Equivalent Level (CNEL) is the 24 hour A-weighted average for sound, with corrections for evening and nighttime hours. The corrections require an addition of 5 decibels to sound levels in the evening hours between 7 p.m. and 10 p.m. and an addition of 10 decibels to sound levels at nighttime hours between 10 p.m. and 7 a.m. These additions are made to account for the increased sensitivity during the evening and nighttime hours when sound appears louder.

A vehicles noise level is from a combination of the noise produced by the engine, exhaust and tires. The cumulative traffic noise levels along a roadway segment are based on three primary factors: the amount of traffic, the travel speed of the traffic, and the vehicle mix ratio or number of medium and heavy trucks. The intensity of traffic noise is increased by higher traffic volumes, greater speeds and increased number of trucks.

Because mobile/traffic noise levels are calculated on a logarithmic scale, a doubling of the traffic noise or acoustical energy results in a noise level increase of 3 dBA. Therefore, the doubling of the traffic volume, without changing the vehicle speeds or mix ratio, results in a noise increase of 3 dBA. Mobile noise levels radiant in an almost oblique fashion from the source and drop off at a rate of 3 dBA for each doubling of distance under hard site conditions and at a rate of 4.5 dBA for soft site conditions.

Hard site conditions consist of concrete, asphalt and hard pack dirt while soft site conditions exist in areas having slight grade changes, landscaped areas and vegetation. On the other hand, fixed/point sources radiate outward uniformly as it travels away from the source. Their sound levels attenuate or drop off at a rate of 6 dBA for each doubling of distance.

The most effective noise reduction methods consist of controlling the noise at the source, blocking the noise transmission with barriers. Any or all of these methods may be required to reduce noise levels to an acceptable level. To be effective, a noise barrier must have enough mass to prevent significant noise transmission through it and high enough and long enough to shield the receiver from the noise source. A safe minimum surface weight for a noise barrier is 3.5 pounds/square foot (equivalent to 3/4-inch plywood), and the barrier must be carefully constructed so that there are no cracks or openings.

Barriers constructed of wood or as a wooden fence must have minimum design considerations as follows: the boards must be ¾ inch thick and free of any gaps or knot holes. The design must also incorporate either overlapping the boards at least 1 inch or utilizing a tongue-and-grove design for this to be achieved.

3.0 SIGNIFICANCE THRESHOLDS AND STANDARDS

3.1 Operational Noise

Fixed sources and operational noise standards are governed by the City of Oceanside Noise Ordinance Section 38.12. Except for exempted activities and sounds as provided in this chapter or exempted properties as referenced in Section 38.15. It shall be unlawful for any person to cause or allow the creation of any noise to the extent that the one-hour average sound level, at any point on or beyond the boundaries of the property in the applicable base district zone on which the sound is produced exceeds the applicable limits set forth below in Table 3-1.

Table 3-1: Sound Level Limits

Base District Zone	7:00 a.m. to 9:59 p.m.	10:00 p.m. to 6:59 a.m.
(1) Residential Districts:		
RE (Residential Estate)	50	45
RS (Single-Family)	50	45
RM (Medium Density)	50	45
RH (High Density)	55	50
RT (Residential Tourist)	55	50
(2) C (Commercial)	65	60
(3) I (Industrial)	70	65
(4) D (Downtown)	65	55
(5) A (Agricultural)	50	45
(6) OS (Open Space)	50	45

In addition to the sound level limits established above, there are established sound level limits for PD (planned development) base district zones. For any residential land use within a PD zone, the sound level limit is that limit which would be otherwise applicable in the residential district zone (RE, RS, RM, RH or RT) corresponding to density of the residential development in that PD zone.

For any nonresidential land use within a PD zone, the sound level limit is that limit corresponding to the C (commercial) or I (industrial) zone which would be applicable to that use if not subject to the PD zone. For the purposes of this section, a land use shall be that use shown on a duly approved planned development plan or specific plan.

When property lines form the joint boundary of two (2) base district zones, the sound level limit shall be the arithmetic mean of the limit applicable to each of the two (2) zones.

3.2 Transportation Related Noise

The City of Oceanside's Noise Element requires that all exterior sensitive areas shall limit noise exposure. For noise sensitive residential land uses, the City has adopted a policy which has established a "normally acceptable" exterior noise level goal of 65 dBA CNEL for the outdoor areas and an interior noise level of less than 45 dBA CNEL.

Interior noise levels should be mitigated to a maximum of 45 dBA CNEL in all habitual rooms when the exterior of the residence are exposed to levels of 60 dBA CNEL or more. If windows and doors are required to be closed to meet the interior noise standard, then mechanical ventilation shall be provided per City requirements.

3.3 Construction Noise

The City of Oceanside Noise Element controls noise levels due to construction operations. It shall be unlawful for any person to operate construction equipment at any construction site, except as outlined in subsections (a) and (b) below:

(a) It shall be unlawful for any person to operate any construction equipment at a level in excess of 85 dBA at 100 feet from the source.
(b) It should be unlawful for any person to engage in construction activities between 6 PM and 7 AM when such activities exceed the ambient noise level by 5 dBA. A special permit may be granted by the Director of Public Works if extenuating circumstances exist.

4.0 EXISTING NOISE ENVIRONMENT

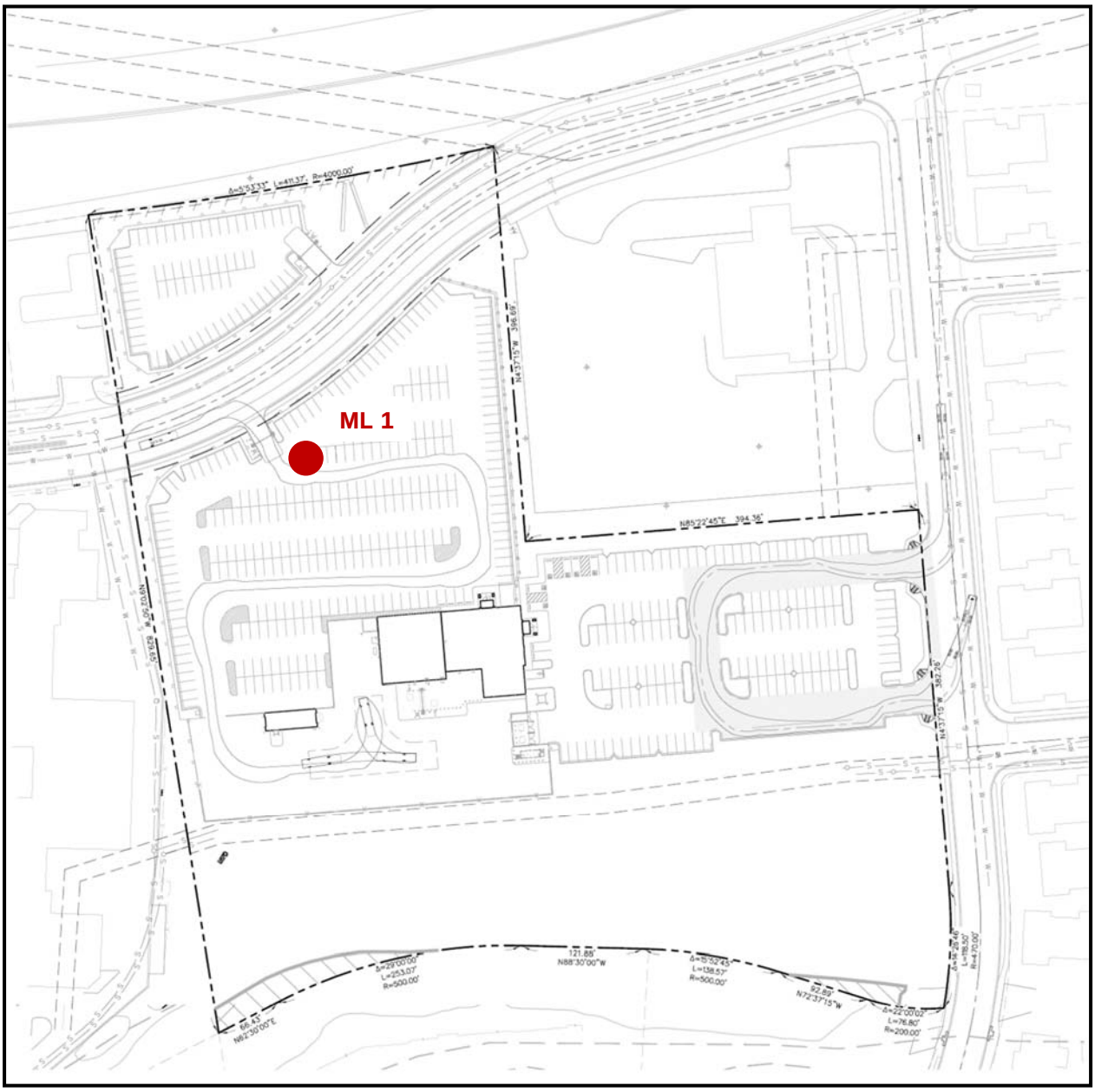
Noise measurements were taken January 13, 2020 in the afternoon hours using a Larson-Davis Model LxT Type 1 precision sound level meter, programmed, in "slow" mode, to record noise levels in "A" weighted form. The sound level meter and microphone were mounted on a tripod, five feet above the ground and equipped with a windscreen during all measurements. The sound level meter was calibrated before and after the monitoring using a Larson-Davis calibrator, Model CAL 200.

Monitoring location 1 (M1) was located along the northern portion of the site. The noise measurements were monitored for a time period of 15 minutes during normal traffic conditions. The results of the noise level measurements are presented in Table 4-1. The existing noise levels in the project area consisted primarily of traffic along the adjacent roadway during each measurement. The ambient Leq noise levels measured in the area of the project during the early afternoon were found to be between 64-71 dBA Leq along the roadways. The statistical indicators Lmax, Lmin, L10, L50 and L90, are given for the monitoring location. As can be seen from the L90 data, 90% of the time the noise level is roughly 46-50 dBA. The noise monitoring locations are provided graphically in Figure 4-1 on the following page.

Table 4-1: Measured Ambient Noise Levels

Measurement Identification	Primary Noise Source	Time	Noise Levels (dBA)					
			Leq	Lmax	Lmin	L10	L50	L90
M1	State Route 78	3:00-3:15 p.m.	61.8	73.1	57.4	63.1	60.5	59.3
Source: Ldn Consulting								

Figure 4-1: Ambient Noise Monitoring Locations



5.0 OPERATIONAL NOISE LEVELS

This section examines the potential operational noise source levels associated with the development and operation of the proposed project. Noise from a fixed or point source drops off at a rate of 6 dBA for each doubling of distance. Which means a noise level of 70 dBA at 5-feet would be 64 dBA at 10-feet and 58 dBA at 20-feet. Noise levels drop 3 decibels each time the duration of the source is reduced in half. Therefore, an hourly noise level if only operating over a 30 minute period would be reduced by 3 decibels based on the limited time of operation.

The required sound levels at a Project's property boundary depend on the time of day and the land use zone. The Project site is zoned for commercial, which allows an equivalent one-hour sound level of 65 dBA Leq-h between 7 A.M. and 9:59 P.M. and 60 dBA from 10 P.M. to 6:59 A.M at the property lines. The western and northern properties are zoned commercial. The existing residential uses located to the west and to the south allow an equivalent one-hour sound level of 50 dBA Leq-h between 7 A.M. and 9:59 P.M. and 45 dBA from 10 P.M. to 6:59 A.M at the property lines.

When two joint boundaries differ in zoning the City of Oceanside Noise Ordinance utilizes the arithmetic mean of the two standards. It should be noted: the hours of operation will only occur during the daytime hours and therefore the applicable property line standard would be 57.5 Leq-h at residential property lines.

5.1 Reference Noise Levels

This section provides a detailed description of the reference noise level measurement results. Each anticipated noise source is provided in more detail below to determine if direct noise impacts will occur. A cumulative noise level analysis with associated distances, noise reductions and calculations of the proposed sources is provided along with a table showing the individual noise sources and their associated property line noise levels.

Carwash

To examine the potential noise impacts associated with the operation of the proposed project, sound level measurements of the equipment were taken at the site. The noise measurements were taken using a Larson-Davis Model LxT Type 1 precision sound level

meter, programmed, in "slow" mode, to record noise levels in "A" weighted form. The sound level meter was mounted on a tripod, five feet above the ground and equipped with a windscreen. The results of the noise measurements are shown in Table 5-1.

Table 5-1: Reference Noise Levels

Equipment	Distance from Source (Feet)	Noise Level (dBA)	Quanity
Vacuum Equipment	3	81.8	1
Carwash Entrance	9	84.3	1
Carwash Exit (Blowers)	9	84.5	1

Air Conditioning Units

Rooftop mechanical ventilation units (HVAC) will be installed on the proposed buildings. In order to evaluate the HVAC noise impacts, the analysis utilized reference noise level measurements taken at a Von's Shopping Center in Murrieta, CA in 2010. The unshielded noise levels for the HVAC units were measured at 65.9 dBA Leq at a distance of 6 feet.

Even though the mechanical ventilation system will cycle on and off throughout the day, this approach presents the worst-case noise condition. Additionally, the noise levels associated with the roof-top mechanical ventilation system will be limited with the proposed parapet walls on each building that will vary in height but will be roughly 1-foot higher than the HVAC units to shield them both visually and acoustically. Hence, the parapet wall will block the line-of-sight from the nearest residential units. No additional reductions were taken from the parapet walls to represent a worst-case noise condition.

5.2 Property Line Noise Levels

To determine the anticipated property line noise levels from the proposed project the reference noise measurements above were utilized. Although the carwash activities and mechanical equipment are intermittent, no duty-cycle reductions were taken and the reference noise levels were considered to be continuous to establish the worst-case anticipated property line noise levels. The property line noise level projections were calculated based on the site plan showing the location of the proposed outdoor uses. The

site plan and some relative distances to the nearest property lines are provided in Figure 5-2 on the following page.

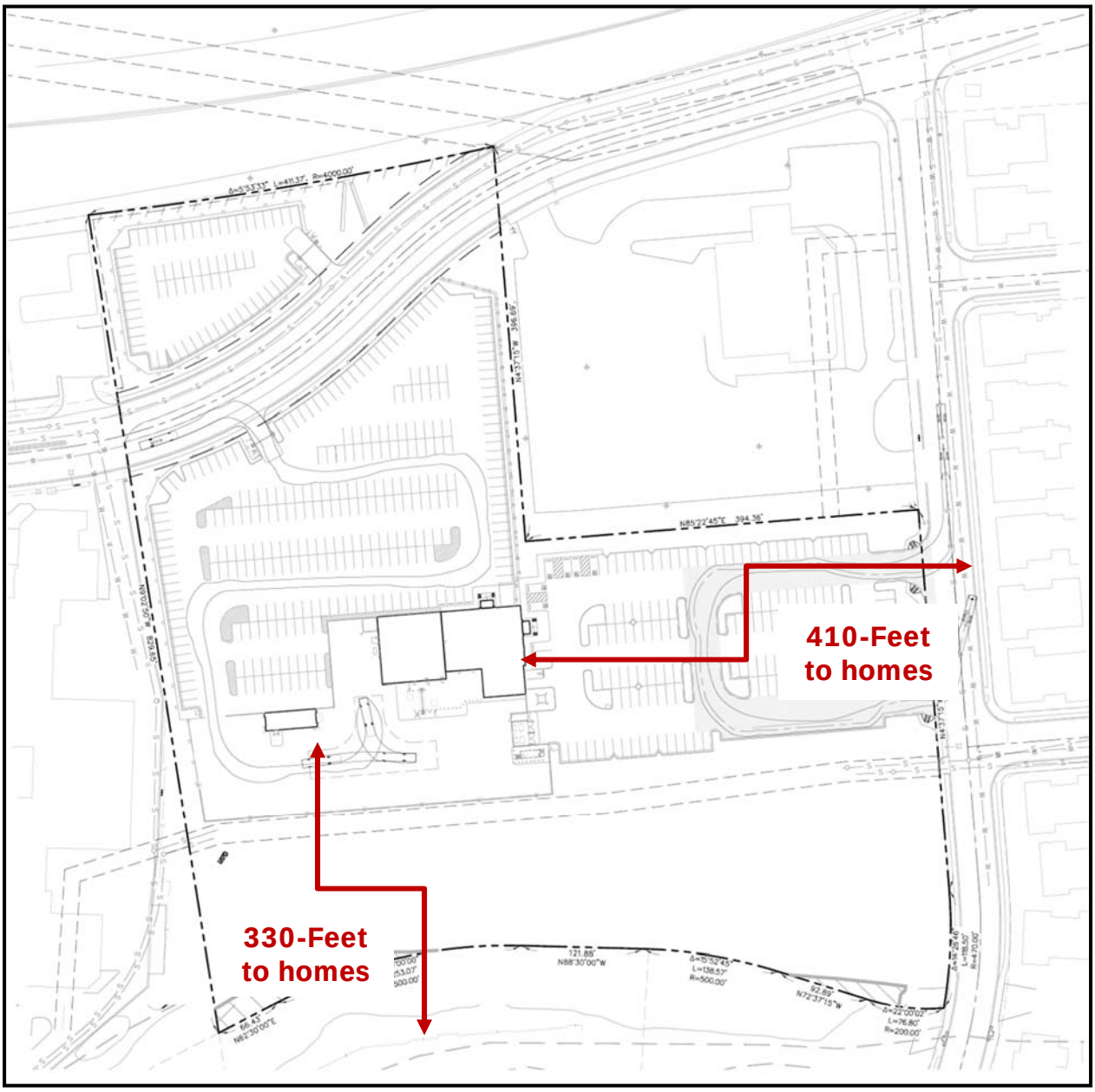
It is possible to calculate the cumulative noise levels from the proposed project to the nearest sensitive property line from the proposed noise sources. Each noise source was cumulatively added to determine the worst case outdoor activity noise levels. Although not all the noise sources are close enough to each other in distance or sound level to create a cumulative effect this method is considered conservative in determining impact potential. The results of this conservative approach are shown in Table 5-2 below for the propagated noise levels to the nearest sensitive property line located 330-410 feet from sources. It should be noted: the values given do not take into account the effect of any noise barriers, structures, or topography that may reduce the noise levels. As can be seen in Table 5-1, the noise level, without accounting for any reductions are below the most restrictive residential noise threshold as shown above in Table 3-1.

Table 5-2: Operational Noise Levels – Southern Property Line

Source	Distance from Source (Feet)	Measured Noise Level (dBA)	Distance to Nearest Property Line (Feet)	Noise Reduction due to distance (dBA)	Resultant Noise Level @ Property Line (dBA)
Vacuum Equipment	3	81.8	330	-40.8	16.5
Carwash Entrance	9	84.3		-31.3	38.1
Carwash Exit (Blowers)	9	84.5		-31.3	38.3
HVAC West Bldg	6	65.9		-34.8	12.7
HVAC East Bldg	6	65.9		-34.8	12.7
Cumulative Noise Level @ Property Line (dBA)					**41.3**

Based upon the property line noise levels determined above none of the proposed noise sources directly or cumulatively exceeds the property line standards at the surrounding property lines. Therefore, the proposed development related operational noise levels comply with the City's noise standards at surrounding residences. No impacts are anticipated and no mitigation is required.

Figure 5-1: Site Plan and Noise Sources



6.0 TRANSPORTATION NOISE LEVELS

6.1 Offsite Transportation Related Noise Levels

The off-site project-related roadway segment noise levels projected in this report were calculated using the methods in the Highway Noise Model published by the Federal Highway Administration (FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108, December, 1978). The FHWA Model uses the traffic volume, vehicle mix, speed, and roadway geometry to compute the equivalent noise level. A spreadsheet calculation was used which computes equivalent noise levels for each of the time periods used in the calculation of CNEL. Weighting these equivalent noise levels and summing them gives the CNEL for the traffic projections. The noise contours are then established by iterating the equivalent noise level over many distances until the distance to the desired noise contour(s) are found.

Because mobile/traffic noise levels are calculated on a logarithmic scale, a doubling of the traffic noise or acoustical energy results in a noise level increase of 3 dBA. Therefore, the doubling of the traffic volume, without changing the vehicle speeds or mix ratio, results in a noise increase of 3 dBA. Mobile noise levels radiate in an almost oblique fashion from the source and drop off at a rate of 3 dBA for each doubling of distance under hard site conditions and at a rate of 4.5 dBA for soft site conditions. Hard site conditions consist of concrete, asphalt, and hard pack dirt, while soft site conditions exist in areas having slight grade changes, landscaped areas, and vegetation.

Community noise level changes greater than 3 dBA are often identified as audible and considered potential significant, while changes less than 1 dBA will not be discernible to local residents. In the range of 1 to 3 dBA, residents who are very sensitive to noise may perceive a slight change. There is no scientific evidence available to support the use of 3 dBA as the significance threshold; community noise exposures are typically over a long time period rather than the immediate comparison made in a laboratory situation. Therefore, the level at which changes in community noise levels become discernible is likely greater than 1 dBA and 3 dBA appears to be appropriate for most people. For the purposes for this analysis, a direct roadway noise impacts would be considered significant if the project increases noise levels for a noise sensitive land use by 3 dBA CNEL and if the project increases noise levels above an unacceptable noise level per the City's General Plan in the area adjacent to the roadway segment.

To determine if direct or cumulative off-site noise level increases associated with the development of the proposed project would create noise impacts. The traffic volumes for the existing conditions were compared with the traffic volume increase of existing plus the proposed project. The project's traffic assessment states that the proposed project site could generate 475 ADT including test drives (Source: CarMax Traffic Analysis – LOS Engineering, 2020). The existing ADT volumes adjacent to the project site along Thunder Drive between Plaza Drive to Tiberon Drive are 9,100 ADT and between Tiberon Drive to Lake Boulevard are 7,631 ADT. The project will result in the traffic volumes increases to 10,255 ADT and 7,796 ADT along those two segment of Thunder Drive, respectively. Typically, it requires a project to double (or add 100%) to the traffic volumes to have a direct impact of 3 dBA CNEL or be a major contributor to the cumulative traffic volumes. The project would result in only a 2-13 percent increase which would increase the noise levels less than 0.5 decibels. Cumulatively the traffic volumes along the roadway are expected to increase but the project related increase would not double the traffic volumes and therefore no impacts are anticipated.

6.2 Conclusions

The Project does not create a noise increase of more than 3 dBA CNEL on any roadway segment. Therefore, the project's contributions to off-site roadway noise increases will not cause any significant impacts to any existing or future noise sensitive land uses.

7.0 CONSTRUCTION NOISE LEVELS

Construction noise represents a short-term impact on the ambient noise levels. Noise generated by construction equipment includes haul trucks, water trucks, graders, dozers, loaders, and scrapers and can reach relatively high levels. Grading activities typically represent one of the highest potential sources for noise impacts. The most effective method of controlling construction noise is through local control of construction hours and by limiting the hours of construction to normal weekday working hours.

The City of Oceanside does not have property line standards for construction, the County of San Diego 75 dBA Leq standard is utilized in the analysis. The County's Noise Ordinance Code states that with the exception of an emergency, it should be unlawful to conduct any construction activity so as to cause, at or beyond the property lines, an average sound level greater than 75 decibels between 7:00 a.m. to 7:00 p.m.

The U.S. Environmental Protection Agency (U.S. EPA) has compiled data regarding the noise generating characteristics of specific types of construction equipment. Noise levels generated by heavy construction equipment can range from 60 dBA to in excess of 100 dBA when measured at 50 feet. However, these noise levels diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 75 dBA measured at 50 feet from the noise source to the receptor would be reduced to 69 dBA at 100 feet from the source to the receptor, and reduced to 63 dBA at 200 feet from the source.

Using a point-source noise prediction model, calculations of the expected construction noise levels were completed. The essential model input data for these performance equations include the source levels of the equipment, source to receiver horizontal and vertical separations, the amount of time the equipment is operating in a given day (also referred to as the duty-cycle), and any transmission loss from topography or barriers.

7.1 Potential Noise Impact Identification

Based on the EPA noise emissions, empirical data and the amount of equipment needed, worst-case noise levels from the construction equipment operations would occur during the base operations (final site preparation). The construction schedule identifies that final site preparation activities will occur in a single phase all at the same time, with anticipated equipment including 3 tractor/backhoe/loader, 1 roller, 1 grader and 1

dozer.

Due to normal site preparation operations, most of the equipment will be spread out over the site. Based upon the proposed site plan, all the residential uses near the site are located more than 330 feet from all the site preparation activities. Therefore, the worst-case noise condition would occur when the equipment is working in close proximity to each other at distances near the property line. The noise levels utilized in this analysis are shown in Table 7-1.

As can be seen in Table 7-1, even if all the equipment was working in the same area, at a distance as close as 330 feet, the point source noise attenuation from the construction activities and the nearest property line is -16 dBA. This would result in an anticipated worst case eight-hour average combined noise level of 66 dBA at the property line.

Table 7-1: Construction Noise Levels

Equipment Type	Quantity Used	Source @ 50 Feet (dBA)	Cumulative Noise Level @ 50 Feet (dBA)
Tractor/Backhoe/Loader	3	72	77
Grader	1	73	73
Roller	1	74	74
Water Truck	1	70	70
Dozer	1	74	74
		Cumulative Level (dBA)	**82**
		Distance to Separation (Feet)	**330**
		Noise Reduction due to Distance (dBA)	**-16**
		Property Line Noise Level (dBA)	**66**

7.2 Construction Noise Conclusions

It was determined that none of the proposed equipment will exceed the City of Oceanside 85 dBA standard at 100 feet from the source. The project will also meet the County of San Diego's 75 dBA standard from all proposed equipment. No impacts will occur and no mitigation measures are required.

APPENDIX N
Vehicle Miles Traveled Analysis

CarMax Auto Dealership (D19-00021)
4000 Block of Plaza Drive
City of Oceanside
December 4, 2020

Vehicle Miles Traveled Analysis

Prepared for:

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Prepared by:

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Job #1918

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Appendix B ..... Excerpts from City of Oceanside VMT and LOS Guidelines
Appendix C ..... City of Oceanside Project Information Form
Appendix D ..... CarMax Trip Generation Survey and ITE Rates

1.0 Introduction

The proposed CarMax auto sales dealership is to be located at the 4000 block of Plaza Drive just west of the Oceanside Department of Motor Vehicles in Oceanside, California. The general location of the project is shown in **Figure 1**. A site plan is shown in **Figure 2**.

The project will have four driveways for access. Two driveways are on Plaza Dr for sales personnel and test drivers only. Arriving customers will use Thunder Dr for on-site customer parking. The project will have two driveways along Thunder Dr for customer parking, employee parking, and delivery of vehicles with 18-wheeler car carriers. Once vehicles are unloaded from the car carriers, employees will drive the cars to the main lot using Plaza Dr.

There is no internal vehicular connection between the "sales" parking areas adjacent to Plaza Dr and the other lot adjacent to Thunder Dr used for customers, employees, and deliveries. This is to keep customers from driving their personal vehicles around the main "sales" lot areas. Customer can walk between the main "sales" lot and customer parking lot.

Figure 1: Project Location

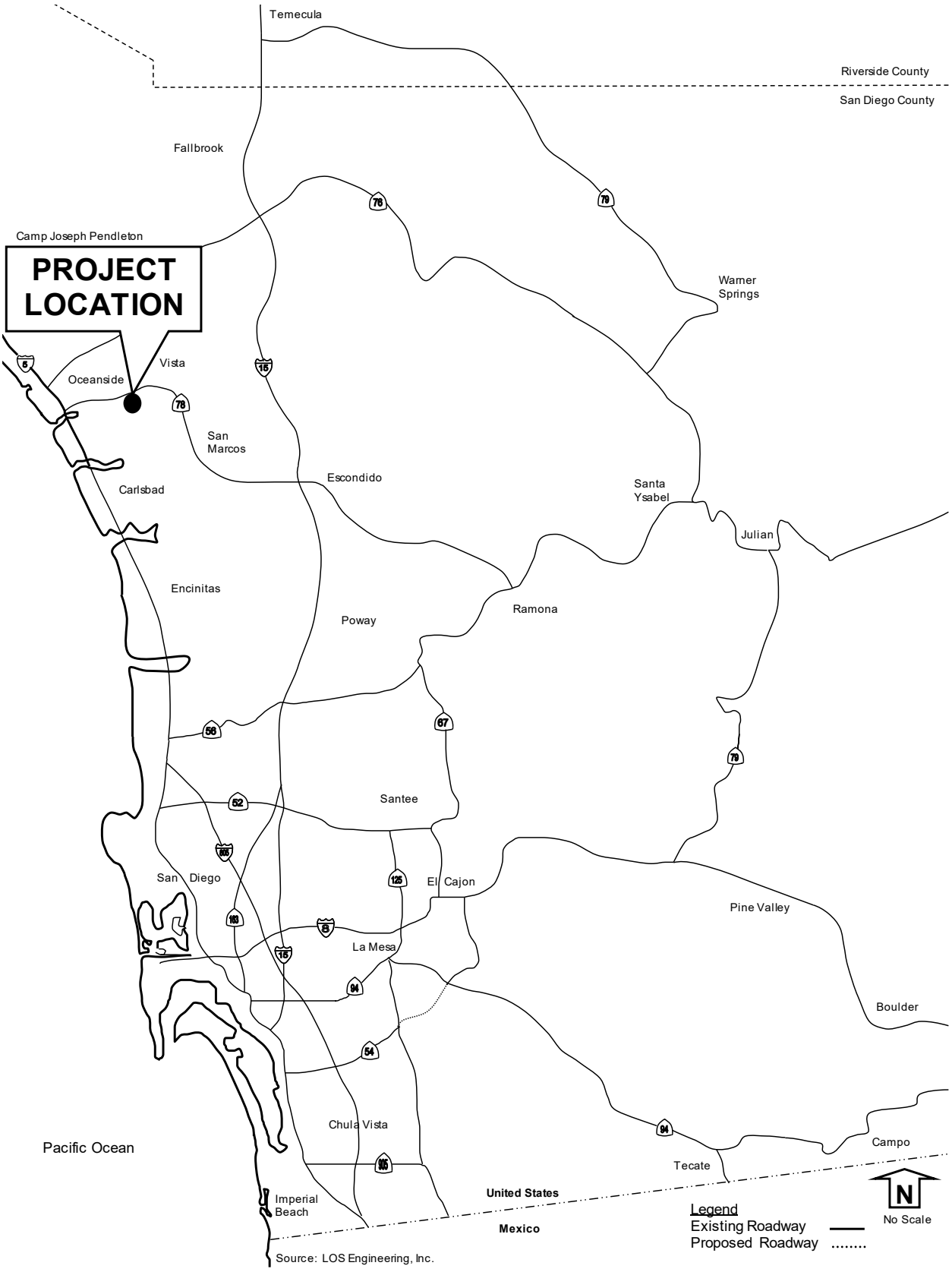
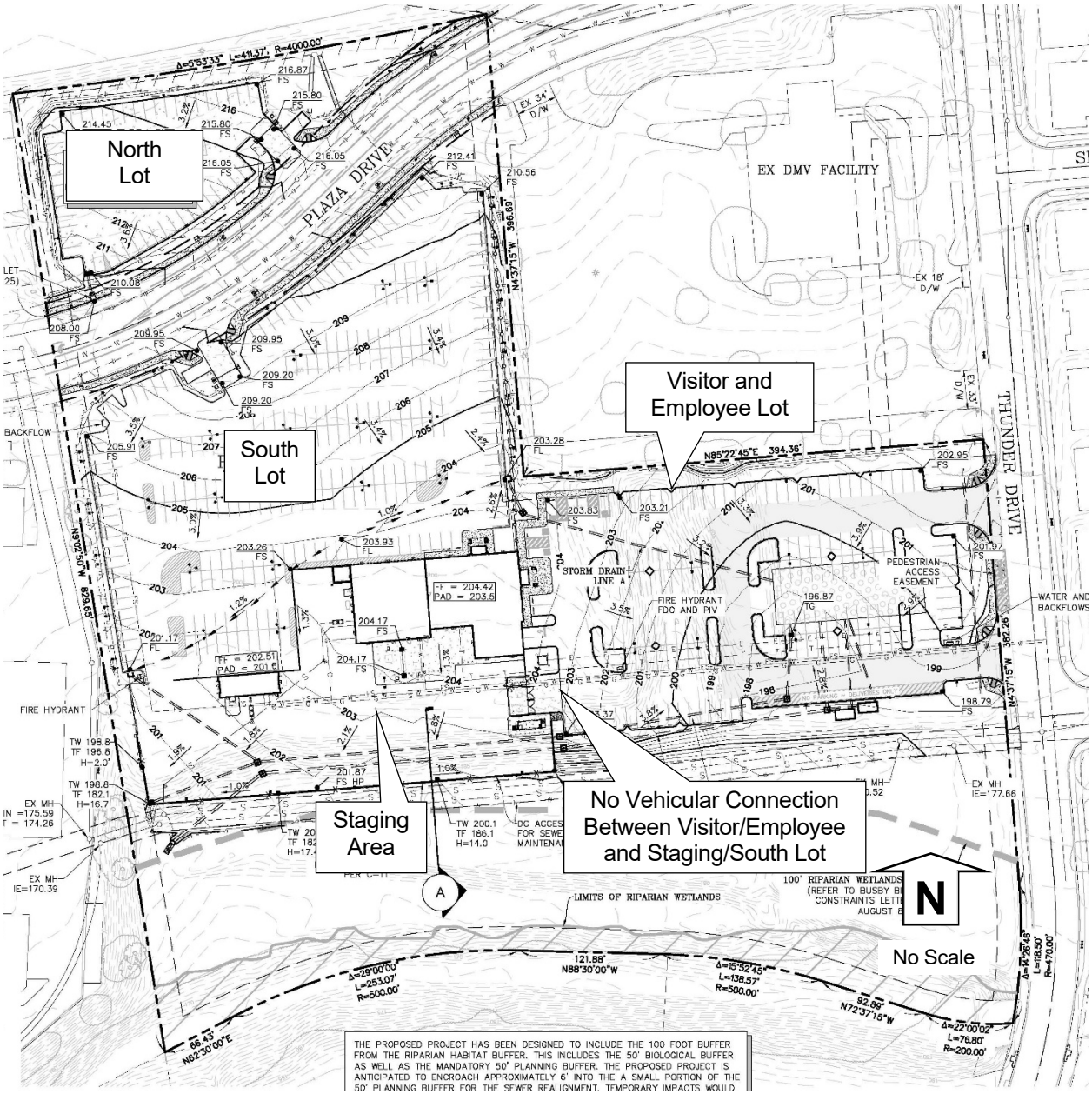


Figure 2: Site Plan



Source: REC Consultants, Inc.

2.0 Vehicle Miles Traveled

A VMT analysis is required to satisfy the CEQA guidelines that utilize VMT as the measure of effectiveness for determining transportation impacts. The California Governor's Office of Planning and Research (OPR) Technical Advisory developed guidance on implementing Senate Bill 743 (SB 743) that shifts the transportation impact measure of effectiveness from Level of Service (LOS) to VMT. The OPR *Transportation Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018 states on page 8 "As noted above, lead agencies have the discretion to set or apply their own thresholds of significance". Excerpts from the OPR Technical Advisory are included in **Appendix A**.

The City of Oceanside *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment*, August 2020 as adopted by City Council has identified several project types that are presumed to be considered VMT reducing projects as documented on page 9 within **Appendix B**:

> "The projects listed are either locally serving or are based on substantial evidence provided by the OPR Technical Advisory Committee supporting SR 743 implementation."

The list of screened out projects is shown in **Table 1**. The City of Oceanside has developed a Project Information Form (PIF) to facilitate the screening of project requirements. A completed PIF for this project is included in **Appendix C**.

2.1 Projects Generating Less Than 1,000 ADT and Consistent with General Plan

As shown in Table 1, The City of Oceanside *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment*, August 2020 lists several project types that screen out. One criterion is for projects that generate less than 1,000 ADT if consistent with the adopted General Plan. The project site is zoned Community Commercial.

The project traffic generation was calculated using a trip generation rate based on a survey of three open and operating CarMax dealerships. The trip generation study was prepared by Kimley-Horn and Associates in September 2002 (copy included in **Appendix D**). The data from the CarMax sites was collected by placing tube counters across all site driveways. These tubes recorded all vehicles including employees, customers, test drives, deliveries, mail carriers, trash trucks, maintenance, and any other vehicle that crossed over the tubes. The Kimley-Horn study documented a trip rate of 41.48 ADT/ksf (1,000 square feet). This is conservative when compared to the latest Institute of Transportation Engineers (ITE) 10th Edition Trip Generation that documents a trip rate of 27.06 ADT/ksf for used automobile sales. Using the CarMax based trip generation rates, the project is forecasted to generate 475 ADT (11.447 ksf of building area x 41.48 ADT/ksf). The project is consistent with the General Plan and calculated to generate 475 ADT, which is less than the 1,000 ADT threshold; therefore, the project is screened out from a transportation VMT CEQA Analysis.

TABLE 1: CITY OF OCEANSIDE VMT SCREENED OUT PROJECTS

Project Type
Projects located in a Transit Priority Areas (TPA) or Smart Growth Opportunity Area as identified in the most recent SANDAG San Diego Forward Regional Plan and is consistent with the General Plan at the time of project application. (1)(2)
Projects located in a low-VMT generating area identified on the most recent SANDAG SB 743 VMT
Locally serving K-12 schools
Day care centers
Local parks
Locally serving retail uses less than 50,000 square feet, including: gas stations, banks, restaurants, grocery stores,
Community institutions (Public libraries, fire stations, local government)
Locally serving hotels (e.g. non-destination hotels, non-regionally serving)
Student housing projects on or adjacent to college campuses
Local serving community colleges that are consistent with the assumptions noted in the most recent SANDAG
Affordable housing projects (3)
Assisted living facilities
Senior housing (as defined by HUD)
Transit projects
Bike projects
Pedestrian projects
Safety improvement projects (e.g. RRFBs and high visibility crosswalks at uncontrolled locations, pedestrian count
Safe Routes to School
Projects generating less than 500 daily vehicle trips (if inconsistent with adopted General Plan)
Projects generating less than 1,000 daily vehicle trips (if consistent with adopted General Plan)

Source: City of Oceanside *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment*, August 2020

(1) Projects located in a TPA must be able to access the transit station within a ½ mile walking distance or 6 minute walk continuously without discontinuity of sidewalk or obstructions to the route. Qualifying transit stops means a site containing an existing rail transit station served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (OPR, 2017). A high-quality transit corridor may also be considered if a corridor with fixed route bus service has service intervals no longer than 15 minutes during peak commute hours (OPR, 2017).

(2) Smart Growth Opportunity Area Map is provided in **Appendix B**. The most recent version available shall be used.

(3) If a project is a mix of affordable housing and market rate housing or unscreened use, only the affordable housing component would qualify as screened out. Additionally, any removal of affordable housing automatically requires CEQA VMT analysis.

2.2 VMT Summary

The City of Oceanside *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment*, August 2020 has identified several project types that are presumed to be considered VMT reducing projects if they are either locally serving or are based on substantial evidence provided by the OPR Technical Advisory Committee supporting SR 743 implementation. The project is consistent with the General Plan and calculated to generate 475 ADT, which is less than the 1,000 ADT threshold; therefore, the project is screened out from a transportation VMT CEQA Analysis.

3.0 Conclusion

The proposed CarMax auto sales dealership is located at the 4000 block of Plaza Drive just west of the Oceanside Department of Motor Vehicles in Oceanside, California. The project site is currently vacant. The project is anticipated to be completed by year 2021 or 2022.

The VMT analysis was based on guidance from the Governor's Office of Planning and Research (OPR) Technical Advisory and the City of Oceanside *Draft Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment*, August 2020. OPR developed guidance for implementing Senate Bill 743 (SB 743) requirements that shifts the transportation impact measure of effectiveness from Level of Service (LOS) to VMT. The City of Oceanside *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment*, August 2020 has identified several project types that are presumed to be considered VMT reducing projects if they are either locally serving or are based on substantial evidence provided by the OPR Technical Advisory Committee supporting SR 743 implementation. One criterion is for projects that generate less than 1,000 ADT if consistent with the adopted General Plan.

The project is consistent with the General Plan and calculated to generate 475 ADT, which is less than the 1,000 ADT threshold; therefore, the project is screened out from a transportation VMT CEQA Analysis.

Appendix A

Excerpts from OPR Technical Advisory

TECHNICAL ADVISORY

ON EVALUATING TRANSPORTATION IMPACTS IN CEQA

December 2018

D. General Principles to Guide Consideration of VMT

SB 743 directs OPR to establish specific "criteria for determining the significance of transportation impacts of projects[.]" (Pub. Resources Code, § 21099, subd. (b)(1).) In establishing this criterion, OPR was guided by the general principles contained within CEQA, the CEQA Guidelines, and applicable case law.

To assist in the determination of significance, many lead agencies rely on "thresholds of significance." The CEQA Guidelines define a "threshold of significance" to mean "an identifiable **quantitative, qualitative[12] or performance level** of a particular environmental effect, non-compliance with which means the effect will ***normally*** be determined to be significant by the agency and compliance with which means the effect ***normally*** will be determined to be less than significant." (CEQA Guidelines, § 15064.7, subd. (a) (emphasis added).) Lead agencies have discretion to develop and adopt their own, or rely on thresholds recommended by other agencies, "provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence." (*Id*. at subd. (c); *Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059, 1068.) Substantial evidence means "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached." (*Id*. at § 15384 (emphasis added); *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1108-1109.)

Additionally, the analysis leading to the determination of significance need not be perfect. The CEQA Guidelines describe the standard for adequacy of environmental analyses:

> An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to **make a decision which intelligently takes account of environmental consequences**. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is **reasonably feasible**. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The **courts have looked not for perfection** but for **adequacy**, **completeness**, and a **good faith effort** at full disclosure.

(CEQA Guidelines, § 15151 (emphasis added).)

These general principles guide OPR's recommendations regarding thresholds of significance for VMT set forth below.

[12] Generally, qualitative analyses should only be conducted when methods do not exist for undertaking a quantitative analysis.

E. Recommendations Regarding Significance Thresholds

As noted above, lead agencies have the discretion to set or apply their own thresholds of significance. (*Center for Biological Diversity v. California Dept. of Fish & Wildlife* (2015) 62 Cal.4th 204, 218-223 [lead agency had discretion to use compliance with AB 32's emissions goals as a significance threshold]; *Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th at p. 1068.) However, Section 21099 of the Public Resources Code states that the criteria for determining the significance of transportation impacts must promote: (1) reduction of greenhouse gas emissions; (2) development of multimodal transportation networks; and (3) a diversity of land uses. It further directed OPR to prepare and develop criteria for determining significance. (Pub. Resources Code, § 21099, subd. (b)(1).) This section provides OPR's suggested thresholds, as well as considerations for lead agencies that choose to adopt their own

The VMT metric can support the three statutory goals: "the reduction of greenhouse gas emissions, the development of multimodal transportation networks, ***and*** a diversity of land uses." (Pub. Resources Code, § 21099, subd. (b)(1), emphasis added.) However, in order for it to promote and support all three, lead agencies should select a significance threshold that aligns with state law on all three. State law concerning the development of multimodal transportation networks and diversity of land uses requires planning for and prioritizing increases in complete streets and infill development, but does not mandate a particular depth of implementation that could translate into a particular threshold of significance. Meanwhile, the State has clear quantitative targets for GHG emissions reduction set forth in law and based on scientific consensus, and the depth of VMT reduction needed to achieve those targets has been quantified. Tying VMT thresholds to GHG reduction also supports the two other statutory goals. Therefore, to ensure adequate analysis of transportation impacts, OPR recommends using quantitative VMT thresholds linked to GHG reduction targets when methods exist to do so.

Various legislative mandates and state policies establish quantitative greenhouse gas emissions reduction targets. For example:

- Assembly Bill 32 (2006) requires statewide GHG emissions reductions to 1990 levels by 2020 and continued reductions beyond 2020.

- Senate Bill 32 (2016) requires at least a 40 percent reduction in GHG emissions from 1990 levels by 2030.

- Pursuant to Senate Bill 375 (2008), the California Air Resources Board GHG emissions reduction targets for metropolitan planning organizations (MPOs) to achieve based on land use patterns and transportation systems specified in Regional Transportation Plans and Sustainable Community Strategies (RTP/SCS). Current targets for the State's largest MPOs call for a 19 percent reduction in GHG emissions from cars and light trucks from 2005 emissions levels by 2035.

- Executive Order B-30-15 (2015) sets a GHG emissions reduction target of 40 percent below 1990 levels by 2030.

Appendix B

Excerpts from City of Oceanside VMT and LOS Guidelines

City of Oceanside

Traffic Impact Analysis Guidelines for

Vehicle Miles Traveled (VMT) and Level of Service Assessment

August 2020
Final Version

Trip Distribution / Assignment Procedure

Typically, two methods are used to determine trip distribution and assignment for transportation analysis and are considered acceptable by the City.

- The first method utilizes engineering judgement based on existing traffic data and land use patterns. This method requires the consultant to provide a map with project distribution and trip assignments to the City for review prior to conducting analysis.

- The second method utilizes the SANDAG Regional Travel Demand Model to perform a select zone or link analysis**. This approach is typically used for larger projects and shall be used for any project that generates over 2,400 ADT**.

Once trip distribution and assignment assumptions are submitted to the City, the City will review and provide feedback on assumptions. If necessary, the developer or consultant may coordinate with the City Traffic Engineer to discuss trip distribution and assignment for any clarification or considerations to travel patterns that are not readily apparent.

7.0 Screened Out Projects

SB 743 eliminates the need for some projects to be analyzed for CEQA purposes that support VMT reduction, these projects are considered screened out for VMT analysis. Screened out is defined as projects not needed to be analyzed for CEQA purposes that already support VMT reduction.

The projects listed in **Table 2** are presumed to be considered VMT-reducing projects. The projects listed are either locally serving or are based on substantial evidence provided by the OPR Technical Advisory Committee supporting SB 743 implementation. A project may be required to conduct a VMT analysis at the discretion of City Staff if it is unclear the project qualifies as screened out or based on the City Traffic Engineer's discretion.

Table 2 – Screened Out Projects

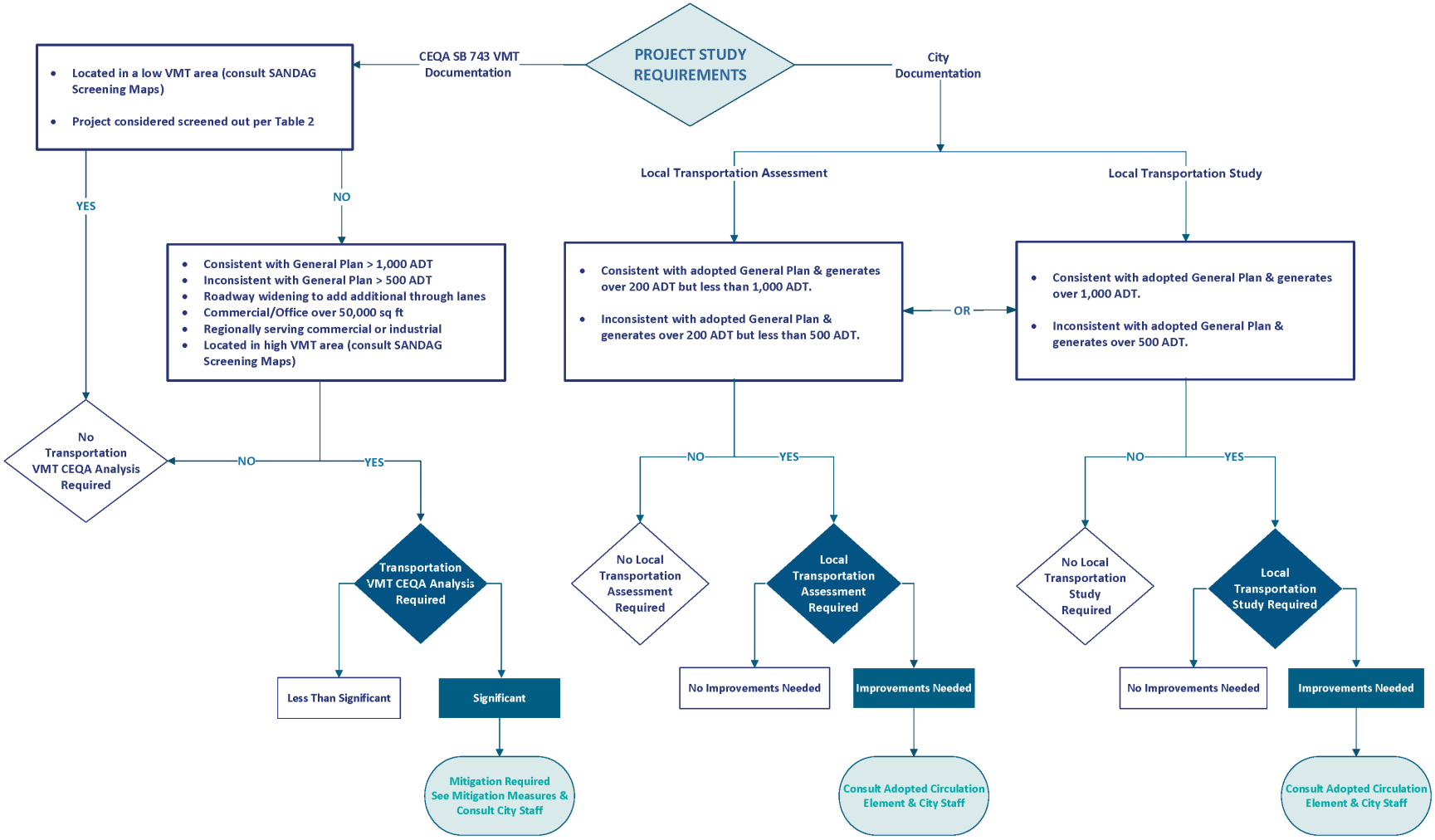
Project Type
Projects located in a Transit Priority Areas (TPA) or Smart Growth Opportunity Area as identified in the most recent SANDAG San Diego Forward Regional Plan and is consistent with the General Plan at the time of project application. (1)(2)
Projects located in a low-VMT generating area identified on the most recent SANDAG SB 743 VMT Screening map
Locally serving K-12 schools
Day care centers
Local parks
Locally serving retail uses less than 50,000 square feet, including: gas stations, banks, restaurants, grocery stores, and shopping centers
Community institutions (Public libraries, fire stations, local government)
Locally serving hotels (e.g. non-destination hotels, non-regionally serving)
Student housing projects on or adjacent to college campuses
Local serving community colleges that are consistent with the assumptions noted in the most recent SANDAG Regional Transportation Plan/Sustainable Communities Strategy
Affordable housing projects (3)
Assisted living facilities
Senior housing (as defined by HUD)
Transit projects
Bike projects
Pedestrian projects
Safety improvement projects (e.g. RRFBs and high visibility crosswalks at uncontrolled locations, pedestrian count down timers, additionally projects identified through the Highway Safety Improvement Program)
Safe Routes to School
Projects generating less than 500 daily vehicle trips (if inconsistent with adopted General Plan)
Projects generating less than 1,000 daily vehicle trips (if consistent with adopted General Plan)

(1) Projects located in a TPA must be able to access the transit station within a ½ mile walking distance or 6 minute walk continuously without discontinuity of sidewalk or obstructions to the route. Qualifying transit stops means a site containing an existing rail transit station served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (OPR, 2017). A high-quality transit corridor may also be considered if a corridor with fixed route bus service has service intervals no longer than 15 minutes during peak commute hours (OPR, 2017).
(2) Smart Growth Opportunity Area Map is provided in **Appendix B**. The most recent version available shall be used.
(3) If a project is a mix of affordable housing and market rate housing or unscreened use, only the affordable housing component would qualify as screened out. Additionally, any removal of affordable housing automatically requires CEQA VMT analysis.

8.0 Determining Project Study Requirements

Figure 8-1 helps guide development projects in determining the requirements from a local and state perspective in order to help determine study requirements. The screening flowchart indicates an overview of the circumstances where a detailed CEQA VMT analysis would or would not be required and when a project would require a Local Transportation Study or Local Transportation Assessment. The City maintains the discretion to require a project to conduct additional analysis if needed.

Figure 8-1 Project Study Requirements



* Projects are not confined to what is listed above and will need to be coordinated with City Staff to determine study requirements for developments not listed.
This flowchart is a generalization, it is up to the City's discretion to determine if additional analyses will be required and if potential mitigation or improvements are acceptable.

9.0 San Diego Regional Guidelines For VMT

The City of Oceanside utilizes the Institute of Transportation Engineers (ITE) San Diego Regional Guidelines (May 2019) to establish thresholds and methodology for VMT analysis. For analysis purposes the most recent version of these guidelines shall be utilized. The following sections summarize the VMT thresholds requirements for Oceanside in alignment with ITE. Thorough analysis explanation can be found in the most recent ITE guidance.

Minimum Threshold for VMT Analysis

Based on the recommendations of the Institute of Transportation Engineers (ITE) for the San Diego section, **Table 3** indicates when a VMT analysis for CEQA is required. This is based on keeping consistent with the thresholds previously used and *SANDAG's Not So Brief Guide Trip Generation (2002)*. These thresholds are based on the understanding that SANDAG trip generation rates differ from ITE trip generation rates which OPR's recommendations are based on.

Projects Consistent with the Adopted General Plan

The City's adopted General Plan represents the vision and goals the City has for the community. Projects that support these goals will adhere to the following VMT analysis thresholds identified in Table 3.

Table 3 – Threshold for VMT Analysis for Projects Consistent with the Adopted General Plan

	VMT Analysis Not Needed	VMT Analysis Needed (1)
Average Daily Traffic Volume (ADT)	Less than 1,000 ADT	Greater than 1,000 ADT

(1) If ADT is equal to 1,000 ADT, VMT analysis is required.

Projects Inconsistent with the Adopted General Plan

The City's adopted General Plan represents the vision and goals the City has for the community. Projects that are not in support of the General Plan have a lower VMT threshold and will require a General Plan Amendment. The following VMT analysis thresholds for projects that are inconsistent are identified in **Table 4**.

Table 4 – Threshold for VMT Analysis for Projects Inconsistent with the Adopted General Plan

	VMT Analysis Not Needed	VMT Analysis Needed (1)
Average Daily Traffic Volume (ADT)	Less than 500 ADT	Greater than 500 ADT

(1) If ADT is equal to 500 ADT, VMT analysis is required.

The thresholds identified in Table 3 and Table 4 stem from the professional expertise and judgement of the ITE San Diego section. These thresholds reflect what is appropriate for the San Diego region to use for VMT and have previously helped determine LOS impacts.

VMT Thresholds

This section identifies what type of VMT analysis is required based on the land use and thresholds identified in the previous section. If a project qualifies for a VMT analysis, the VMT analysis can be compared based on City-wide, Regional, or community basis. The method of comparison shall be agreed upon by the City Traffic Engineer and shall be appropriate based on the use of the site.

The following defines the metrics identified in **Table 5**. It is important the appropriate metrics are applied for each project.

VMT/Capita:

Includes all vehicle-based person trips grouped and summed to the home location of individuals who are drivers or passengers on each trip. It includes home-based and non-home-based trips. The VMT for each home is then summed for all homes in a particular census tract and divided by the population of that census tract to arrive at Resident VMT/Capita.

VMT/Employee:

Includes all vehicle-based person trips grouped and summed to the work location of individuals on the trip. This includes all trips, not just work-related trips. The VMT for each work location is then summed for all work locations in a particular census tract and divided by the number of employees of that census tract to arrive at Employee VMT/Employee.

Small Projects

Small projects, under 2,400 ADT, shall utilize the most recent version of the SANDAG SB 743 Concept Maps. SANDAG has prepared an online mapping system that calculates average VMT/capita and VMT/employee at the census tract level. This tool determines the project's VMT/employee or VMT/capita to be compared to community, city, and/or regional averages. **Appendix C** provides an example of how to use the SANDAG Concept Maps to determine the project's VMT.

Large Projects

Projects consisting of 2,400 ADT or higher will require the use of the most recent SANDAG model to determine VMT. The SANDAG transportation model provides a systematic analytical platform so that different alternatives and inputs can be evaluated in an iterative and controlled environment.

Table 5 identifies the significance thresholds for proposed land uses. Projects that exceed the significance thresholds are considered significant and will require VMT analysis and mitigation.

Table 5 – City of Oceanside Project Threshold

Project Type	Metric	Significance Threshold[1]
Residential	Resident VMT / Capita	15 % below regional average
Commercial	Employee VMT / Employee	15 % below regional average
Industrial	Employee VMT / Employee	15 % below regional average
Retail [2]	Net increase in the regional VMT	Net increase in regional VMT
Mixed-Use	Evaluate each land use separately	Based on proposed land use
Redevelopment [3]	Based on the proposed land use	Based on the proposed land use

(1) The City may request the applicant to analyze VMT using a more localized threshold if the project requires.

(2) Locally serving retail is presumed to decrease VMT however retail projects over 50,000 square feet are considered regionally serving.

(3) A redevelopment project that reduces VMT is presumed to have less than a significant impact and is screened out. The removal of affordable housing will require VMT analysis.

10.0 Mitigation Measures and Strategies for VMT Reduction

A project that exceeds the thresholds identified in the previous tables is considered to have a significant impact and will require mitigation measures and strategies. With appropriate mitigation the project may be able to apply VMT reductions to part or all of the project depending on the land use and strategy chosen. It is critical to implement strategies that are appropriate for the land use, for example, a residential project would not implement a telecommute strategy but may include providing a bike facility and amenities on-site.

SANDAG Mobility Management Guidebook

The purpose of the mitigation measures and strategies is to reduce the VMT generated by the project through a reduction of the distance driven or reducing the number of vehicle trips. It is recommended the SANDAG Mobility Management Guidebook (2019) be consulted to determine mitigation measures for the project site.

The guidebook consists of the following resources:

- Mobility Management Guidebook
- VMT Reduction Calculator Tool
- Calculator Design Document
- Recommendations for Application
- User Training Videos

Figure 10-1 identifies the potential mobility management strategies included in the guidebook that are recommended for a project exceeding the VMT thresholds. It is also recommended the SANDAG iCommute and MTS programs be utilized for projects generating employment. Several opportunities included in these programs are identified in **Table 6**. **Appendix D** contains the SANDAG Mobility Management Guidebook for reference.

The VMT Reduction Calculator Tool evaluates the VMT impact of more than 20 mobility management strategies. The calculator can be utilized to determine how a strategy, when implemented, can reduce a project's VMT. **Appendix E** contains the SANDAG VMT Reduction Calculator Tool for reference, the calculator is available on the SANDAG website. All VMT reduction strategies utilized should be discussed with the City and provided with backup documentation. Any changes or overrides to input parameters should be discussed and approved by the City.

Figure 10-1 Mobility Management Strategies

	Strategy Type	Strategy Name	Included in VMT Calculator?
Project/Site Level	Employer Commute Programs	Comprehensive Employer Commute Program	√
		Employer Carpool Program	√
		Employer Transit Pass Subsidy	√
		Employer Vanpool Program	√
		Employer Telework Program	√
		Employer Guaranteed Ride Home Program	
		On-Site Bike Amenities	
	Land Use Strategies	Higher-Density Development	
		Transit-Oriented Development	√
		Mixed-Use Development	√
	Parking Management	Parking Pricing	√
		Parking Cash-Out	√
		Reduced Parking	
		Unbundled Parking	
		Smart Parking	
		Shared Parking	
		Shared Mobility Parking	
		Flexible Curb Space	
Community/City Level	Neighborhood Enhancements	Street Connectivity Improvement	√
		Pedestrian Facility Improvement	√
		Bikeway Network Expansion	√
		Bike Facility Improvement	√
		Bikeshare	√
		Carshare	√
		Community-Based Travel Planning	√
	Transit Strategies	Transit Service Expansion	√
		Transit Frequency Improvements	√
		Transit-Supportive Treatments	√
		Transit Fare Reduction	√
		Microtransit NEV Shuttle	√
		Microtransit Commuter Shuttle	
	Transportation System Management	Adaptive Traffic Signal Systems	
		Smart Signals and Intersections	
		Optimized Signal Timing for Bicycles	
		Advanced Bicycle Detection	
		Real-Time Traveler Information	
		Active Traffic Management	
		Traffic Incident Management	
		Roadway Weather Management	

Source: SANDAG Mobility Management Strategy Guidebook, June 2019

Table 6 – Additional VMT Reduction Strategies for Employers

Additional VMT Reduction Strategies for Employers
Establish and maintain participation in SANDAG's iCommute services for employers
Provide a monthly employer subsidy/pretax payroll deduction toward transit passes, carpool, or vanpool.
Encourage employees to register in SANDAG's iCommute program for rideshare matches.
Provide a monthly employer subsidy or incentives for employees or patrons who regularly commute by bicycle.
Host or sponsor regional events such as Bike to Work day, Rideshare Month
Participate in MTS promotions such as Free Ride Day and EcoPass
Implement an internal carpool program for employees
Designate an on-site point of contact for employee commute inquiries.

OPR Mitigation Measures

Table 7 identifies additional mitigation measures provided by the Office of Planning and Research (OPR).

Table 7 – OPR Recommended Mitigation Measures

Additional Mitigation Measures
Improve or increase access to transit.
Increase access to common goods and services, such as groceries, schools, and daycare.
Incorporate affordable housing into the project.
Incorporate a neighborhood electric vehicle network.
Orient the project toward transit, bicycle, and pedestrian facilities.
Improve pedestrian or bicycle networks, or transit service.
Implement or provide access to a commute reduction program.
Provide parking cash-out programs.
Unbundle parking costs.
Provide bicycle parking.
Limit or eliminate parking supply.
Provide traffic calming as a way to incentivize bicycling and/or walking.
Provide partially or fully subsidized transit passes.
Shift single occupancy vehicle trips to carpooling or vanpooling by providing ride-matching services or shuttle services.
Provide telework options.
Provide incentives or subsidies that increase the use of modes other than a single-occupancy vehicle.
Provide on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, showers and locker rooms, and bicycle repair services.
Provide employee transportation coordinators at employment sites.
Provide a guaranteed ride home service to users of non-auto modes.
Contribute to a mobility fee program that funds multimodal transportation improvements, such as those described above.

The City may decide to implement a VMT mitigation fee bank to fund projects that would help the City reduce GHG emissions and promote VMT reduction. This would need to be developed specifically for VMT reduction projects for the City and cannot be preexisting to this document. Mitigation measures are not limited to this document and may be discussed with the City Traffic Engineer providing appropriate reduction methodologies are applied using documentation published by SANDAG, the California Air Resources Board (CARB), or the California Air Pollution Control Officers Association (CAPCOA). These resources provide quantifiable measures that may be used for project mitigation. Mitigation and reduction measures utilized should be documented and easily referenced in the document's appendix.

SIGNIFICANT AND UNAVOIDABLE IMPACTS

Projects that are unable to mitigate to a less than significant level of impact must provide a detailed statement of overriding considerations in accordance with CEQA Guidelines Sections 15091 and 15093. The following are direct quotes from the legislation to help project applicants understand CEQA law.

Section 15091 Findings:

" (a) No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding.

The possible findings are:

(1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

(2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

(3) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

(b) The findings required by subdivision (a) shall be supported by substantial evidence in the record.

(c) The finding in subdivision (a)(2) shall not be made if the agency making the finding has concurrent jurisdiction with another agency to deal with identified feasible mitigation measures or alternatives. The finding in subdivision (a)(3) shall describe the specific reasons for rejecting identified mitigation measures and project alternatives.

(d) When making the findings required in subdivision (a)(1), the agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to avoid or substantially lessen significant environmental effects. These measures must be fully enforceable through permit conditions, agreements, or other measures.

(e) The public agency shall specify the location and custodian of the documents or other material which constitute the record of the proceedings upon which its decision is based.

(f) A statement made pursuant to Section 15093 does not substitute for the findings required by this section."

Section 15093 – Statement of Overriding Considerations:

" (a) CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposal project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable."

(b) When the lead agency approves a project which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record.

(c) If an agency makes a statement of overriding considerations, the statement should be included in the record of the project approval and should be mentioned in the notice of determination. This statement does not substitute for, and shall be in addition to, findings required pursuant to Section 15091."

11.0 LOCAL TRANSPORTATION STUDY AND LOCAL TRANSPORTATION ASSESSMENT GUIDELINES

The City of Oceanside utilizes the Institute of Transportation Engineers (ITE) San Diego Regional Guidelines (May 2019) to establish thresholds and methodology for a Local Transportation Study (LTS). A Local Transportation Study is different from VMT analysis for CEQA purposes and may be required in addition to the VMT analysis or individually. A Local Transportation Study will analyze the projects influence on the surrounding intersections and roadway network utilizing level of service (LOS) for all project scenarios. The purpose of the LTS is to help quantify the local impact of the development and expected changes in transportation conditions. The LTS should include roadway, bicycle, pedestrian, and transit evaluations. The following sections identify the project requirements for a Local Transportation Study. The Local Transportation Study helps the City ensure the goals, objectives, and policies adopted by the City are supported and implemented while monitoring the capacity for the roadway networks.

Data should be collected during typical operation hours. Data should be recent and no more than 2 years old for an LTS. **The acceptable level of service for the City of Oceanside that is consistent with the adopted Circulation Element is LOS D.**

Minimum Threshold for Local Transportation Study

Based on the recommendations of the Institute of Transportation Engineers (ITE) for the San Diego section, **Table 8** indicates when a Local Transportation Study is required for the City. This is based on keeping consistent with the thresholds previously used and *SANDAG's Not So Brief Guide (2002) Trip Generation*.

Projects Consistent with the Adopted General Plan

The City's adopted General Plan represents the vision and goals the City has for the community. Projects that support these goals will adhere to the following LTS thresholds identified in Table 8.

Table 8 – Threshold for LTS for Projects Consistent with the Adopted General Plan

	LTS Analysis Not Needed	LTS Analysis Needed (1)
Average Daily Traffic Volume (ADT)	Less than 1,000 ADT	Greater than 1,000 ADT

(1) If ADT is equal to 1,000 ADT, an LTS is required.

A Local Transportation Study (LTS) will be required if a project exceeds 1,000 ADT and is consistent with the adopted General Plan.

Projects Inconsistent with the Adopted General Plan

The City's adopted General Plan represents the vision and goals the City has for the community. Projects that are not in support of the General Plan have a lower LTS threshold and will require a General Plan Amendment. The following LTS analysis thresholds for projects that are inconsistent are identified in **Table 9**.

Table 9 – Threshold for LTS for Projects Inconsistent with the Adopted General Plan

	LTS Analysis Not Needed	LTS Analysis Needed (1)
Average Daily Traffic Volume (ADT)	Less than 500 ADT	Greater than 500 ADT

(1) If ADT is equal to 500 ADT, an LTS is required.

A Local Transportation Study (LTS) will be required if a project exceeds 500 ADT and is inconsistent with the adopted General Plan.

The thresholds identified in Table 7 and Table 8 stem from the professional expertise and judgement of the ITE San Diego section. These thresholds keep consistent with regional practice and will help ensure developments will not overburden the transportation network.

If a project would add peak hour trips to any existing on- or off-ramp it is recommended to consult with the City and Caltrans to determine if an LTS would be required.

Study Scenarios

The following scenarios are included in an LTS and may be modified in agreement with the City Traffic Engineer.

- Existing Conditions
- Existing Conditions Plus Project
- Existing Conditions Plus Near-Term Cumulative Projects
- Existing Conditions Plus Near-Term Cumulative Projects Plus Project
- Buildout Conditions (2030)
- Buildout Conditions Plus Project

Local Transportation Assessment (LTA)

A Local Transportation Assessment (LTA) may be required instead of a Local Transportation Study depending on the size of the project. A helps the City monitor development impacts on the transportation network and is similar to a Local Transportation Study(LTS). The main difference between the two studies is a Local Transportation Assessment (LTA) analyzes fewer scenarios than a Local Transportation Study (LTS). A Local Transportation Assessment (LTA) will be required if a project is less than 1,000 ADT but is anticipated to influence the surrounding environment.

A Local Transportation Assessment (LTA) will be required to analyze the following scenarios based on the thresholds for identified for the project's ADT.

- **A project that generates between 200-500 ADT will be required to analyze existing conditions and existing conditions plus project.**

- **A project that generates between 500-1,000 ADT will be required to analyze existing conditions, existing conditions plus project, existing conditions plus near-term cumulative projects, and existing conditions plus near-term cumulative projects plus project.**

Transportation Modes to be Included for Discussion in the LTS/LTA

Pedestrian:

- The LTS/LTA shall include pedestrian infrastructure available including any opportunities or deficiencies such as path obstructions or missing sidewalk for ½ mile walking distance from project pedestrian access points.
- All pedestrian facilities directly connected to project access points or adjacent to the project development, extending in each direction to the nearest intersection with a classified roadway or connection with a Class I path
- Facilities connecting to transit stops within two blocks of the project
- Only facilities on the side of the project or along the walking route to transit stop
- Additional geographic areas may be included in certain cases to address special cases such as schools or retail centers

Bicycle:

- The LTS/LTA shall include a discussion of bicycle infrastructure available including any opportunities or deficiencies such as bike lanes, bike buffers, or bike boxes. This section must also include discussion of what is planned based on City and regional documentation. The extents are as follows:
    - All roadways adjacent to the project, extending in each direction to the nearest intersection with a classified roadway or with a Class I path
    - Both directions of travel should be evaluated

Transit:

- The LTS/LTA shall identify any transit stops or routes existing and planned near the project site. This section shall also include a discussion and evaluation of transit stop amenities within ½ mile of each pedestrian access point.

Vehicle:

All signalized intersections and signalized project driveways shall be analyzed if:

- The project will add 50 or more peak hour (final cumulative) trips in either direction

All unsignalized intersections and unsignalized project driveways shall be analyzed if:

- The project will add 50 or more peak hour (final cumulative) trips in either direction

All freeway ramp intersections and signalized project driveways shall be analyzed if:

- The project will add 20 or more peak hour (final cumulative) trips in either direction

Intersection Level of Service analysis should be conducted using the Highway Capacity Manual (HCM) Methodology. For signalized intersections, the methodology described in the HCM for signalized intersections is used. With this methodology, the average control delay per vehicle is estimated for each lane group and aggregated for each approach and for the intersection as a whole. The relationship between control delay per vehicle and LOS for signalized intersections is summarized in **Table 10**.

Table 10 – HCM Level of Service Description for Signalized Intersections

Level of Service	Description of Traffic Conditions	Control Delay (sec/veh)
A	Insignificant delays: no approach phase is fully utilized and no vehicle waits longer than one red indication	≤ 10
B	Minimal delays: an occasional approach phase is fully utilized. Drivers begin to feel restricted.	> 10 – 20
C	Acceptable delays: major approach phase may become fully utilized. Most drivers feel somewhat restricted.	> 25 – 35
D	Tolerable delays: Drivers may wait through more than one red indication. Queues may develop but dissipate rapidly without excessive delays.	> 35 – 55
E	Significant delays: Volumes approaching capacity. Vehicles may wait through several cycles and long vehicle queues form upstream.	> 55 – 80
F	Excessive delays: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80

Source: Highway Capacity Manual, Transportation Research Board, 2010.

For unsignalized intersections, the methodology described in the HCM for unsignalized intersections is used. With this methodology, LOS is related to the control delay for each stop-controlled movement. The relationship between control delay per vehicle and LOS for unsignalized intersections is summarized in **Table 11**.

Table 11 – HCM Level of Service Description for Unsignalized Intersections

Level of Service	Description of Traffic Conditions	Control Delay (sec/veh)
A	No delay for stop-controlled approaches.	≤ 10
B	Operations with minor delay.	> 10 – 15
C	Operations with moderate delays.	> 15 – 25
D	Operations with some delays.	> 25 – 35
E	Operations with high delays and long queues.	> 35 – 50
F	Operation with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50

Source: Highway Capacity Manual, Transportation Research Board, 2010.

Table 12 provides guidance on the levels of ADT that can be accommodated on various types of roadways, based on level of service.

Table 12 – Circulation Element Roadway Classification LOS & Capacity

Class	Lanes	Cross Section [1]	Level of Service (LOS)				
			A	B	C	D	E
Expressway	6	102/160 122/200	30,000	42,000	60,000	70,000	80,000
Expressway	4	102/160 122/200	25,000	35,000	50,000	55,000	60,000
Prime Arterial	6	104/124	25,000	35,000	50,000	55,000	60,000
6-Lane Major Arterial	6	104/124	20,000	28,000	40,000	45,000	50,000
5-Lane Major Arterial [2]	5	102/122	17,500	24,500	35,000	40,000	45,000
4-Lane Major Arterial	4	80/100	15,000	21,000	30,000	35,000	40,000
Secondary Collector (4 lanes with 2-way left turn lane)	4	64/84	10,000	14,000	20,000	25,000	30,000
Secondary Collector (4 lanes without 2-way left-turn lane, with left turn pockets	4	54/74, 60/80	9,000	13,000	18,000	22,000	25,000
Collector (commercial fronting, 2-lanes with 2-way left turn lane) [3]	2	50/70	5,000	7,000	10,000	13,000	15,000
Collector (residential streets in the Circulation Element or industrial fronting)	2	40/60, 50/70	4,000	5,500	7,500	9,000	10,000
Local Street (residential streets NOT in the Circulation Element	1	36/56, 40/60	–	–	2,400	–	–

(1) Cross sections are listed as curd-to-curb width/total right of way width, in feet.
(2) Vandegrift Boulevard is the only Circulation Element roadway designated as a 5-lane Major Arterial. It is not intended that other roadways be build to 5-lane Major Arterial standards.
(3) This capacity will also be assumed for a two-lane one-way collector.

Table 13 indicates when a project's effect on the roadway system is considered to justify the need for roadway improvements. That is, if a project's traffic effect causes the values in this table to be exceeded, roadway improvements should be considered as follows on a case by case basis:

- Improvements should be consistent with the General Plan
- Improvements for transit, bike and pedestrian facilities should be given priority in Transit Priority Areas or Smart Growth Opportunity Areas as identified by SANDAG.
- Projects in Transit Priority Areas or Smart Growth Opportunity Areas as identified by SANDAG, that are consistent with the General Plan at the time of project application, should not be denied due to the inability to provide roadway improvements (i.e. existing right of way is constrained, etc.)

Table 13 – Determination of the Need for Roadway Improvements

Level of Service with Project*	Allowable Change Due to Project Effect**					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (MPH)	V/C	Speed (MPH)	Delay (Sec.)	Delay (Min.)
E & F (or ramp meter delays above 15 min)	0.01	1	0.02	1	2	2

12.0 TRANSPORTATION DEMAND MANAGEMENT (TDM) STRATEGIES

In general, the goal of City Staff is to help Oceanside increase connectivity and level of comfort for pedestrians, bicyclists, and transit users. Project improvements may come from the City's adopted General Plan or other City policies that help improve the overall quality of life for the community. **Table 14** identifies some TDM improvement measures that may be considered for a project.

Table 14 – Potential TDM Improvement Measures

Potential TDM Measures	
Transit Facilities	Telecommuting
Bike Facilities	Rideshare Programs
Walkability	Flex-time
Carpool Incentives	Parking Cash-Out
Subsidized Transit Passes	Shuttle Service

A measure that is not listed may be considered if the mitigation is appropriately applied and reasonable. Additional improvement measures may be identified as future technologies and policies evolve or with consultation by City Staff.

13.0 RESOURCES

The following resources were used in the development of these guidelines. It is recommended the consultant develop a plan of action that aligns with the City Traffic Engineer's expectation prior to conducting any analyses.

City of San Diego. "Transportation Study Manual (TSM) Draft." September 2019.

Institute of Transportation Engineers (San Diego Section). " Guidelines for Transportation Impact Studies (TIS) in the San Diego Region." May 2019. Accessed April 1, 2020.

Governor's Office of Planning and Research (OPR). "Technical Advisory on Evaluating Transportation Impacts in CEQA." December 2018. Accessed April 1, 2020.

Governor's Office of Planning and Research (OPR). "Key Resources on SB 743: Studies, Reports, Briefs, and Tools." April 2018. Accessed April 1, 2020.

California Air Resources Board (CARB). "2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals." January 2019. Accessed April 1, 2020.

California Air Pollution Control Officers Association (CAPCOA). "Quantifying Greenhouse Gas Mitigation Measures." August 2010. Accessed April 1, 2020.

San Diego Association of Governments (SANDAG). "TDM Planning Resources." 2019. Accessed April 1, 2020.

Appendix C

City of Oceanside Project Information Form

PROJECT INFORMATION FORM (PIF)

THE FOLLOWING IS TO BE COMPLETED BY THE PROJECT APPLICANT:

PROJECT INFORMATION FORM			
1.	**PROJECT DESCRIPTION:** CarMax Auto Dealership		
2.	**PROJECT LOCATION:** 4000 Block of Plaza Dr		
3.	**LAND USE:** Community Commercial **SIZE/DENSITY:** Approximately 10.28 Acres		
4.	**ZONING AND LAND USE CONSISTENT WITH ADOPTED GENERAL PLAN?**	☒ Yes	☐ No
5.	**PROJECT LOCATED IN TRANSIT PRIORITY AREA[1], SMART GROWTH AREA[2], OR LOW VMT AREA[3]?**	☐ Yes	☒ No
6.	**PROJECT TRIP GENERATION:** 475 ADT	☐ < 200 ADT ☒ ≥ 200 ADT ☐ ≥ 1,000 ADT ☐ ≥ 2,400 ADT	
	ATTACHMENTS		
A.	**PROJECT LOCATION MAP**	☒ Attached	
B.	**PROJECT TRIP DISTRIBUTION**	☒ Attached	
C.	**PROJECT TRIP ASSIGNMENT**	☒ Attached	

1) Projects located in a TPA must be able to access the transit station within a ½ mile walking distance or 6 minute walk continuously without discontinuity of sidewalk or obstructions to the route. Qualifying transit stops means a site containing an existing rail transit station served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (OPR, 2017). A high-quality transit corridor may also be considered if a corridor with fixed route bus service has service intervals no longer than 15 minutes during peak commute hours (OPR, 2017).
(2) See Appendix B.
(3) Based on the most recent SANDAG SB 743 Screening Map. Example shown in Appendix C.

TO BE COMPLETED BY CITY STAFF AND RETURNED TO PROJECT APPLICANT

	PROJECT STUDY REQUIREMENTS			
1)	**Does the project require a CEQA VMT analysis?** **A. If yes, does the project require a SANDAG Model Run?**	☐ Yes ☐ Yes	■ No ☐ No	☐ Incomplete[(1)]
2a)	**Does the project require a Local Transportation Study?**	■ Yes	☐ No	☐ Incomplete[(1)]
	OR			
2b)	**Does the project require a Local Transportation Assessment?**	☐ Yes	■ No	☐ Incomplete[(1)]

[(1)] Incomplete application or additional information is needed to determine study requirements.

Appendix D

CarMax Trip Generation Survey and ITE Rates

Trip Generation Study:

CARMAX Auto Superstores

Prepared for:

Industrial Developments International
Atlanta, GA

Prepared by:

Kimley-Horn & Associates, Inc.
September 2002
015908000

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INTRODUCTION

Kimley-Horn & Associates, Inc. was retained to conduct this trip generation study for Carmax Auto Superstores by Industrial Developments International (IDI) at three current store locations. This report summarizes the analysis and findings of the study, and offers an estimate of trip generation rates. It is anticipated that such rates may be used in the planning and design for future Carmax facilities.

Carmax Auto Superstores provide customers with a selection of pre-owned vehicles for purchase or trade-in, and the option to sell a vehicle without making a purchase. A few locations offer new car sales as well. In addition, each store has a service area that handles warranty work, general vehicle maintenance on a limited basis, and reconditioning in preparation for vehicle sales at Carmax Auto Superstores. There are currently 39 Carmax Auto Superstores in 12 states nationwide, ranging from ± 14,000 to ± 95,000 square feet. The service centers typically operate from 7:30 AM to 6:00 PM Monday through Friday, and 7:30 AM to 5:30 PM on Saturday. The sales centers are typically open from 10:00 AM to 9:00 PM Monday through Friday, 9:00 AM to 9:00 PM on Saturday, and 12:00 PM to 7:00 PM on Sunday (where allowed by local ordinances). The Institute of Transportation Engineers *Trip Generation Manual (6thEdition)* provides a land use designation (841) for new car sales. However, due to the fact that pre-owned vehicle sales account for most (if not all) of the sales at a Carmax Auto Superstore, combined with the unique nature of Carmax Auto Superstores compared with other new and used car dealers, a trip generation study was performed to more accurately determine the trip generation rates for a Carmax Auto Superstore.

STUDY METHODOLOGY

This trip generation study used the following methodology:

Trip Generation Study Variables

The purpose of this study is to develop more accurate trip generation rates for Carmax Auto Superstores. Trip generation data was averaged to ascertain the actual number of trips. Data was collected for 24 hours for a period covering weekdays and weekends, and was analyzed for daily, AM, and PM peak periods by building square footage and by the number of employees.

Study Sites

At the time of this study, there were 39 Carmax Auto Superstores in 12 states nationwide. Of these 39 sites, three of distinct size and age were used for data collection and analysis in the study. Descriptions of the three sites are found below; location maps of each site are included in Appendix A.

The sites used for data collection and analysis were:

- Davie, Florida (# 7108)
- Nashville, Tennessee (# 7150)
- Plano, Texas (# 7207)

Carmax Auto Superstore # 7108 is located in **Davie, Florida** at 7420 State Road 84. The store is located on the corner of State Road 84 and SW 71st Terrace, and access to the site is provided from each of the two roads. The main site entrance on State Road 84 allows access for employees, sales customers, and service customers, while the access on 71st Street is used primarily for vehicle delivery and distribution. Only pre-owned vehicles are sold at this location. The store is ±81,099 square feet, has 220 employees, and has been in operation since November 1997. This store differs from the other two analyzed in this study in that it is a "hub" store. A "hub" store handles service and re-conditioning for its location, as well as other "satellite" locations in the area of the "hub". This "hub" location is capable of 24-hour service, meaning that there is often a night shift used for vehicle reconditioning.

Carmax Auto Superstore # 7150 is located in **Nashville, Tennessee** at 2051 Powell Avenue. Access to the site is provided by a single driveway, shared with the adjacent Home Depot Expo, located on Powell Avenue less than one mile from Interstate 65. This location sells new and pre-owned vehicles and has a full service center for customers and reconditioning. It is designated as a "stand-alone" store, and is ±55,558 square feet, employees 187 people, and has been in operation since July 1999.

Carmax Auto Superstore # 7207 is located in **Plano, Texas** at 4448 West Plano Parkway. Access to the site is provided by two driveways, approximately 200 feet apart, along Fulgham Road, just off West Plano Parkway. The northern drive is considered the primary access to the site, and experiences a heavier amount of traffic. Transport vehicles delivering and collecting vehicles for sale primarily use the southern drive. This store is ±14,012 square feet, has 69 employees, and has been in operation since February 2002. This location is a "satellite" store and only offers pre-owned vehicles.

DATA COLLECTION

Trip Generation

Driveway volumes were collected using 24-hour automatic tube counters at all site driveways for each of the three locations used in this study. Volumes were collected for twenty-four (24) hours, for at least seven consecutive days, and were recorded in 15-minute intervals in order to determine daily and peak-hour volumes.

Manual driveway counts were performed at each site by Kimley-Horn & Associates staff to verify the count data collected by the tube counters. The dates of data collection are listed below by location.

- Davie, FL – Thursday, September 11, 2002 to Thursday, September 18, 2002
- Nashville, TN – Monday, September 9, 2002 to Thursday, September 18, 2002
- Plano, TX – Monday, September 9, 2002 to Friday, September 19, 2002

DATA ANALYSIS

Daily Trip Generation

The daily trip generation rates for each Carmax Auto Superstore location were calculated in two manners. First, by dividing the average weekday (Tuesday, Wednesday, and Thursday) total driveway volumes by the building square footage, and second, by dividing the average weekday (Tuesday, Wednesday, and Thursday) total driveway volumes by the number of employees. In addition, daily volumes from Saturday were also analyzed in the same way to determine a Saturday trip generation rate. Tables 1 and 4 summarize the daily driveway volumes observed at each study site and the resulting trip generation rates.

AM Peak Hour Trip Generation

Morning peak hour (7:00 AM to 9:00 AM) volumes were analyzed, and an AM Peak hour was determined for weekdays Tuesday, Wednesday, and Thursday. An AM Peak hour trip generation rate was then calculated using two methods. The volumes for the peak hour each day were divided first by the building square footage, and second, by the number of employees. These results were averaged to obtain a weekday AM Peak hour trip generation rate. Tables 2 and 5 summarize the AM Peak driveway volumes observed at each study site and the resulting trip generation rates.

PM Peak Hour Trip Generation

Afternoon peak hour (4:00 AM to 6:00 AM) volumes were analyzed, and a PM Peak hour was determined for weekdays Tuesday, Wednesday, and Thursday. A PM Peak hour trip generation rate was then calculated using two methods. The volumes for the peak hour each day were divided first by the building square footage, and second, by the number of employees. These results were averaged to obtain a weekday PM Peak hour trip generation rate. Tables 3 and 6 summarize the PM Peak driveway volumes observed at each study site and the resulting trip generation rates.

Table 1
Daily Trip Generation Rates (per 1,000 square feet)

Store Number	Store Location	Building Size (sq.ft.)	Total Daily Driveway Trip Ends					Daily Trip Generation Rate	
			Tues.	Wed.	Thurs	Average	Sat.	Weekday	Saturday
7108	Davie, Florida	81,099	2,786	2,380	1,955	2,374	1,704	29.27	21.01
7150	Nashville, TN	55,558	1,490	1,581	1,396	1,489	1,151	26.80	20.71
7207	Plano, Texas	14,012	963	980	932	958	1,391	68.37	99.27
Average Trip Generation Rate:								**41.48**	**47.00**

Table 2
AM Peak Hour Trip Generation Rates (per 1,000 square feet)

Store Number	Store Location	Building Size (sq. ft.)	Total Peak Hour Driveway Trip Ends				AM Peak Hour Rate		Total AM Peak
			Tues. In/out	Wed. In/out	Thurs. In/out	Average In/out	In	Out	
7108	Davie, Florida	81,099	30 / 61	80 / 57	35 / 62	48.3 / 60.0	0.60	0.74	1.34
7150	Nashville, TN	55,558	62 / 28	56 / 24	45 / 25	54.3 / 25.7	0.98	0.46	1.44
7207	Plano, Texas	14,012	17 / 13	14 / 11	18 / 8	16.3 / 10.7	1.16	0.76	1.92
Average Trip Generation Rate:							**0.91**	**0.65**	**1.56**

Table 3
PM Peak Hour Trip Generation Rates (per 1,000 square feet)

Store Number	Store Location	Building Size (sq. ft.)	Total Peak Hour Driveway Trip Ends				PM Peak Hour Rate		Total PM Peak
			Tues. In/out	Wed. In/out	Thurs In/out	Average In/out	In	Out	
7108	Davie, Florida	81,099	198 / 155	114 / 87	98 / 80	136.7 / 107.3	1.69	1.32	3.01
7150	Nashville, TN	55,558	70 / 53	69 / 63	49 / 59	62.7 / 58.3	1.13	1.05	2.18
7207	Plano, Texas	14,012	78 / 46	72 / 36	77 / 24	75.7 / 35.3	5.40	2.52	7.92
Average Trip Generation Rate:							**2.74**	**1.63**	**4.37**

Table 4
Daily Trip Generation Rates (per employee)

Store Number	Store Location	Number of Employees	Total Daily Driveway Trip Ends					Daily Trip Generation Rate	
			Tues.	Wed.	Thurs.	Average	Sat.	Weekday	Saturday
7108	Davie, FL	220	2,786	2,380	1,955	2,374	1,704	10.79	7.75
7150	Nashville, TN	187	1,490	1,581	1,396	1,489	1,151	7.96	6.16
7207	Plano, TX	69	963	980	932	958	1,391	13.88	20.16
Average Trip Generation Rate:								**10.88**	**11.37**

Table 5
AM Peak Hour Trip Generation Rates (per employee)

Store Number	Store Location	Number of Employees	Total Peak Hour Driveway Trip Ends				AM Peak Hour Rate		Total AM Peak
			Tues. In/out	Wed. In/out	Thurs. In/out	Average In/out	In	Out	
7108	Davie, FL	220	30 / 61	80 / 57	35 / 62	48.3 / 60.0	0.22	0.27	0.49
7150	Nashville, TN	187	62 / 28	56 / 24	45 / 25	54.3 / 25.7	0.29	0.14	0.43
7207	Plano, TX	69	17 / 13	14 / 11	18 / 8	16.3 / 10.7	0.24	0.16	0.40
Average Trip Generation Rate:							**0.25**	**0.19**	**0.44**

Table 6
PM Peak Hour Trip Generation Rates (per employee)

Store Number	Store Location	Number of Employees	Total Peak Hour Driveway Trip Ends				PM Peak Hour Rate		Total PM Peak
			Tues. In/out	Wed. In/out	Thurs. In/out	Average In/out	In	Out	
7108	Davie, FL	220	198 / 155	114 / 87	98 / 80	136.7 / 107.3	0.62	0.49	1.11
7150	Nashville, TN	187	70 / 53	69 / 63	49 / 59	62.7 / 58.3	0.34	0.31	0.65
7207	Plano, TX	69	78 / 46	72 / 36	77 / 24	75.7 / 35.3	1.10	0.51	1.61
Average Trip Generation Rate:							**0.69**	**0.44**	**1.13**

CONCLUSION

The purpose of this trip generation study was to estimate how much daily and peak hour traffic a proposed Carmax Auto Superstore may generate during a weekday and Saturday period. Since different size stores were studied, the trip generation analysis produced trip rates that can be applied to the store size or to the number of employees. The results of this trip generation study were compared against the trip rates published in the Institute of Transportation Engineers *Trip Generation Manual (6th Edition)*. The ITE Manual provides a land use code for New Car Sales (Land use 841). The comparison of ITE rates with the rates found in this study is summarized below in Table 7.

Table 7
Trip Generation Rate Comparison

Period	Based on 1,000 Square Feet		Based on Number of Employees	
	KHA Study	ITE Manual	KHA Study	ITE Manual
Weekday	41.48	37.50	10.88	21.14
Saturday	47.00	21.03	11.37	10.55
AM Peak Hour	1.56	2.21	0.44	0.67
PM Peak Hour	4.37	2.80	1.13	0.96

From Table 7, the trip rates observed based on square footage from this study are slightly lower than the ITE rates for the weekday and AM peak hour. However, the Saturday and PM peak hour rates observed were noticeably higher than the rates indicated in the ITE Manual.

The trip rates based on number of employees were observed to be considerably less than ITE rates when evaluating the weekday period, and similar to ITE rates when comparing Saturday. It should be noted that this trip generation study utilized a relatively small sample size (3 locations).

APPENDIX A:
Location Maps

Figure 1
CarMax Auto Superstore # 7108- Davie, Florida

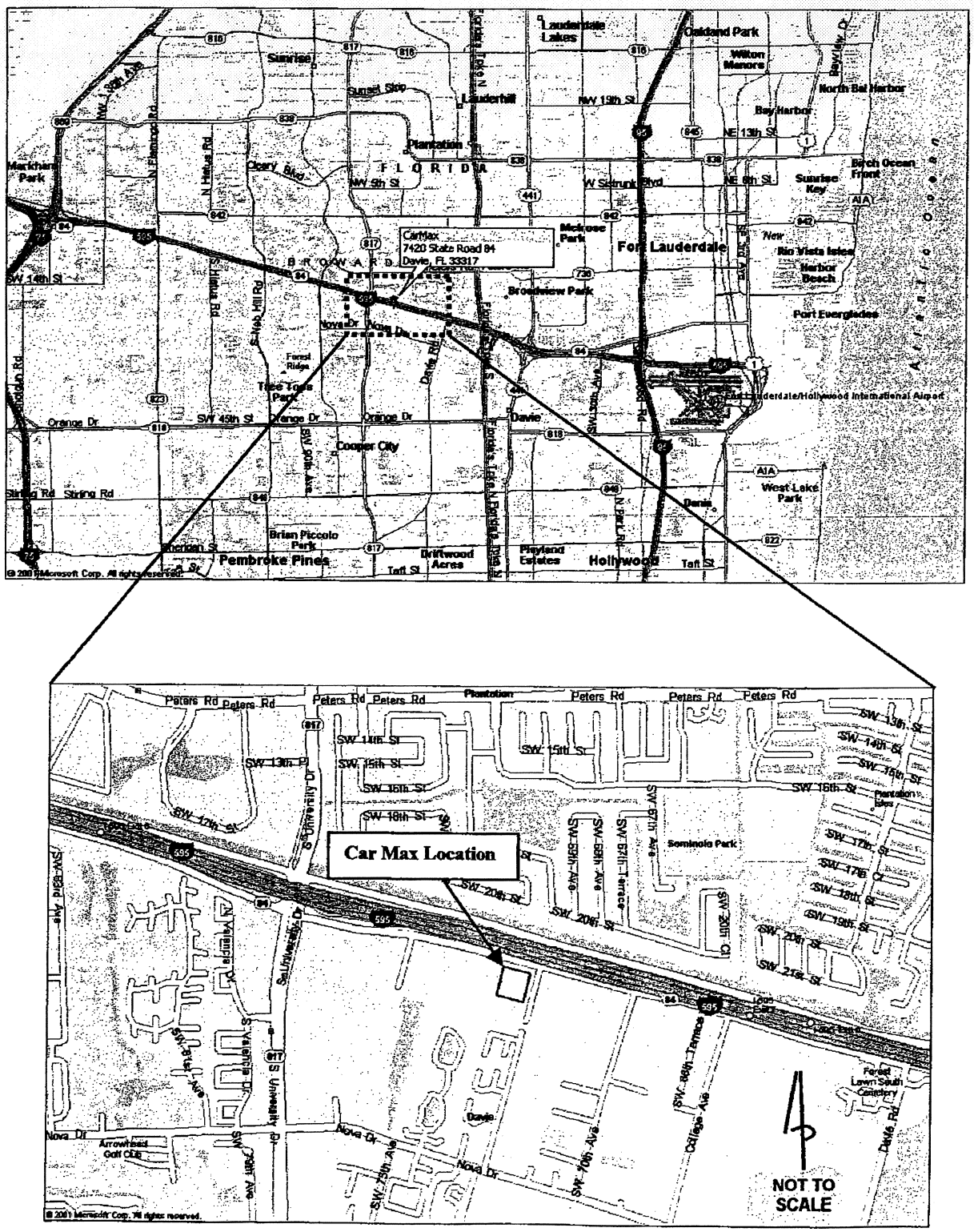


Figure 2
CarMax Auto Superstore #7150- Nashville, Tennesee

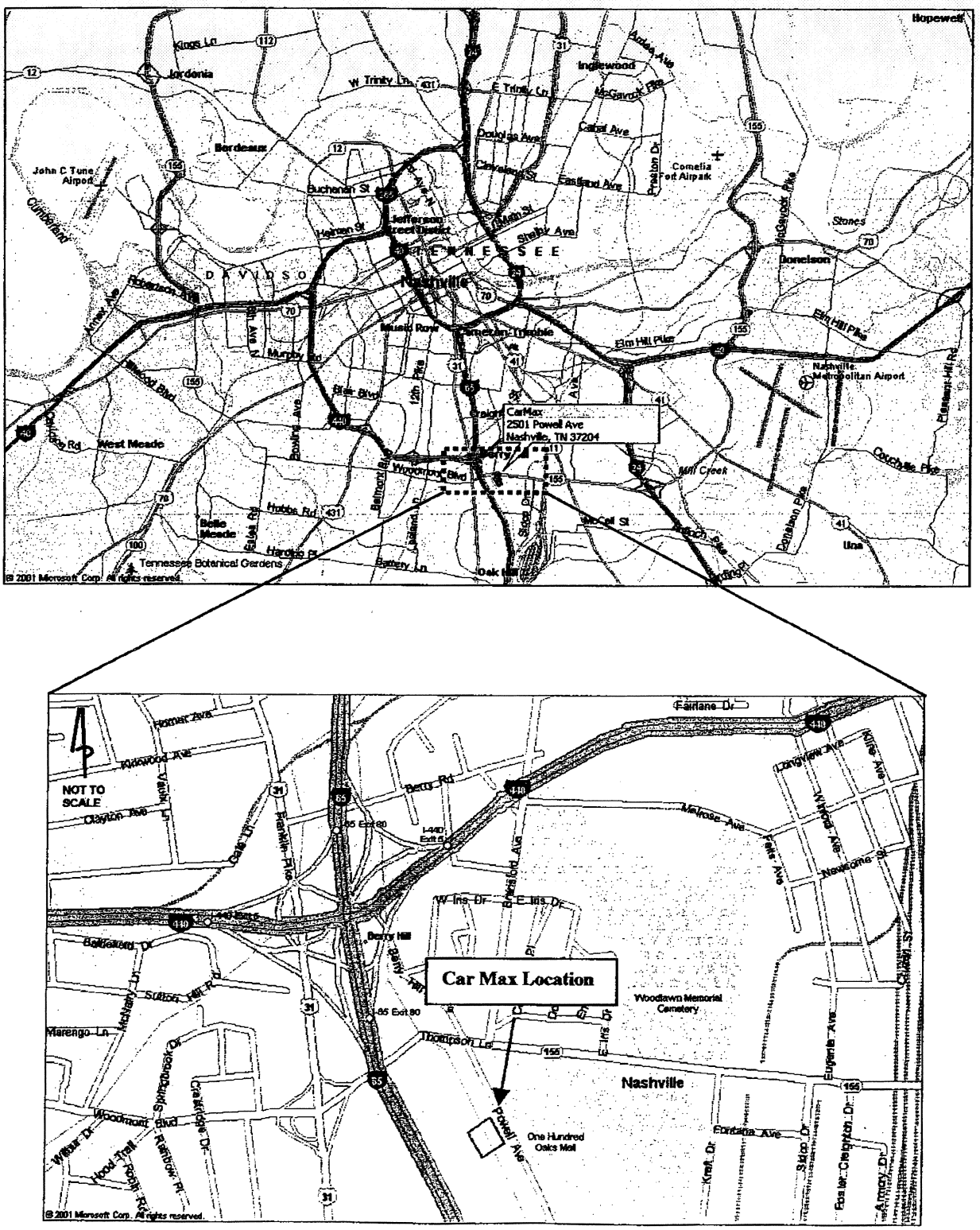
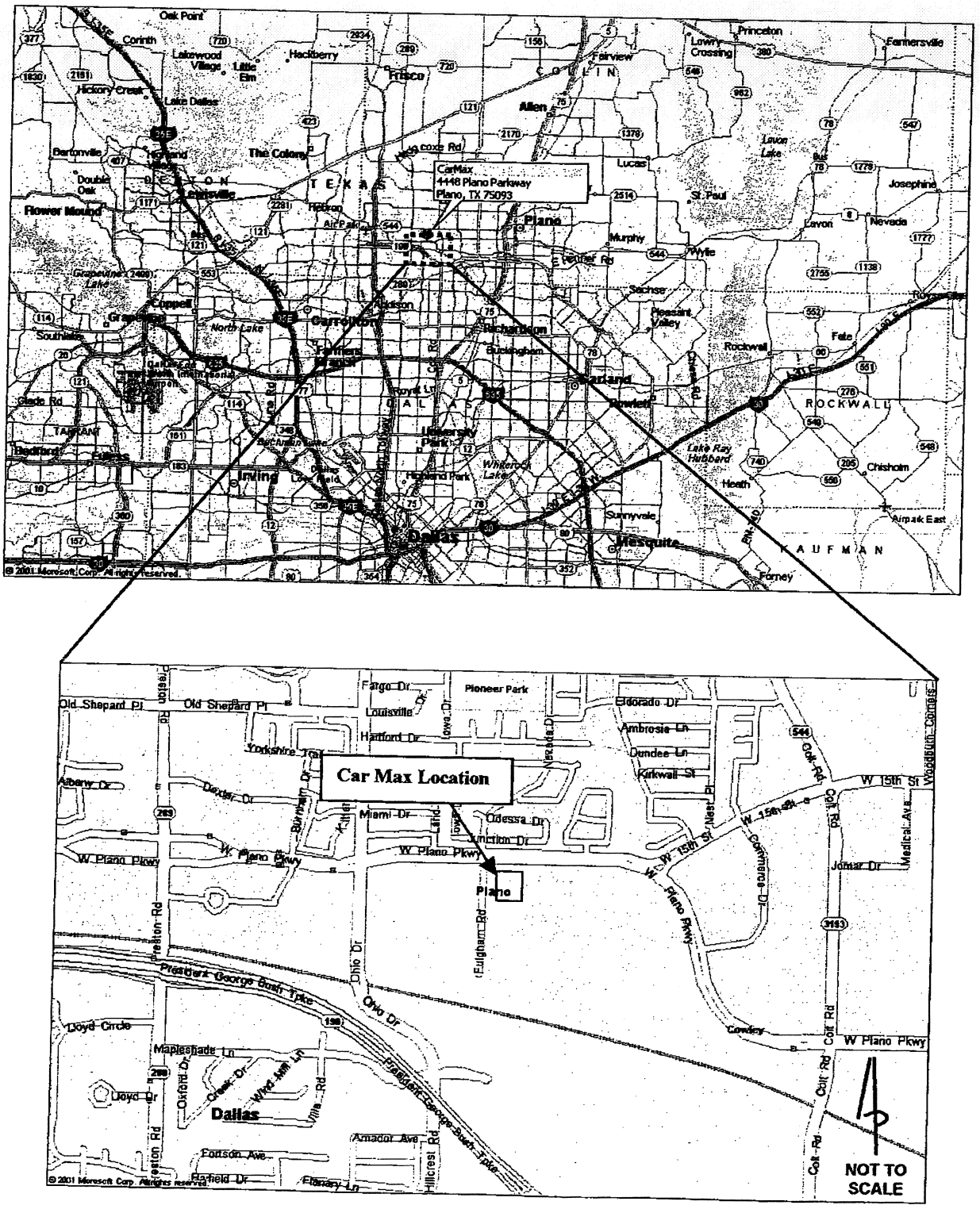


Figure 3
CarMax Auto Superstore #7207- Plano, Texas



Land Use: 841
Automobile Sales (Used)

Description

A used automobile sales dealership is typically located along a major arterial street characterized by abundant commercial development. The sale or lease of used cars is the primary business at these facilities; however, automobile services and parts sales may also be available. Some dealerships also include leasing options, truck sales, and servicing. Automobile sales (new) (Land Use 840) and recreational vehicle sales (Land Use 842) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the 14 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 9:45 and 10:45 a.m. and 4:30 and 5:30 p.m., respectively.

The sites were surveyed in the 2010s in Texas.

Source Numbers

880, 881

Automobile Sales (Used)
(841)

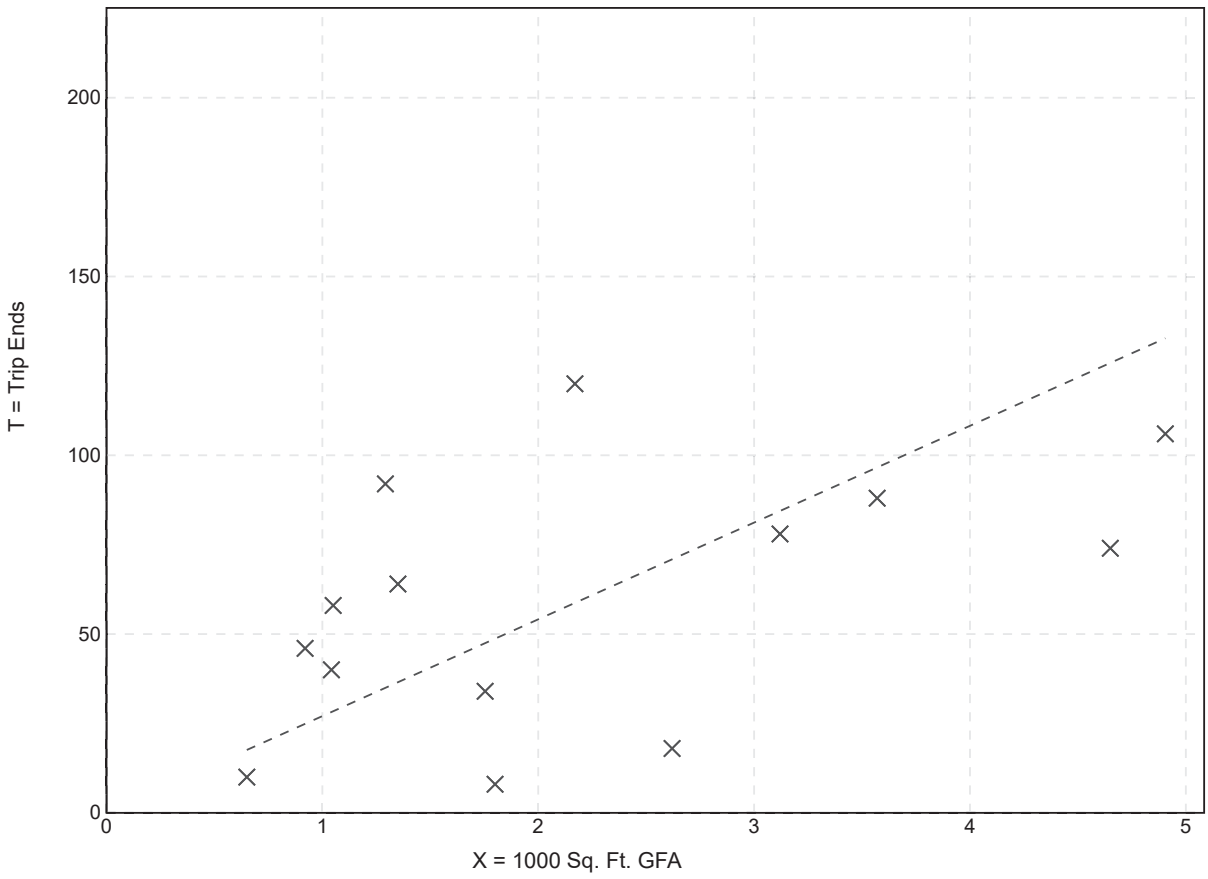
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 14
1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
27.06	4.44 - 71.21	17.91

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= **

APPENDIX O
Local Transportation Study

CarMax Auto Dealership (D19-00021)
4000 Block of Plaza Drive
City of Oceanside
December 4, 2020

Local Transportation Study

Prepared for:

REC Consultants, Inc.
2442 Second Avenue
San Diego, CA 92101

Prepared by:

LOS Engineering, Inc.
11622 El Camino Real, Suite 100, San Diego, CA 92130
Phone 619-890-1253

Job #1918

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Executive Summary
CarMax Auto Dealership

The proposed CarMax auto sales dealership is to be located at the 4000 block of Plaza Drive just west of the Oceanside Department of Motor Vehicles in Oceanside, California. The project site is currently vacant. The project is anticipated to be completed by year 2021 or 2022.

This Local Transportation Study (LTS) has been prepared to determine if there are any traffic effects caused by the project traffic that would justify roadway improvements or fair share participation. This report is based on the City of Oceanside *Draft Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment*, August 2020 and includes the analysis of pedestrian, bicycle, transit, and traffic elements.

The **LTS Pedestrian** analysis included the assessment of pedestrian facilities. As part of the project, the applicant is widening Plaza Drive and installing sidewalks on both side of the street along the project frontage. The remaining existing pedestrian infrastructure from College Blvd to Thunder Drive did not have any deficiencies except for the north side of Plaza Dr from the project site easterly to Thunder Drive where the north side is missing a sidewalk.

The **LTS Bicycle** analysis included the assessment of bicycle facilities. As part of the project, the applicant is widening Plaza Drive and installing bike lanes on both side of the street along the project frontage. The City's Bicycle Master Plan has a recommended Class 3 bike route on Thunder Dr. If the City requires bike sharrows or bike route signs along the project frontage, then the applicant will install.

The **LTS Transit** analysis included the assessment of transit facilities. The bus stop for westbound travel on Lake Blvd is located a walking distance of approximately 710 feet from the project access on Thunder Dr and includes a bench and trash receptacle that are in good condition. The bus stop for eastbound travel on Lake Blvd is located a walking distance of approximately 940 feet from the project access on Thunder Dr and includes a trash receptacle in good condition. No transit improvements are proposed as part of this project.

The **LTS Traffic** analysis included a study area of nine (9) intersections and five (5) roadway segments. The project traffic generation was calculated using a trip generation rate from a survey of three open and operating CarMax dealerships. The data from the CarMax sites was collected by placing tube counters across all site driveways that recorded all vehicles including employees, customers, test drives, deliveries, mail carriers, trash trucks, maintenance, and any other vehicle that crossed over the tubes. Using the CarMax based trip generation rates, the project is forecasted to generate 475 ADT, 18 AM peak hour trips (11 inbound and 7 outbound), and 50 PM peak hour trips (31 inbound and 19 outbound). The project will have two driveways on Plaza Dr and two driveways on Thunder Dr. Six (6) scenarios were analyzed, which included Existing, Existing + Project, Existing + Cumulative, Existing + Cumulative + Project, Horizon Year 2030 Master Transportation Plan (MTP), and Horizon Year 2030 MTP + Project conditions. Operational findings by scenario are summarized below:

1) Under Existing conditions, the study intersections and segments are calculated to operate at LOS D or better except for:
    a. Segment of College Blvd between Vista Way and Plaza Dr (LOS F),
    b. Segment of Plaza Dr between SR-78 EB Ramp and Thunder Dr (LOS E), and
    c. Segment Thunder Dr between Plaza Dr and Tiberon Dr (LOS E).

2) Under Existing + Project conditions, the study intersections and segments were calculated to operate at LOS D or better except for the:
    1) Segment of College Blvd between Vista Way and Plaza Dr (LOS F),
    2) Segment of Plaza Dr between SR-EB Ramp to Thunder Dr (LOS E), and
    3) Segment of Thunder Dr between Plaza Dr and Tiberon Dr (LOS E).

    The project is calculated to cause a traffic effect on Thunder Drive between Plaza Drive and Tiberon Dr because the project exceeds the City's thresholds (proposed improvements are described below).

3) Under Existing + Cumulative conditions, the study intersections and segments were calculated to operate at LOS D or better except for the:
    a. Segment of College Blvd between Vista Way and Plaza Dr (LOS F),
    b. Segment of Plaza Dr between SR-EB Ramp to Thunder Dr (LOS E), and
    c. Segment of Thunder Dr between Plaza Dr and Tiberon Dr (LOS E).

4) Under Existing + Cumulative + Project conditions, the study intersections and segment were calculated to operate at LOS D or better except for the:
    a. Segment of College Blvd between Vista Way and Plaza Dr (LOS F),
    b. Segment of Plaza Dr between SR-EB Ramp to Thunder Dr (LOS E), and
    c. Segment of Thunder Dr between Plaza Dr and Tiberon Dr (LOS F).

    The project is calculated to cause a traffic effect on Thunder Drive between Plaza Drive and Tiberon Dr because the project exceeds the City's thresholds.

5) Under Horizon Year 2030 MTP conditions, all study intersections and segments were calculated to operate at LOS D or better, except for:
    a. Segment of College Blvd between Vista Way and Plaza Dr (LOS F),
    b. Segment of Plaza Dr between SR-78 EB Ramp and Thunder Dr (LOS E), and
    c. Thunder Dr between Plaza Dr and Tiberon Dr (LOS E).

6) Under Horizon Year 2030 MTP + Project conditions, all study intersections and segments were calculated to operate at LOS D or better except for the:
    a. Segment of College Blvd between Vista Way and Plaza Dr (LOS F),
    b. Segment of Plaza Dr between SR-EB Ramp to Thunder Dr (LOS E), and
    c. Segment of Thunder Dr between Plaza Dr and Tiberon Dr (LOS F).

    The project is calculated to cause a traffic effect on Thunder Drive between Plaza Drive and Tiberon Dr because the project exceeds the City's thresholds.

The intersection operations are summarized in **Table ES-1** with street segment operations shown in **Table ES-2**.

TABLE ES-1: INTERSECTION LEVEL OF SERVICE

Intersection and (Analysis)[1]	Movement	Peak Hour	Existing	Existing + Project	Existing + Cumulative	Existing + Cumulative + Project	Horizon Year 2030	Horizon Year 2030 + Project
1) College Blvd at	All	AM	C	C	C	C	C	C
Vista Way (S)	All	PM	C	C	D	D	C	C
2) College Blvd at	All	AM	B	C	C	C	C	C
Plaza Dr (S)	All	PM	C	C	D	D	D	D
3) Plaza Dr at	All	AM	C	C	C	C	C	C
SR-78 EB Ramp (S)	All	PM	C	C	C	C	D	D
4) Plaza Dr at	NB LR	AM	NA	A	NA	A	NA	A
Project S. Dwy (U)	NB LR	PM	NA	C	NA	C	NA	C
5) Plaza Dr at	All	AM	B	B	B	B	B	B
Thunder Dr (S)	All	PM	B	B	B	B	B	B
6) Thunder Dr at	EB LR	AM	NA	B	NA	B	NA	B
Project N. Dwy (U)	EB LR	AM	NA	B	NA	B	NA	C
7) Thunder Dr at	EB LR	AM	NA	B	NA	B	NA	B
Project S. Dwy (U)	EB LR	AM	NA	B	NA	B	NA	B
8) Thunder Dr at	All	AM	B	B	B	B	B	B
Lake Blvd (S)	All	PM	C	C	C	C	C	C
9) Plaza Dr at	SB LR	AM	NA	A	NA	A	NA	A
Project N. Dwy (U)	SB LR	PM	NA	B	NA	B	NA	B

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized.

TABLE ES-2: STREET SEGMENT LEVEL OF SERVICE

Roadway Segment	Level of Service					
	Existing	Existing + Project	Existing + Cumulative	Existing + Cumulative + Project	Horizon Year 2030	Horizon Year 2030 + Project
College Boulevard						
Vista Way to Plaza Dr	**F**	**F**	**F**	**F**	**F**	**F**
Plaza Drive						
College Blvd to SR-78 EB Ramp	D	D	D	D	D	D
SR-78 EB Ramp to Thunder Dr	**E**	**E**	**E**	**E**	**E**	**E**
Thunder Drive						
Plaza Dr to Tiberon Dr	**E**	**E**	**E**	**E**	**E**	**E**
Tiberon Dr to Lake Blvd	D	D	D	D	D	D

Project Improvements

1) The proposed improvement for the traffic effect on Thunder Drive is to widen the street into the site along the project frontage and restrict parking on the project side of the street between the two proposed project driveways. The City's Bicycle Master Plan has a recommended Class 3 bike route on Thunder Dr. If the City requires bike sharrows or bike route signs along the project frontage, then the applicant will install.

2) The applicant will widen Plaza Drive along the project frontage to the General Plan classification of a Secondary Collector; however, the applicant will only stripe this segment with 3 travel lanes (2 eastbound lanes and 1 westbound lane) and a center two way left turn lane in order to match the existing westbound single travel lane configuration adjacent to the DMV all to the satisfaction of the City Engineer. Additionally, the following improvements will be made to the satisfaction of the City Engineer:

   a. Sidewalks will be installed on both sides of Plaza Drive along the project frontage.

   b. Bike lanes will be striped on both sides of Plaza Drive along the project frontage.

1.0 Introduction

The proposed CarMax auto sales dealership is to be located at the 4000 block of Plaza Drive just west of the Oceanside Department of Motor Vehicles in Oceanside, California. The general location of the project is shown in **Figure 1**. A site plan is shown in **Figure 2**.

This report describes the existing roadway network in the vicinity of the project and includes a review of existing and proposed activities for weekday peak and daily traffic conditions when the project is completed. The format of this study includes the following chapters:

1.0 Introduction
2.0 Alternative Transportation Mode Assessment
3.0 Traffic Analysis
4.0 Conclusion

Figure 1: Project Location

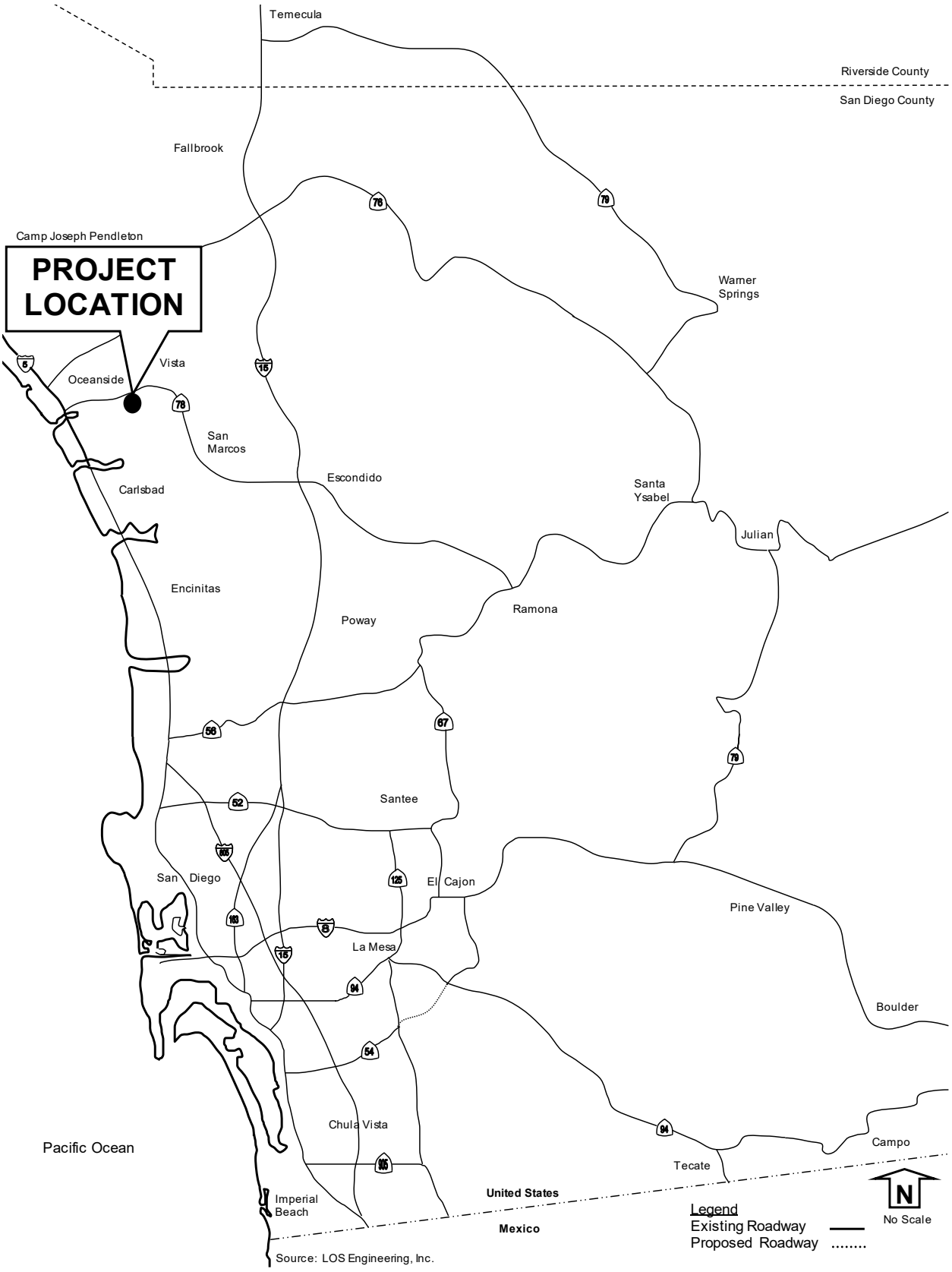
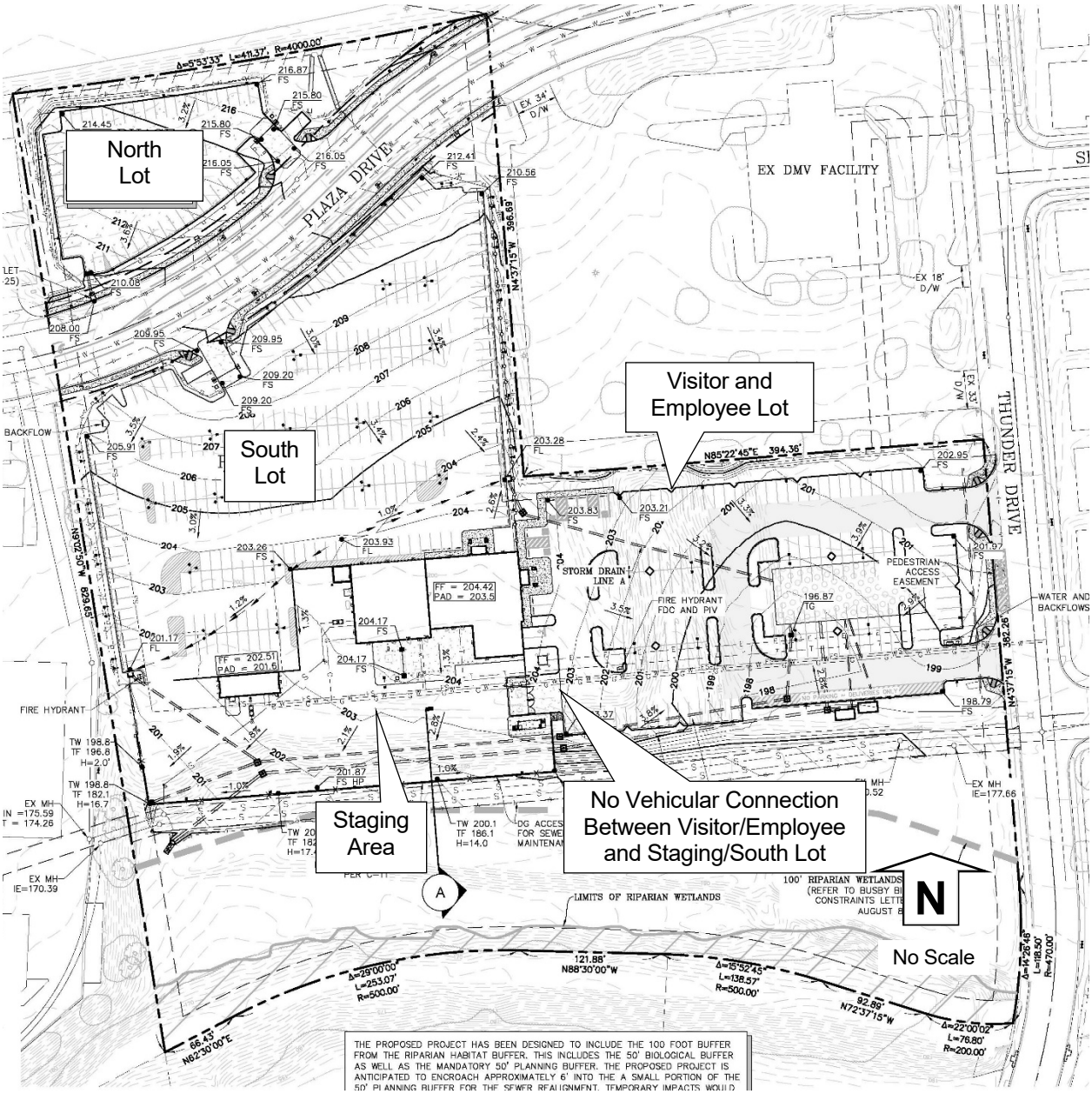


Figure 2: Site Plan



Source: REC Consultants, Inc.

2.0 Alternative Transportation Mode Assessment

The following transportation modes were analyzed based on criteria outlined in the City of Oceanside *Draft Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment*, August 2020:

1) Pedestrian: Documentation of pedestrian infrastructure available including any opportunities or deficiencies such as path obstructions or missing sidewalk from the project access points extending ½ mile walking distance or to the nearest intersection with a classified roadway/connection with a Class I path.

2) Bicycle: Documentation of bicycle infrastructure available including any opportunities or deficiencies such as bike lanes, bike buffers, or bike boxes from the project access points extending in each direction to the nearest intersection with a classified roadway or connection with a Class I path.

3) Transit: Identification of transit stops or routes existing within ½ mile walking distance of each pedestrian project access point.

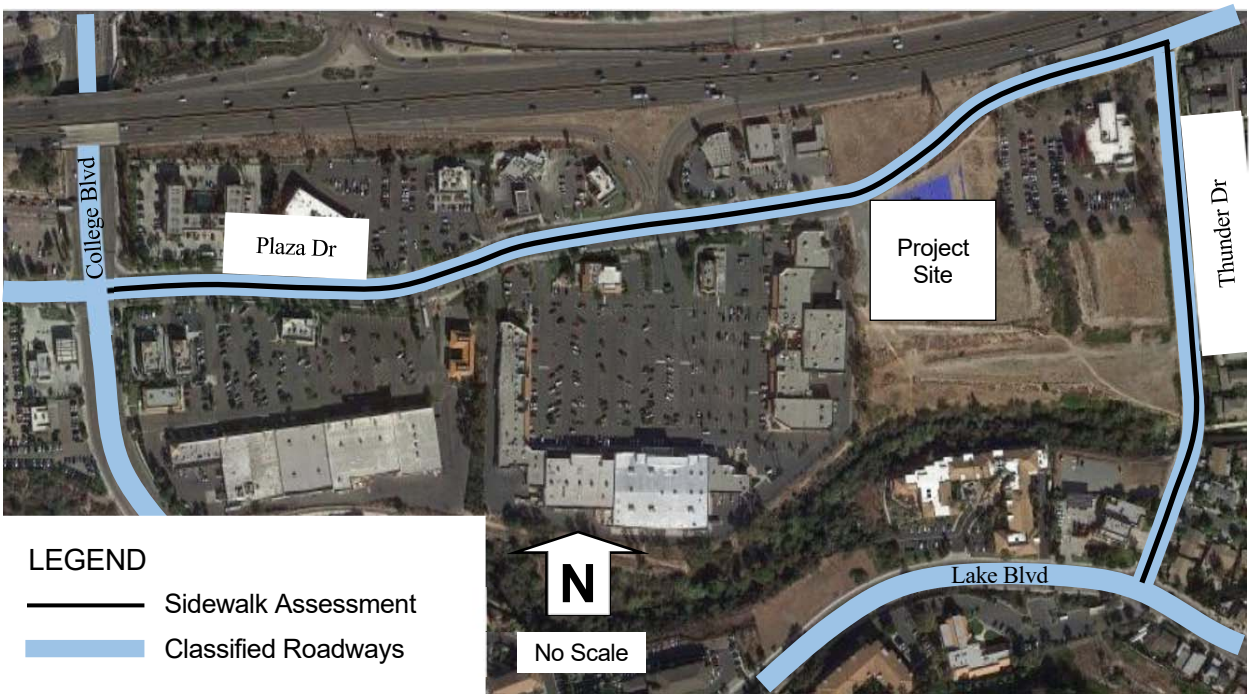
2.1 Pedestrian

The pedestrian analysis consists of documenting pedestrian infrastructure available including any opportunities or deficiencies such as path obstructions or missing sidewalk from the project access points extending to the nearest intersection with a classified roadway or to a connection with a Class I path.

> Plaza Dr from College Blvd (nearest intersection with a classified roadway) easterly to the project site there are either non-contiguous or contiguous sidewalks on both sides of the street. There are no sidewalks along the project frontage on Plaza Dr. From the project site easterly to Thunder Dr (nearest intersection with a classified roadway) there are contiguous sidewalks on the south side of the street and no sidewalk on the north side of the street. There were no major sidewalk obstructions observed along the roadway segments that had sidewalks.
>
> Thunder Dr from Plaza Dr to Lake Blvd (nearest intersection with a classified roadway) has either non-contiguous or contiguous sidewalks on both sides of the street. There were no major sidewalk obstructions observed along this segment.

As part of the project, the applicant is widening Plaza Drive and installing sidewalks on both side of the street along the project frontage. The remaining existing pedestrian infrastructure from College Blvd to Thunder Drive did not have any deficiencies except for the north side of Plaza Dr from the project site easterly to Thunder Drive where the north side is missing a sidewalk. The pedestrian study elements are shown in **Figure 3**.

Figure 3: Pedestrian Elements



Source: Google Maps

2.2 Bicycle

The bicycle analysis consists of documenting bicycle infrastructure available including any opportunities or deficiencies such as bike lanes, bike buffers, or bike boxes from the project access points extending in each direction to the nearest intersection with a classified roadway or connection with a Class I path.

> Plaza Dr from College Blvd to Thunder Dr (study limits identified by the nearest intersection with a classified roadway) has a recommended Class 3 bike route identified in the *City of Oceanside Bicycle Master Plan 2017 Update* (**Appendix A**). This segment of Plaza Dr did not have any observed bike lane nor bike route signs.
>
> Thunder Dr from Plaza Dr to Lake Blvd (study limits identified by the nearest intersection with a classified roadway) has a recommended Class 3 bike route identified in the *City of Oceanside Bicycle Master Plan 2017 Update.* This segment of Thunder Dr did not have any observed bike lane nor bike route signs.

As part of the project, the applicant is widening Plaza Drive and installing bike lanes on both sides of the street along the project frontage. If the City requires bike sharrows or bike route signs along the project frontage on Thunder Drive, then the applicant will install. The bicycle study elements are shown in **Figure 4**.

Figure 4: Bicycle Elements

Source: Google Maps

2.3 Transit

The transit analysis includes identifying the closest transit routes and stops to the project. If the stops are within ½ mile walking distance of the project access, the condition of the closest stop amenities are described. North County Transit District (NCTD) lists Bus Route 323 within ½ mile walking distance from the project access points/driveways. The closest bus stops to the project site are located on Lake Blvd just west of Thunder Dr.

The bus stop for westbound travel on Lake Blvd is located a walking distance of approximately 710 feet from the project access on Thunder Dr. The bus stop includes a bench and trash receptacle. The bus stop is in good condition.

The bus stop for eastbound travel on Lake Blvd is located a walking distance of approximately 940 feet from the project access on Thunder Dr. The bus stop includes only a trash receptacle. The bus stop is in good condition.

No transit improvements are proposed as part of this project. A summary of the service times is shown in **Table 1** for weekdays and **Table 2** for weekend days. The noted bus schedules are included in **Appendix B**.

TABLE 1: WEEKDAY BUS SERVICE OPERATIONS AND FREQUENCY

Bus Route	Weekday (Mon-Fri) Service Operations (Off-Peak Service Frequency Range)	7-9 AM Peak Hour Service Frequency	4-6 PM Peak Hour Service Frequency
Route 323	≈ 6:00 AM to ≈ 6:00 PM (≈ 60 minutes)	60 minutes	60 minutes

Notes: Above service times are summaries, thus please refer to Appendix E for exact service details.

TABLE 2: WEEKEND BUS SERVICE OPERATIONS AND FREQUENCY

Bus Route	Saturday Service Operations (Service Frequency Range)	Sunday Service Operations (Service Frequency Range)
Route 323	No scheduled service	No scheduled service

The nearby transit routes and bus stops are shown in **Figure 5**.

Figure 5: Transit Elements

Source: Google Maps

3.0 Traffic Analysis

The traffic analysis includes the study of specific scenarios, analysis of roadway operations, and determination of potential off-site improvements. Details for each of these parameters are include herein.

3.1 Study Area and Scenario Criteria

The project study area is generally determined by the limits or extent of where 50 peak hour project trips would travel in either direction to or from the site, which is based on the City of Oceanside *Draft Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment,* August 2020 (excerpts included in **Appendix D**). Additionally, the study area can also be identified by City staff, which was the basis for the following study area.

For this project, the following intersections were analyzed as part of this study:

1) Vista Way/College Blvd (Signalized)
2) Plaza Dr/College Blvd (Signalized)
3) Plaza Dr/SR-78 (Signalized)
4) Plaza Dr/Project S. Lot Driveway (future driveway, currently does not exist)
5) Plaza Dr/Thunder Dr (Signalized)
6) Thunder Dr/North Project Driveway (future driveway, currently does not exist)
7) Thunder Dr/South Project Driveway (future driveway, currently does not exist)
8) Thunder Dr/Lake Blvd (Signalized)
9) Plaza Dr/Project N. Lot Driveway (future driveway, currently does not exist)

The following street segments were analyzed as part of this study:

1) College Blvd from Vista Way to Plaza Dr
2) Plaza Dr from College Blvd to SR-78 EB Ramp
3) Plaza Dr from SR-78 EB Ramp to Thunder Dr
4) Thunder Dr from Plaza Dr to Tiberon Dr
5) Thunder Dr from Tiberon Dr to Lake Blvd

The number of scenarios to be analyzed is typically based on the size of the project, the number of cumulative projects and whether the project conforms to current zoning. For this project, the following scenarios were included based on direction from City engineering staff:

1) Existing Conditions
2) Existing + Project Conditions
3) Existing + Cumulative Conditions
4) Existing + Cumulative + Project Conditions
5) Horizon Year 2030 (Master Transportation Roadway Plan) Conditions
6) Horizon Year 2030 (Master Transportation Roadway Plan) plus project Conditions

3.2 Traffic Analysis Criteria

The traffic analyses prepared for this study were based on the *Highway Capacity Manual* (HCM) operations analysis using Level of Service (LOS) evaluation criteria. The operating conditions of the study intersections, street segments, and freeway segments were measured using the HCM LOS designations, which ranges from A through F. LOS A represents the best operating condition and LOS F denotes the worst operating condition. The LOS criteria for each roadway component are described below.

3.2.1 Intersections

The study intersections were analyzed based on the **operational analysis** outlined in the 6th Ed HCM. This process defines LOS in terms of **average control delay** per vehicle, which is measured in seconds. LOS at the intersections were calculated using the computer software program Synchro 10 (Trafficware Corporation). The 6th Ed HCM LOS for the range of delay by seconds for un-signalized and signalized intersections is described in **Table 3**.

TABLE 3: INTERSECTION LEVEL OF SERVICE DEFINITIONS (6TH EDITION HCM)

Level of Service	Un-Signalized (TWSC and AWSC) Control Delay (sec/veh where v/c ≤ 1)	Signalized Control Delay (sec/veh where v/c ≤ 1)
A	0-10	≤ 10
B	> 10-15	> 10-20
C	> 15-25	> 20-35
D	> 25-35	> 35-55
E	> 35-50	> 55-80
F	> 50	> 80

TWSC: Two Way Stop Control. AWSC: All Way Stop Control. Source: 6th Edition HCM (exhibit 20-2 for two way stop control, exhibit 21-8 for all way stop control, and exhibit 19-8 for signalized intersections).

3.2.2 Street Segments

The street segments were analyzed based on the functional classification of the roadway using the City of Oceanside *Average Daily Vehicle Trips* capacity lookup table. The roadway segment capacity and LOS standards used to analyze street segments are summarized in **Table 4**.

TABLE 4: STREET SEGMENT DAILY CAPACITY AND LOS (CITY OF OCEANSIDE)

Circulation Element Road Classification	Lanes	LOS A	LOS B	LOS C	LOS D	LOS E
Expressway	6	<30,000	<42,000	<60,000	<70,000	<80,000
Expressway	4	<25,000	<35,000	<50,000	<55,000	<60,000
Prime Arterial	6	<25,000	<35,000	<50,000	<55,000	<60,000
6-Lane Major Arterial	6	<20,000	<28,000	<40,000	<45,000	<50,000
5-Lane Major Arterial	5	<17,500	<24,500	<35,000	<40,000	<45,000
4-Lane Major Arterial	4	<15,000	<21,000	<30,000	<35,000	<40,000
Secondary Collector with TWLTL	4	<10,000	<14,000	<20,000	<25,000	<30,000
Secondary Collector no TWLTL	4	<9,000	<13,000	<18,000	<22,000	<25,000
Collector – Commercial Fronting	2	<5,000	<7,000	<10,000	<13,000	<15,000
Collector – Residential Fronting	2	<4,000	<5,500	<7,500	<9,000	<10,000
Local Street	2	na	na	<2,400	na	na

Source: City of Oceanside *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment*, August 2020.

3.2.3 Traffic Effect Thresholds

A project Owner/Permittee may be required to provide an off-site improvement if the project traffic exceeds the City of Oceanside *Draft Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment* (August 2020) defined thresholds as shown in **Table 5**.

TABLE 5: DETERMINATION OF THE NEED FOR ROADWAY IMPROVEMENTS

Level of Service with Project	Allowable Increase Due to Project Effect				
	Freeways	Roadway Segments		Intersections	Ramp Metering
	V/C	V/C	Speed (mph)	Delay (sec.)	Delay (min.)
E & F	0.01	0.02	1	2	2*

Source: City of Oceanside *Draft Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment* (August 2020).

3.3 Existing Conditions

This section describes the study area street system, existing daily roadway, peak hour intersection traffic volumes, and existing LOS conditions.

3.3.1 Existing Street System

In the vicinity of the project site, the following roadways were analyzed as part of this study, which are described below. The roadway classification was obtained from the City of Oceanside General Plan *Circulation Element*, September 2012 (excerpts included in **Appendix F**).

College Boulevard is classified as a *Major Arterial* from Vista Way to Plaza Drive. This segment of College Boulevard is generally constructed as a 6-lane roadway with three lanes in each direction along with Class II bike lanes in each direction. The road has either a painted median (double-double yellow) or a raised median just south of Vista Way.

Plaza Drive is classified as a *Secondary Collector* from College Boulevard to Thunder Drive. Plaza Dr from College Boulevard to approximately 300 ft past SR-78 Ramps is constructed as a 4-lane roadway with two lanes in each direction. Along the project frontage, Plaza Dr is constructed as a 2-lane undivided roadway. East of the project site and along the DMV frontage, Plaza Dr is generally constructed as a 3-lane roadway (2 EB lanes and 1 WB lane) along with a center Two Way Left Turn Lane (TWLTL). The posted speed limit is 35 MPH.

Thunder Drive is classified as a *Collector Road* from Plaza Drive to Lake Blvd. This segment of Thunder Drive is constructed as a 2-lane roadway with one travel lane in each. The posted speed limit is 25 MPH.

3.3.2 Existing Traffic Volumes and LOS Analyses

Existing 7-9 AM and 4-6 PM peak period traffic volume data were collected on Tuesday, July 23, 2019 at the following intersections:

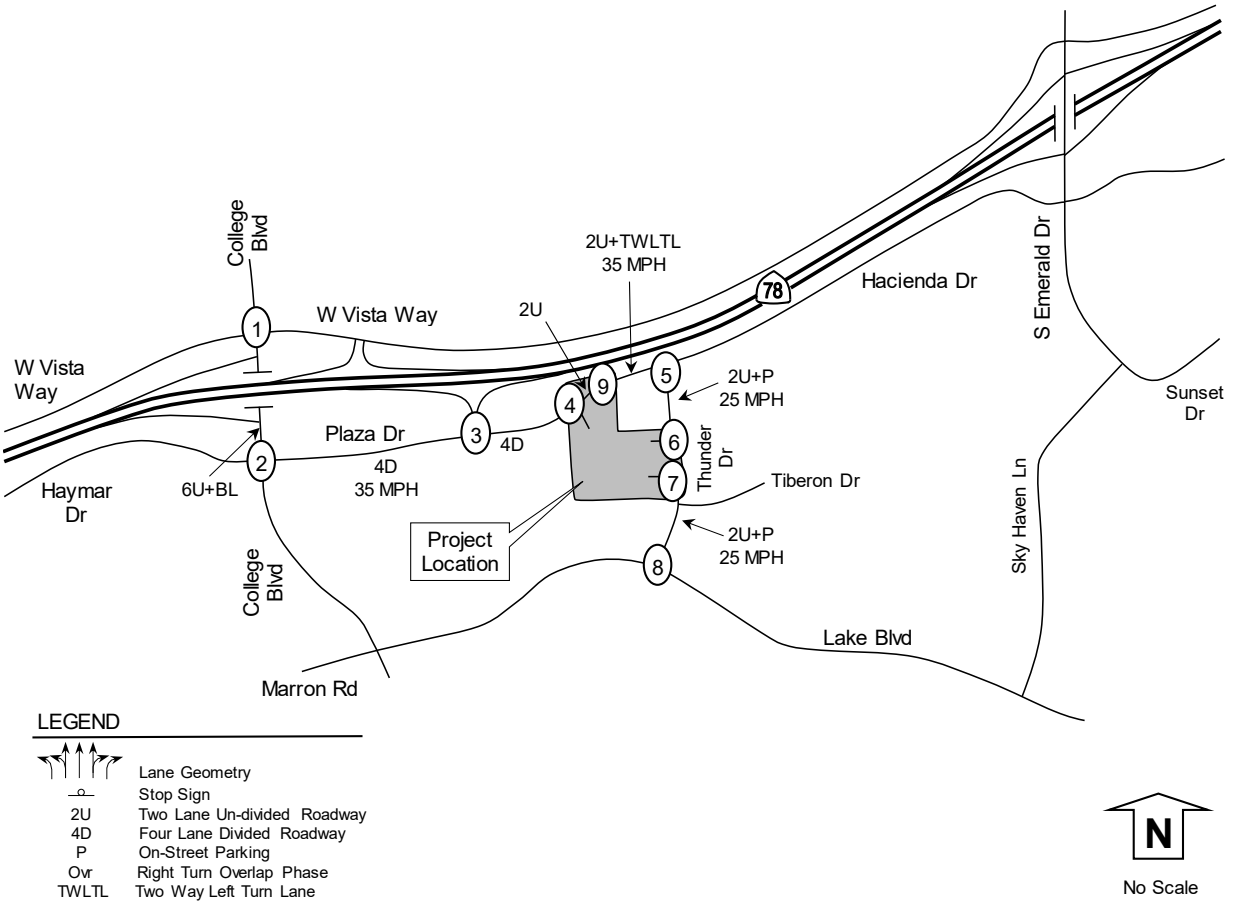
1) Vista Way/College Blvd
2) Plaza Dr/College Blvd
3) Plaza Dr/SR-78
4) Plaza Dr/Project S. Lot Driveway (Does not exist, thus peak hour through volumes used for driveway analysis were obtained from Plaza Dr segment count)
5) Plaza Dr/Thunder Dr
6) Thunder Dr/North Project Driveway (Does not exist, thus peak hour through volumes used for driveway analysis were obtained from Thunder Dr segment count)
7) Thunder Dr/South Project Driveway (Does not exist, thus peak hour through volumes used for driveway analysis were obtained from Thunder Dr segment count)
8) Thunder Dr/Lake Blvd
9) Plaza Dr/Project N. Lot Driveway (Does not exist, thus peak hour through volumes used for driveway analysis were obtained from Plaza Dr segment count)

The following street segment volumes were also collected on Tuesday, July 23, 2019:

1) College Blvd from Vista Way to Plaza Dr
2) Plaza Dr from College Blvd to SR-78 EB Ramp
3) Plaza Dr from SR-78 EB Ramp to Thunder Dr
4) Thunder Dr from Plaza Dr to North Project Driveway
5) Thunder Dr from South Project Driveway to Lake Blvd

Existing traffic, pedestrian, and bicycle counts are included in **Appendix E.** The existing roadway conditions are shown in **Figure 6** and the existing AM, PM, and daily volumes are shown on **Figure 7.**

Figure 6: Existing Roadway Conditions



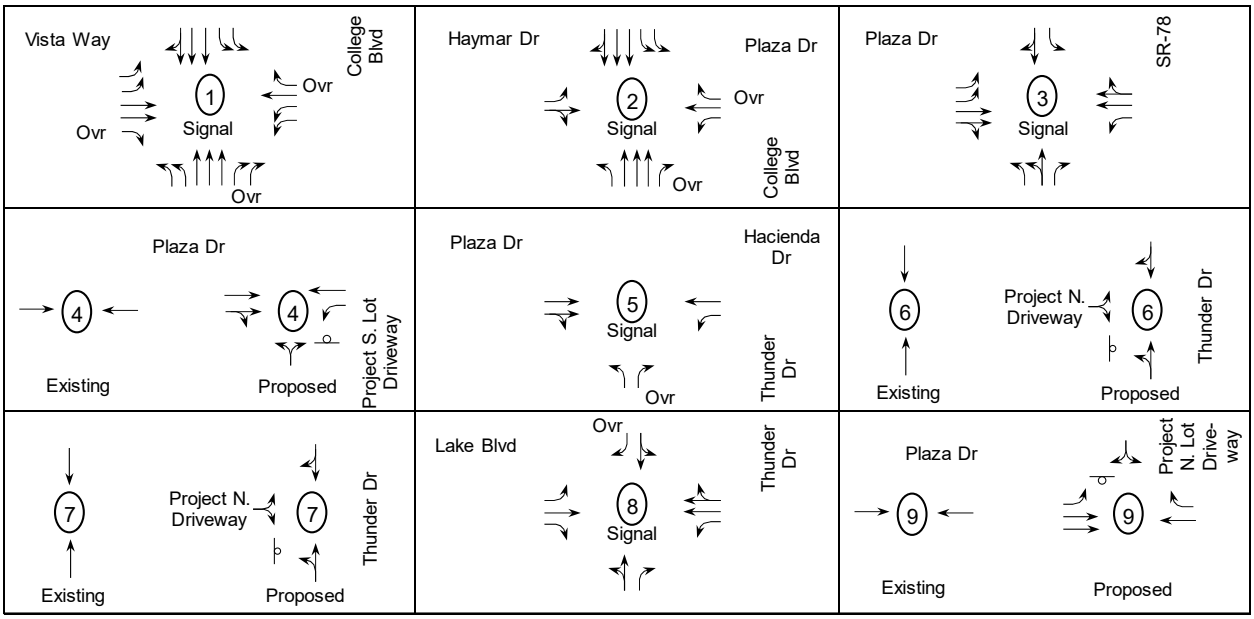
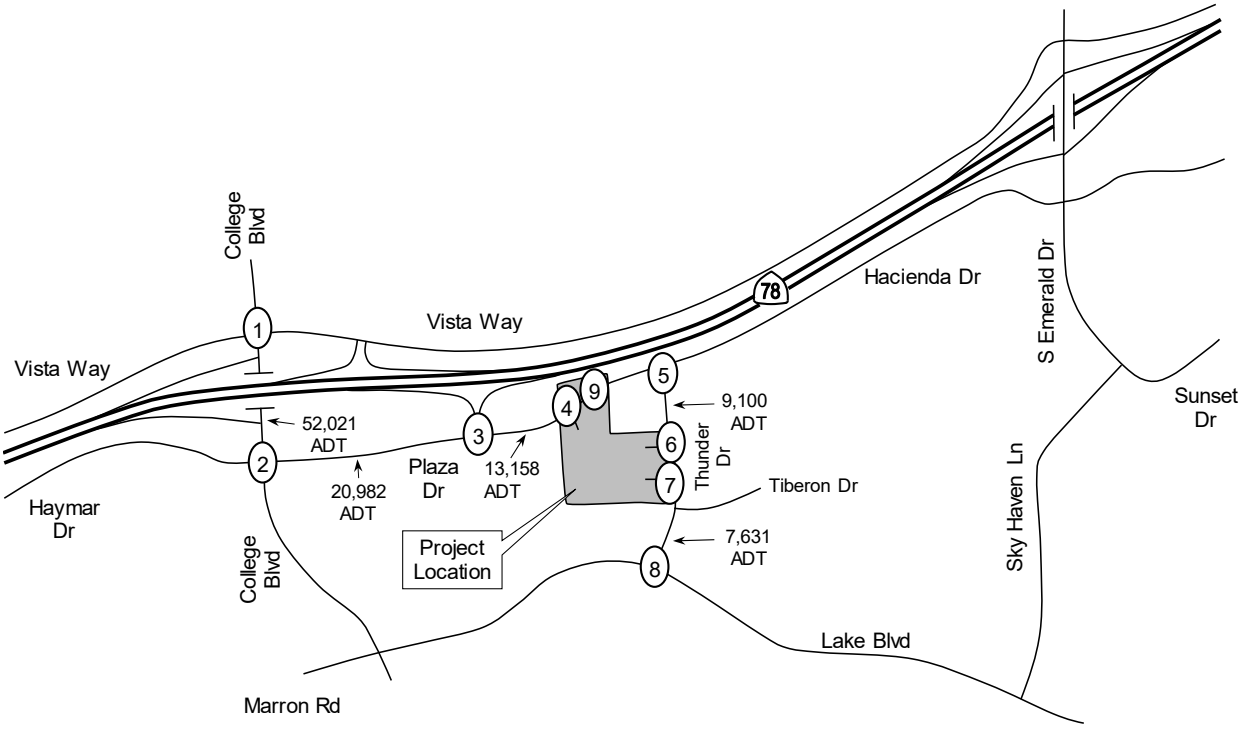


Figure 7: Existing Volumes



LEGEND

XX	AM peak hour volumes at intersections
(YY)	PM peak hour volumes at intersections
Z,ZZZ	ADT volumes shown along segments
(#)	Intersection Reference Number to LOS Tables
——	Existing Roadways

N

No Scale

Vista Way: 43 (97) / 1299 (1062) / 24 (23); College Blvd: 255 (303) / 257 (341) / 386 (464); 42 (120) / 111 (181) / 361 (425); 170 (359) / 660 (1438) / 558 (578)	Haymar Dr: 74 (87) / 1196 (1220) / 563 (664); Plaza Dr: 199 (470) / 16 (17) / 113 (168); 58 (79) / 31 (59) / 14 (11); 23 (29) / 606 (1270) / 188 (303); College Blvd	Plaza Dr: 31 (24) / 19 (55) / 71 (132); SR-78: 32 (53) / 225 (431) / 36 (110); 568 (636) / 156 (302) / 22 (83); 35 (180) / 11 (48) / 7 (53)
Plaza Dr: 231 (511) / 294 (573); 0 () / 0 (); 0 () / 0 (); Project S. Lot Driveway	Plaza Dr: 167 (363) / 176 (391); 52 (153) / 184 (216); 115 (159) / 94 (262); Thunder Dr; Hacienda Dr	Project N. Driveway: 0 () / 206 (316); 0 () / 0 (); 0 () / 168 (375); Thunder Dr
Project S. Driveway: 0 () / 206 (316); 0 () / 0 (); 0 () / 168 (375); Thunder Dr	Lake Blvd: 169 (137) / 3 (2) / 51 (140); Thunder Dr: 62 (99) / 387 (294) / 1 (3); 82 (265) / 202 (580) / 2 (3); 3 (2) / 1 (4) / 0 (2)	Plaza Dr: 0 () / 0 (); 0 () / 231 (511); 0 () / 294 (573); Project N. Lot Driveway

The LOS calculated for the intersections and street segments are shown in **Tables 6 and 7**, respectively. Intersection calculations are included in **Appendix F**.

TABLE 6: EXISTING INTERSECTION LEVEL OF SERVICE

Intersection and (Analysis)[1]	Movement	Study Period	Existing Delay[2]	Existing LOS[3]
1) College Blvd at	All	AM	27.7	C
Vista Way (S)	All	PM	31.7	C
2) College Blvd at	All	AM	18.7	B
Plaza Dr (S)	All	PM	31.8	C
3) Plaza Dr at	All	AM	23.9	C
SR-78 EB Ramp (S)	All	PM	31.5	C
4) Plaza Dr at	NB LR	AM	DNE	NA
Project S. Dwy (U)	NB LR	PM	DNE	NA
5) Plaza Dr at	All	AM	14.2	B
Thunder Dr (S)	All	PM	15.1	B
6) Thunder Dr at	EB LR	AM	DNE	NA
Project N. Dwy (U)	EB LR	AM	DNE	NA
7) Thunder Dr at	EB LR	AM	DNE	NA
Project S. Dwy (U)	EB LR	AM	DNE	NA
8) Thunder Dr at	All	AM	16.0	B
Lake Blvd (S)	All	PM	30.1	C
9) Plaza Dr at	SB LR	AM	DNE	NA
Project N. Dwy (U)	SB LR	PM	DNE	NA

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds. 3) LOS: Level of Service. DNE: Does Not Exist. NA: Not Applicable.

TABLE 7: EXISTING ADT VOLUMES AND LEVEL OF SERVICE

Segment	Circulation Element Roadway Classification (as built)	LOS E Capacity	Existing Daily Volume	Existing V/C	Existing LOS
College Boulevard					
Vista Way to Plaza Dr	6 Lane Major (6D)	50,000	52,021	1.040	**F**
Plaza Drive					
College Blvd to SR-78 EB Ramp	Secondary Coll. (4D)	30,000	20,982	0.699	D
SR-78 EB Ramp to Thunder Dr	Secondary Coll. (2U)	15,000	13,158	0.877	**E**
Thunder Drive					
Plaza Dr to Tiberon Dr	Collector (2U)	10,000	9,100	0.910	**E**
Tiberon Dr to Lake Blvd	Collector (2U)	10,000	7,631	0.763	D

Notes: 6D=6 lane divided roadway. Daily volume is a 24 hour volume. LOS:Level of Service. V/C:Volume to Capacity Ratio

Under Existing conditions, the study intersections and segments are calculated to operate at LOS D or better except for:

1) Segment of College Blvd between Vista Way and Plaza Dr (LOS F),
2) Segment of Plaza Dr between SR-78 EB Ramp and Thunder Dr (LOS E), and
3) Segment of Thunder Dr between Plaza Dr and Tiberon Dr (LOS E).

3.4 Project Traffic Generation

The project traffic generation was calculated using a trip generation rate based on a survey of three open and operating CarMax dealerships. The trip generation study was prepared by Kimley-Horn and Associates in September 2002 (copy included in **Appendix G**). The data from the CarMax sites was collected by placing tube counters across all site driveways. These tubes recorded all vehicles including employees, customers, test drives, deliveries, mail carriers, trash trucks, maintenance, and any other vehicle that crossed over the tubes. The Kimley-Horn study documented a trip rate of 41.48 ADT/ksf (1,000 square feet). This is conservative when compared to the latest Institute of Transportation Engineers (ITE) 10th Edition Trip Generation that documents a trip rate of 27.06 ADT/ksf for used automobile sales. Using the CarMax based trip generation rates, the project is forecasted to generate 475 ADT, 18 AM peak hour trips (11 inbound and 7 outbound), and 50 PM peak hour trips (31 inbound and 19 outbound) as shown in **Table 8**.

TABLE 8: PROJECT TRAFFIC GENERATION

Proposed						AM Peak Hour			PM Peak Hour		
Land Use	Rates & Size				Daily	IN	OUT	Total	IN	OUT	Total
CarMax	Rates:	41.48	/KSF			0.91	0.65	1.56	2.74	1.63	4.37
Used Auto Sales	Size:	11,447	SF	Trips:	**475**	11	7	**18**	31	19	**50**

Source: CarMax Trip Generation Study, Kimley-Horn and Associates (Sept 2002). KSF - 1,000 Square Feet.
Daily: 24 hour traffic.

3.5 Project Access

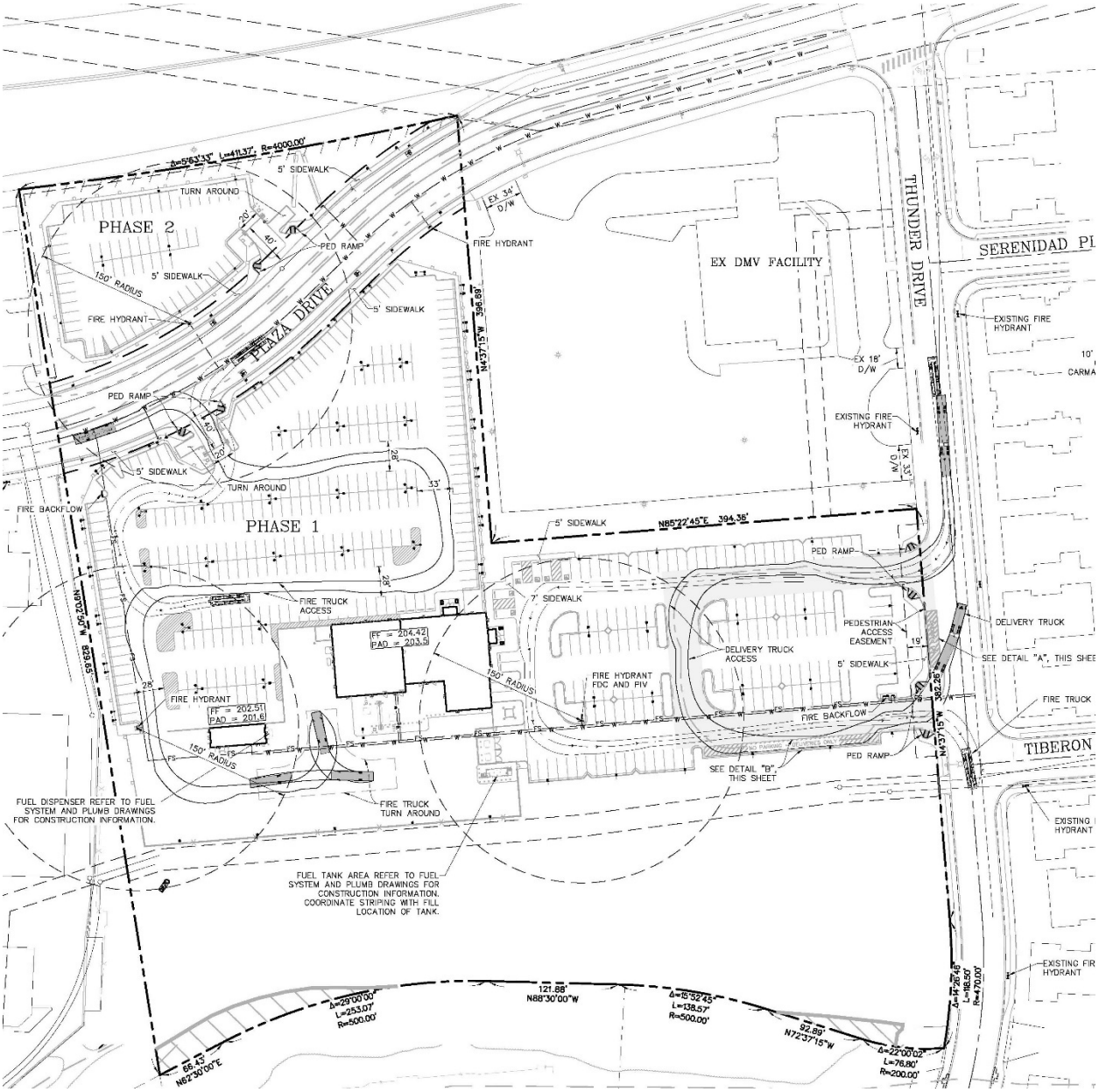
The project will have four driveways for access. Two driveways are on Plaza Dr for sales personnel and test drivers only. Arriving customers will use Thunder Dr for on-site customer parking. The project will have two driveways along Thunder Dr for customer parking, employee parking, and delivery of vehicles with 18-wheeler car carriers. Turning templates for the 18-wheeler car carriers using Thunder Dr are shown in **Figure 8**. Once vehicles are unloaded from the car carriers, employees will drive the cars to the main lot using Plaza Dr.

There is no internal vehicular connection between the "sales" parking areas adjacent to Plaza Dr and the other lot adjacent to Thunder Dr used for customers, employees, and deliveries. This is to keep customers from driving their personal vehicles around the main "sales" lot areas. Customer can walk between the main "sales" lot and customer parking lot.

3.6 Project Distribution and Assignment

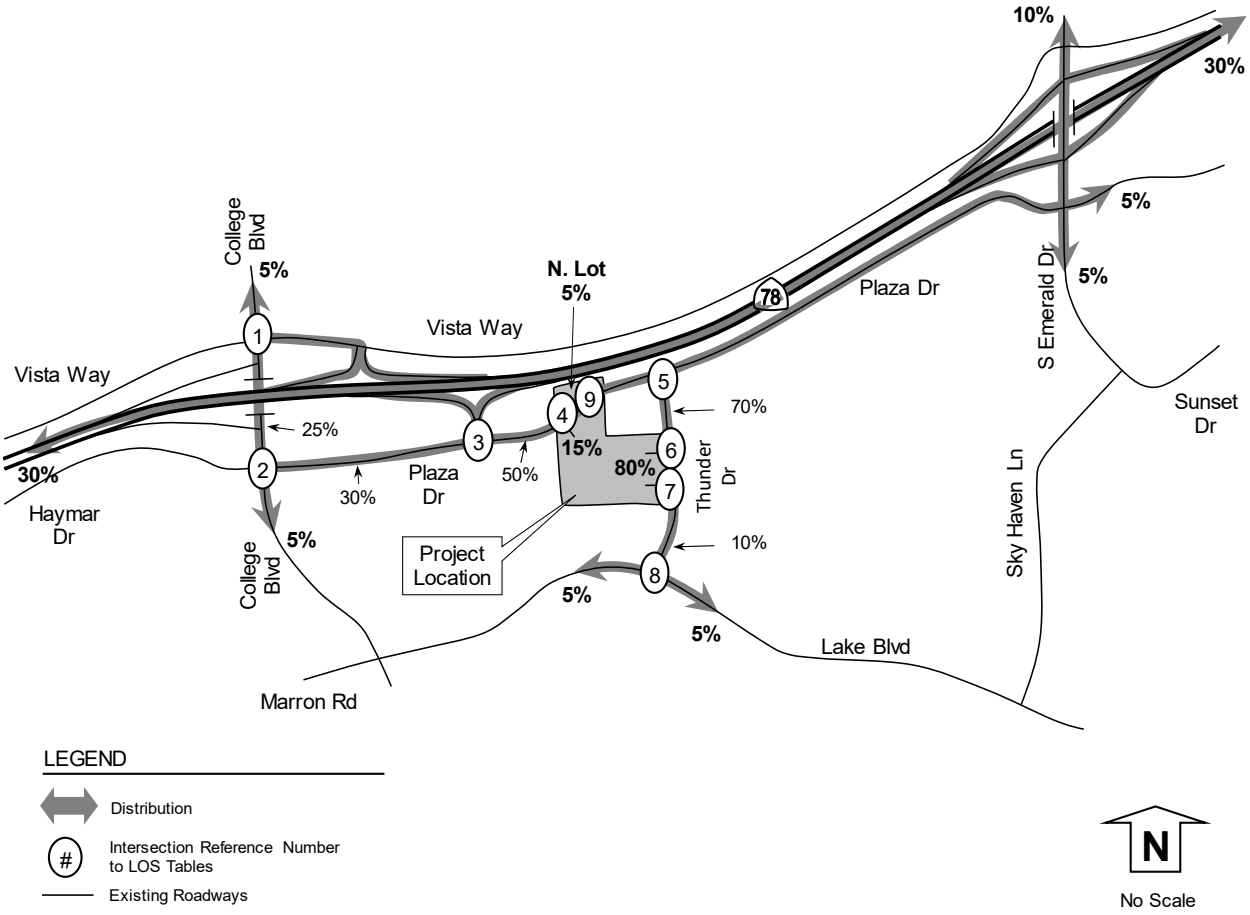
Project trips were distributed to the adjacent roadways based on regional and local attractors; the project location between two freeway interchanges; and potential drive testing routes. The distribution accounts for 80% of the customers, employees, and deliveries using Thunder Dr while 20% for test drivers and vehicle shuttling by employees using Plaza Dr. The project distribution is shown in **Figure 9**. The project trip assignment is shown in **Figure 10**.

Figure 8: Project Access Turning Templates



Source: REC Consultants, Inc.

Figure 9: Project Distribution



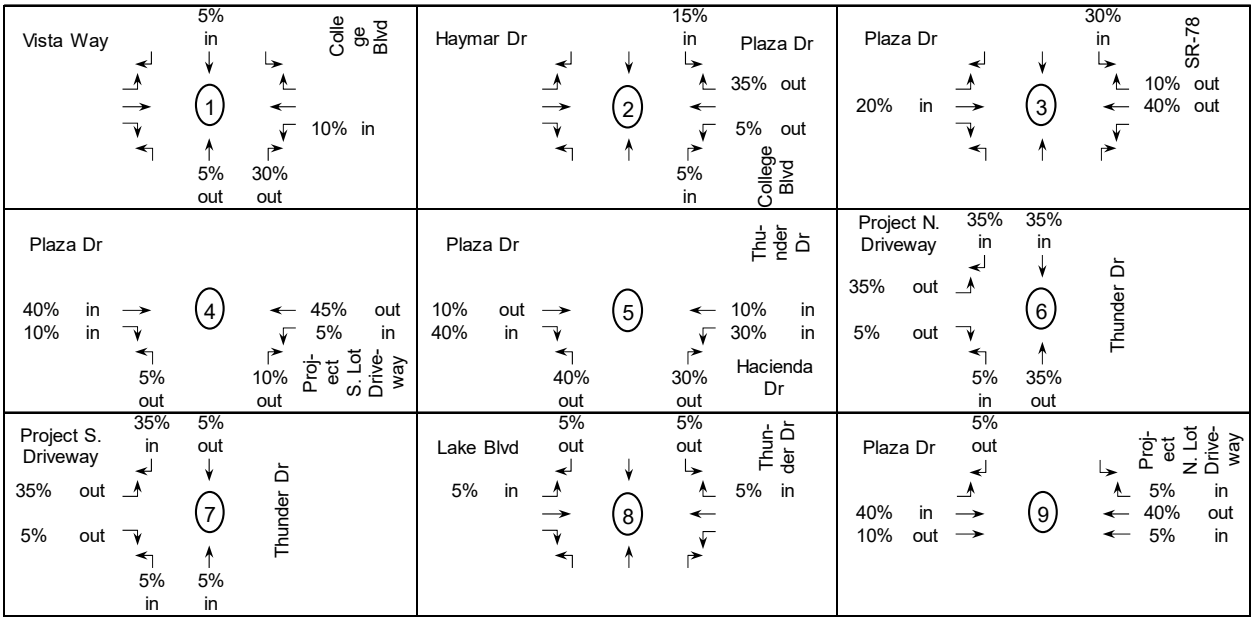
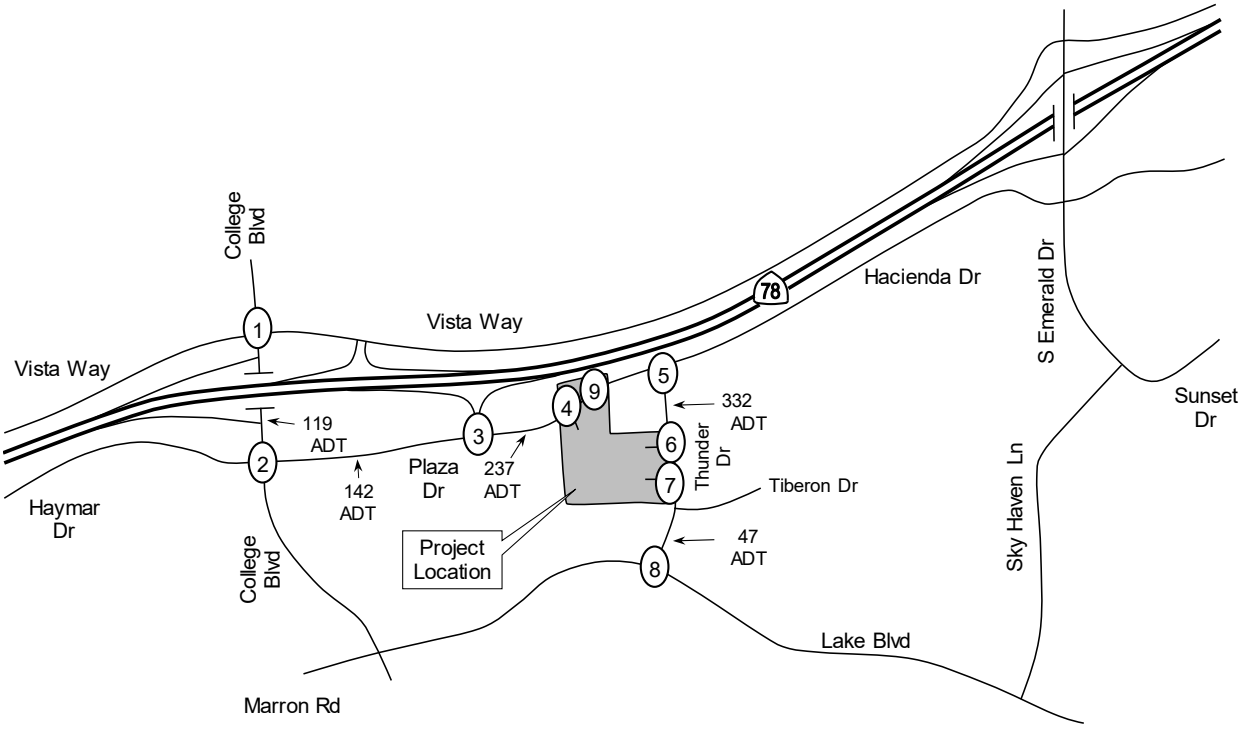


Figure 10: Project Volumes

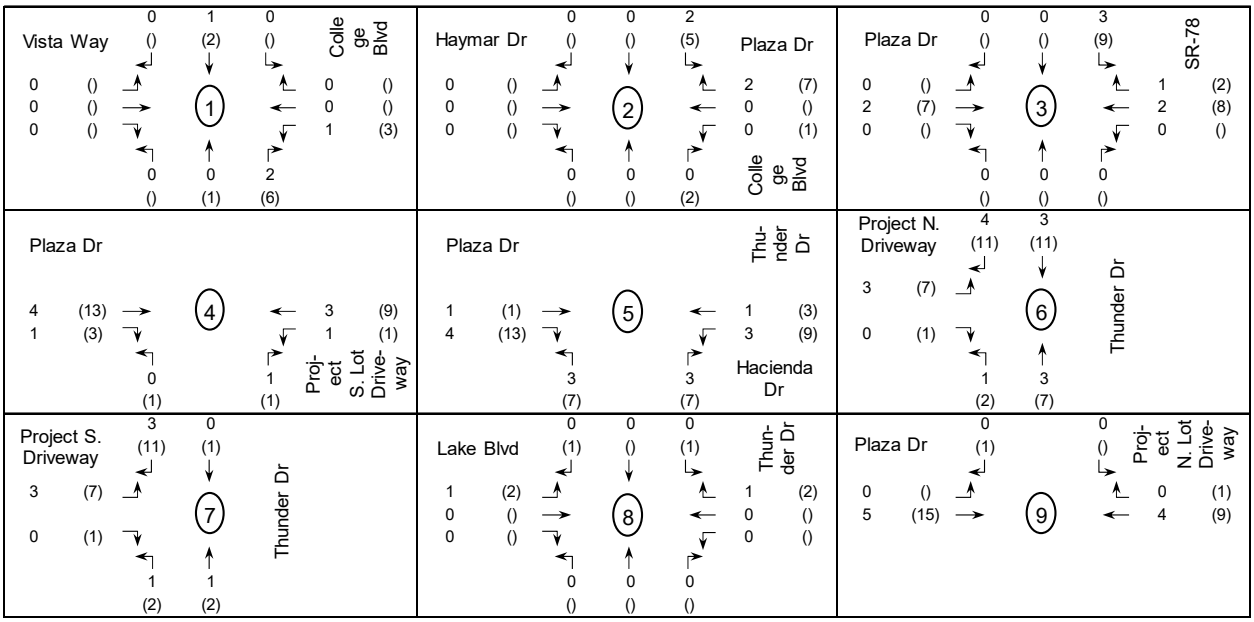


LEGEND

XX	AM peak hour volumes at intersections
(YY)	PM peak hour volumes at intersections
Z,ZZZ	ADT volumes shown along segments
(#)	Intersection Reference Number to LOS Tables
——	Existing Roadways

N

No Scale



3.7 Existing + Project Conditions

This scenario analyzes the addition of project traffic onto the existing background traffic for AM, PM, and daily conditions. The peak hour intersection volumes and daily traffic volumes for this scenario is shown in **Figure 11**. The LOS calculated with the addition of project traffic for intersections and street segments are shown in **Tables 9 and 10,** respectively. Intersection calculations are included in **Appendix H**.

TABLE 9: EXISTING + PROJECT INTERSECTION LEVEL OF SERVICE

Intersection and	Movement	Study	Existing		Existing + Project			
(Analysis)[1]		Period	Delay[2]	LOS[3]	Delay[2]	LOS[3]	Delta[4]	Effect?[5]
1) College Blvd at	All	AM	27.7	C	27.7	C	0.0	No
Vista Way (S)	All	PM	31.7	C	31.8	C	0.1	No
2) College Blvd at	All	AM	18.7	B	18.7	C	0.0	No
Plaza Dr (S)	All	PM	30.8	C	31.1	C	0.3	No
3) Plaza Dr at	All	AM	23.9	C	24.0	C	0.1	No
SR-78 EB Ramp (S)	All	PM	31.5	C	32.2	C	0.7	No
4) Plaza Dr at	NB LR	AM	DNE	NA	9.0	A	NA	No
Project S. Dwy (U)	NB LR	PM	DNE	NA	17.1	C	NA	No
5) Plaza Dr at	All	AM	14.2	B	14.3	B	0.1	No
Thunder Dr (S)	All	PM	15.1	B	15.5	B	0.4	No
6) Thunder Dr at	EB LR	AM	DNE	NA	11.1	B	NA	No
Project N. Dwy (U)	EB LR	AM	DNE	NA	14.5	B	NA	No
7) Thunder Dr at	EB LR	AM	DNE	NA	11.1	B	NA	No
Project S. Dwy (U)	EB LR	AM	DNE	NA	14.4	B	NA	No
8) Thunder Dr at	All	AM	16.0	B	16.0	B	0.0	No
Lake Blvd (S)	All	PM	30.1	C	30.4	C	0.3	No
9) Plaza Dr at	SB LR	AM	DNE	NA	0.0	A	NA	No
Project N. Dwy (U)	SB LR	PM	DNE	NA	12.5	B	NA	No

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds. 3) LOS: Level of Service. 4) Delta is the increase in delay from project. 5) Project effect if increase in traffic exceeds City's threshold. DNE: Does not exist. NA: Not Applicable.

TABLE 10: EXISTING + PROJECT ADT VOLUMES AND LEVEL OF SERVICE

	Circulation Element		Existing			Project	Existing + Project				
Segment	Roadway Classification (as built)	LOS E Capacity	Daily Volume	V/C	LOS	Daily Volume	Daily Volume	V/C	LOS	Change in V/C	Project Effect?
College Boulevard											
Vista Way to Plaza Dr	6 Lane Major (6D)	50,000	52,021	1.040	**F**	119	52,140	1.043	**F**	0.002	No
Plaza Drive											
College Blvd to SR-78 EB Ramp	Secondary Coll. (4D)	30,000	20,982	0.699	D	142	21,124	0.704	D	0.005	No
SR-78 EB Ramp to Thunder Dr	Secondary Coll. (2U)	15,000	13,158	0.877	**E**	237	13,395	0.893	**E**	0.016	No
Thunder Drive											
Plaza Dr to Tiberon Dr	Collector (2U)	10,000	9,100	0.910	**E**	332	9,432	0.943	**E**	0.033	**Yes**
Tiberon Dr to Lake Blvd	Collector (2U)	10,000	7,631	0.763	D	47	7,678	0.768	D	0.005	No

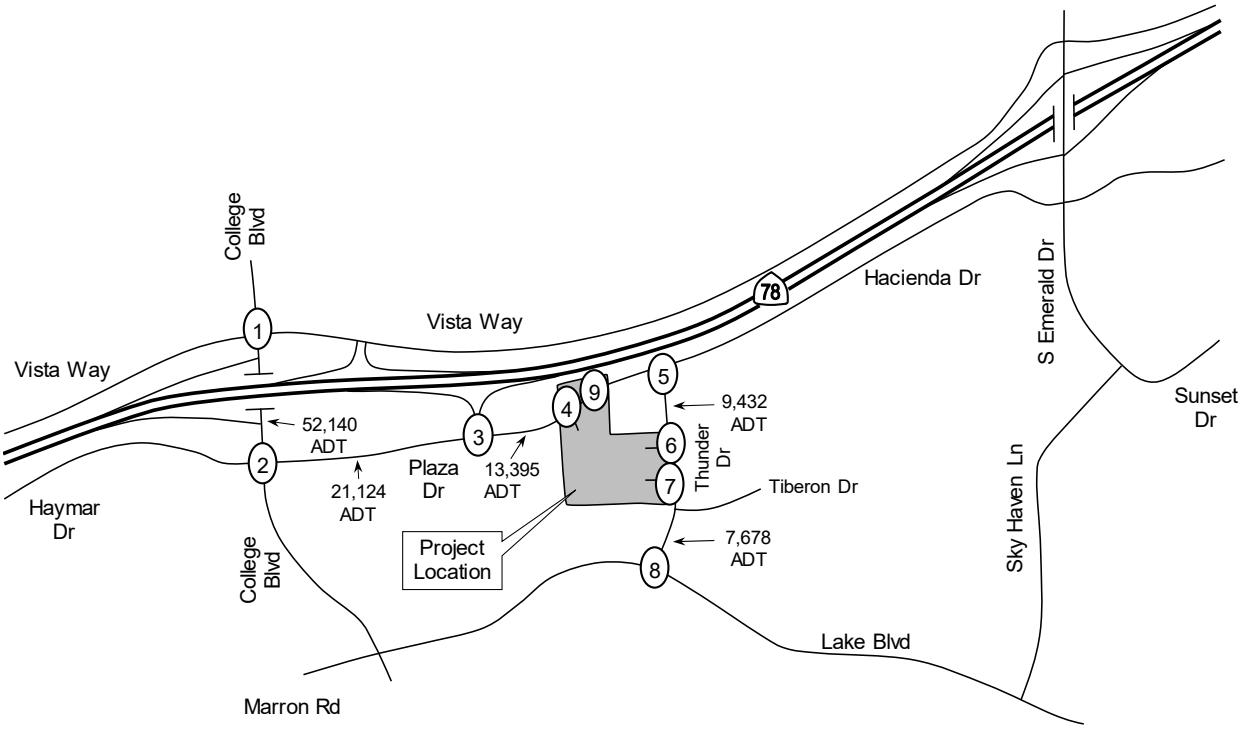
Notes: 6D=6 lane divided roadway. Daily volume is a 24 hour volume. LOS:Level of Service. V/C:Volume to Capacity Ratio.
Project effect if increase in traffic exceeds City's threshold.

Under Existing + Project conditions, the study intersections and segments were calculated to operate at LOS D or better except for the:

1) Segment of College Blvd between Vista Way and Plaza Dr (LOS F),
2) Segment of Plaza Dr between SR-EB Ramp to Thunder Dr (LOS E), and
3) Segment of Thunder Dr between Plaza Dr and Tiberon Dr (LOS E).

The project is calculated to cause a traffic effect on Thunder Drive between Plaza Drive and Tiberon Dr because the project exceeds the City's threshold.

Figure 11: Existing + Project Volumes

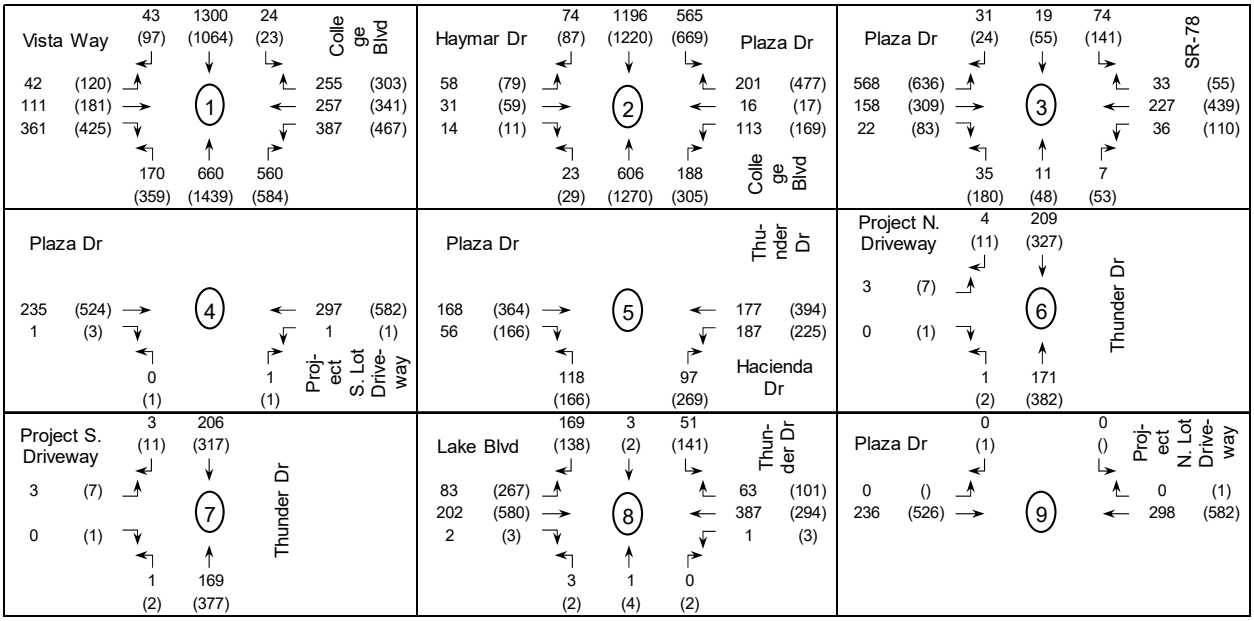


LEGEND

XX	AM peak hour volumes at intersections
(YY)	PM peak hour volumes at intersections
Z,ZZZ	ADT volumes shown along segments
(#)	Intersection Reference Number to LOS Tables
——	Existing Roadways

N

No Scale



3.8 Cumulative Projects

City of Oceanside staff provided traffic data on several foreseeable projects for the near-term (existing + cumulative) analysis. The cumulative project traffic volumes are shown on **Figure 12** with cumulative project details included in **Appendix I**. The following list includes a brief description of the cumulative projects:

1) Sky Haven Lane Condominiums: a 48-unit condominium project generally located on the southeast corner of Sky Haven Lane and Sunset Drive in the City of Vista. According to the Sky Haven Lane Condominium traffic study prepared by Darnell & Associates, Inc., this cumulative project is calculated to generate 384 daily trips with 31 AM and 38 PM trips.

2) Tri-City Medical Office Building: a 60,000 square foot medical office building located on the northwest corner of Vista Way and Tri City Hospital. The building is completed; however, the building was not occupied during traffic data collection. Therefore, it is included as a cumulative project. According to the Tri-City Medical Office Building traffic study prepared by Michael Baker International, this cumulative project is calculated to generate 3,000 daily trips with 180 AM and 330 PM trips.

3) Quarry Creek Master Plan: a master plan community with up to 656 homes generally located south of Haymar Drive and west of College Blvd. Based on field observations and available web data, approximately 20% to 40% of the homes and apartments were occupied during data collection. However, to be conservative only 20% was reduced from the total Quarry Creek trip generation. This resulted in the assignment of 80% of the Quarry Creek traffic in this near-term analysis. According to the Quarry Creek Master Plan traffic study prepared by Urban Systems Associates, Inc., the total project is calculated to generate 5,878 daily trips with 515 AM and 620 PM trips. The near-term assignment included 4,702 daily trips with 412 AM and 496 PM trips.

4) Children's Paradise Day Care: a day care for up to 196 students located at 5333 Marron Rd. The project is calculated to generate 980 daily trips with 166 AM and 176 PM trips.

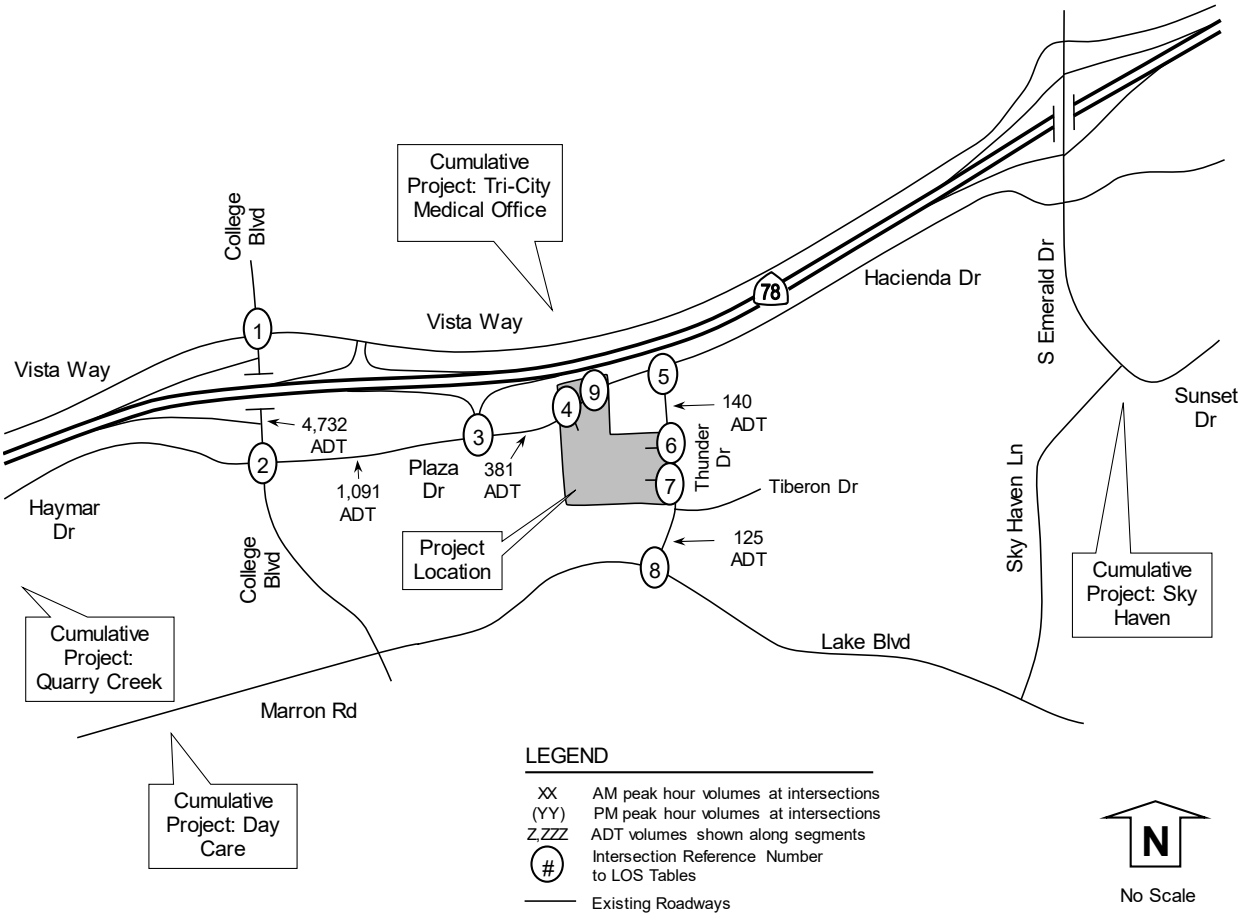
5) To account for distant and unforeseen cumulative projects, a 0.5% growth factor per year for two years (1% total) was applied to existing counts and added to the cumulative total.

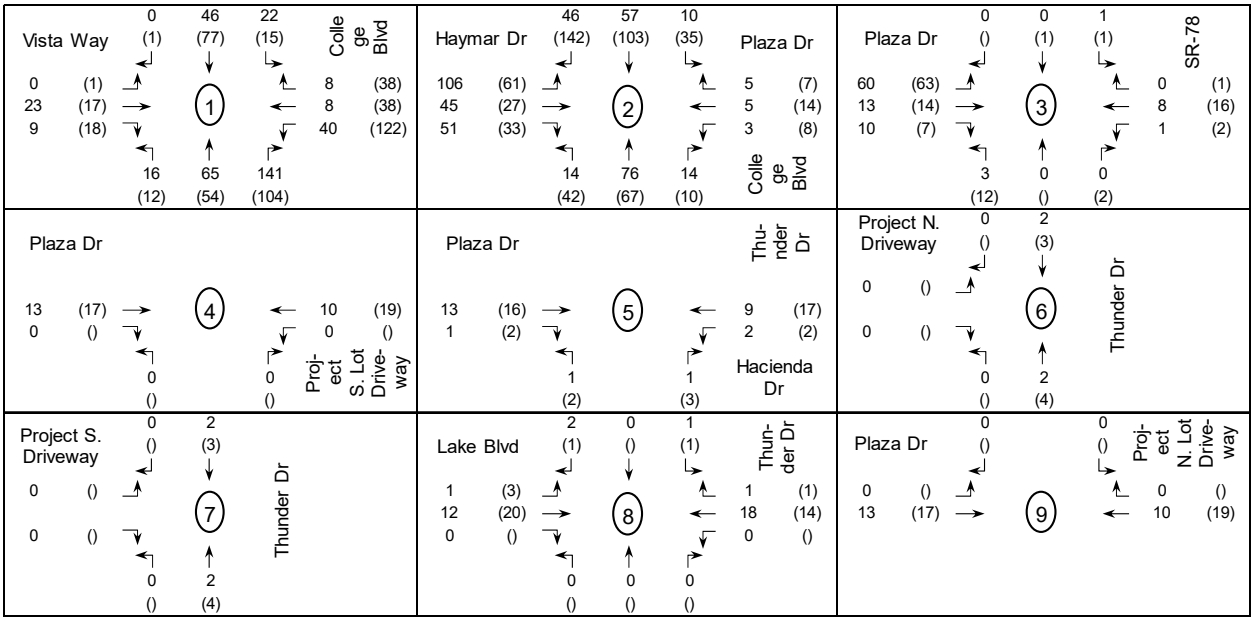
The traffic generated from the proposed cumulative projects is summarized in **Table 11**:

TABLE 11: CUMULATIVE PROJECT TRAFFIC GENERATION

Cumualtive		AM		PM	
Land Use	ADT	IN	OUT	IN	OUT
Sky Haven Lane Condominiums (48 units)	384	6	25	27	11
Tri-City Medical Office Building (60,000 sf)	3,000	144	36	99	231
Quarry Creek Master Plan	5,878	154	361	398	222
Childern's Paradise Day Care	980	83	83	88	88
Total:	**10,242**	**387**	**505**	**612**	**552**

Figure 12: Cumulative Project Locations and Volumes





3.9 Existing + Cumulative Conditions

This scenario analyzes the addition of cumulative project traffic onto the existing traffic for AM, PM, and daily conditions. The peak hour intersection volumes and daily traffic volumes for this scenario are shown in **Figure 13**.

The LOS calculated with the addition of cumulative traffic for intersections and street segments are shown in **Table 12** and **13**, respectively. Intersection calculations are included in **Appendix J**.

TABLE 12: EXISTING + CUMULATIVE INTERSECTION LEVEL OF SERVICE

Intersection and (Analysis)[1]	Movement	Peak Hour	Existing + Cumulative Delay[2]	Existing + Cumulative LOS[3]
1) College Blvd at	All	AM	29.4	C
Vista Way (S)	All	PM	37.3	D
2) College Blvd at	All	AM	24.5	C
Plaza Dr (S)	All	PM	44.0	D
3) Plaza Dr at	All	AM	24.8	C
SR-78 EB Ramp (S)	All	PM	34.3	C
4) Plaza Dr at	NB LR	AM	DNE	NA
Project S. Dwy (U)	NB LR	PM	DNE	NA
5) Plaza Dr at	All	AM	14.3	B
Thunder Dr (S)	All	PM	15.3	B
6) Thunder Dr at	EB LR	AM	DNE	NA
Project N. Dwy (U)	EB LR	AM	DNE	NA
7) Thunder Dr at	EB LR	AM	DNE	NA
Project S. Dwy (U)	EB LR	AM	DNE	NA
8) Thunder Dr at	All	AM	16.4	B
Lake Blvd (S)	All	PM	30.7	C
9) Plaza Dr at	SB LR	AM	DNE	NA
Project N. Dwy (U)	SB LR	PM	DNE	NA

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds. 3) LOS: Level of Service. DNE: Does Not Exist. NA: Not Applicable.

TABLE 13: EXISTING + CUMULATIVE ADT VOLUMES AND LEVEL OF SERVICE

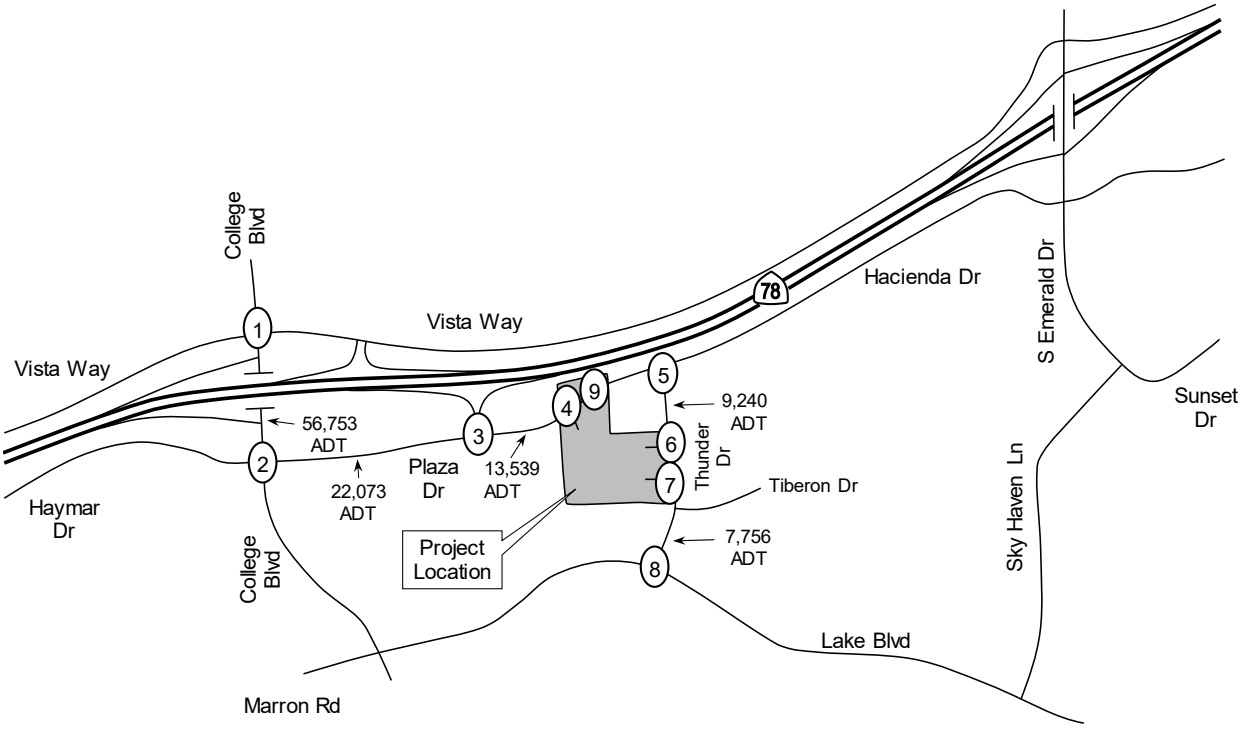
Daily	Current Classification (as built)	LOS E Capacity	Existing + Cumulative Daily Volume	V/C	LOS
College Boulevard					
Vista Way to Plaza Dr	6 Lane Major (6D)	50,000	56,753	1.135	**F**
Plaza Drive					
College Blvd to SR-78 EB Ramp	Secondary Coll. (4D)	30,000	22,073	0.736	D
SR-78 EB Ramp to Thunder Dr	Secondary Coll. (2U)	15,000	13,539	0.903	**E**
Thunder Drive					
Plaza Dr to Tiberon Dr	Collector (2U)	10,000	9,240	0.924	**E**
Tiberon Dr to Lake Blvd	Collector (2U)	10,000	7,756	0.776	D

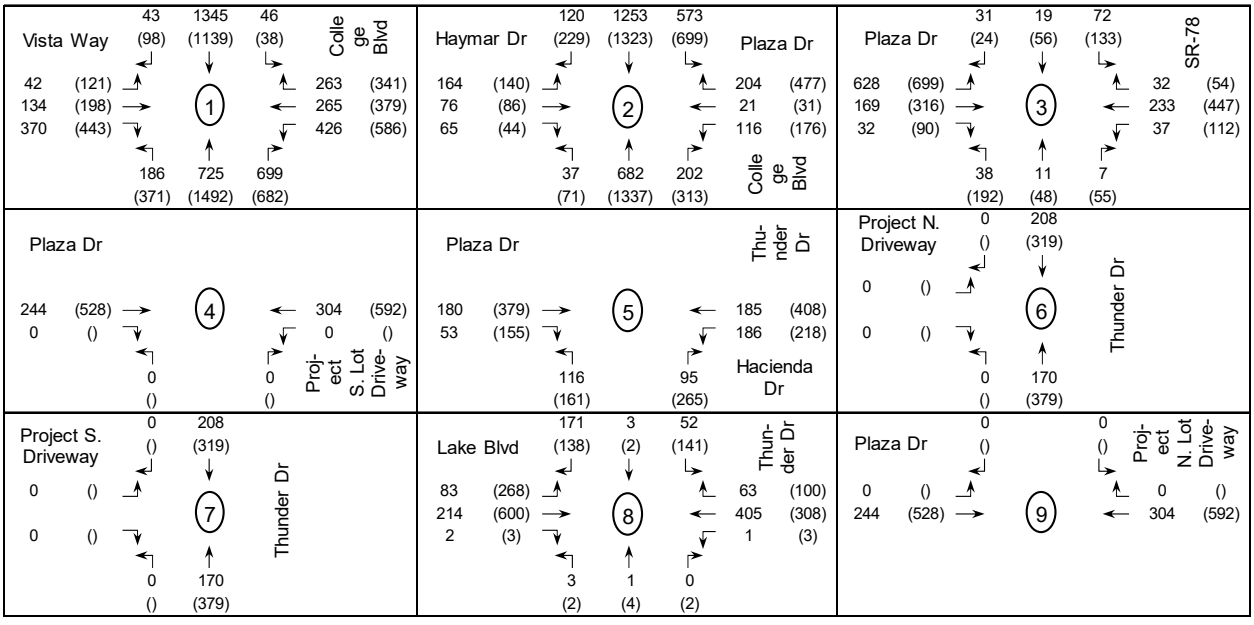
Notes: 6D=6 lane divided roadway. Daily volume is a 24 hour volume. LOS:Level of Service. V/C:Volume to Capacity Ratio.

Under Existing + Cumulative conditions, the study intersections and segments were calculated to operate at LOS D or better except for the:

1) Segment of College Blvd between Vista Way and Plaza Dr (LOS F),
2) Segment of Plaza Dr between SR-EB Ramp to Thunder Dr (LOS E), and
3) Segment of Thunder Dr between Plaza Dr and Tiberon Dr (LOS E).

Figure 13: Existing + Cumulative Volumes





3.10 Existing + Cumulative + Project Conditions

This scenario analyzes the addition of project traffic onto the existing plus cumulative traffic for AM, PM, and daily conditions. The peak hour intersection volumes and daily traffic volumes for this scenario is shown in **Figure 14**. The LOS calculated with the addition of project traffic for the intersections and street segments are shown in **Tables 14 and 15,** respectively. Intersection calculations are included in **Appendix K**.

TABLE 14: EXISTING + CUMULATIVE + PROJECT INTERSECTION LEVEL OF SERVICE

Intersection and	Movement	Peak	Existing + Cumulative		Existing + Cumulative + Project			
(Analysis)[1]		Hour	Delay[2]	LOS[3]	Delay[2]	LOS[3]	Delta[4]	Effect?[5]
1) College Blvd at	All	AM	29.4	C	29.4	C	0.0	No
Vista Way (S)	All	PM	37.3	D	37.5	D	0.2	No
2) College Blvd at	All	AM	24.5	C	24.6	C	0.1	No
Plaza Dr (S)	All	PM	44.0	D	44.2	D	0.2	No
3) Plaza Dr at	All	AM	24.8	C	24.9	C	0.1	No
SR-78 EB Ramp (S)	All	PM	34.3	C	34.4	C	0.1	No
4) Plaza Dr at	NB LR	AM	DNE	NA	9.1	A	NA	No
Project S. Dwy (U)	NB LR	PM	DNE	NA	17.7	C	NA	No
5) Plaza Dr at	All	AM	14.3	B	14.4	B	0.1	No
Thunder Dr (S)	All	PM	15.3	B	15.7	B	0.4	No
6) Thunder Dr at	EB LR	AM	DNE	NA	11.2	B	NA	No
Project N. Dwy (U)	EB LR	AM	DNE	NA	14.7	B	NA	No
7) Thunder Dr at	EB LR	AM	DNE	NA	11.1	B	NA	No
Project S. Dwy (U)	EB LR	AM	DNE	NA	14.4	B	NA	No
8) Thunder Dr at	All	AM	16.4	B	16.4	B	0.0	No
Lake Blvd (S)	All	PM	30.7	C	30.9	C	0.2	No
9) Plaza Dr at	SB LR	AM	DNE	NA	0.0	A	NA	No
Project N. Dwy (U)	SB LR	PM	DNE	NA	12.7	B	NA	No

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds. 3) LOS: Level of Service. 4) Delta is increase in delay from project. 5) Project effect if increase in traffic exceeds City's threshold. DNE: Does Not Exist. NA: Not Applicable.

TABLE 15: EXISTING + CUMULATIVE + PROJECT ADT AND LEVEL OF SERVICE

Segment	Current Classification (as built)	LOS E Capacity	Existing +Cumulative Daily Volume	V/C	LOS	Project Daily Volume	Existing + Cumulative + Project Daily Volume	V/C	LOS	Change in V/C	Project Effect?
College Boulevard											
Vista Way to Plaza Dr	6 Lane Major (6D)	50,000	56,753	1.135	**F**	119	56,872	1.137	**F**	0.002	No
Plaza Drive											
College Blvd to SR-78 EB Ramp	Secondary Coll. (4D)	30,000	22,073	0.736	D	142	22,215	0.741	D	0.005	No
SR-78 EB Ramp to Thunder Dr	Secondary Coll. (2U)	15,000	13,539	0.903	**E**	237	13,776	0.918	**E**	0.016	No
Thunder Drive											
Plaza Dr to Tiberon Dr	Collector (2U)	10,000	9,240	0.924	**E**	332	9,572	0.957	**E**	0.033	**Yes**
Tiberon Dr to Lake Blvd	Collector (2U)	10,000	7,756	0.776	D	47	7,803	0.780	D	0.005	No

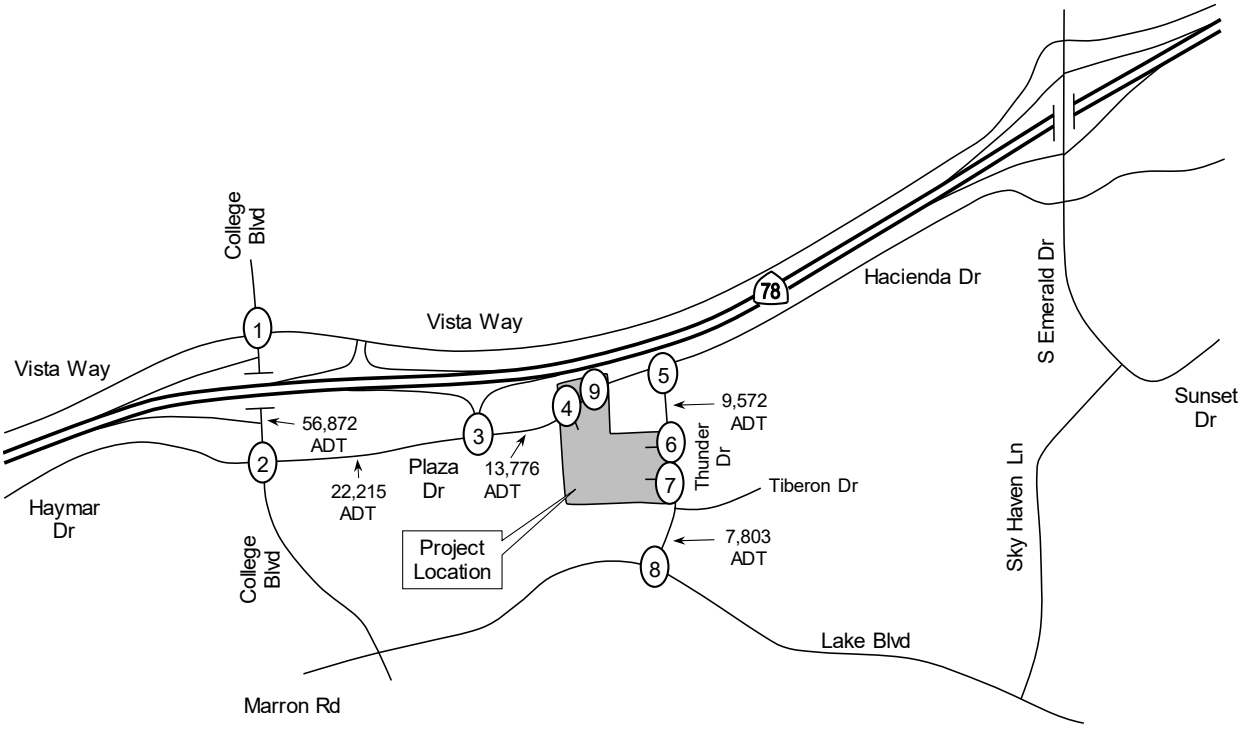
Notes: 6D=6 lane divided roadway. Daily volume is a 24 hour volume. LOS:Level of Service. V/C:Volume to Capacity Ratio.

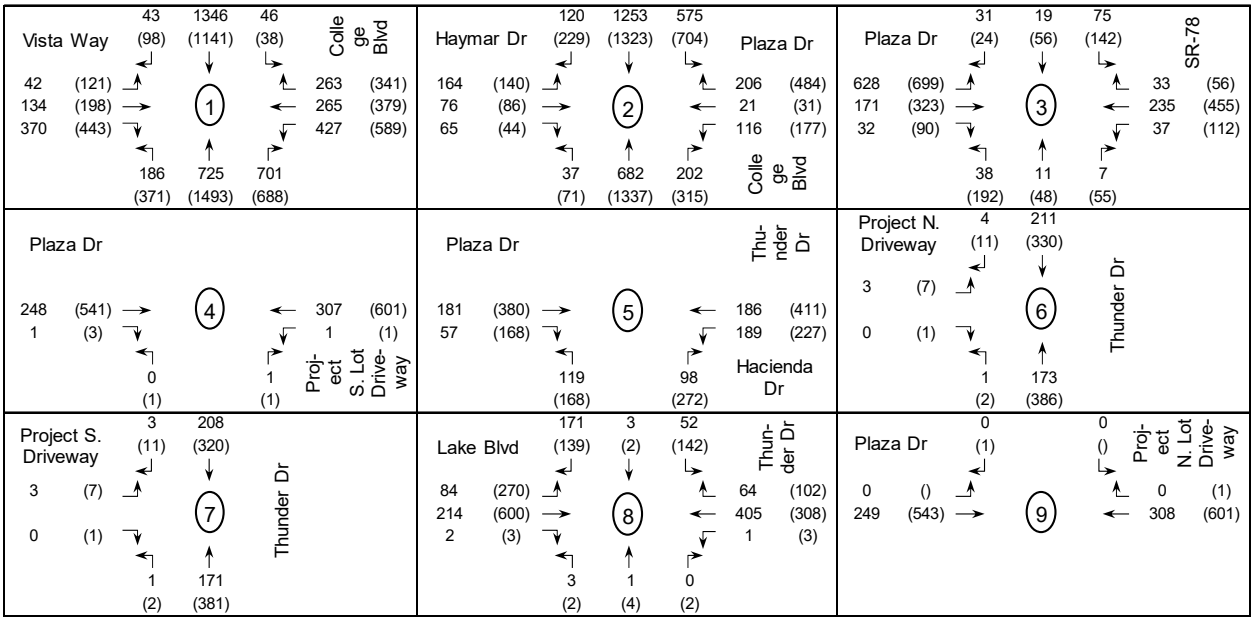
Under Existing + Cumulative + Project conditions, the study intersections and street segments are calculated to operate at LOS D or better except for the:

1) Segment of College Blvd between Vista Way and Plaza Dr (LOS F),
2) Segment of Plaza Dr between SR-EB Ramp to Thunder Dr (LOS E), and
3) Segment of Thunder Dr between Plaza Dr and Tiberon Dr (LOS E).

The project is calculated to cause a traffic effect on Thunder Drive between Plaza Drive and Tiberon Dr because the project exceeds the City's threshold.

Figure 14: Existing + Cumulative + Project Volumes





3.11 Horizon Year 2030 (Master Transportation Plan) Conditions

This section documents the analysis of traffic volumes for AM, PM, and daily traffic conditions for a horizon year 2030 Master Transportation Plan (MTP) scenario. Copies of the Year 2030 Master Transportation Plan roadway network and volumes are included in **Appendix N**. The *Oceanside General Plan Circulation Element* included year 2030 MTP volumes for the following study intersections and segments:

1) Segment of College Blvd between Vista Way and Plaza Dr
2) Segment of Plaza Dr between College Blvd and SR-78 EB Ramp
3) Segment of Plaza Dr between SR-78 EB Ramp and Thunder Drive
4) Segment of Thunder Drive between Plaza Dr and Lake Blvd
5) Intersection of College Blvd/Vista Way
6) Intersection of College Blvd/Plaza Dr
7) Intersection of Plaza Dr/SR-78 EB Ramp

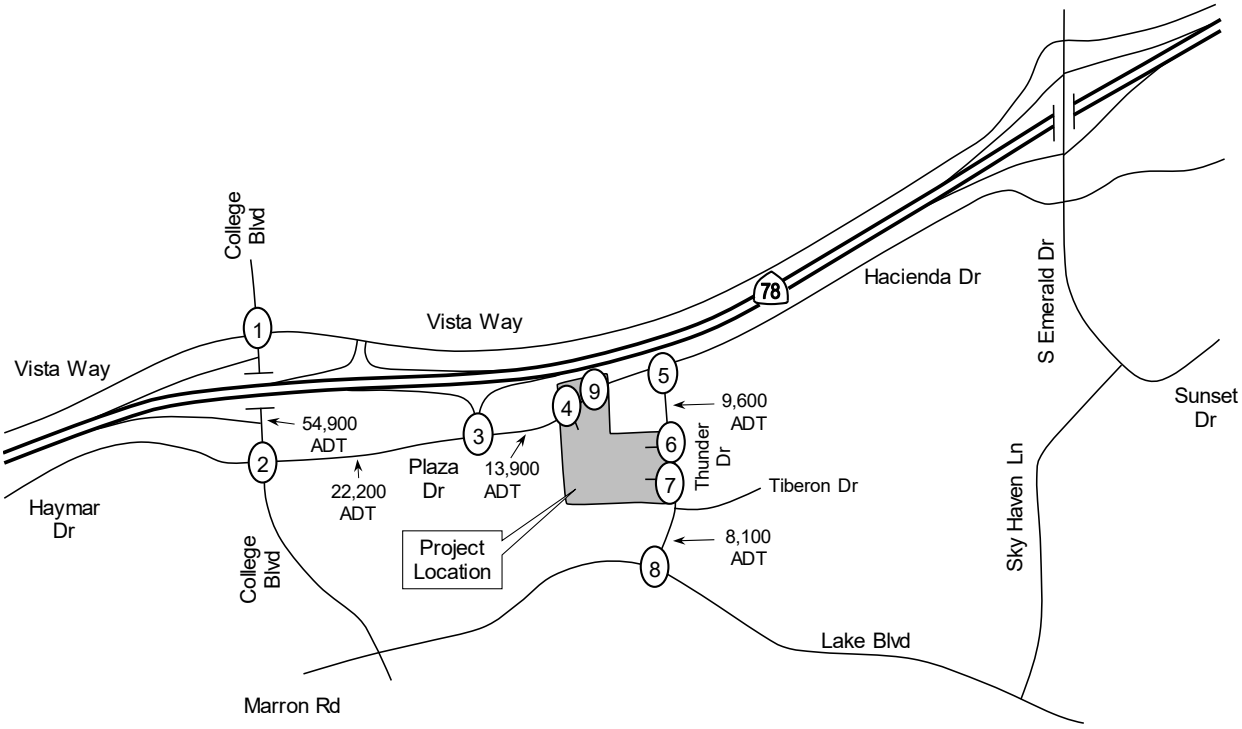
However, some of the year 2030 MTP segment volumes were lower than existing year 2019 volumes. This is most likely due to the 2030 MTP forecast having future additional roadway connections incorporated in the traffic model; thereby, adjusting or shifting traffic on the study area roadways. Additionally, some of the study segments and intersections were not analyzed in the General Plan. The study locations without 2030 MTP volumes or volumes less than existing counts included:

1) Segment of College Blvd between Vista Way and Plaza Dr (existing 52,021 ADT vs. year 2030 MTP 49,300 ADT)
2) Segment of Thunder Drive between Plaza Dr and Tiberon Dr (existing 9,100 ADT vs. year 2030 MTP 7,500 ADT)
3) Segment of Thunder Drive between Tiberon Dr and Lake Blvd (existing 7,631 ADT vs. year 2030 MTP 7,500 ADT)
4) Segment peak hour volumes along project driveways on Plaza Dr and Thunder Dr (no year 2030 MTP peak hour volumes)
5) Intersection of Plaza Dr/Thunder Dr (no year 2030 MTP volume)
6) Intersection of Thunder Dr/Lake Blvd (no year 2030 MTP volume)

To be conservative for the above segment locations, the year 2030 volumes were factored up from year 2019 volumes by applying a 0.5% per year growth factor. Over 11 years (2019 to 2030), the compounded growth factor is 1.056. For example, the application of the growth factor to the segment of College Blvd between Vista Way and Plaza Dr is calculated by taking the existing year 2019 volume of 52,021 times 1.056 to equal 54,934, which is rounded to 54,900 ADT.

The peak hour intersection volumes and daily traffic volumes are shown in **Figure 15**. The intersection LOS calculated is shown in **Table 16** with segment LOS shown in **Table 17.** Intersection LOS calculations are included in **Appendix L**.

Figure 15: Horizon Year 2030 Volumes



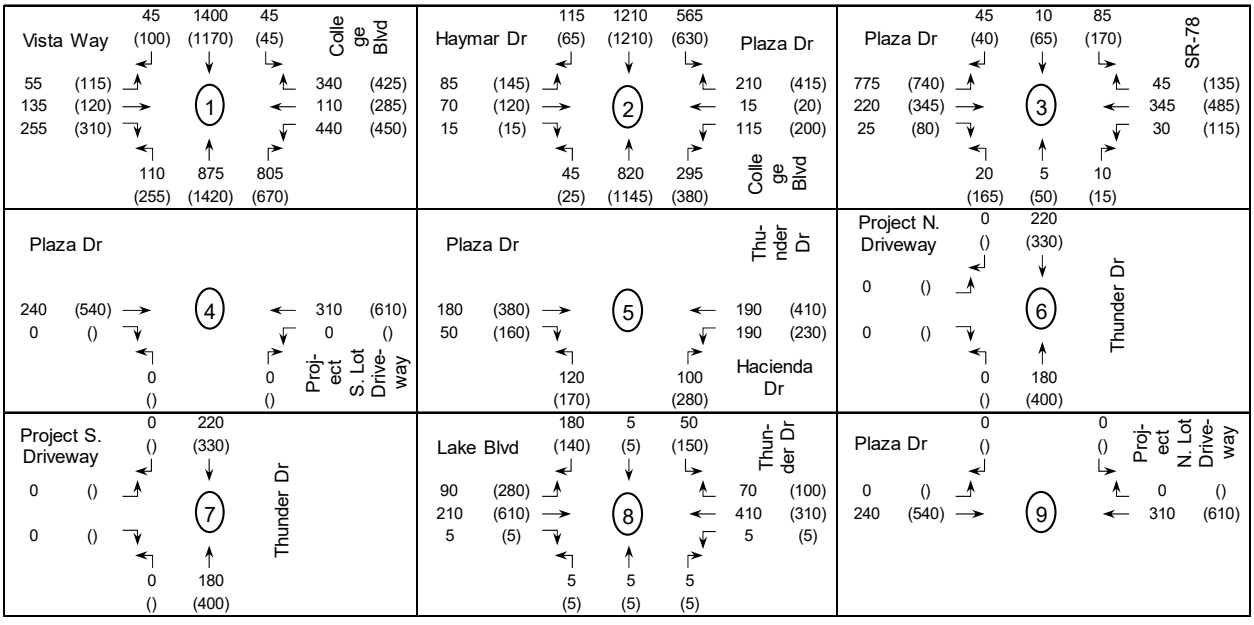


TABLE 16: HORIZON YEAR 2030 (MASTER TRANSPORTATION PLAN) INTERSECTION LOS

Intersection and (Analysis)[1]	Movement	Study Period	Horizon Year 2030 MTP Delay[2]	Horizon Year 2030 MTP LOS[3]
1) College Blvd at	All	AM	26.3	C
Vista Way (S)	All	PM	31.1	C
2) College Blvd at	All	AM	22.8	C
Plaza Dr (S)	All	PM	40.4	D
3) Plaza Dr at	All	AM	29.9	C
SR-78 EB Ramp (S)	All	PM	42.7	D
4) Plaza Dr at	NB LR	AM	DNE	NA
Project S. Dwy (U)	NB LR	PM	DNE	NA
5) Plaza Dr at	All	AM	14.2	B
Thunder Dr (S)	All	PM	15.6	B
6) Thunder Dr at	EB LR	AM	DNE	NA
Project N. Dwy (U)	EB LR	AM	DNE	NA
7) Thunder Dr at	EB LR	AM	DNE	NA
Project S. Dwy (U)	EB LR	AM	DNE	NA
8) Thunder Dr at	All	AM	16.2	B
Lake Blvd (S)	All	PM	33.4	C
9) Plaza Dr at	NB LR	AM	DNE	NA
Project N. Dwy (U)	NB LR	PM	DNE	NA

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds. 3) LOS: Level of Service. DNE: Does Not Exist. NA: Not Applicable.

TABLE 17: HORIZON YEAR 2030 (MASTER TRANSPORTATION PLAN) SEGMENT VOLUMES AND LOS

Segment	Classification	LOS E Capacity	Horizon Year 2030 MTP Daily Volume	V/C	LOS
College Boulevard					
Vista Way to Plaza Dr	6 Lane Major (6D)	50,000	54,900	1.098	**F**
Plaza Drive					
College Blvd to SR-78 EB Ramp	Secondary Coll. (4D)	30,000	22,200	0.740	D
SR-78 EB Ramp to Thunder Dr	Secondary Coll. (2U)	15,000	13,900	0.927	**E**
Thunder Drive					
Plaza Dr to Tiberon Dr	Collector (2U)	10,000	9,600	0.960	**E**
Tiberon Dr to Lake Blvd	Collector (2U)	10,000	8,100	0.810	D

Notes: 6D=6 lane divided roadway. Daily volume is a 24 hour volume. LOS:Level of Service. V/C:Volume to Capacity Ratio.

Under Horizon Year 2030 MTP conditions, the study intersections and segments are calculated to operate at LOS D or better except for:

1) Segment of College Blvd between Vista Way and Plaza Dr (LOS F),
2) Segment of Plaza Dr between SR-78 EB Ramp and Thunder Dr (LOS E), and
3) Thunder Dr between Plaza Dr and Tiberon Dr (LOS E).

3.12 Horizon Year 2030 (Master Transportation Plan) + Project Conditions

This scenario analyzes the addition of project traffic onto the horizon year 2030 (Master Transportation Plan) conditions for AM, PM and daily traffic conditions. The peak hour intersection volumes and daily traffic volumes for this scenario is shown in **Figure 16**. The intersection LOS is shown in **Table 18** with segment LOS shown in **Table 19.** Intersection LOS calculations are included in **Appendix M**.

TABLE 18: HORIZON YEAR 2030 (MASTER TRANSPORTATION PLAN) + PROJECT INTERSECTION LEVEL OF SERVICE

Intersection and (Analysis)[1]	Movement	Study Period	Year 2030 MTP Delay[2]	Year 2030 MTP LOS[3]	Year 2030 MTP + Project Delay[2]	Year 2030 MTP + Project LOS[3]	Delta[4]	Effect?[5]
1) College Blvd at	All	AM	26.3	C	26.4	C	0.1	No
Vista Way (S)	All	PM	31.1	C	31.2	C	0.1	No
2) College Blvd at	All	AM	22.8	C	22.9	C	0.1	No
Plaza Dr (S)	All	PM	40.4	D	40.9	D	0.5	No
3) Plaza Dr at	All	AM	29.9	C	30.2	C	0.3	No
SR-78 EB Ramp (S)	All	PM	42.7	D	44.4	D	1.7	No
4) Plaza Dr at	NB LR	AM	DNE	NA	9.0	A	NA	No
Project S. Dwy (U)	NB LR	PM	DNE	NA	18.3	C	NA	No
5) Plaza Dr at	All	AM	14.2	B	14.3	B	0.1	No
Thunder Dr (S)	All	PM	15.6	B	16.1	B	0.5	No
6) Thunder Dr at	EB LR	AM	DNE	NA	11.4	B	NA	No
Project N. Dwy (U)	EB LR	AM	DNE	NA	15.1	C	NA	No
7) Thunder Dr at	EB LR	AM	DNE	NA	11.3	B	NA	No
Project S. Dwy (U)	EB LR	AM	DNE	NA	14.9	B	NA	No
8) Thunder Dr at	All	AM	16.2	B	16.2	B	0.0	No
Lake Blvd (S)	All	PM	33.4	C	33.7	C	0.3	No
9) Plaza Dr at	NB LR	AM	DNE	NA	0.0	A	NA	No
Project N. Dwy (U)	NB LR	PM	DNE	NA	12.9	B	NA	No

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds. 3) LOS: Level of Service. 4) Delta is the increase in delay from project. 5) Project effect if increase in traffic exceeds City's threshold. Does not exist. NA: Not Applicable.

TABLE 19: HORIZON YEAR 2030 (MASTER TRANSPORTATION PLAN) + PROJECT SEGMENT LEVEL OF SERVICE

Segment	Classification (as built)	LOS E Capacity	Horizon Year 2030 Daily Volume	Horizon Year 2030 V/C	Horizon Year 2030 LOS	Project Daily Volume	Horizon Year 2030 MTP + Project Daily Volume	Horizon Year 2030 MTP + Project V/C	Horizon Year 2030 MTP + Project LOS	Change In V/C	Project Effect?
College Boulevard											
Vista Way to Plaza Dr	6 Lane Major (6D)	50,000	54,900	1.098	**F**	119	55,019	1.100	**F**	0.002	No
Plaza Drive											
College Blvd to SR-78 EB Ramp	Secondary Coll. (4D)	30,000	22,200	0.740	D	142	22,342	0.745	D	0.005	No
SR-78 EB Ramp to Thunder Dr	Secondary Coll. (2U)	15,000	13,900	0.927	**E**	237	14,137	0.942	**E**	0.016	No
Thunder Drive											
Plaza Dr to Tiberon Dr	Collector (2U)	10,000	9,600	0.960	**E**	332	9,932	0.993	**E**	0.033	**Yes**
Tiberon Dr to Lake Blvd	Collector (2U)	10,000	8,100	0.810	D	47	8,147	0.815	D	0.005	No

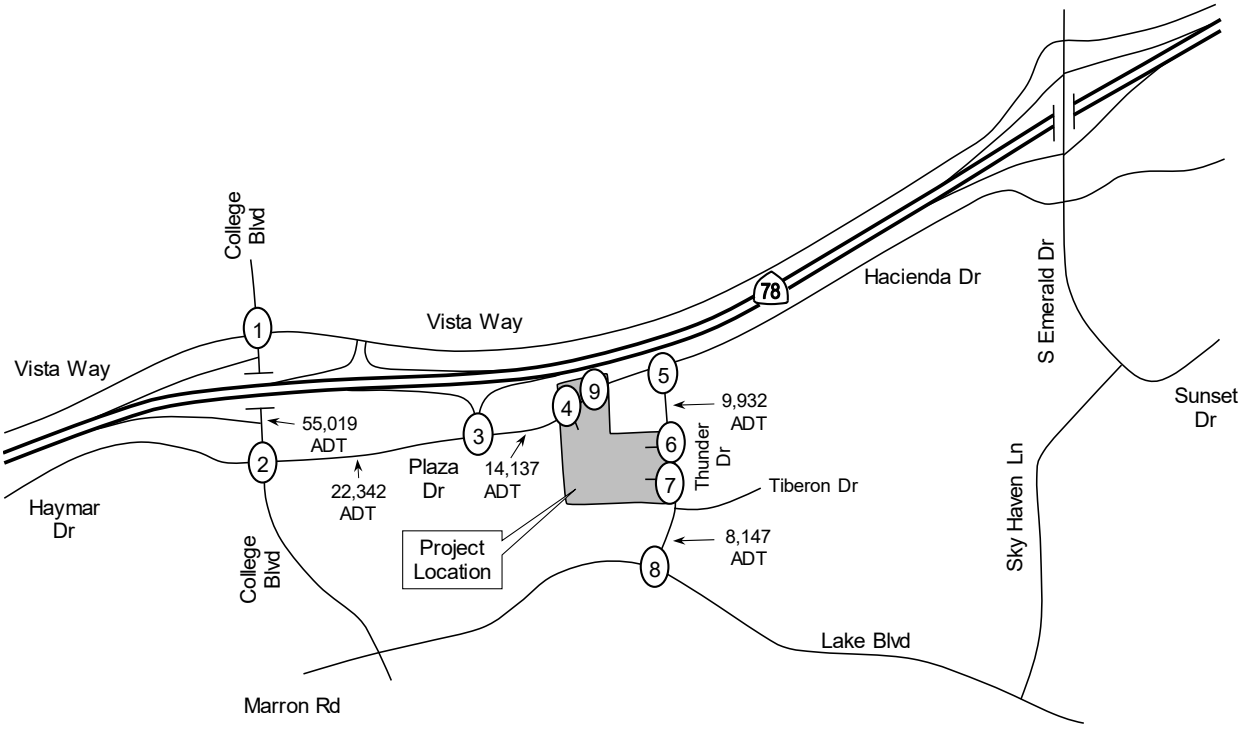
Notes: 6D=6 lane divided roadway. Daily volume is a 24 hour volume. LOS:Level of Service. V/C:Volume to Capacity Ratio.

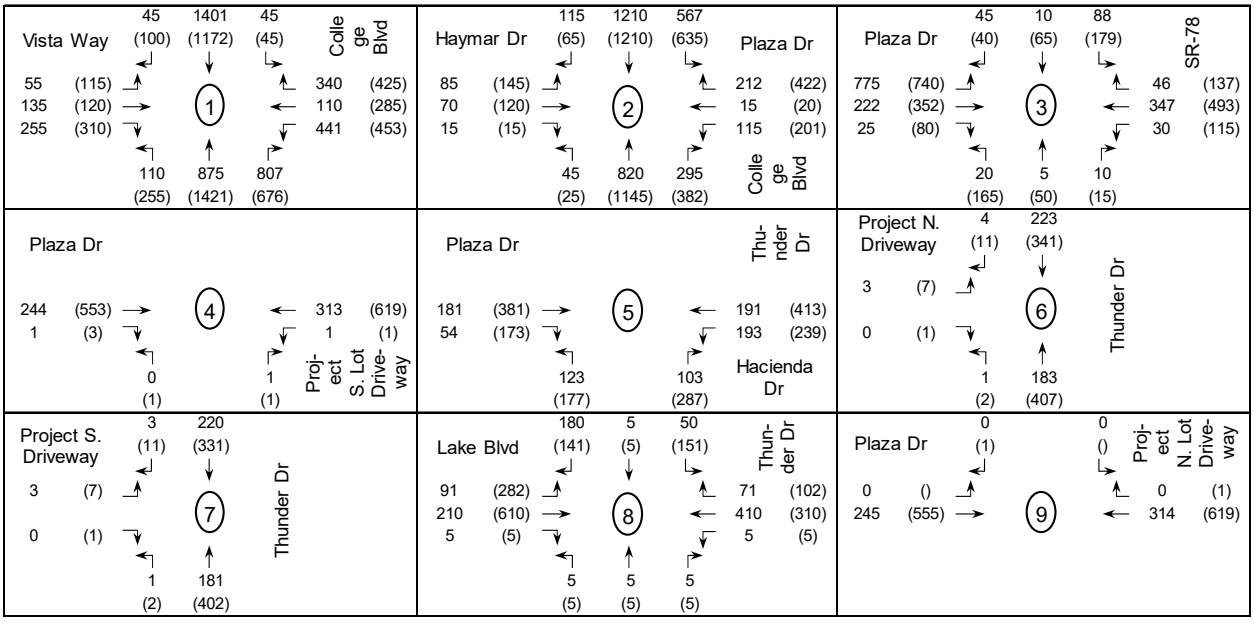
Under Horizon Year 2030 MTP + Project conditions, the study intersections and segments were calculated to operate at LOS D or better except for the:

1) Segment of College Blvd between Vista Way and Plaza Dr (LOS F),
2) Segment of Plaza Dr between SR-EB Ramp to Thunder Dr (LOS E), and
3) Segment of Thunder Dr between Plaza Dr and Tiberon Dr (LOS F).

The project is calculated to cause a traffic effect on Thunder Drive between Plaza Drive and Tiberon Dr because the project exceeds the City's threshold.

Figure 16: Horizon Year 2030 + Project Volumes





3.13 Traffic Effects Summary

The project is calculated to cause a traffic effect on Thunder Drive between Plaza Drive and Tiberon Dr because the project exceeds the City's threshold. This traffic effect occurs under existing + project, existing + cumulative + project, and horizon year + project conditions.

3.13.1 Thunder Drive Improvement

The proposed improvement for the traffic effect on Thunder Drive is to widen the street into the site along the project frontage and restrict parking on the project side of the street between the two proposed project driveways.

3.13.2 Plaza Drive Improvement

As part of the project, the applicant will widen Plaza Drive along the project frontage to the General Plan classification of a Secondary Collector; however, the applicant will only stripe this segment with 3 travel lanes (2 eastbound lanes and 1 westbound lane) and a center two way left turn lane in order to match the existing westbound single travel lane configuration adjacent to the DMV all to the satisfaction of the City Engineer. The capacity of the 3-lane roadway is taken at 75% of the capacity of a 4 lane Secondary Collector. The operations with the proposed roadway widening is shown in **Table 20.**

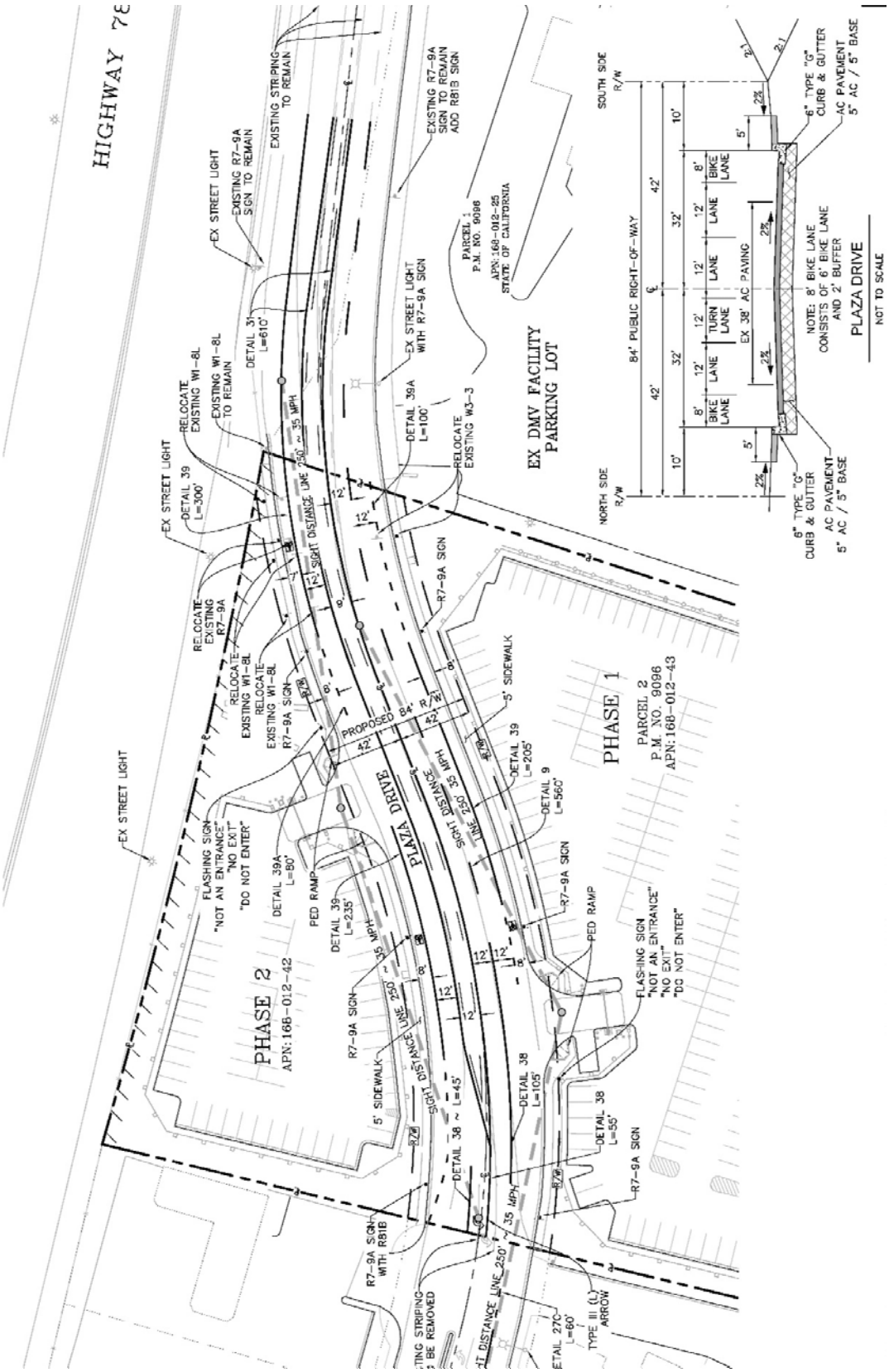
TABLE 20: PLAZA DR LEVEL OF SERVICE WITH PROJECT WIDENING

Scenario & Segment	Existing Conditions (2 lanes)					With Improvement (3 lanes + TWLTL)				
	Daily Volume	LOS E Capacity	V/C	LOS	Effect?	Daily Volume	LOS E Capacity	V/C	LOS	Effect?
Existing + Project										
Plaza Drive										
Along project frontage	13,395	15,000	0.893	**E**	No	13,395	18,750	0.71	C	No
Existing + Cumulative + Project										
Plaza Drive										
Along project frontage	13,776	15,000	0.918	**E**	No	13,776	18,750	0.73	C	No
Horizon Year + Project										
Plaza Drive										
Along project frontage	14,137	15,000	0.942	**E**	No	14,137	18,750	0.75	C	No

Notes: Daily volume is a 24 hour volume. V/C: Volume over Capacity. LOS: Level of Service. TWLTL: Two Way Left Turn Lane.

The proposed widening and striping of Plaza Drive is shown in **Figure 17**.

Figure 17: Plaza Drive Proposed Widening and Striping



Source: REC Consultants, Inc.

4.0 Conclusion

The proposed CarMax auto sales dealership is to be located at the 4000 block of Plaza Drive just west of the Oceanside Department of Motor Vehicles in Oceanside, California. The project site is currently vacant. The project is anticipated to be completed by year 2021 or 2022.

This Local Transportation Study (LTS) has been prepared to determine if there are any traffic effects caused by the project traffic that would justify roadway improvements or fair share participation. This report is based on the City of Oceanside *Draft Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment*, August 2020 and includes the analysis of pedestrian, bicycle, transit, and traffic elements.

The **LTS Pedestrian** analysis included the assessment of pedestrian facilities. As part of the project, the applicant is widening Plaza Drive and installing sidewalks on both side of the street along the project frontage. The remaining existing pedestrian infrastructure from College Blvd to Thunder Drive did not have any deficiencies except for the north side of Plaza Dr from the project site easterly to Thunder Drive where the north side is missing a sidewalk.

The **LTS Bicycle** analysis included the assessment of bicycle facilities. As part of the project, the applicant is widening Plaza Drive and installing bike lanes on both side of the street along the project frontage. The City's Bicycle Master Plan has a recommended Class 3 bike route on Thunder Dr. If the City requires bike sharrows or bike route signs along the project frontage, then the applicant will install.

The **LTS Transit** analysis included the assessment of transit facilities. The bus stop for westbound travel on Lake Blvd is located a walking distance of approximately 710 feet from the project access on Thunder Dr and includes a bench and trash receptacle that are in good condition. The bus stop for eastbound travel on Lake Blvd is located a walking distance of approximately 940 feet from the project access on Thunder Dr and includes a trash receptacle in good condition. No transit improvements are proposed as part of this project.

The **LTS Traffic** analysis included a study area of nine (9) intersections and five (5) roadway segments. The project traffic generation was calculated using a trip generation rate from a survey of three open and operating CarMax dealerships. The data from the CarMax sites was collected by placing tube counters across all site driveways that recorded all vehicles including employees, customers, test drives, deliveries, mail carriers, trash trucks, maintenance, and any other vehicle that crossed over the tubes. Using the CarMax based trip generation rates, the project is forecasted to generate 475 ADT, 18 AM peak hour trips (11 inbound and 7 outbound), and 50 PM peak hour trips (31 inbound and 19 outbound). The project will have two driveways on Plaza Dr and two driveways on Thunder Dr. Six (6) scenarios were analyzed, which included Existing, Existing + Project, Existing + Cumulative, Existing + Cumulative + Project, Horizon Year 2030 Master Transportation Plan (MTP), and Horizon Year 2030 MTP + Project conditions. Operational findings by scenario are summarized below:

1) Under Existing conditions, the study intersections and segments are calculated to operate at LOS D or better except for:
    a. Segment of College Blvd between Vista Way and Plaza Dr (LOS F),
    b. Segment of Plaza Dr between SR-78 EB Ramp and Thunder Dr (LOS E), and
    c. Segment Thunder Dr between Plaza Dr and Tiberon Dr (LOS E).

2) Under Existing + Project conditions, the study intersections and segments were calculated to operate at LOS D or better except for the:
    4) Segment of College Blvd between Vista Way and Plaza Dr (LOS F),
    5) Segment of Plaza Dr between SR-EB Ramp to Thunder Dr (LOS E), and
    6) Segment of Thunder Dr between Plaza Dr and Tiberon Dr (LOS E).

    The project is calculated to cause a traffic effect on Thunder Drive between Plaza Drive and Tiberon Dr because the project exceeds the City's thresholds (proposed improvements are described below).

3) Under Existing + Cumulative conditions, the study intersections and segments were calculated to operate at LOS D or better except for the:
    a. Segment of College Blvd between Vista Way and Plaza Dr (LOS F),
    b. Segment of Plaza Dr between SR-EB Ramp to Thunder Dr (LOS E), and
    c. Segment of Thunder Dr between Plaza Dr and Tiberon Dr (LOS E).

4) Under Existing + Cumulative + Project conditions, the study intersections and segment were calculated to operate at LOS D or better except for the:
    a. Segment of College Blvd between Vista Way and Plaza Dr (LOS F),
    b. Segment of Plaza Dr between SR-EB Ramp to Thunder Dr (LOS E), and
    c. Segment of Thunder Dr between Plaza Dr and Tiberon Dr (LOS F).

    The project is calculated to cause a traffic effect on Thunder Drive between Plaza Drive and Tiberon Dr because the project exceeds the City's thresholds.

5) Under Horizon Year 2030 MTP conditions, all study intersections and segments were calculated to operate at LOS D or better, except for:
    a. Segment of College Blvd between Vista Way and Plaza Dr (LOS F),
    b. Segment of Plaza Dr between SR-78 EB Ramp and Thunder Dr (LOS E), and
    c. Thunder Dr between Plaza Dr and Tiberon Dr (LOS E).

6) Under Horizon Year 2030 MTP + Project conditions, all study intersections and segments were calculated to operate at LOS D or better except for the:
    a. Segment of College Blvd between Vista Way and Plaza Dr (LOS F),
    b. Segment of Plaza Dr between SR-EB Ramp to Thunder Dr (LOS E), and
    c. Segment of Thunder Dr between Plaza Dr and Tiberon Dr (LOS F).

    The project is calculated to cause a traffic effect on Thunder Drive between Plaza Drive and Tiberon Dr because the project exceeds the City's thresholds.

Project Improvements

1) The proposed improvement for the traffic effect on Thunder Drive is to widen the street into the site along the project frontage and restrict parking on the project side of the street between the two proposed project driveways. The City's Bicycle Master Plan has a recommended Class 3 bike route on Thunder Dr. If the City requires bike sharrows or bike route signs along the project frontage, then the applicant will install.

2) The applicant will widen Plaza Drive along the project frontage to the General Plan classification of a Secondary Collector; however, the applicant will only stripe this segment with 3 travel lanes (2 eastbound lanes and 1 westbound lane) and a center two way left turn lane in order to match the existing westbound single travel lane configuration adjacent to the DMV all to the satisfaction of the City Engineer. Additionally, the following improvements will be made to the satisfaction of the City Engineer:

    a. Sidewalks will be installed on both sides of Plaza Drive along the project frontage.

    b. Bike lanes will be striped on both sides of Plaza Drive along the project frontage.

###

Appendix A

Excerpts from City of Oceanside Bicycle Master Plan 2017 Update

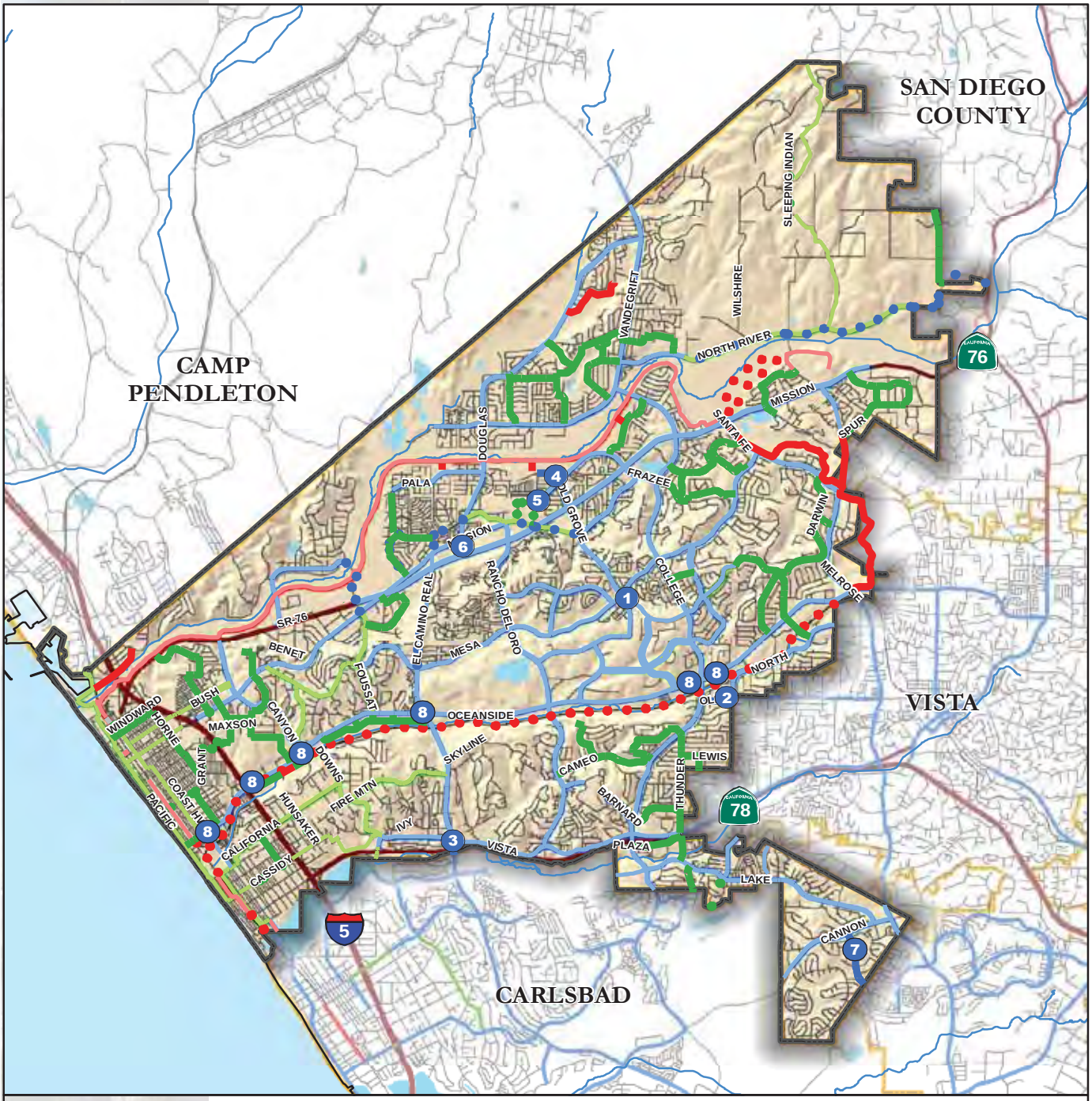
City of Oceanside
Bicycle Master Plan

2017 Bicycle Master Plan Update Prepared by
STC Traffic, Inc.

2008 Bicycle Master Plan Prepared by
KTU+A Planning + Landscape Architecture

In association with
IBI Group Transportation Planning

for the
City of Oceanside, California



Existing Bicycle Facilities
- Class 1: Bike Path
- Class 2: Bike Lane
- Class 3: Bike Route

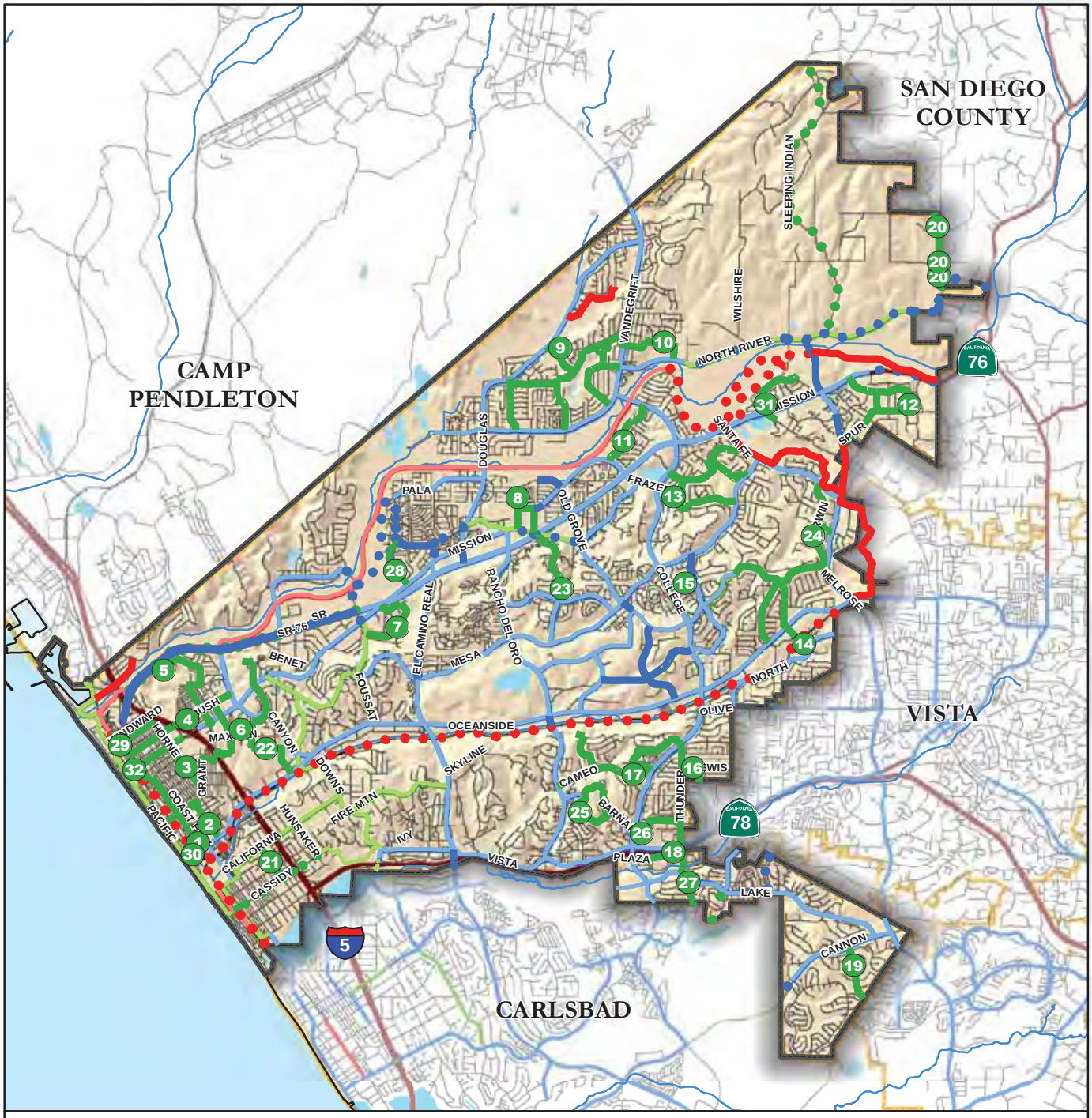
Planned Bicycle Facilities
- Class 1: Bike Path
- Class 2: Bike Lane
- Class 3: Bike Route

Recommended Facilities
- Class 1: Bike Path
- Class 2: Bike Lane
- Class 3: Bike Route

Data Source: City of Oceanside

Figure 4.2 A: Class 2 Bike Lane Recommended Projects
(2017 Update)

0 0.5 1
Miles



Existing Bicycle Facilities

- Class 1: Bike Path
- Class 2: Bike Lane
- Class 3: Bike Route

Planned Bicycle Facilities

- Class 1: Bike Path
- Class 2: Bike Lane
- Class 3: Bike Route

Recommended Facilities

- Class 1: Bike Path
- Class 2: Bike Lane
- Class 3: Bike Route

Data Source: City of Oceanside General Plan (1995) and KTU+A (2008)

~~***Figure 4.3 Class 3 Bike Route Recommended Projects***~~

Superceded 2017

0 0.5 1 Miles

Appendix B

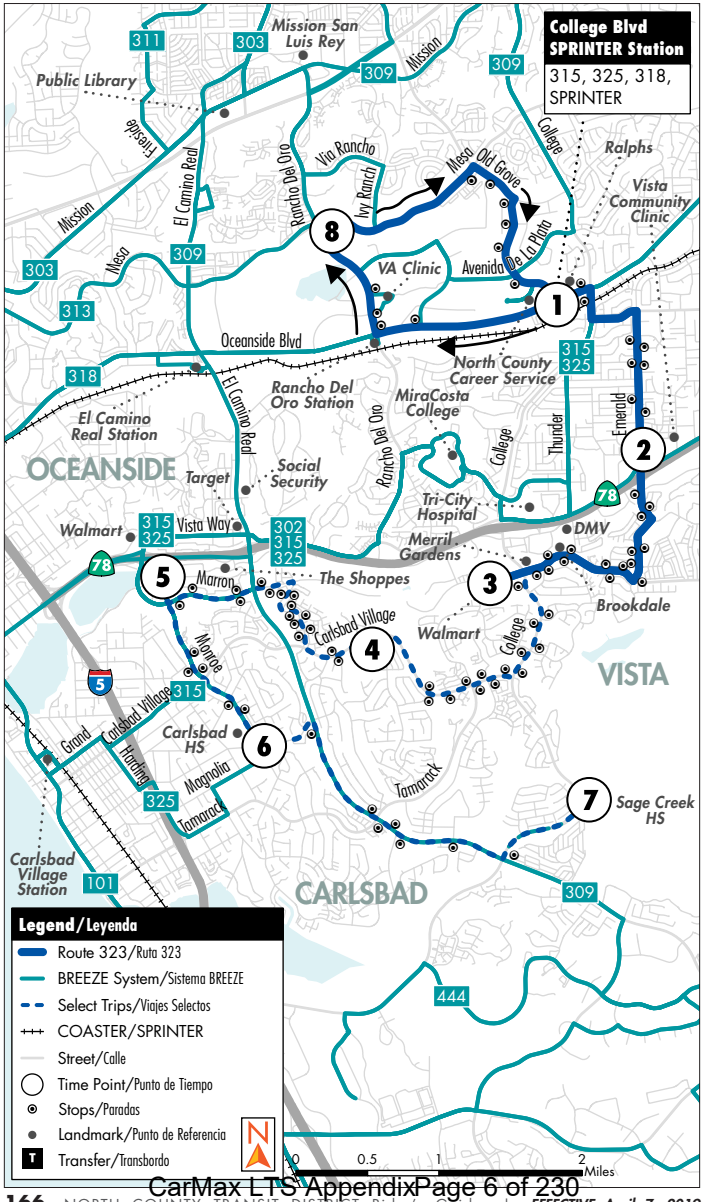
Bus Schedules

323 College Blvd. SPRINTER Station to Quarry Creek

Estación College Blvd. de SPRINTER vía Quarry Creek

M-F
L-V

Destinations/Destinos
- Plaza Camino Real
- Quarry Creek (Walmart)
- The Shoppes at Carlsbad
- Carlsbad High School
- Sage Creek High School
- DMV
- Salvation Army
- Vista Community Clinic
- Valley Middle School
- VA Clinic



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323 College Blvd. SPRINTER Station to Quarry Creek
Estación College Blvd. de SPRINTER vía Quarry Creek

Bold denotes P.M. times/El texto en negrita indica horario en las tardes (P.M.)

Monday - Friday
Southbound to Quarry Creek/Plaza Camino Real
Lunes a Viernes • Dirección hacia el sur a Quarry Creek/Plaza Camino Real

#Oceanside Bl & Avenida Del Oro	Emerald Dr. & West Dr.	Quarry Creek Plaza (Walmart)	Carlsbad Village Dr. & Santa Clara Way	Plaza Camino Real Transit Center	Chestnut Ave. & Monroe St. (Carlsbad HS)	Cannon Rd. & College Blvd. (Sage Creek HS)
1	**2**	**3**	**4**	**5**	**6**	**7**
5:56	6:02	6:10	–	–	–	–
*6:08	*6:16	–	*6:33	*6:47	*6:59	*7:15a
**6:16	**6:24	–	**6:41	**6:55	**7:07	–
6:56	7:02	7:10	–	–	–	–
**7:09	**7:18	–	**7:34	**7:48	**8:00	**8:15
7:56	8:02	8:10	–	–	–	–
8:56	9:02	9:12	–	–	–	–
9:56	10:02	10:12	–	–	–	–
10:56	11:02	11:12	–	–	–	–
11:56	**12:02**	**12:12p**	**–**	**–**	**–**	**–**
12:56	**1:03**	**1:13**	**–**	**–**	**–**	**–**
1:56	**2:03**	**2:13**	**–**	**–**	**–**	**–**
2:56	**3:03**	**3:13**	**–**	**–**	**–**	**–**
3:54	**4:01**	**4:11**	**–**	**–**	**–**	**–**
4:54	**5:01**	**5:11**	**–**	**–**	**–**	**–**
5:56	**6:03**	**6:12**	**–**	**–**	**–**	**–**

* **Operates Monday, Tuesday, Thursday, and Friday arriving at Carlsbad High School at 6:59 a.m. and Sage Creek High School at 7:15 a.m.**
Opera Lunes, Martes, Jueves y Viernes llegando a Carlsbad High School a las 6:59 a.m. y a Sage Creek High School a las 7:15 a.m.

** **Operates Wednesday only.**
Opera solamente los Miércoles.

Route 323 does not operate on Saturdays, Sundays, or holidays.
La Ruta 323 no opera los sábados, domingos o en días festivos.

 # Board southbound Route 323 buses on south side of Oceanside Blvd. by Panda Express.
Subir a bordo de los autobuses de la Ruta 323, dirección hacia el sur, en el lado sur de Oceanside Blvd. cerca de Panda Express.

Trips operate only when high schools are open. Trip operates on school days in regular school year (not during summer school).
Los viajes operan solamente cuando las escuelas están abiertas. El viaje opera los días escolares durante el año regular de clases (no durante el verano).

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323 College Blvd. SPRINTER Station to Quarry Creek

Estación College Blvd. de SPRINTER vía Quarry Creek

Bold denotes P.M. times/El texto en negrita indica horario en las tardes (P.M.)

Monday - Friday
Northbound to College Blvd. SPRINTER Station
Lunes a Viernes • Dirección hacia el norte a College Blvd. Estación de SPRINTER

Cannon Rd. & College Blvd. (Sage Creek HS)	Chestnut Ave. & Monroe St. (Carlsbad HS)	Plaza Camino Real Transit Center	Carlsbad Village Dr. & Santa Clara Way	Quarry Creek Plaza (Walmart)	Emerald Dr. & West Dr.	#Oceanside Bl & Avenida Del Oro Westbound	Mesa Dr. & Rancho Del Oro Dr.	Oceanside Bl & Avenida Del Oro Eastbound
7	**6**	**5**	**4**	**3**	**2**	**1**	**8**	**1**
–	–	–	–	5:13	5:23	5:34	5:37	5:47a
–	–	–	–	6:13	6:23	6:34	6:37	6:47
–	–	–	–	7:13	7:23	7:34	7:37	7:47
–	–	–	–	8:13	8:23	8:34	8:37	8:47
–	–	–	–	9:13	9:23	9:34	9:37	9:47
–	–	–	–	10:13	10:23	10:34	10:37	10:47
–	–	–	–	11:13	11:23	11:34	11:37	11:47
–	–	–	–	**12:14**	**12:24**	**12:34**	**12:37**	**12:47p**
–	**–**	**–**	**–**	**1:14**	**1:24**	**1:34**	**1:37**	**1:47**
–	**–**	**–**	**–**	**2:14**	**2:24**	**2:35**	**2:38**	**2:48**
–	**–**	**–**	**–**	**3:14**	**3:24**	**3:35**	**3:38**	**3:48**
2:45	**2:56**	**3:06**	**3:15**	**–**	**3:34**	**3:45**	**3:48**	**3:58**
–	**–**	**–**	**–**	**4:12**	**4:22**	**4:34**	**4:37**	**4:48**
–	**–**	**–**	**–**	**5:12**	**5:22**	**5:34**	**5:37**	**5:47**

Route 323 does not operate on Saturdays, Sundays, or holidays.
La Ruta 323 no opera los sábados, domingos o en días festivos.

 # Board northbound Route 323 buses on the north side of Oceanside Blvd. by KFC.
Subir a bordo de los autobuses de la Ruta 323, dirección hacia el norte, en el lado norte de Oceanside Blvd. cerca de KFC.

Trips operate only when high schools are open. Trip operates on school days in regular school year (not during summer school).
Los viajes operan solamente cuando las escuelas están abiertas. El viaje opera los días escolares durante el año regular de clases (no durante el verano).

CarMax LTS AppendixPage 8 of 230

Appendix C

Excerpts from the *Oceanside General Plan Circulation Element*, Sept 2012

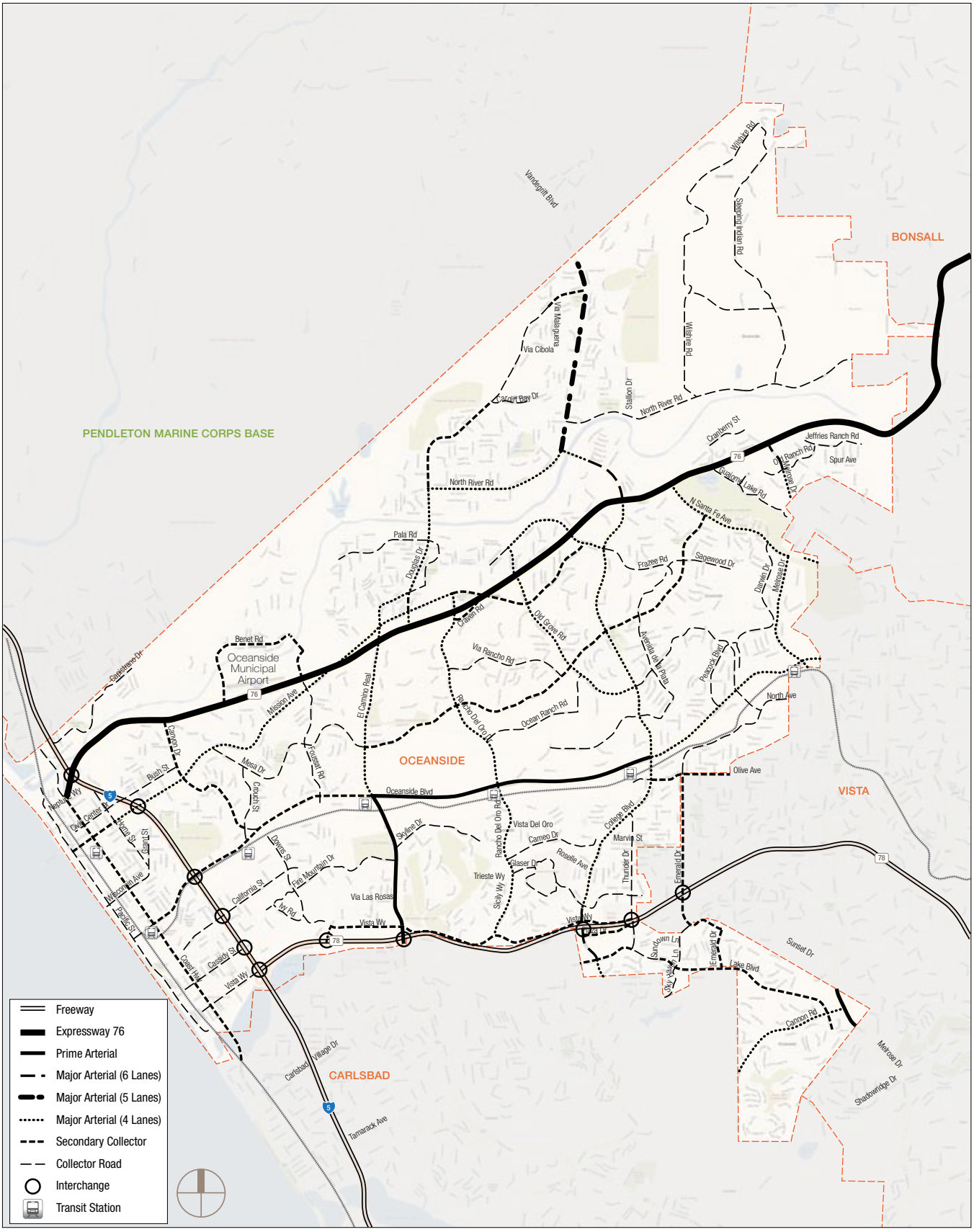
OCEANSIDE GENERAL PLAN
CIRCULATION ELEMENT UPDATE
City of Oceanside, California

Prepared for
City of Oceanside
Transportation Engineering Division
300 North Coast Highway
Oceanside, CA 92054

Prepared by

IBI GROUP
701 B Street, Suite 1810
San Diego, CA 92101

September 2012



Not to Scale

Existing Roadway Classifications

Figure 3.1

Appendix D

Excerpts from City of Oceanside VMT and LOS Guidelines

City of Oceanside

Traffic Impact Analysis Guidelines for

Vehicle Miles Traveled (VMT) and Level of Service Assessment

August 2020
Final Version

Trip Distribution / Assignment Procedure

Typically, two methods are used to determine trip distribution and assignment for transportation analysis and are considered acceptable by the City.

- The first method utilizes engineering judgement based on existing traffic data and land use patterns. This method requires the consultant to provide a map with project distribution and trip assignments to the City for review prior to conducting analysis.

- The second method utilizes the SANDAG Regional Travel Demand Model to perform a select zone or link analysis**. This approach is typically used for larger projects and shall be used for any project that generates over 2,400 ADT**.

Once trip distribution and assignment assumptions are submitted to the City, the City will review and provide feedback on assumptions. If necessary, the developer or consultant may coordinate with the City Traffic Engineer to discuss trip distribution and assignment for any clarification or considerations to travel patterns that are not readily apparent.

7.0 Screened Out Projects

SB 743 eliminates the need for some projects to be analyzed for CEQA purposes that support VMT reduction, these projects are considered screened out for VMT analysis. Screened out is defined as projects not needed to be analyzed for CEQA purposes that already support VMT reduction.

The projects listed in **Table 2** are presumed to be considered VMT-reducing projects. The projects listed are either locally serving or are based on substantial evidence provided by the OPR Technical Advisory Committee supporting SB 743 implementation. A project may be required to conduct a VMT analysis at the discretion of City Staff if it is unclear the project qualifies as screened out or based on the City Traffic Engineer's discretion.

Table 2 – Screened Out Projects

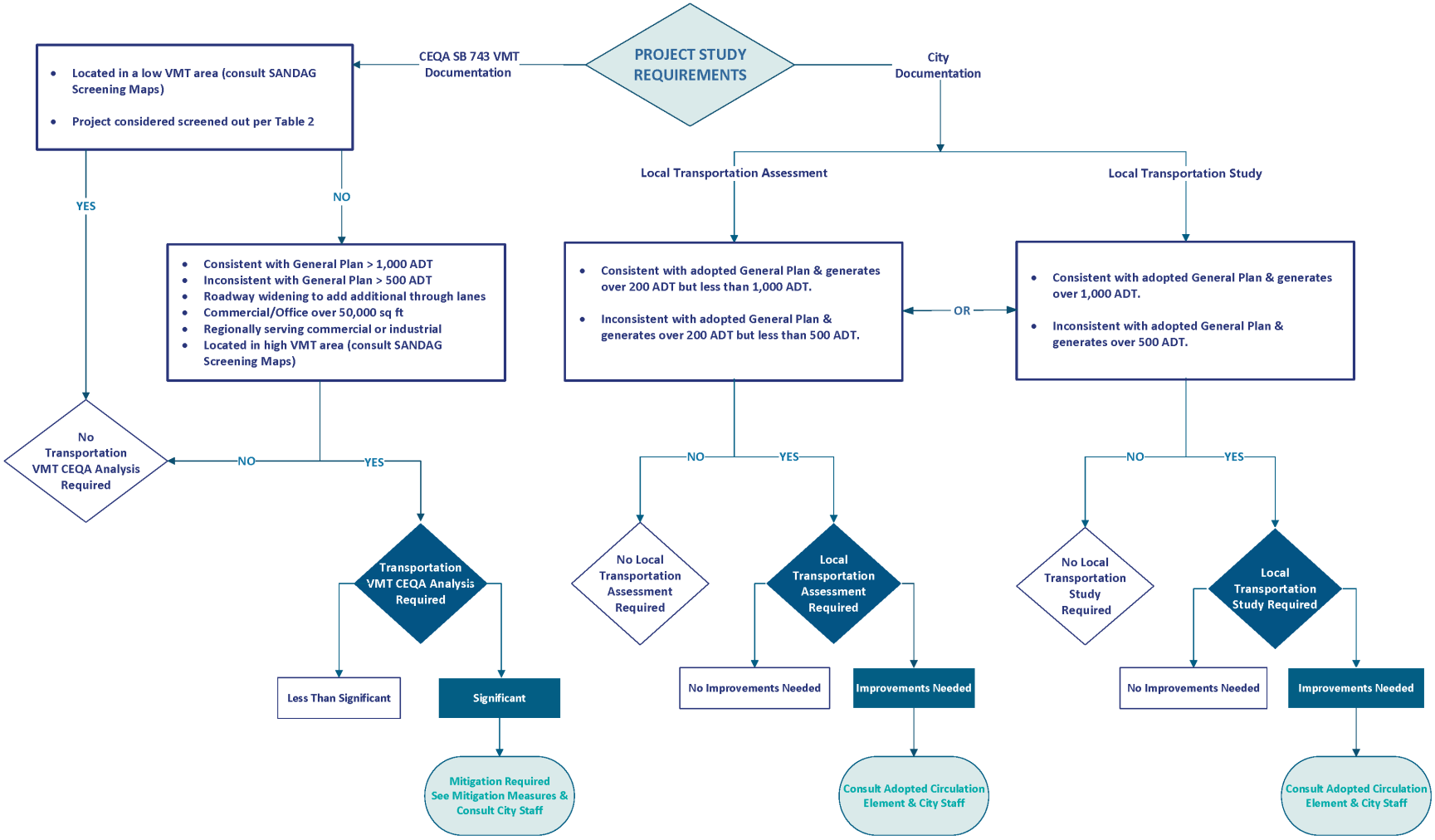
Project Type
Projects located in a Transit Priority Areas (TPA) or Smart Growth Opportunity Area as identified in the most recent SANDAG San Diego Forward Regional Plan and is consistent with the General Plan at the time of project application. (1)(2)
Projects located in a low-VMT generating area identified on the most recent SANDAG SB 743 VMT Screening map
Locally serving K-12 schools
Day care centers
Local parks
Locally serving retail uses less than 50,000 square feet, including: gas stations, banks, restaurants, grocery stores, and shopping centers
Community institutions (Public libraries, fire stations, local government)
Locally serving hotels (e.g. non-destination hotels, non-regionally serving)
Student housing projects on or adjacent to college campuses
Local serving community colleges that are consistent with the assumptions noted in the most recent SANDAG Regional Transportation Plan/Sustainable Communities Strategy
Affordable housing projects (3)
Assisted living facilities
Senior housing (as defined by HUD)
Transit projects
Bike projects
Pedestrian projects
Safety improvement projects (e.g. RRFBs and high visibility crosswalks at uncontrolled locations, pedestrian count down timers, additionally projects identified through the Highway Safety Improvement Program)
Safe Routes to School
Projects generating less than 500 daily vehicle trips (if inconsistent with adopted General Plan)
Projects generating less than 1,000 daily vehicle trips (if consistent with adopted General Plan)

(1) Projects located in a TPA must be able to access the transit station within a ½ mile walking distance or 6 minute walk continuously without discontinuity of sidewalk or obstructions to the route. Qualifying transit stops means a site containing an existing rail transit station served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (OPR, 2017). A high-quality transit corridor may also be considered if a corridor with fixed route bus service has service intervals no longer than 15 minutes during peak commute hours (OPR, 2017).
(2) Smart Growth Opportunity Area Map is provided in **Appendix B**. The most recent version available shall be used.
(3) If a project is a mix of affordable housing and market rate housing or unscreened use, only the affordable housing component would qualify as screened out. Additionally, any removal of affordable housing automatically requires CEQA VMT analysis.

8.0 Determining Project Study Requirements

Figure 8-1 helps guide development projects in determining the requirements from a local and state perspective in order to help determine study requirements. The screening flowchart indicates an overview of the circumstances where a detailed CEQA VMT analysis would or would not be required and when a project would require a Local Transportation Study or Local Transportation Assessment. The City maintains the discretion to require a project to conduct additional analysis if needed.

Figure 8-1 Project Study Requirements



* Projects are not confined to what is listed above and will need to be coordinated with City Staff to determine study requirements for developments not listed.
This flowchart is a generalization, it is up to the City's discretion to determine if additional analyses will be required and if potential mitigation or improvements are acceptable.

9.0 San Diego Regional Guidelines For VMT

The City of Oceanside utilizes the Institute of Transportation Engineers (ITE) San Diego Regional Guidelines (May 2019) to establish thresholds and methodology for VMT analysis. For analysis purposes the most recent version of these guidelines shall be utilized. The following sections summarize the VMT thresholds requirements for Oceanside in alignment with ITE. Thorough analysis explanation can be found in the most recent ITE guidance.

Minimum Threshold for VMT Analysis

Based on the recommendations of the Institute of Transportation Engineers (ITE) for the San Diego section, **Table 3** indicates when a VMT analysis for CEQA is required. This is based on keeping consistent with the thresholds previously used and *SANDAG's Not So Brief Guide Trip Generation (2002)*. These thresholds are based on the understanding that SANDAG trip generation rates differ from ITE trip generation rates which OPR's recommendations are based on.

Projects Consistent with the Adopted General Plan

The City's adopted General Plan represents the vision and goals the City has for the community. Projects that support these goals will adhere to the following VMT analysis thresholds identified in Table 3.

Table 3 – Threshold for VMT Analysis for Projects Consistent with the Adopted General Plan

	VMT Analysis Not Needed	VMT Analysis Needed (1)
Average Daily Traffic Volume (ADT)	Less than 1,000 ADT	Greater than 1,000 ADT

(1) If ADT is equal to 1,000 ADT, VMT analysis is required.

Projects Inconsistent with the Adopted General Plan

The City's adopted General Plan represents the vision and goals the City has for the community. Projects that are not in support of the General Plan have a lower VMT threshold and will require a General Plan Amendment. The following VMT analysis thresholds for projects that are inconsistent are identified in **Table 4**.

Table 4 – Threshold for VMT Analysis for Projects Inconsistent with the Adopted General Plan

	VMT Analysis Not Needed	VMT Analysis Needed (1)
Average Daily Traffic Volume (ADT)	Less than 500 ADT	Greater than 500 ADT

(1) If ADT is equal to 500 ADT, VMT analysis is required.

The thresholds identified in Table 3 and Table 4 stem from the professional expertise and judgement of the ITE San Diego section. These thresholds reflect what is appropriate for the San Diego region to use for VMT and have previously helped determine LOS impacts.

VMT Thresholds

This section identifies what type of VMT analysis is required based on the land use and thresholds identified in the previous section. If a project qualifies for a VMT analysis, the VMT analysis can be compared based on City-wide, Regional, or community basis. The method of comparison shall be agreed upon by the City Traffic Engineer and shall be appropriate based on the use of the site.

The following defines the metrics identified in **Table 5**. It is important the appropriate metrics are applied for each project.

VMT/Capita:

Includes all vehicle-based person trips grouped and summed to the home location of individuals who are drivers or passengers on each trip. It includes home-based and non-home-based trips. The VMT for each home is then summed for all homes in a particular census tract and divided by the population of that census tract to arrive at Resident VMT/Capita.

VMT/Employee:

Includes all vehicle-based person trips grouped and summed to the work location of individuals on the trip. This includes all trips, not just work-related trips. The VMT for each work location is then summed for all work locations in a particular census tract and divided by the number of employees of that census tract to arrive at Employee VMT/Employee.

Small Projects

Small projects, under 2,400 ADT, shall utilize the most recent version of the SANDAG SB 743 Concept Maps. SANDAG has prepared an online mapping system that calculates average VMT/capita and VMT/employee at the census tract level. This tool determines the project's VMT/employee or VMT/capita to be compared to community, city, and/or regional averages. **Appendix C** provides an example of how to use the SANDAG Concept Maps to determine the project's VMT.

Large Projects

Projects consisting of 2,400 ADT or higher will require the use of the most recent SANDAG model to determine VMT. The SANDAG transportation model provides a systematic analytical platform so that different alternatives and inputs can be evaluated in an iterative and controlled environment.

Table 5 identifies the significance thresholds for proposed land uses. Projects that exceed the significance thresholds are considered significant and will require VMT analysis and mitigation.

Table 5 – City of Oceanside Project Threshold

Project Type	Metric	Significance Threshold[1]
Residential	Resident VMT / Capita	15 % below regional average
Commercial	Employee VMT / Employee	15 % below regional average
Industrial	Employee VMT / Employee	15 % below regional average
Retail [2]	Net increase in the regional VMT	Net increase in regional VMT
Mixed-Use	Evaluate each land use separately	Based on proposed land use
Redevelopment [3]	Based on the proposed land use	Based on the proposed land use

(1) The City may request the applicant to analyze VMT using a more localized threshold if the project requires.

(2) Locally serving retail is presumed to decrease VMT however retail projects over 50,000 square feet are considered regionally serving.

(3) A redevelopment project that reduces VMT is presumed to have less than a significant impact and is screened out. The removal of affordable housing will require VMT analysis.

10.0 Mitigation Measures and Strategies for VMT Reduction

A project that exceeds the thresholds identified in the previous tables is considered to have a significant impact and will require mitigation measures and strategies. With appropriate mitigation the project may be able to apply VMT reductions to part or all of the project depending on the land use and strategy chosen. It is critical to implement strategies that are appropriate for the land use, for example, a residential project would not implement a telecommute strategy but may include providing a bike facility and amenities on-site.

SANDAG Mobility Management Guidebook

The purpose of the mitigation measures and strategies is to reduce the VMT generated by the project through a reduction of the distance driven or reducing the number of vehicle trips. It is recommended the SANDAG Mobility Management Guidebook (2019) be consulted to determine mitigation measures for the project site.

The guidebook consists of the following resources:

- Mobility Management Guidebook
- VMT Reduction Calculator Tool
- Calculator Design Document
- Recommendations for Application
- User Training Videos

Figure 10-1 identifies the potential mobility management strategies included in the guidebook that are recommended for a project exceeding the VMT thresholds. It is also recommended the SANDAG iCommute and MTS programs be utilized for projects generating employment. Several opportunities included in these programs are identified in **Table 6**. **Appendix D** contains the SANDAG Mobility Management Guidebook for reference.

The VMT Reduction Calculator Tool evaluates the VMT impact of more than 20 mobility management strategies. The calculator can be utilized to determine how a strategy, when implemented, can reduce a project's VMT. **Appendix E** contains the SANDAG VMT Reduction Calculator Tool for reference, the calculator is available on the SANDAG website. All VMT reduction strategies utilized should be discussed with the City and provided with backup documentation. Any changes or overrides to input parameters should be discussed and approved by the City.

Figure 10-1 Mobility Management Strategies

	Strategy Type	Strategy Name	Included in VMT Calculator?
Project/Site Level	Employer Commute Programs	Comprehensive Employer Commute Program	√
		Employer Carpool Program	√
		Employer Transit Pass Subsidy	√
		Employer Vanpool Program	√
		Employer Telework Program	√
		Employer Guaranteed Ride Home Program	
		On-Site Bike Amenities	
	Land Use Strategies	Higher-Density Development	
		Transit-Oriented Development	√
		Mixed-Use Development	√
	Parking Management	Parking Pricing	√
		Parking Cash-Out	√
		Reduced Parking	
		Unbundled Parking	
		Smart Parking	
		Shared Parking	
		Shared Mobility Parking	
		Flexible Curb Space	
Community/City Level	Neighborhood Enhancements	Street Connectivity Improvement	√
		Pedestrian Facility Improvement	√
		Bikeway Network Expansion	√
		Bike Facility Improvement	√
		Bikeshare	√
		Carshare	√
		Community-Based Travel Planning	√
	Transit Strategies	Transit Service Expansion	√
		Transit Frequency Improvements	√
		Transit-Supportive Treatments	√
		Transit Fare Reduction	√
		Microtransit NEV Shuttle	√
		Microtransit Commuter Shuttle	
	Transportation System Management	Adaptive Traffic Signal Systems	
		Smart Signals and Intersections	
		Optimized Signal Timing for Bicycles	
		Advanced Bicycle Detection	
		Real-Time Traveler Information	
		Active Traffic Management	
		Traffic Incident Management	
		Roadway Weather Management	

Source: SANDAG Mobility Management Strategy Guidebook, June 2019

Table 6 – Additional VMT Reduction Strategies for Employers

Additional VMT Reduction Strategies for Employers
Establish and maintain participation in SANDAG's iCommute services for employers
Provide a monthly employer subsidy/pretax payroll deduction toward transit passes, carpool, or vanpool.
Encourage employees to register in SANDAG's iCommute program for rideshare matches.
Provide a monthly employer subsidy or incentives for employees or patrons who regularly commute by bicycle.
Host or sponsor regional events such as Bike to Work day, Rideshare Month
Participate in MTS promotions such as Free Ride Day and EcoPass
Implement an internal carpool program for employees
Designate an on-site point of contact for employee commute inquiries.

OPR Mitigation Measures

Table 7 identifies additional mitigation measures provided by the Office of Planning and Research (OPR).

Table 7 – OPR Recommended Mitigation Measures

Additional Mitigation Measures
Improve or increase access to transit.
Increase access to common goods and services, such as groceries, schools, and daycare.
Incorporate affordable housing into the project.
Incorporate a neighborhood electric vehicle network.
Orient the project toward transit, bicycle, and pedestrian facilities.
Improve pedestrian or bicycle networks, or transit service.
Implement or provide access to a commute reduction program.
Provide parking cash-out programs.
Unbundle parking costs.
Provide bicycle parking.
Limit or eliminate parking supply.
Provide traffic calming as a way to incentivize bicycling and/or walking.
Provide partially or fully subsidized transit passes.
Shift single occupancy vehicle trips to carpooling or vanpooling by providing ride-matching services or shuttle services.
Provide telework options.
Provide incentives or subsidies that increase the use of modes other than a single-occupancy vehicle.
Provide on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, showers and locker rooms, and bicycle repair services.
Provide employee transportation coordinators at employment sites.
Provide a guaranteed ride home service to users of non-auto modes.
Contribute to a mobility fee program that funds multimodal transportation improvements, such as those described above.

The City may decide to implement a VMT mitigation fee bank to fund projects that would help the City reduce GHG emissions and promote VMT reduction. This would need to be developed specifically for VMT reduction projects for the City and cannot be preexisting to this document. Mitigation measures are not limited to this document and may be discussed with the City Traffic Engineer providing appropriate reduction methodologies are applied using documentation published by SANDAG, the California Air Resources Board (CARB), or the California Air Pollution Control Officers Association (CAPCOA). These resources provide quantifiable measures that may be used for project mitigation. Mitigation and reduction measures utilized should be documented and easily referenced in the document's appendix.

SIGNIFICANT AND UNAVOIDABLE IMPACTS

Projects that are unable to mitigate to a less than significant level of impact must provide a detailed statement of overriding considerations in accordance with CEQA Guidelines Sections 15091 and 15093. The following are direct quotes from the legislation to help project applicants understand CEQA law.

Section 15091 Findings:

" (a) No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding.

The possible findings are:

(1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

(2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

(3) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

(b) The findings required by subdivision (a) shall be supported by substantial evidence in the record.

(c) The finding in subdivision (a)(2) shall not be made if the agency making the finding has concurrent jurisdiction with another agency to deal with identified feasible mitigation measures or alternatives. The finding in subdivision (a)(3) shall describe the specific reasons for rejecting identified mitigation measures and project alternatives.

(d) When making the findings required in subdivision (a)(1), the agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to avoid or substantially lessen significant environmental effects. These measures must be fully enforceable through permit conditions, agreements, or other measures.

(e) The public agency shall specify the location and custodian of the documents or other material which constitute the record of the proceedings upon which its decision is based.

(f) A statement made pursuant to Section 15093 does not substitute for the findings required by this section."

Section 15093 – Statement of Overriding Considerations:

" (a) CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposal project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable."

(b) When the lead agency approves a project which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record.

(c) If an agency makes a statement of overriding considerations, the statement should be included in the record of the project approval and should be mentioned in the notice of determination. This statement does not substitute for, and shall be in addition to, findings required pursuant to Section 15091."

11.0 LOCAL TRANSPORTATION STUDY AND LOCAL TRANSPORTATION ASSESSMENT GUIDELINES

The City of Oceanside utilizes the Institute of Transportation Engineers (ITE) San Diego Regional Guidelines (May 2019) to establish thresholds and methodology for a Local Transportation Study (LTS). A Local Transportation Study is different from VMT analysis for CEQA purposes and may be required in addition to the VMT analysis or individually. A Local Transportation Study will analyze the projects influence on the surrounding intersections and roadway network utilizing level of service (LOS) for all project scenarios. The purpose of the LTS is to help quantify the local impact of the development and expected changes in transportation conditions. The LTS should include roadway, bicycle, pedestrian, and transit evaluations. The following sections identify the project requirements for a Local Transportation Study. The Local Transportation Study helps the City ensure the goals, objectives, and policies adopted by the City are supported and implemented while monitoring the capacity for the roadway networks.

Data should be collected during typical operation hours. Data should be recent and no more than 2 years old for an LTS. **The acceptable level of service for the City of Oceanside that is consistent with the adopted Circulation Element is LOS D.**

Minimum Threshold for Local Transportation Study

Based on the recommendations of the Institute of Transportation Engineers (ITE) for the San Diego section, **Table 8** indicates when a Local Transportation Study is required for the City. This is based on keeping consistent with the thresholds previously used and *SANDAG's Not So Brief Guide (2002) Trip Generation*.

Projects Consistent with the Adopted General Plan

The City's adopted General Plan represents the vision and goals the City has for the community. Projects that support these goals will adhere to the following LTS thresholds identified in Table 8.

Table 8 – Threshold for LTS for Projects Consistent with the Adopted General Plan

	LTS Analysis Not Needed	LTS Analysis Needed (1)
Average Daily Traffic Volume (ADT)	Less than 1,000 ADT	Greater than 1,000 ADT

(1) If ADT is equal to 1,000 ADT, an LTS is required.

A Local Transportation Study (LTS) will be required if a project exceeds 1,000 ADT and is consistent with the adopted General Plan.

Projects Inconsistent with the Adopted General Plan

The City's adopted General Plan represents the vision and goals the City has for the community. Projects that are not in support of the General Plan have a lower LTS threshold and will require a General Plan Amendment. The following LTS analysis thresholds for projects that are inconsistent are identified in **Table 9**.

Table 9 – Threshold for LTS for Projects Inconsistent with the Adopted General Plan

	LTS Analysis Not Needed	LTS Analysis Needed (1)
Average Daily Traffic Volume (ADT)	Less than 500 ADT	Greater than 500 ADT

(1) If ADT is equal to 500 ADT, an LTS is required.

A Local Transportation Study (LTS) will be required if a project exceeds 500 ADT and is inconsistent with the adopted General Plan.

The thresholds identified in Table 7 and Table 8 stem from the professional expertise and judgement of the ITE San Diego section. These thresholds keep consistent with regional practice and will help ensure developments will not overburden the transportation network.

If a project would add peak hour trips to any existing on- or off-ramp it is recommended to consult with the City and Caltrans to determine if an LTS would be required.

Study Scenarios

The following scenarios are included in an LTS and may be modified in agreement with the City Traffic Engineer.

- Existing Conditions
- Existing Conditions Plus Project
- Existing Conditions Plus Near-Term Cumulative Projects
- Existing Conditions Plus Near-Term Cumulative Projects Plus Project
- Buildout Conditions (2030)
- Buildout Conditions Plus Project

Local Transportation Assessment (LTA)

A Local Transportation Assessment (LTA) may be required instead of a Local Transportation Study depending on the size of the project. A helps the City monitor development impacts on the transportation network and is similar to a Local Transportation Study(LTS). The main difference between the two studies is a Local Transportation Assessment (LTA) analyzes fewer scenarios than a Local Transportation Study (LTS). A Local Transportation Assessment (LTA) will be required if a project is less than 1,000 ADT but is anticipated to influence the surrounding environment.

A Local Transportation Assessment (LTA) will be required to analyze the following scenarios based on the thresholds for identified for the project's ADT.

- **A project that generates between 200-500 ADT will be required to analyze existing conditions and existing conditions plus project.**

- **A project that generates between 500-1,000 ADT will be required to analyze existing conditions, existing conditions plus project, existing conditions plus near-term cumulative projects, and existing conditions plus near-term cumulative projects plus project.**

Transportation Modes to be Included for Discussion in the LTS/LTA

Pedestrian:

- The LTS/LTA shall include pedestrian infrastructure available including any opportunities or deficiencies such as path obstructions or missing sidewalk for ½ mile walking distance from project pedestrian access points.
- All pedestrian facilities directly connected to project access points or adjacent to the project development, extending in each direction to the nearest intersection with a classified roadway or connection with a Class I path
- Facilities connecting to transit stops within two blocks of the project
- Only facilities on the side of the project or along the walking route to transit stop
- Additional geographic areas may be included in certain cases to address special cases such as schools or retail centers

Bicycle:

- The LTS/LTA shall include a discussion of bicycle infrastructure available including any opportunities or deficiencies such as bike lanes, bike buffers, or bike boxes. This section must also include discussion of what is planned based on City and regional documentation. The extents are as follows:
    - All roadways adjacent to the project, extending in each direction to the nearest intersection with a classified roadway or with a Class I path
    - Both directions of travel should be evaluated

Transit:

- The LTS/LTA shall identify any transit stops or routes existing and planned near the project site. This section shall also include a discussion and evaluation of transit stop amenities within ½ mile of each pedestrian access point.

Vehicle:

All signalized intersections and signalized project driveways shall be analyzed if:

- The project will add 50 or more peak hour (final cumulative) trips in either direction

All unsignalized intersections and unsignalized project driveways shall be analyzed if:

- The project will add 50 or more peak hour (final cumulative) trips in either direction

All freeway ramp intersections and signalized project driveways shall be analyzed if:

- The project will add 20 or more peak hour (final cumulative) trips in either direction

Intersection Level of Service analysis should be conducted using the Highway Capacity Manual (HCM) Methodology. For signalized intersections, the methodology described in the HCM for signalized intersections is used. With this methodology, the average control delay per vehicle is estimated for each lane group and aggregated for each approach and for the intersection as a whole. The relationship between control delay per vehicle and LOS for signalized intersections is summarized in **Table 10**.

Table 10 – HCM Level of Service Description for Signalized Intersections

Level of Service	Description of Traffic Conditions	Control Delay (sec/veh)
A	Insignificant delays: no approach phase is fully utilized and no vehicle waits longer than one red indication	≤ 10
B	Minimal delays: an occasional approach phase is fully utilized. Drivers begin to feel restricted.	> 10 – 20
C	Acceptable delays: major approach phase may become fully utilized. Most drivers feel somewhat restricted.	> 25 – 35
D	Tolerable delays: Drivers may wait through more than one red indication. Queues may develop but dissipate rapidly without excessive delays.	> 35 – 55
E	Significant delays: Volumes approaching capacity. Vehicles may wait through several cycles and long vehicle queues form upstream.	> 55 – 80
F	Excessive delays: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80

Source: Highway Capacity Manual, Transportation Research Board, 2010.

For unsignalized intersections, the methodology described in the HCM for unsignalized intersections is used. With this methodology, LOS is related to the control delay for each stop-controlled movement. The relationship between control delay per vehicle and LOS for unsignalized intersections is summarized in **Table 11**.

Table 11 – HCM Level of Service Description for Unsignalized Intersections

Level of Service	Description of Traffic Conditions	Control Delay (sec/veh)
A	No delay for stop-controlled approaches.	≤ 10
B	Operations with minor delay.	> 10 – 15
C	Operations with moderate delays.	> 15 – 25
D	Operations with some delays.	> 25 – 35
E	Operations with high delays and long queues.	> 35 – 50
F	Operation with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50

Source: Highway Capacity Manual, Transportation Research Board, 2010.

Table 12 provides guidance on the levels of ADT that can be accommodated on various types of roadways, based on level of service.

Table 12 – Circulation Element Roadway Classification LOS & Capacity

Class	Lanes	Cross Section [1]	Level of Service (LOS)				
			A	B	C	D	E
Expressway	6	102/160 122/200	30,000	42,000	60,000	70,000	80,000
Expressway	4	102/160 122/200	25,000	35,000	50,000	55,000	60,000
Prime Arterial	6	104/124	25,000	35,000	50,000	55,000	60,000
6-Lane Major Arterial	6	104/124	20,000	28,000	40,000	45,000	50,000
5-Lane Major Arterial [2]	5	102/122	17,500	24,500	35,000	40,000	45,000
4-Lane Major Arterial	4	80/100	15,000	21,000	30,000	35,000	40,000
Secondary Collector (4 lanes with 2-way left turn lane)	4	64/84	10,000	14,000	20,000	25,000	30,000
Secondary Collector (4 lanes without 2-way left-turn lane, with left turn pockets	4	54/74, 60/80	9,000	13,000	18,000	22,000	25,000
Collector (commercial fronting, 2-lanes with 2-way left turn lane) [3]	2	50/70	5,000	7,000	10,000	13,000	15,000
Collector (residential streets in the Circulation Element or industrial fronting)	2	40/60, 50/70	4,000	5,500	7,500	9,000	10,000
Local Street (residential streets NOT in the Circulation Element	1	36/56, 40/60	–	–	2,400	–	–

(1) Cross sections are listed as curd-to-curb width/total right of way width, in feet.
(2) Vandegrift Boulevard is the only Circulation Element roadway designated as a 5-lane Major Arterial. It is not intended that other roadways be build to 5-lane Major Arterial standards.
(3) This capacity will also be assumed for a two-lane one-way collector.

Table 13 indicates when a project's effect on the roadway system is considered to justify the need for roadway improvements. That is, if a project's traffic effect causes the values in this table to be exceeded, roadway improvements should be considered as follows on a case by case basis:

- Improvements should be consistent with the General Plan
- Improvements for transit, bike and pedestrian facilities should be given priority in Transit Priority Areas or Smart Growth Opportunity Areas as identified by SANDAG.
- Projects in Transit Priority Areas or Smart Growth Opportunity Areas as identified by SANDAG, that are consistent with the General Plan at the time of project application, should not be denied due to the inability to provide roadway improvements (i.e. existing right of way is constrained, etc.)

Table 13 – Determination of the Need for Roadway Improvements

Level of Service with Project*	Allowable Change Due to Project Effect**					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (MPH)	V/C	Speed (MPH)	Delay (Sec.)	Delay (Min.)
E & F (or ramp meter delays above 15 min)	0.01	1	0.02	1	2	2

12.0 TRANSPORTATION DEMAND MANAGEMENT (TDM) STRATEGIES

In general, the goal of City Staff is to help Oceanside increase connectivity and level of comfort for pedestrians, bicyclists, and transit users. Project improvements may come from the City's adopted General Plan or other City policies that help improve the overall quality of life for the community. **Table 14** identifies some TDM improvement measures that may be considered for a project.

Table 14 – Potential TDM Improvement Measures

Potential TDM Measures	
Transit Facilities	Telecommuting
Bike Facilities	Rideshare Programs
Walkability	Flex-time
Carpool Incentives	Parking Cash-Out
Subsidized Transit Passes	Shuttle Service

A measure that is not listed may be considered if the mitigation is appropriately applied and reasonable. Additional improvement measures may be identified as future technologies and policies evolve or with consultation by City Staff.

13.0 RESOURCES

The following resources were used in the development of these guidelines. It is recommended the consultant develop a plan of action that aligns with the City Traffic Engineer's expectation prior to conducting any analyses.

City of San Diego. "Transportation Study Manual (TSM) Draft." September 2019.

Institute of Transportation Engineers (San Diego Section). " Guidelines for Transportation Impact Studies (TIS) in the San Diego Region." May 2019. Accessed April 1, 2020.

Governor's Office of Planning and Research (OPR). "Technical Advisory on Evaluating Transportation Impacts in CEQA." December 2018. Accessed April 1, 2020.

Governor's Office of Planning and Research (OPR). "Key Resources on SB 743: Studies, Reports, Briefs, and Tools." April 2018. Accessed April 1, 2020.

California Air Resources Board (CARB). "2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals." January 2019. Accessed April 1, 2020.

California Air Pollution Control Officers Association (CAPCOA). "Quantifying Greenhouse Gas Mitigation Measures." August 2010. Accessed April 1, 2020.

San Diego Association of Governments (SANDAG). "TDM Planning Resources." 2019. Accessed April 1, 2020.

Appendix E

Count Data (Vehicles, Pedestrians, and Bicycles)

PO Box 1178
Corona, CA 92880
951-268-6268

Location: Oceanside
N/S: College Boulevard
E/W: Vista Way

Date: 7/23/2019
Day: TUESDAY
Project # 143-19504

TURNING MOVEMENT COUNT

Count Period: **7:00 AM to 9:00 AM**
Peak Hour: **7:30 AM to 8:30 AM**

Vehicle Counts

	College Boulevard Northbound			College Boulevard Southbound			Vista Way Eastbound			Vista Way Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	18	104	110	3	312	5	6	19	73	78	41	47	816
7:15 AM	23	146	139	6	330	8	11	23	93	85	50	56	970
7:30 AM	33	147	131	2	365	11	9	27	83	106	53	56	1023
7:45 AM	54	187	170	7	316	10	13	36	97	100	76	66	1132
8:00 AM	34	168	134	5	318	10	10	27	77	102	73	67	1025
8:15 AM	49	158	123	10	300	12	10	21	104	78	55	66	986
8:30 AM	49	156	111	10	265	13	8	27	87	101	66	53	946
8:45 AM	36	135	130	12	314	15	14	23	85	95	76	47	982
TOTAL VOLUMES:	296	1201	1048	55	2520	84	81	203	699	745	490	458	7880

AM Peak Hr Begins at: 730 AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	170	660	558	24	1299	43	42	111	361	386	257	255	4166

PEAK HR FACTOR:	0.844	0.903	0.880	0.928	0.920

Bicycle Counts

	College Boulevard Northbound			College Boulevard Southbound			Vista Way Eastbound			Vista Way Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1	0	0	0	0	0	0	0	2

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

Pedestrian Counts

	College Boulevard North Leg	College Boulevard South Leg	Vista Way East Leg	Vista Way West Leg	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	2	0	2
8:00 AM	0	0	3	0	3
8:15 AM	0	0	1	0	1
8:30 AM	0	0	2	0	2
8:45 AM	1	0	4	0	5
TOTAL VOLUMES:	1	0	12	0	13

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	0	0	6	0	6

PO Box 1178
Corona, CA 92880
951-268-6268

Location: Oceanside
N/S: College Boulevard
E/W: Vista Way

Date: 7/23/2019
Day: TUESDAY
Project # 143-19504

TURNING MOVEMENT COUNT

Count Period: **4:00 PM to 6:00 PM**
Peak Hour: **5:00 PM to 6:00 PM**

Vehicle Counts

	College Boulevard Northbound			College Boulevard Southbound			Vista Way Eastbound			Vista Way Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	81	309	159	13	249	19	26	33	92	152	84	74	1291
4:15 PM	81	356	147	13	280	31	22	38	101	125	72	87	1353
4:30 PM	78	338	161	10	260	21	26	51	110	122	87	83	1347
4:45 PM	85	389	140	5	299	24	23	38	101	121	80	72	1377
5:00 PM	100	300	130	4	221	24	40	45	111	118	88	77	1258
5:15 PM	96	411	147	4	282	28	31	47	103	103	86	71	1409
5:30 PM	62	361	143	3	189	14	23	31	88	99	83	95	1191
5:45 PM	80	373	161	9	305	15	24	40	60	84	63	79	1293
TOTAL VOLUMES:	663	2837	1188	61	2085	176	215	323	766	924	643	638	10519

PM Peak Hr Begins at: 430 PM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	359	1438	578	23	1062	97	120	181	425	464	341	303	5391

PEAK HR FACTOR:	0.908	0.901	0.926	0.949	0.957

Bicycle Counts

	College Boulevard Northbound			College Boulevard Southbound			Vista Way Eastbound			Vista Way Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	0	1	0	0	0	0	0	1	0	1	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
5:45 PM	0	2	0	0	0	0	0	0	1	0	0	0	3
TOTAL VOLUMES:	0	5	1	0	1	1	0	0	2	0	2	0	12

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	3	0	0	1	0	0	0	0	0	0	0	4

Pedestrian Counts

	College Boulevard North Leg	College Boulevard South Leg	Vista Way East Leg	Vista Way West Leg	TOTAL
4:00 PM	1	0	2	0	3
4:15 PM	0	0	3	1	4
4:30 PM	0	0	3	0	3
4:45 PM	2	0	3	1	6
5:00 PM	0	0	1	0	1
5:15 PM	1	0	6	0	7
5:30 PM	0	0	6	2	8
5:45 PM	0	0	2	0	2
TOTAL VOLUMES:	4	0	26	4	34

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	3	0	13	1	17

PO Box 1178
Corona, CA 92880
951-268-6268

Location: Oceanside
N/S: College Boulevard
E/W: Plaza Drive

Date: 7/23/2019
Day: TUESDAY
Project # 143-19504

TURNING MOVEMENT COUNT

Count Period: **7:00 AM to 9:00 AM**
Peak Hour: **7:30 AM to 8:30 AM**

Vehicle Counts

	College Boulevard Northbound			College Boulevard Southbound			Plaza Drive Eastbound			Plaza Drive Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	9	109	41	116	266	26	22	8	2	29	1	30	659
7:15 AM	9	131	45	130	296	20	13	11	3	20	2	40	720
7:30 AM	5	139	47	141	336	11	14	7	6	33	5	49	793
7:45 AM	5	171	43	164	306	21	18	5	3	25	3	56	820
8:00 AM	6	135	40	122	298	20	14	9	1	19	4	43	711
8:15 AM	7	161	58	136	256	22	12	10	4	36	4	51	757
8:30 AM	4	151	48	135	279	20	16	12	2	21	4	46	738
8:45 AM	5	150	55	164	279	17	8	13	5	25	3	43	767
TOTAL VOLUMES:	50	1147	377	1108	2316	157	117	75	26	208	26	358	5965

AM Peak Hr Begins at: 730 AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	23	606	188	563	1196	74	58	31	14	113	16	199	3081

PEAK HR FACTOR:	0.904	0.933	0.954	0.901	0.939

Bicycle Counts

	College Boulevard Northbound			College Boulevard Southbound			Plaza Drive Eastbound			Plaza Drive Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	3	0	0	0	0	0	0	0	3
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	1	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	3	1	0	5	0	0	0	0	0	0	0	9

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	2	0	0	1	0	0	0	0	0	0	0	3

Pedestrian Counts

	College Boulevard North Leg	College Boulevard South Leg	Plaza Drive East Leg	Plaza Drive West Leg	TOTAL
7:00 AM	0	1	0	0	1
7:15 AM	0	0	1	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	2	0	2
8:00 AM	0	0	2	0	2
8:15 AM	0	0	1	0	1
8:30 AM	0	0	2	1	3
8:45 AM	0	2	2	0	4
TOTAL VOLUMES:	0	3	10	1	14

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	0	0	5	0	5

PO Box 1178
Corona, CA 92880
951-268-6268

Location: Oceanside
N/S: College Boulevard
E/W: Plaza Drive

Date: 7/23/2019
Day: TUESDAY
Project # 143-19504

TURNING MOVEMENT COUNT

Count Period: **4:00 PM to 6:00 PM**
Peak Hour: **4:30 PM to 5:30 PM**

Vehicle Counts

	College Boulevard Northbound			College Boulevard Southbound			Plaza Drive Eastbound			Plaza Drive Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	4	290	71	172	304	24	21	15	5	24	1	111	1042
4:15 PM	2	312	66	183	276	20	15	19	3	46	4	119	1065
4:30 PM	10	308	77	203	293	26	12	19	2	34	4	132	1120
4:45 PM	8	327	83	151	339	18	19	9	3	49	6	108	1120
5:00 PM	6	281	81	173	299	22	15	16	5	43	3	123	1067
5:15 PM	5	354	62	137	289	21	33	15	1	42	4	107	1070
5:30 PM	7	320	58	137	241	19	24	14	7	37	2	102	968
5:45 PM	2	314	53	140	253	24	15	12	6	33	2	97	951
TOTAL VOLUMES:	44	2506	551	1296	2294	174	154	119	32	308	26	899	8403

PM Peak Hr Begins at: 430 PM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	29	1270	303	664	1220	87	79	59	11	168	17	470	4377

PEAK HR FACTOR:	0.951	0.944	0.760	0.963	0.977

Bicycle Counts

	College Boulevard Northbound			College Boulevard Southbound			Plaza Drive Eastbound			Plaza Drive Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	2	1	0	1	0	0	0	0	0	0	0	4
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
TOTAL VOLUMES:	0	7	1	0	2	0	0	1	0	0	0	0	11

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	4	1	0	1	0	0	0	0	0	0	0	6

Pedestrian Counts

	College Boulevard North Leg	College Boulevard South Leg	Plaza Drive East Leg	Plaza Drive West Leg	TOTAL
4:00 PM	0	1	4	3	8
4:15 PM	0	3	4	3	10
4:30 PM	0	0	1	0	1
4:45 PM	0	1	2	0	3
5:00 PM	0	0	0	0	0
5:15 PM	0	1	3	0	4
5:30 PM	0	6	4	3	13
5:45 PM	0	3	4	0	7
TOTAL VOLUMES:	0	15	22	9	46

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	0	2	6	0	8

PO Box 1178
Corona, CA 92880
951-268-6268

Location: Oceanside
N/S: SR-78 EB Ramps
E/W: Plaza Drive

Date: 7/23/2019
Day: TUESDAY
Project # 143-19504

TURNING MOVEMENT COUNT

Count Period: **7:00 AM to 9:00 AM**
Peak Hour: **8:00 AM to 9:00 AM**

Vehicle Counts

	SR-78 EB Ramps Northbound			SR-78 EB Ramps Southbound			Plaza Drive Eastbound			Plaza Drive Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	2	0	1	10	3	9	130	33	0	8	39	12	247
7:15 AM	2	2	0	15	1	3	134	32	2	4	50	10	255
7:30 AM	9	3	2	13	5	8	132	34	11	5	55	10	287
7:45 AM	4	1	2	21	2	8	143	47	1	10	64	10	313
8:00 AM	8	3	2	15	7	8	116	32	5	8	48	7	259
8:15 AM	13	0	2	17	2	10	155	42	4	6	64	5	320
8:30 AM	7	4	1	19	5	4	147	38	7	8	56	12	308
8:45 AM	7	4	2	20	5	9	150	44	6	14	57	8	326
TOTAL VOLUMES:	52	17	12	130	30	59	1107	302	36	63	433	74	2315

AM Peak Hr Begins at: 800 AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	35	11	7	71	19	31	568	156	22	36	225	32	1213

PEAK HR FACTOR:	0.883	0.890	0.928	0.927	0.930

Bicycle Counts

	SR-78 EB Ramps Northbound			SR-78 EB Ramps Southbound			Plaza Drive Eastbound			Plaza Drive Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	1	0	2

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Counts

	SR-78 EB Ramps North Leg	SR-78 EB Ramps South Leg	Plaza Drive East Leg	Plaza Drive West Leg	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	4	0	1	5
7:30 AM	1	1	0	0	2
7:45 AM	0	0	0	1	1
8:00 AM	0	1	0	1	2
8:15 AM	0	1	0	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	2	0	0	2
TOTAL VOLUMES:	1	9	0	3	13

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	0	4	0	1	5

PO Box 1178
Corona, CA 92880
951-268-6268

Location: Oceanside
N/S: SR-78 EB Ramps
E/W: Plaza Drive

Date: 7/23/2019
Day: TUESDAY
Project # 143-19504

TURNING MOVEMENT COUNT

Count Period: **4:00 PM to 6:00 PM**
Peak Hour: **4:15 PM to 5:15 PM**

Vehicle Counts

	SR-78 EB Ramps Northbound			SR-78 EB Ramps Southbound			Plaza Drive Eastbound			Plaza Drive Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	40	10	13	30	10	7	139	79	19	26	104	11	488
4:15 PM	41	15	7	51	15	9	156	79	16	30	103	11	533
4:30 PM	45	14	11	32	13	7	155	85	23	17	104	13	519
4:45 PM	35	8	15	27	11	3	166	68	26	32	114	11	516
5:00 PM	59	11	20	22	16	5	159	70	18	31	110	18	539
5:15 PM	39	14	13	27	9	5	157	67	15	30	106	9	491
5:30 PM	44	10	8	28	8	3	120	51	27	27	101	11	438
5:45 PM	35	13	15	20	15	2	140	71	24	39	90	21	485
TOTAL VOLUMES:	338	95	102	237	97	41	1192	570	168	232	832	105	4009

PM Peak Hr Begins at: 415 PM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	180	48	53	132	55	24	636	302	83	110	431	53	2107

PEAK HR FACTOR:	0.781	0.703	0.971	0.934	0.977

Bicycle Counts

	SR-78 EB Ramps Northbound			SR-78 EB Ramps Southbound			Plaza Drive Eastbound			Plaza Drive Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	2
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	0	0	0	3	0	1	0	0	4

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

Pedestrian Counts

	SR-78 EB Ramps North Leg	SR-78 EB Ramps South Leg	Plaza Drive East Leg	Plaza Drive West Leg	TOTAL
4:00 PM	3	1	0	0	4
4:15 PM	3	1	2	2	8
4:30 PM	0	2	0	0	2
4:45 PM	0	1	2	2	5
5:00 PM	0	1	0	0	1
5:15 PM	2	6	0	2	10
5:30 PM	0	3	0	1	4
5:45 PM	0	2	0	0	2
TOTAL VOLUMES:	8	17	4	7	36

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	3	5	4	4	16

PO Box 1178
Corona, CA 92880
951-268-6268

Location: Oceanside
N/S: Thunder Drive
E/W: Plaza Drive

Date: 7/23/2019
Day: TUESDAY
Project # 143-19504

TURNING MOVEMENT COUNT

Count Period: **7:00 AM to 9:00 AM**
Peak Hour: **7:30 AM to 8:30 AM**

Vehicle Counts

	Thunder Drive Northbound			Thunder Drive Southbound			Plaza Drive Eastbound			Plaza Drive Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	26	0	28	0	0	0	0	26	10	28	31	0	149
7:15 AM	35	0	23	0	0	0	0	26	13	40	33	0	170
7:30 AM	24	0	25	0	0	0	0	41	10	43	42	0	185
7:45 AM	38	0	20	0	0	0	0	54	8	53	51	0	224
8:00 AM	26	0	27	0	0	0	0	30	16	50	37	0	186
8:15 AM	27	0	22	0	0	0	0	42	18	38	46	0	193
8:30 AM	28	0	27	0	0	0	0	35	12	30	41	0	173
8:45 AM	22	0	39	0	0	0	0	46	12	34	50	0	203
TOTAL VOLUMES:	226	0	211	0	0	0	0	300	99	316	331	0	1483

AM Peak Hr Begins at: 730 AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	115	0	94	0	0	0	0	167	52	184	176	0	788

PEAK HR FACTOR:	0.901	0.000	0.883	0.865	0.879

Bicycle Counts

	Thunder Drive Northbound			Thunder Drive Southbound			Plaza Drive Eastbound			Plaza Drive Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	0	0	0	0	0	0	0	0	1

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	1	0	0	0	0	0	0	0	0	0	1

Pedestrian Counts

	Thunder Drive North Leg	Thunder Drive South Leg	Plaza Drive East Leg	Plaza Drive West Leg	TOTAL
7:00 AM	0	1	0	0	1
7:15 AM	0	0	0	0	0
7:30 AM	0	3	0	0	3
7:45 AM	0	2	0	0	2
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	2	0	0	2
8:45 AM	0	1	0	0	1
TOTAL VOLUMES:	0	9	0	0	9

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	0	5	0	0	5

PO Box 1178
Corona, CA 92880
951-268-6268

Location: Oceanside
N/S: Thunder Drive
E/W: Plaza Drive

Date: 7/23/2019
Day: TUESDAY
Project # 143-19504

TURNING MOVEMENT COUNT

Count Period: **4:00 PM to 6:00 PM**
Peak Hour: **4:00 PM to 5:00 PM**

Vehicle Counts

	Thunder Drive Northbound			Thunder Drive Southbound			Plaza Drive Eastbound			Plaza Drive Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	30	0	56	0	0	0	0	96	32	63	100	0	377
4:15 PM	42	0	62	0	0	0	0	91	44	56	100	0	395
4:30 PM	29	0	65	0	0	0	0	98	39	57	84	0	372
4:45 PM	58	0	79	0	0	0	0	78	38	40	107	0	400
5:00 PM	45	0	51	0	0	0	0	79	48	46	86	0	355
5:15 PM	39	0	67	0	0	0	0	83	41	47	97	0	374
5:30 PM	44	0	58	0	0	0	0	71	36	31	96	0	336
5:45 PM	55	0	64	0	0	0	0	75	46	36	88	0	364
TOTAL VOLUMES:	342	0	502	0	0	0	0	671	324	376	758	0	2973

PM Peak Hr Begins at: 400 PM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	159	0	262	0	0	0	0	363	153	216	391	0	1544

PEAK HR FACTOR:	0.768	0.000	0.942	0.931	0.965

Bicycle Counts

	Thunder Drive Northbound			Thunder Drive Southbound			Plaza Drive Eastbound			Plaza Drive Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	0	1	0	0	0	0	0	0	0	1	0	2
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	0	0	0	1	0	0	1	0	3

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	1	0	0	0	0	1	0	0	1	0	3

Pedestrian Counts

	Thunder Drive North Leg	Thunder Drive South Leg	Plaza Drive East Leg	Plaza Drive West Leg	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	4	0	0	4
4:30 PM	0	1	0	1	2
4:45 PM	0	2	0	0	2
5:00 PM	0	11	0	0	11
5:15 PM	0	7	0	0	7
5:30 PM	0	0	0	0	0
5:45 PM	0	4	0	0	4
TOTAL VOLUMES:	0	29	0	1	30

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	0	7	0	1	8

PO Box 1178
Corona, CA 92880
951-268-6268

Location: Oceanside
N/S: Thunder Drive
E/W: Lake Boulevard

Date: 7/23/2019
Day: TUESDAY
Project # 143-19504

TURNING MOVEMENT COUNT

Count Period: **7:00 AM to 9:00 AM**
Peak Hour: **7:30 AM to 8:30 AM**

Vehicle Counts

	Thunder Drive Northbound			Thunder Drive Southbound			Lake Boulevard Eastbound			Lake Boulevard Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	0	0	6	0	30	17	32	0	1	64	18	168
7:15 AM	1	0	0	10	0	33	11	32	2	0	97	18	204
7:30 AM	1	0	0	10	1	37	15	47	1	0	102	15	229
7:45 AM	0	0	0	14	1	47	19	56	0	1	106	19	263
8:00 AM	2	0	0	10	1	50	25	57	1	0	82	21	249
8:15 AM	0	1	0	17	0	35	23	42	0	0	97	7	222
8:30 AM	0	1	1	13	4	30	19	40	2	0	92	13	215
8:45 AM	0	1	0	9	4	19	28	50	3	0	84	18	216
TOTAL VOLUMES:	4	3	1	89	11	281	157	356	9	2	724	129	1766

AM Peak Hr Begins at: 730 AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	3	1	0	51	3	169	82	202	2	1	387	62	963

PEAK HR FACTOR:	0.500	0.899	0.861	0.893	0.915

Bicycle Counts

	Thunder Drive Northbound			Thunder Drive Southbound			Lake Boulevard Eastbound			Lake Boulevard Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	1	2	0	0	0	0	3

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	0	0	0	1	0	0	0	0	0	1

Pedestrian Counts

	Thunder Drive North Leg	Thunder Drive South Leg	Lake Boulevard East Leg	Lake Boulevard West Leg	TOTAL
7:00 AM	1	0	0	1	2
7:15 AM	0	0	0	0	0
7:30 AM	1	0	0	0	1
7:45 AM	1	1	1	0	3
8:00 AM	1	0	0	0	1
8:15 AM	0	0	0	0	0
8:30 AM	0	2	0	1	3
8:45 AM	0	2	5	2	9
TOTAL VOLUMES:	4	5	6	4	19

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	3	1	1	0	5

PO Box 1178
Corona, CA 92880
951-268-6268

Location: Oceanside
N/S: Thunder Drive
E/W: Lake Boulevard

Date: 7/23/2019
Day: TUESDAY
Project # 143-19504

TURNING MOVEMENT COUNT

Count Period: **4:00 PM to 6:00 PM**
Peak Hour: **4:45 PM to 5:45 PM**

Vehicle Counts

	Thunder Drive Northbound			Thunder Drive Southbound			Lake Boulevard Eastbound			Lake Boulevard Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	1	1	1	23	2	40	64	122	1	0	70	17	342
4:15 PM	2	1	0	32	0	37	64	120	1	0	73	37	367
4:30 PM	0	0	0	28	0	41	66	133	0	0	40	26	334
4:45 PM	1	2	0	44	2	31	76	135	1	0	66	38	396
5:00 PM	0	0	1	41	0	35	67	142	0	1	68	21	376
5:15 PM	1	2	1	23	0	41	65	161	0	2	93	23	412
5:30 PM	0	0	0	32	0	30	57	142	2	0	67	17	347
5:45 PM	0	1	1	28	0	32	76	111	0	2	77	23	351
TOTAL VOLUMES:	5	7	4	251	4	287	535	1066	5	5	554	202	2925

PM Peak Hr Begins at: 445 PM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	2	4	2	140	2	137	265	580	3	3	294	99	1531

PEAK HR FACTOR:	0.500	0.906	0.938	0.839	0.929

Bicycle Counts

	Thunder Drive Northbound			Thunder Drive Southbound			Lake Boulevard Eastbound			Lake Boulevard Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	1	0	2

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

Pedestrian Counts

	Thunder Drive North Leg	Thunder Drive South Leg	Lake Boulevard East Leg	Lake Boulevard West Leg	TOTAL
4:00 PM	0	0	1	0	1
4:15 PM	0	2	0	0	2
4:30 PM	3	0	0	0	3
4:45 PM	0	0	0	0	0
5:00 PM	1	4	4	0	9
5:15 PM	1	0	0	1	2
5:30 PM	2	0	0	0	2
5:45 PM	0	0	0	1	1
TOTAL VOLUMES:	7	6	5	2	20

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	4	4	4	1	13

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

City of Oceanside
College Boulevard
B/ Vista Way - Plaza Drive

File Name 001
Site Code: 143-19504
24 Hour Directional Volume Count

Date:	Northbound				Southbound					
7/23/2019	15 Minute Totals		Hourly Totals		15 Minute Totals		Hourly Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	57	459			31	413				
12:15	56	472			28	426				
12:30	35	533			14	376				
12:45	26	508	174	1972	23	407	96	1622	270	3594
1:00	26	512			15	386				
1:15	18	475			16	387				
1:30	20	503			11	364				
1:45	19	524	83	2014	12	390	54	1527	137	3541
2:00	19	465			9	391				
2:15	24	540			11	360				
2:30	17	485			9	373				
2:45	12	542	72	2032	12	347	41	1471	113	3503
3:00	14	553			17	336				
3:15	18	551			16	392				
3:30	14	527			20	366				
3:45	24	646	70	2277	32	341	85	1435	155	3712
4:00	28	574			24	406				
4:15	31	596			40	384				
4:30	48	605			69	415				
4:45	71	618	178	2393	77	406	210	1611	388	4004
5:00	52	569			88	388				
5:15	87	655			129	365				
5:30	98	619			209	313				
5:45	128	625	365	2468	241	345	667	1411	1032	3879
6:00	151	538			219	301				
6:15	163	516			336	270				
6:30	227	478			388	274				
6:45	301	464	842	1996	441	244	1384	1089	2226	3085
7:00	248	387			375	259				
7:15	307	381			399	203				
7:30	327	384			448	200				
7:45	422	376	1304	1528	424	193	1646	855	2950	2383
8:00	336	323			391	193				
8:15	352	323			390	168				
8:30	345	318			375	182				
8:45	326	301	1359	1265	400	146	1556	689	2915	1954
9:00	306	282			322	149				
9:15	337	310			364	150				
9:30	342	268			375	117				
9:45	380	183	1365	1043	385	113	1446	529	2811	1572
10:00	347	202			373	99				
10:15	397	162			344	73				
10:30	411	169			345	71				
10:45	441	127	1596	660	403	66	1465	309	3061	969
11:00	421	134			344	35				
11:15	382	98			396	56				
11:30	461	81			389	34				
11:45	457	82	1721	395	372	25	1501	150	3222	545
Totals	9129	20043			10151	12698				
Combined Totals		29172				22849				
ADT										52021
AM Peak Hour	1100	AM			645	AM				
Volume	1721				1663					
P.H.F.	0.933				0.928					
PM Peak Hour		500	PM			1200	PM			
Volume		2468				1622				
P.H.F.		0.942				0.952				
Percentage	31.3%	68.7%			44.4%	55.6%				

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

City of Oceanside
Plaza Drive
B/ College Boulevard - State Route 78 Eastbound

File Name 002
Site Code: 143-19504
24 Hour Directional Volume Count

Date:	Eastbound				Westbound					
7/23/2019	15 Minute Totals		Hourly Totals		15 Minute Totals		Hourly Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	29	253			13	157				
12:15	28	255			14	150				
12:30	10	254			10	155				
12:45	19	240	86	1002	10	146	47	608	133	1610
1:00	10	244			8	153				
1:15	8	230			6	140				
1:30	9	262			7	139				
1:45	9	244	36	980	6	168	27	600	63	1580
2:00	8	235			3	149				
2:15	9	223			11	144				
2:30	9	254			4	162				
2:45	7	259	33	971	3	154	21	609	54	1580
3:00	9	255			1	157				
3:15	8	279			4	148				
3:30	12	239			4	150				
3:45	9	282	38	1055	5	158	14	613	52	1668
4:00	7	236			7	150				
4:15	22	236			7	153				
4:30	28	269			13	156				
4:45	35	252	92	993	3	152	30	611	122	1604
5:00	38	240			7	174				
5:15	59	238			23	147				
5:30	75	192			18	150				
5:45	86	231	258	901	34	128	82	599	340	1500
6:00	90	213			37	128				
6:15	136	189			58	111				
6:30	138	177			57	104				
6:45	162	166	526	745	52	121	204	464	730	1209
7:00	167	162			50	120				
7:15	166	145			55	80				
7:30	174	144			72	81				
7:45	194	130	701	581	78	83	255	364	956	945
8:00	151	129			64	84				
8:15	197	129			87	90				
8:30	189	120			67	96				
8:45	189	109	726	487	73	77	291	347	1017	834
9:00	173	103			81	57				
9:15	183	105			90	69				
9:30	210	99			88	60				
9:45	214	78	780	385	95	29	354	215	1134	600
10:00	216	83			113	25				
10:15	209	62			98	28				
10:30	194	56			114	32				
10:45	204	34	823	235	108	21	433	106	1256	341
11:00	199	27			140	23				
11:15	236	40			130	14				
11:30	226	31			148	12				
11:45	228	33	889	131	152	15	570	64	1459	195
Totals	4988	8466			2328	5200				
Combined Totals		13454				7528				
ADT										20982
AM Peak Hour	1100	AM			1100	AM				
Volume	889				570					
P.H.F.	0.942				0.938					
PM Peak Hour		300	PM			415	PM			
Volume		1055				635				
P.H.F.		0.935				0.912				
Percentage	37.1%	62.9%			30.9%	69.1%				

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

City of Oceanside
Plaza Drive
B/ State Route 78 Eastbound - Thunder Drive

File Name 003
Site Code: 143-19504
24 Hour Directional Volume Count

Date:	Eastbound				Westbound					
7/23/2019	15 Minute Totals		Hourly Totals		15 Minute Totals		Hourly Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	24	123			22	143				
12:15	10	146			8	130				
12:30	5	136			3	147				
12:45	7	128	46	533	8	125	41	545	87	1078
1:00	8	130			3	134				
1:15	6	129			4	122				
1:30	6	136			6	129				
1:45	2	134	22	529	4	149	17	534	39	1063
2:00	3	109			3	126				
2:15	3	124			6	129				
2:30	1	119			3	151				
2:45	1	131	8	483	3	132	15	538	23	1021
3:00	3	133			1	139				
3:15	1	142			2	131				
3:30	3	111			4	124				
3:45	2	125	9	511	3	150	10	544	19	1055
4:00	7	124			5	141				
4:15	8	132			7	142				
4:30	5	140			12	134				
4:45	3	115	23	511	7	156	31	573	54	1084
5:00	9	108			7	159				
5:15	15	110			24	142				
5:30	9	89			17	141				
5:45	16	105	49	412	39	150	87	592	136	1004
6:00	16	97			31	125				
6:15	24	90			55	115				
6:30	28	86			58	110				
6:45	47	93	115	366	60	112	204	462	319	828
7:00	43	74			57	108				
7:15	46	93			63	94				
7:30	49	68			68	63				
7:45	71	72	209	307	82	69	270	334	479	641
8:00	48	66			63	78				
8:15	63	79			79	76				
8:30	56	52			76	88				
8:45	64	58	231	255	76	54	294	296	525	551
9:00	65	65			80	41				
9:15	78	50			103	53				
9:30	74	40			89	39				
9:45	97	40	314	195	87	20	359	153	673	348
10:00	98	28			106	20				
10:15	111	24			96	25				
10:30	104	36			107	24				
10:45	108	25	421	113	101	17	410	86	831	199
11:00	89	23			133	21				
11:15	100	21			129	15				
11:30	131	12			145	10				
11:45	117	20	437	76	124	11	531	57	968	133
Totals	1884	4291			2269	4714				
Combined Totals		6175				6983				
ADT										13158
AM Peak Hour	1100	AM			1100	AM				
Volume	437				531					
P.H.F.	0.834				0.916					
PM Peak Hour		1215	PM			445	PM			
Volume		540				598				
P.H.F.		0.925				0.940				
Percentage	30.5%	69.5%			32.5%	67.5%				

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

City of Oceanside
Thunder Drive
B/ Plaza Drive - Tiberon Drive

File Name 004
Site Code: 143-19504
24 Hour Directional Volume Count

Date:	Northbound				Southbound					
7/23/2019	15 Minute Totals		Hourly Totals		15 Minute Totals		Hourly Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	4	71			14	68				
12:15	6	86			3	79				
12:30	5	81			8	69				
12:45	1	69	16	307	5	78	30	294	46	601
1:00	1	71			1	69				
1:15	1	78			6	64				
1:30	4	78			4	74				
1:45	2	75	8	302	0	78	11	285	19	587
2:00	2	70			3	60				
2:15	3	86			3	69				
2:30	1	78			0	77				
2:45	2	96	8	330	2	75	8	281	16	611
3:00	0	117			0	84				
3:15	1	94			2	83				
3:30	1	89			2	67				
3:45	1	101	3	401	1	85	5	319	8	720
4:00	11	85			0	95				
4:15	5	106			2	100				
4:30	12	96			3	97				
4:45	11	137	39	424	9	78	14	370	53	794
5:00	16	98			3	94				
5:15	22	106			11	89				
5:30	15	103			21	69				
5:45	35	119	88	426	24	79	59	331	147	757
6:00	35	97			22	76				
6:15	36	89			32	75				
6:30	41	85			59	77				
6:45	37	75	149	346	55	68	168	296	317	642
7:00	50	72			37	71				
7:15	59	63			54	67				
7:30	48	39			54	50				
7:45	59	58	216	232	57	59	202	247	418	479
8:00	50	44			68	66				
8:15	49	42			55	61				
8:30	54	49			42	61				
8:45	59	32	212	167	46	50	211	238	423	405
9:00	57	28			54	62				
9:15	64	31			54	40				
9:30	41	32			50	35				
9:45	69	23	231	114	55	51	213	188	444	302
10:00	62	20			44	27				
10:15	67	16			62	26				
10:30	57	22			61	33				
10:45	73	13	259	71	48	20	215	106	474	177
11:00	70	10			64	14				
11:15	78	12			63	17				
11:30	87	7			63	9				
11:45	82	9	317	38	63	12	253	52	570	90
Totals	1546	3158			1389	3007				
Combined Totals		4704				4396				
ADT										9100
AM Peak Hour	1100	AM			1100	AM				
Volume	317				253					
P.H.F.	0.911				0.988					
PM Peak Hour		445	PM			345	PM			
Volume		444				377				
P.H.F.		0.810				0.943				
Percentage	32.9%	67.1%			31.6%	68.4%				

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

City of Oceanside
Thunder Drive
B/ Tiberon Drive - Lake Boulevard

File Name 005
Site Code: 143-19504
24 Hour Directional Volume Count

Date:	Northbound				Southbound					
7/23/2019	15 Minute Totals		Hourly Totals		15 Minute Totals		Hourly Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	4	49			9	56				
12:15	4	80			3	62				
12:30	5	67			3	61				
12:45	1	67	14	263	3	63	18	242	32	505
1:00	2	53			0	66				
1:15	2	76			5	53				
1:30	1	57			3	63				
1:45	2	65	7	251	0	70	8	252	15	503
2:00	3	69			2	52				
2:15	1	78			1	59				
2:30	2	70			0	67				
2:45	2	87	8	304	2	57	5	235	13	539
3:00	0	102			0	73				
3:15	0	80			0	61				
3:30	0	76			3	59				
3:45	1	88	1	346	3	69	6	262	7	608
4:00	6	73			1	76				
4:15	3	107			5	80				
4:30	5	83			5	75				
4:45	8	112	22	375	8	85	19	316	41	691
5:00	3	86			2	87				
5:15	10	93			13	69				
5:30	10	75			29	67				
5:45	18	104	41	358	35	66	79	289	120	647
6:00	25	78			31	65				
6:15	23	82			40	65				
6:30	26	77			59	61				
6:45	29	58	103	295	51	50	181	241	284	536
7:00	36	55			37	60				
7:15	31	53			46	49				
7:30	36	40			43	44				
7:45	39	42	142	190	62	48	188	201	330	391
8:00	43	37			65	53				
8:15	34	29			59	47				
8:30	40	45			46	50				
8:45	51	28	168	139	36	33	206	183	374	322
9:00	39	28			48	37				
9:15	43	26			46	35				
9:30	35	36			45	29				
9:45	49	21	166	111	46	39	185	140	351	251
10:00	49	17			42	23				
10:15	52	19			63	20				
10:30	47	14			53	20				
10:45	51	9	199	59	44	17	202	80	401	139
11:00	52	8			50	8				
11:15	64	12			52	10				
11:30	66	7			59	6				
11:45	70	6	252	33	54	7	215	31	467	64
Totals	1123	2724			1312	2472				
Combined Totals		3847				3784				
ADT										7631
AM Peak Hour	1100	AM			745	AM				
Volume	252				232					
P.H.F.	0.900				0.892					
PM Peak Hour		415	PM			415	PM			
Volume		388				327				
P.H.F.		0.866				0.940				
Percentage	29.2%	70.8%			34.7%	65.3%				

Appendix F

Existing Intersection LOS Calculations

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	121	392	420	279	277	185	717	607	26	1459
Protected Phases	7	4	5	3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.0	8.5	8.5	20.5	8.5	8.5	20.5	8.5	8.5	20.5
Total Split (s)	8.5	20.0	17.0	19.0	30.5	15.0	17.0	36.0	19.0	15.0	34.0
Total Split (%)	9.4%	22.2%	18.9%	21.1%	33.9%	16.7%	18.9%	40.0%	21.1%	16.7%	37.8%
Maximum Green (s)	4.0	15.5	12.5	14.5	26.0	10.5	12.5	31.5	14.5	10.5	29.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max
Walk Time (s)					5.0			5.0			5.0
Flash Dont Walk (s)					11.0			11.0			11.0
Pedestrian Calls (#/hr)					5			5			5
v/c Ratio	0.26	0.31	0.74	0.71	0.61	0.42	0.39	0.32	0.32	0.10	0.76
Control Delay	42.9	35.7	26.1	39.7	33.3	14.2	35.0	16.1	1.1	37.5	26.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	35.7	26.1	39.7	33.3	14.2	35.0	16.1	1.1	37.5	26.0
Queue Length 50th (ft)	11	31	119	104	130	68	44	86	0	6	239
Queue Length 95th (ft)	30	56	216	#170	211	132	80	131	21	19	336
Internal Link Dist (ft)		491			575			528			491
Turn Bay Length (ft)	170		200	280			150		100	165	
Base Capacity (vph)	176	705	558	640	623	746	551	2237	1937	463	1923
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.17	0.70	0.66	0.45	0.37	0.34	0.32	0.31	0.06	0.76

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 78.8
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

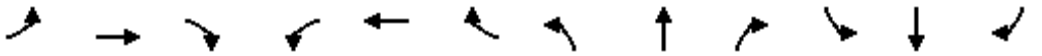
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	111	361	386	257	255	170	660	558	24	1299	43
Future Volume (veh/h)	42	111	361	386	257	255	170	660	558	24	1299	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	121	392	420	279	277	185	717	607	26	1412	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	110	676	427	512	573	521	273	2140	1574	75	1836	61
Arrive On Green	0.03	0.19	0.19	0.15	0.31	0.31	0.08	0.42	0.42	0.02	0.36	0.36
Sat Flow, veh/h	3456	3554	1585	3456	1870	1585	3456	5106	2770	3456	5073	169
Grp Volume(v), veh/h	46	121	392	420	279	277	185	717	607	26	948	511
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1870	1585	1728	1702	1385	1728	1702	1837
Q Serve(g_s), s	1.1	2.3	15.5	9.6	9.9	11.6	4.2	7.7	9.9	0.6	20.1	20.1
Cycle Q Clear(g_c), s	1.1	2.3	15.5	9.6	9.9	11.6	4.2	7.7	9.9	0.6	20.1	20.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	110	676	427	512	573	521	273	2140	1574	75	1232	665
V/C Ratio(X)	0.42	0.18	0.92	0.82	0.49	0.53	0.68	0.34	0.39	0.34	0.77	0.77
Avail Cap(c_a), veh/h	170	676	427	615	597	540	530	2140	1574	445	1232	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	27.7	28.9	33.7	23.0	22.3	36.5	16.0	9.8	39.3	23.0	23.0
Incr Delay (d2), s/veh	2.5	0.1	24.8	7.4	0.6	0.9	2.9	0.4	0.7	2.7	4.7	8.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.0	10.1	4.4	4.3	4.3	1.9	2.9	2.8	0.3	8.4	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.3	27.8	53.8	41.1	23.7	23.2	39.5	16.4	10.5	42.0	27.7	31.4
LnGrp LOS	D	C	D	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		559			976			1509			1485	
Approach Delay, s/veh		47.1			31.0			16.9			29.2	
Approach LOS		D			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	38.7	16.6	20.0	10.9	34.0	7.1	29.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	31.5	14.5	15.5	12.5	29.5	4.0	26.0
Max Q Clear Time (g_c+I1), s	2.6	11.9	11.6	17.5	6.2	22.1	3.1	13.6
Green Ext Time (p_c), s	0.0	7.8	0.5	0.0	0.3	5.1	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	27.7
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	63	49	123	17	216	25	659	204	612	1380
Protected Phases	7	4	3	8	1	5	2	3	1	6
Permitted Phases					8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	8.5	8.5	20.5	8.5	8.5	20.5
Total Split (s)	13.3	20.5	17.4	24.6	28.1	10.0	24.0	17.4	28.1	42.1
Total Split (%)	14.8%	22.8%	19.3%	27.3%	31.2%	11.1%	26.7%	19.3%	31.2%	46.8%
Maximum Green (s)	8.8	16.0	12.9	20.1	23.6	5.5	19.5	12.9	23.6	37.6
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	None	None	Max
Walk Time (s)		5.0					5.0			5.0
Flash Dont Walk (s)		11.0					11.0			11.0
Pedestrian Calls (#/hr)		5					5			5
v/c Ratio	0.19	0.22	0.49	0.07	0.30	0.17	0.43	0.25	0.71	0.48
Control Delay	29.4	26.9	38.6	31.2	6.6	40.1	24.1	3.4	30.6	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	26.9	38.6	31.2	6.6	40.1	24.1	3.4	30.6	12.8
Queue Length 50th (ft)	21	15	53	7	20	11	93	0	130	119
Queue Length 95th (ft)	74	47	120	25	48	39	163	40	219	271
Internal Link Dist (ft)		470		1268			481			528
Turn Bay Length (ft)	90		140			130		100	260	
Base Capacity (vph)	363	431	337	553	858	144	1533	872	1197	2880
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.11	0.36	0.03	0.25	0.17	0.43	0.23	0.51	0.48

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 70.7
Control Type: Actuated-Uncoordinated



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	31	14	113	16	199	23	606	188	563	1196	74
Future Volume (veh/h)	58	31	14	113	16	199	23	606	188	563	1196	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	63	34	15	123	17	216	25	659	204	612	1300	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	116	51	159	258	569	39	1728	668	764	2639	162
Arrive On Green	0.05	0.09	0.09	0.09	0.14	0.14	0.02	0.34	0.34	0.22	0.54	0.54
Sat Flow, veh/h	1781	1230	543	1781	1870	1585	1781	5106	1557	3456	4910	302
Grp Volume(v), veh/h	63	0	49	123	17	216	25	659	204	612	901	479
Grp Sat Flow(s),veh/h/ln	1781	0	1773	1781	1870	1585	1781	1702	1557	1728	1702	1808
Q Serve(g_s), s	2.4	0.0	1.8	4.7	0.6	7.1	1.0	6.9	6.0	11.7	11.6	11.7
Cycle Q Clear(g_c), s	2.4	0.0	1.8	4.7	0.6	7.1	1.0	6.9	6.0	11.7	11.6	11.7
Prop In Lane	1.00		0.31	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	81	0	167	159	258	569	39	1728	668	764	1830	972
V/C Ratio(X)	0.78	0.00	0.29	0.77	0.07	0.38	0.64	0.38	0.31	0.80	0.49	0.49
Avail Cap(c_a), veh/h	224	0	405	328	537	806	140	1728	668	1166	1830	972
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	0.0	29.5	31.2	26.2	16.6	33.9	17.6	13.2	25.8	10.2	10.2
Incr Delay (d2), s/veh	15.0	0.0	1.0	7.8	0.1	0.4	15.9	0.6	1.2	2.4	1.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.8	2.3	0.2	2.5	0.6	2.6	2.1	4.8	4.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.0	0.0	30.5	39.0	26.3	17.1	49.9	18.2	14.4	28.1	11.1	12.0
LnGrp LOS	D	A	C	D	C	B	D	B	B	C	B	B
Approach Vol, veh/h		112			356			888			1992	
Approach Delay, s/veh		40.3			25.1			18.2			16.6	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	28.2	10.7	11.1	6.0	42.1	7.7	14.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	23.6	19.5	12.9	16.0	5.5	37.6	8.8	20.1
Max Q Clear Time (g_c+I1), s	13.7	8.9	6.7	3.8	3.0	13.7	4.4	9.1
Green Ext Time (p_c), s	1.7	3.9	0.1	0.1	0.0	10.8	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	617	194	39	280	25	25	8	77	55
Protected Phases	7	4	3	8	2	2		6	6
Permitted Phases							2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5
Total Split (s)	28.2	38.0	10.7	20.5	20.8	20.8	20.8	20.5	20.5
Total Split (%)	31.3%	42.2%	11.9%	22.8%	23.1%	23.1%	23.1%	22.8%	22.8%
Maximum Green (s)	23.7	33.5	6.2	16.0	16.3	16.3	16.3	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max	None	None
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		5		5	5	5	5	5	5
v/c Ratio	0.72	0.14	0.25	0.50	0.06	0.06	0.02	0.33	0.22
Control Delay	31.0	15.3	39.9	31.2	27.5	27.4	0.0	35.0	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	15.3	39.9	31.2	27.5	27.4	0.0	35.0	18.7
Queue Length 50th (ft)	128	28	17	57	9	9	0	32	8
Queue Length 95th (ft)	220	57	54	110	35	35	0	78	42
Internal Link Dist (ft)		1268		162		397			490
Turn Bay Length (ft)	165		90					190	
Base Capacity (vph)	1198	1718	161	829	403	413	518	416	420
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.11	0.24	0.34	0.06	0.06	0.02	0.19	0.13

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 70.9
Control Type: Actuated-Uncoordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	568	156	22	36	225	32	35	11	7	71	19	31
Future Volume (veh/h)	568	156	22	36	225	32	35	11	7	71	19	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	617	170	24	39	245	35	25	30	8	77	21	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	800	1031	143	57	406	57	479	503	426	130	47	76
Arrive On Green	0.23	0.33	0.33	0.03	0.13	0.13	0.27	0.27	0.27	0.07	0.07	0.07
Sat Flow, veh/h	3456	3132	435	1781	3127	441	1781	1870	1585	1781	641	1038
Grp Volume(v), veh/h	617	95	99	39	138	142	25	30	8	77	0	55
Grp Sat Flow(s),veh/h/ln	1728	1777	1790	1781	1777	1791	1781	1870	1585	1781	0	1679
Q Serve(g_s), s	10.1	2.3	2.4	1.3	4.4	4.5	0.6	0.7	0.2	2.5	0.0	1.9
Cycle Q Clear(g_c), s	10.1	2.3	2.4	1.3	4.4	4.5	0.6	0.7	0.2	2.5	0.0	1.9
Prop In Lane	1.00		0.24	1.00		0.25	1.00		1.00	1.00		0.62
Lane Grp Cap(c), veh/h	800	585	590	57	231	232	479	503	426	130	0	123
V/C Ratio(X)	0.77	0.16	0.17	0.69	0.60	0.61	0.05	0.06	0.02	0.59	0.00	0.45
Avail Cap(c_a), veh/h	1351	982	989	182	469	473	479	503	426	470	0	443
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.8	14.4	14.4	29.1	24.9	24.9	16.4	16.5	16.3	27.2	0.0	26.9
Incr Delay (d2), s/veh	1.6	0.1	0.1	13.9	2.5	2.6	0.2	0.2	0.1	4.2	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.9	0.9	0.8	1.9	2.0	0.3	0.3	0.1	1.2	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	14.5	14.6	42.9	27.4	27.5	16.6	16.7	16.4	31.4	0.0	29.5
LnGrp LOS	C	B	B	D	C	C	B	B	B	C	A	C
Approach Vol, veh/h		811			319			63			132	
Approach Delay, s/veh		21.3			29.3			16.6			30.6	
Approach LOS		C			C			B			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		20.8	6.4	24.5		8.9	18.5	12.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		16.3	6.2	33.5		16.0	23.7	16.0				
Max Q Clear Time (g_c+I1), s		2.7	3.3	4.4		4.5	12.1	6.5				
Green Ext Time (p_c), s		0.1	0.0	1.1		0.3	1.9	1.0				

Intersection Summary												
HCM 6th Ctrl Delay			23.9									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.

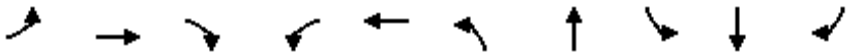
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	239	200	191	125	102
Protected Phases	4	3	8	2	3
Permitted Phases					2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	8.5	20.5	20.5	8.5
Total Split (s)	20.5	18.0	38.5	21.5	18.0
Total Split (%)	34.2%	30.0%	64.2%	35.8%	30.0%
Maximum Green (s)	16.0	13.5	34.0	17.0	13.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Max	None
Walk Time (s)	5.0				
Flash Dont Walk (s)	11.0				
Pedestrian Calls (#/hr)	5				
v/c Ratio	0.35	0.52	0.24	0.19	0.11
Control Delay	15.2	23.7	8.1	14.8	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.2	23.7	8.1	14.8	1.7
Queue Length 50th (ft)	24	51	30	25	0
Queue Length 95th (ft)	51	119	56	71	15
Internal Link Dist (ft)	164		458	303	
Turn Bay Length (ft)		125		100	
Base Capacity (vph)	1214	518	1356	653	1051
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.20	0.39	0.14	0.19	0.10

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 48
Control Type: Actuated-Uncoordinated

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	167	52	184	176	115	94
Future Volume (veh/h)	167	52	184	176	115	94
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.98	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	182	57	200	191	125	102
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	376	114	261	734	708	862
Arrive On Green	0.14	0.14	0.15	0.39	0.40	0.40
Sat Flow, veh/h	2768	810	1781	1870	1781	1585
Grp Volume(v), veh/h	119	120	200	191	125	102
Grp Sat Flow(s),veh/h/ln	1777	1707	1781	1870	1781	1585
Q Serve(g_s), s	2.6	2.8	4.6	3.0	1.9	1.3
Cycle Q Clear(g_c), s	2.6	2.8	4.6	3.0	1.9	1.3
Prop In Lane		0.47	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	250	240	261	734	708	862
V/C Ratio(X)	0.48	0.50	0.77	0.26	0.18	0.12
Avail Cap(c_a), veh/h	664	638	562	1486	708	862
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.9	17.0	17.6	8.8	8.4	4.8
Incr Delay (d2), s/veh	1.4	1.6	4.7	0.2	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.1	2.0	1.0	0.7	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.3	18.6	22.2	9.0	8.9	5.0
LnGrp LOS	B	B	C	A	A	A
Approach Vol, veh/h	239			391	227	
Approach Delay, s/veh	18.5			15.7	7.2	
Approach LOS	B			B	A	

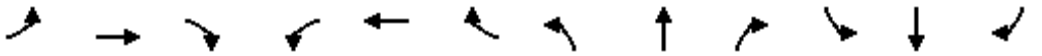
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		21.5	10.8	10.5		21.3
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		17.0	13.5	16.0		34.0
Max Q Clear Time (g_c+I1), s		3.9	6.6	4.8		5.0
Green Ext Time (p_c), s		0.5	0.3	1.0		1.1

Intersection Summary	
HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	89	220	2	1	488	0	4	0	58	184
Protected Phases	7	4		3	8		2		6	7
Permitted Phases			4			2		6		6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	8.5
Total Split (s)	14.0	27.0	27.0	9.0	22.0	24.0	24.0	24.0	24.0	14.0
Total Split (%)	23.3%	45.0%	45.0%	15.0%	36.7%	40.0%	40.0%	40.0%	40.0%	23.3%
Maximum Green (s)	9.5	22.5	22.5	4.5	17.5	19.5	19.5	19.5	19.5	9.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag					Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	None
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	
v/c Ratio	0.33	0.29	0.00	0.01	0.56		0.01		0.10	0.17
Control Delay	25.4	11.7	0.0	25.0	19.2		13.2		13.8	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	25.4	11.7	0.0	25.0	19.2		13.2		13.8	2.2
Queue Length 50th (ft)	26	39	0	0	67		1		12	3
Queue Length 95th (ft)	65	100	0	5	109		6		37	26
Internal Link Dist (ft)		321			351		325		639	
Turn Bay Length (ft)	100		100	25						150
Base Capacity (vph)	334	896	801	158	1220		658		575	1107
Starvation Cap Reductn	0	0	0	0	0		0		0	0
Spillback Cap Reductn	0	0	0	0	0		0		0	0
Storage Cap Reductn	0	0	0	0	0		0		0	0
Reduced v/c Ratio	0.27	0.25	0.00	0.01	0.40		0.01		0.10	0.17

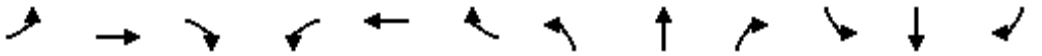
Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 51.8
Control Type: Actuated-Uncoordinated



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	202	2	1	387	62	3	1	0	51	3	169
Future Volume (veh/h)	82	202	2	1	387	62	3	1	0	51	3	169
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	220	2	1	421	67	3	1	0	55	3	184
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	114	524	434	4	667	105	537	160	673	732	36	775
Arrive On Green	0.06	0.28	0.28	0.00	0.22	0.22	0.42	0.42	0.00	0.42	0.42	0.42
Sat Flow, veh/h	1781	1870	1548	1781	3071	485	942	378	1585	1364	85	1585
Grp Volume(v), veh/h	89	220	2	1	242	246	4	0	0	58	0	184
Grp Sat Flow(s),veh/h/ln	1781	1870	1548	1781	1777	1779	1319	0	1585	1449	0	1585
Q Serve(g_s), s	2.3	4.4	0.0	0.0	5.7	5.8	0.0	0.0	0.0	0.0	0.0	3.1
Cycle Q Clear(g_c), s	2.3	4.4	0.0	0.0	5.7	5.8	0.9	0.0	0.0	0.9	0.0	3.1
Prop In Lane	1.00		1.00	1.00		0.27	0.75		1.00	0.95		1.00
Lane Grp Cap(c), veh/h	114	524	434	4	386	386	698	0	673	768	0	775
V/C Ratio(X)	0.78	0.42	0.00	0.26	0.63	0.64	0.01	0.00	0.00	0.08	0.00	0.24
Avail Cap(c_a), veh/h	369	917	759	175	677	678	698	0	673	768	0	775
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.2	13.5	11.9	22.9	16.3	16.3	7.6	0.0	0.0	7.8	0.0	6.8
Incr Delay (d2), s/veh	10.9	0.5	0.0	31.8	1.7	1.7	0.0	0.0	0.0	0.2	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.6	0.0	0.0	2.2	2.2	0.0	0.0	0.0	0.3	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.1	14.0	11.9	54.7	18.0	18.1	7.6	0.0	0.0	8.0	0.0	7.5
LnGrp LOS	C	B	B	D	B	B	A	A	A	A	A	A
Approach Vol, veh/h		311			489			4			242	
Approach Delay, s/veh		19.2			18.1			7.6			7.6	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.0	4.6	17.4		24.0	7.4	14.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.5	4.5	22.5		19.5	9.5	17.5				
Max Q Clear Time (g_c+I1), s		2.9	2.0	6.4		5.1	4.3	7.8				
Green Ext Time (p_c), s		0.0	0.0	1.1		0.8	0.1	2.1				
Intersection Summary												
HCM 6th Ctrl Delay			16.0									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	130	197	462	504	371	329	390	1563	628	25	1259
Protected Phases	7	4	5	3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.0	8.5	8.5	20.5	8.5	8.5	20.5	8.5	8.5	20.5
Total Split (s)	10.0	20.0	18.5	20.0	30.0	10.8	18.5	39.2	20.0	10.8	31.5
Total Split (%)	11.1%	22.2%	20.6%	22.2%	33.3%	12.0%	20.6%	43.6%	22.2%	12.0%	35.0%
Maximum Green (s)	5.5	15.5	14.0	15.5	25.5	6.3	14.0	34.7	15.5	6.3	27.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max
Walk Time (s)					5.0			5.0			5.0
Flash Dont Walk (s)					11.0			11.0			11.0
Pedestrian Calls (#/hr)					5			15			5
v/c Ratio	0.59	0.41	0.74	0.83	0.80	0.56	0.73	0.76	0.35	0.10	0.78
Control Delay	52.0	36.3	25.3	47.7	43.8	16.2	44.2	25.4	2.3	39.9	30.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.0	36.3	25.3	47.7	43.8	16.2	44.2	25.4	2.3	39.9	30.8
Queue Length 50th (ft)	36	52	157	137	188	78	105	263	14	6	226
Queue Length 95th (ft)	#73	84	270	#226	289	152	#159	342	39	19	296
Internal Link Dist (ft)		491			575			528			491
Turn Bay Length (ft)	170		200	280			150		100	165	
Base Capacity (vph)	220	639	639	620	553	590	560	2062	1799	252	1621
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.31	0.72	0.81	0.67	0.56	0.70	0.76	0.35	0.10	0.78

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 86
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	181	425	464	341	303	359	1438	578	23	1062	97
Future Volume (veh/h)	120	181	425	464	341	303	359	1438	578	23	1062	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	130	197	462	504	371	329	390	1563	628	25	1154	105
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	633	499	581	540	489	474	2177	1631	72	1475	134
Arrive On Green	0.06	0.18	0.18	0.17	0.29	0.29	0.14	0.43	0.43	0.02	0.31	0.31
Sat Flow, veh/h	3456	3554	1585	3456	1870	1580	3456	5106	2727	3456	4757	433
Grp Volume(v), veh/h	130	197	462	504	371	329	390	1563	628	25	826	433
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1870	1580	1728	1702	1363	1728	1702	1785
Q Serve(g_s), s	3.2	4.2	15.5	12.4	15.3	15.8	9.6	22.0	10.6	0.6	19.2	19.3
Cycle Q Clear(g_c), s	3.2	4.2	15.5	12.4	15.3	15.8	9.6	22.0	10.6	0.6	19.2	19.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	198	633	499	581	540	489	474	2177	1631	72	1056	554
V/C Ratio(X)	0.66	0.31	0.93	0.87	0.69	0.67	0.82	0.72	0.38	0.35	0.78	0.78
Avail Cap(c_a), veh/h	218	633	499	615	548	496	556	2177	1631	250	1056	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	31.1	28.8	35.3	27.5	26.2	36.5	20.6	9.3	42.0	27.4	27.4
Incr Delay (d2), s/veh	6.1	0.3	23.2	12.1	3.5	3.5	8.5	2.1	0.7	2.8	5.8	10.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.8	12.1	6.1	7.2	6.2	4.5	8.7	3.0	0.3	8.4	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	31.4	52.1	47.4	31.0	29.7	45.1	22.7	10.0	44.9	33.1	37.9
LnGrp LOS	D	C	D	D	C	C	D	C	A	D	C	D
Approach Vol, veh/h		789			1204			2581			1284	
Approach Delay, s/veh		46.0			37.5			23.0			35.0	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	41.6	19.1	20.0	16.4	31.5	9.5	29.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.3	34.7	15.5	15.5	14.0	27.0	5.5	25.5
Max Q Clear Time (g_c+I1), s	2.6	24.0	14.4	17.5	11.6	21.3	5.2	17.8
Green Ext Time (p_c), s	0.0	8.6	0.3	0.0	0.4	3.7	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	31.7
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	86	76	183	18	511	32	1380	329	722	1421
Protected Phases	7	4	3	8	1	5	2	3	1	6
Permitted Phases					8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	8.5	8.5	20.5	8.5	8.5	20.5
Total Split (s)	14.4	20.5	14.8	20.9	24.4	10.4	30.3	14.8	24.4	44.3
Total Split (%)	16.0%	22.8%	16.4%	23.2%	27.1%	11.6%	33.7%	16.4%	27.1%	49.2%
Maximum Green (s)	9.9	16.0	10.3	16.4	19.9	5.9	25.8	10.3	19.9	39.8
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	None	None	Max
Walk Time (s)		5.0					5.0			5.0
Flash Dont Walk (s)		11.0					11.0			11.0
Pedestrian Calls (#/hr)		5					10			5
v/c Ratio	0.28	0.36	0.81	0.08	0.78	0.25	0.85	0.40	0.86	0.49
Control Delay	34.6	35.3	64.4	33.2	28.2	43.3	33.0	6.7	43.1	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.6	35.3	64.4	33.2	28.2	43.3	33.0	6.7	43.1	13.0
Queue Length 50th (ft)	33	33	94	9	~256	16	243	30	185	130
Queue Length 95th (ft)	93	72	#228	27	284	47	#376	93	#321	268
Internal Link Dist (ft)		470		1268			481			528
Turn Bay Length (ft)	90		140			130		100	260	
Base Capacity (vph)	327	368	226	380	659	129	1632	818	850	2884
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.21	0.81	0.05	0.78	0.25	0.85	0.40	0.85	0.49

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 81
Control Type: Actuated-Uncoordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	59	11	168	17	470	29	1270	303	664	1220	87
Future Volume (veh/h)	79	59	11	168	17	470	29	1270	303	664	1220	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	64	12	183	18	511	32	1380	329	722	1326	95
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	205	38	216	361	670	44	1550	663	793	2467	177
Arrive On Green	0.06	0.13	0.13	0.12	0.19	0.19	0.02	0.30	0.30	0.23	0.51	0.51
Sat Flow, veh/h	1781	1530	287	1781	1870	1585	1781	5106	1551	3456	4855	348
Grp Volume(v), veh/h	86	0	76	183	18	511	32	1380	329	722	930	491
Grp Sat Flow(s),veh/h/ln	1781	0	1817	1781	1870	1585	1781	1702	1551	1728	1702	1799
Q Serve(g_s), s	4.0	0.0	3.2	8.6	0.7	16.4	1.5	21.9	13.2	17.3	15.7	15.7
Cycle Q Clear(g_c), s	4.0	0.0	3.2	8.6	0.7	16.4	1.5	21.9	13.2	17.3	15.7	15.7
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	111	0	244	216	361	670	44	1550	663	793	1730	914
V/C Ratio(X)	0.77	0.00	0.31	0.85	0.05	0.76	0.72	0.89	0.50	0.91	0.54	0.54
Avail Cap(c_a), veh/h	207	0	342	216	361	670	124	1550	663	809	1730	914
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	0.0	33.3	36.6	28.0	20.9	41.2	28.3	17.9	31.9	14.1	14.1
Incr Delay (d2), s/veh	10.9	0.0	0.7	25.7	0.1	5.2	19.5	8.1	2.6	14.1	1.2	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.4	5.2	0.3	9.1	0.9	9.7	4.9	8.5	5.9	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.2	0.0	34.0	62.3	28.0	26.1	60.6	36.4	20.5	46.0	15.4	16.4
LnGrp LOS	D	A	C	E	C	C	E	D	C	D	B	B
Approach Vol, veh/h		162			712			1741			2143	
Approach Delay, s/veh		42.6			35.5			33.8			25.9	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	30.3	14.8	15.9	6.6	47.7	9.8	20.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	19.9	25.8	10.3	16.0	5.9	39.8	9.9	16.4
Max Q Clear Time (g_c+I1), s	19.3	23.9	10.6	5.2	3.5	17.7	6.0	18.4
Green Ext Time (p_c), s	0.2	1.6	0.0	0.2	0.0	10.7	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	30.8
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	691	418	120	526	123	125	58	143	86
Protected Phases	7	4	3	8	2	2		6	6
Permitted Phases							2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5
Total Split (s)	27.0	30.9	17.1	21.0	21.5	21.5	21.5	20.5	20.5
Total Split (%)	30.0%	34.3%	19.0%	23.3%	23.9%	23.9%	23.9%	22.8%	22.8%
Maximum Green (s)	22.5	26.4	12.6	16.5	17.0	17.0	17.0	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max	None	None
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		5		5	5	5	5	5	5
v/c Ratio	0.82	0.35	0.55	0.80	0.35	0.35	0.12	0.57	0.32
Control Delay	39.4	21.4	45.1	42.6	33.8	33.7	0.5	43.3	29.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.4	21.4	45.1	42.6	33.8	33.7	0.5	43.3	29.2
Queue Length 50th (ft)	178	81	62	140	61	62	0	74	32
Queue Length 95th (ft)	#259	132	119	#226	120	122	0	131	73
Internal Link Dist (ft)		1268		162		397			490
Turn Bay Length (ft)	165		90					190	
Base Capacity (vph)	938	1187	270	706	347	355	465	344	360
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.35	0.44	0.75	0.35	0.35	0.12	0.42	0.24

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 83
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	636	302	83	110	431	53	180	48	53	132	55	24
Future Volume (veh/h)	636	302	83	110	431	53	180	48	53	132	55	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	691	328	90	120	468	58	124	153	58	143	60	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	820	926	250	154	589	73	401	421	355	203	141	61
Arrive On Green	0.24	0.34	0.34	0.09	0.19	0.19	0.23	0.23	0.23	0.11	0.11	0.11
Sat Flow, veh/h	3456	2755	743	1781	3182	393	1781	1870	1577	1781	1233	534
Grp Volume(v), veh/h	691	210	208	120	260	266	124	153	58	143	0	86
Grp Sat Flow(s),veh/h/ln	1728	1777	1721	1781	1777	1797	1781	1870	1577	1781	0	1767
Q Serve(g_s), s	14.4	6.7	6.9	5.0	10.6	10.7	4.4	5.2	2.2	5.8	0.0	3.4
Cycle Q Clear(g_c), s	14.4	6.7	6.9	5.0	10.6	10.7	4.4	5.2	2.2	5.8	0.0	3.4
Prop In Lane	1.00		0.43	1.00		0.22	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	820	597	578	154	329	333	401	421	355	203	0	202
V/C Ratio(X)	0.84	0.35	0.36	0.78	0.79	0.80	0.31	0.36	0.16	0.70	0.00	0.43
Avail Cap(c_a), veh/h	1030	621	602	297	388	393	401	421	355	377	0	374
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.5	18.9	18.9	33.8	29.4	29.4	24.4	24.7	23.5	32.2	0.0	31.2
Incr Delay (d2), s/veh	5.3	0.4	0.4	8.2	9.1	9.5	2.0	2.4	1.0	4.4	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	2.7	2.7	2.4	5.2	5.3	2.0	2.5	0.9	2.7	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.8	19.2	19.3	42.0	38.5	38.9	26.4	27.1	24.5	36.6	0.0	32.6
LnGrp LOS	C	B	B	D	D	D	C	C	C	D	A	C
Approach Vol, veh/h		1109			646			335			229	
Approach Delay, s/veh		27.7			39.3			26.4			35.1	
Approach LOS		C			D			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		21.5	11.0	29.9		13.1	22.4	18.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		17.0	12.6	26.4		16.0	22.5	16.5				
Max Q Clear Time (g_c+I1), s		7.2	7.0	8.9		7.8	16.4	12.7				
Green Ext Time (p_c), s		1.0	0.1	2.3		0.5	1.5	1.1				

Intersection Summary	
HCM 6th Ctrl Delay	31.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	561	235	425	173	285
Protected Phases	4	3	8	2	3
Permitted Phases					2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	8.5	20.5	20.5	8.5
Total Split (s)	20.5	19.0	39.5	20.5	19.0
Total Split (%)	34.2%	31.7%	65.8%	34.2%	31.7%
Maximum Green (s)	16.0	14.5	35.0	16.0	14.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Max	None
Walk Time (s)	5.0				
Flash Dont Walk (s)	11.0				
Pedestrian Calls (#/hr)	10				
v/c Ratio	0.64	0.62	0.43	0.33	0.33
Control Delay	19.0	27.6	8.8	18.9	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.0	27.6	8.8	18.9	4.2
Queue Length 50th (ft)	69	70	73	45	18
Queue Length 95th (ft)	118	136	123	98	50
Internal Link Dist (ft)	164		458	303	
Turn Bay Length (ft)		125		100	
Base Capacity (vph)	1071	477	1214	527	956
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.52	0.49	0.35	0.33	0.30

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 54.3
Control Type: Actuated-Uncoordinated

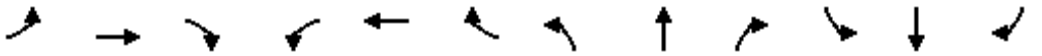
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	363	153	216	391	159	262
Future Volume (veh/h)	363	153	216	391	159	262
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	395	166	235	425	173	285
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	569	236	298	923	577	779
Arrive On Green	0.24	0.24	0.17	0.49	0.32	0.32
Sat Flow, veh/h	2515	1001	1781	1870	1781	1585
Grp Volume(v), veh/h	288	273	235	425	173	285
Grp Sat Flow(s),veh/h/ln	1777	1646	1781	1870	1781	1585
Q Serve(g_s), s	7.3	7.5	6.2	7.4	3.6	5.5
Cycle Q Clear(g_c), s	7.3	7.5	6.2	7.4	3.6	5.5
Prop In Lane		0.61	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	418	387	298	923	577	779
V/C Ratio(X)	0.69	0.70	0.79	0.46	0.30	0.37
Avail Cap(c_a), veh/h	576	533	523	1326	577	779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	17.3	19.7	8.2	12.5	7.8
Incr Delay (d2), s/veh	2.0	2.5	4.7	0.4	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	2.8	2.7	2.3	1.4	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.3	19.9	24.4	8.6	13.8	9.1
LnGrp LOS	B	B	C	A	B	A
Approach Vol, veh/h	561			660	458	
Approach Delay, s/veh	19.6			14.2	10.9	
Approach LOS	B			B	B	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		20.5	12.8	16.1		28.9
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		16.0	14.5	16.0		35.0
Max Q Clear Time (g_c+I1), s		7.5	8.2	9.5		9.4
Green Ext Time (p_c), s		1.1	0.4	1.9		2.8

Intersection Summary	
HCM 6th Ctrl Delay	15.1
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	288	630	3	3	428	0	6	2	0	154	149
Protected Phases	7	4		3	8		2			6	7
Permitted Phases			4			2		2	6		6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5	8.5
Total Split (s)	18.0	30.0	30.0	8.5	20.5	21.5	21.5	21.5	21.5	21.5	18.0
Total Split (%)	30.0%	50.0%	50.0%	14.2%	34.2%	35.8%	35.8%	35.8%	35.8%	35.8%	30.0%
Maximum Green (s)	13.5	25.5	25.5	4.0	16.0	17.0	17.0	17.0	17.0	17.0	13.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag						Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max	None
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	5	
v/c Ratio	0.72	0.69	0.00	0.02	0.56		0.01	0.00		0.36	0.16
Control Delay	32.8	17.0	0.0	26.0	18.7		15.0	0.0		19.0	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	32.8	17.0	0.0	26.0	18.7		15.0	0.0		19.0	1.7
Queue Length 50th (ft)	85	132	0	1	54		1	0		39	0
Queue Length 95th (ft)	#198	#357	0	8	91		9	0		91	18
Internal Link Dist (ft)		321			351		325			639	
Turn Bay Length (ft)	100		100	25				40			150
Base Capacity (vph)	443	948	837	131	1057		552	616		426	954
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.65	0.66	0.00	0.02	0.40		0.01	0.00		0.36	0.16

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 54.3
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	265	580	3	3	294	99	2	4	2	140	2	137
Future Volume (veh/h)	265	580	3	3	294	99	2	4	2	140	2	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	288	630	3	3	320	108	2	4	2	152	2	149
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	351	743	613	6	532	176	94	142	527	141	1	841
Arrive On Green	0.20	0.40	0.40	0.00	0.20	0.20	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1781	1870	1544	1781	2615	866	0	426	1576	0	3	1584
Grp Volume(v), veh/h	288	630	3	3	215	213	6	0	2	154	0	149
Grp Sat Flow(s),veh/h/ln	1781	1870	1544	1781	1777	1704	426	0	1576	3	0	1584
Q Serve(g_s), s	7.9	15.6	0.1	0.1	5.6	5.8	0.0	0.0	0.0	0.0	0.0	2.5
Cycle Q Clear(g_c), s	7.9	15.6	0.1	0.1	5.6	5.8	17.0	0.0	0.0	17.0	0.0	2.5
Prop In Lane	1.00		1.00	1.00		0.51	0.33		1.00	0.99		1.00
Lane Grp Cap(c), veh/h	351	743	613	6	361	347	237	0	527	142	0	841
V/C Ratio(X)	0.82	0.85	0.00	0.52	0.60	0.61	0.03	0.00	0.00	1.09	0.00	0.18
Avail Cap(c_a), veh/h	473	938	774	140	559	536	237	0	527	142	0	841
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.6	13.9	9.3	25.3	18.4	18.4	13.0	0.0	11.3	25.3	0.0	6.2
Incr Delay (d2), s/veh	8.3	6.0	0.0	56.6	1.6	1.8	0.2	0.0	0.0	100.9	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	6.6	0.0	0.1	2.2	2.2	0.1	0.0	0.0	5.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.8	20.0	9.3	81.9	19.9	20.2	13.2	0.0	11.3	126.3	0.0	6.6
LnGrp LOS	C	B	A	F	B	C	B	A	B	F	A	A
Approach Vol, veh/h		921			431			8			303	
Approach Delay, s/veh		22.4			20.5			12.7			67.4	
Approach LOS		C			C			B			E	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		21.5	4.7	24.7		21.5	14.5	14.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		17.0	4.0	25.5		17.0	13.5	16.0				
Max Q Clear Time (g_c+I1), s		19.0	2.1	17.6		19.0	9.9	7.8				
Green Ext Time (p_c), s		0.0	0.0	2.6		0.0	0.3	1.6				

Intersection Summary	
HCM 6th Ctrl Delay	30.1
HCM 6th LOS	C

Appendix G

CarMax Trip Generation Survey and ITE Rates

Trip Generation Study:

CARMAX Auto Superstores

Prepared for:

Industrial Developments International
Atlanta, GA

Prepared by:

Kimley-Horn & Associates, Inc.
September 2002
015908000

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INTRODUCTION

Kimley-Horn & Associates, Inc. was retained to conduct this trip generation study for Carmax Auto Superstores by Industrial Developments International (IDI) at three current store locations. This report summarizes the analysis and findings of the study, and offers an estimate of trip generation rates. It is anticipated that such rates may be used in the planning and design for future Carmax facilities.

Carmax Auto Superstores provide customers with a selection of pre-owned vehicles for purchase or trade-in, and the option to sell a vehicle without making a purchase. A few locations offer new car sales as well. In addition, each store has a service area that handles warranty work, general vehicle maintenance on a limited basis, and reconditioning in preparation for vehicle sales at Carmax Auto Superstores. There are currently 39 Carmax Auto Superstores in 12 states nationwide, ranging from ± 14,000 to ± 95,000 square feet. The service centers typically operate from 7:30 AM to 6:00 PM Monday through Friday, and 7:30 AM to 5:30 PM on Saturday. The sales centers are typically open from 10:00 AM to 9:00 PM Monday through Friday, 9:00 AM to 9:00 PM on Saturday, and 12:00 PM to 7:00 PM on Sunday (where allowed by local ordinances). The Institute of Transportation Engineers *Trip Generation Manual (6thEdition)* provides a land use designation (841) for new car sales. However, due to the fact that pre-owned vehicle sales account for most (if not all) of the sales at a Carmax Auto Superstore, combined with the unique nature of Carmax Auto Superstores compared with other new and used car dealers, a trip generation study was performed to more accurately determine the trip generation rates for a Carmax Auto Superstore.

STUDY METHODOLOGY

This trip generation study used the following methodology:

Trip Generation Study Variables

The purpose of this study is to develop more accurate trip generation rates for Carmax Auto Superstores. Trip generation data was averaged to ascertain the actual number of trips. Data was collected for 24 hours for a period covering weekdays and weekends, and was analyzed for daily, AM, and PM peak periods by building square footage and by the number of employees.

Study Sites

At the time of this study, there were 39 Carmax Auto Superstores in 12 states nationwide. Of these 39 sites, three of distinct size and age were used for data collection and analysis in the study. Descriptions of the three sites are found below; location maps of each site are included in Appendix A.

The sites used for data collection and analysis were:

- Davie, Florida (# 7108)
- Nashville, Tennessee (# 7150)
- Plano, Texas (# 7207)

Carmax Auto Superstore # 7108 is located in **Davie, Florida** at 7420 State Road 84. The store is located on the corner of State Road 84 and SW 71st Terrace, and access to the site is provided from each of the two roads. The main site entrance on State Road 84 allows access for employees, sales customers, and service customers, while the access on 71st Street is used primarily for vehicle delivery and distribution. Only pre-owned vehicles are sold at this location. The store is ±81,099 square feet, has 220 employees, and has been in operation since November 1997. This store differs from the other two analyzed in this study in that it is a "hub" store. A "hub" store handles service and re-conditioning for its location, as well as other "satellite" locations in the area of the "hub". This "hub" location is capable of 24-hour service, meaning that there is often a night shift used for vehicle reconditioning.

Carmax Auto Superstore # 7150 is located in **Nashville, Tennessee** at 2051 Powell Avenue. Access to the site is provided by a single driveway, shared with the adjacent Home Depot Expo, located on Powell Avenue less than one mile from Interstate 65. This location sells new and pre-owned vehicles and has a full service center for customers and reconditioning. It is designated as a "stand-alone" store, and is ±55,558 square feet, employees 187 people, and has been in operation since July 1999.

Carmax Auto Superstore # 7207 is located in **Plano, Texas** at 4448 West Plano Parkway. Access to the site is provided by two driveways, approximately 200 feet apart, along Fulgham Road, just off West Plano Parkway. The northern drive is considered the primary access to the site, and experiences a heavier amount of traffic. Transport vehicles delivering and collecting vehicles for sale primarily use the southern drive. This store is ±14,012 square feet, has 69 employees, and has been in operation since February 2002. This location is a "satellite" store and only offers pre-owned vehicles.

DATA COLLECTION

Trip Generation

Driveway volumes were collected using 24-hour automatic tube counters at all site driveways for each of the three locations used in this study. Volumes were collected for twenty-four (24) hours, for at least seven consecutive days, and were recorded in 15-minute intervals in order to determine daily and peak-hour volumes.

Manual driveway counts were performed at each site by Kimley-Horn & Associates staff to verify the count data collected by the tube counters. The dates of data collection are listed below by location.

- Davie, FL – Thursday, September 11, 2002 to Thursday, September 18, 2002
- Nashville, TN – Monday, September 9, 2002 to Thursday, September 18, 2002
- Plano, TX – Monday, September 9, 2002 to Friday, September 19, 2002

DATA ANALYSIS

Daily Trip Generation

The daily trip generation rates for each Carmax Auto Superstore location were calculated in two manners. First, by dividing the average weekday (Tuesday, Wednesday, and Thursday) total driveway volumes by the building square footage, and second, by dividing the average weekday (Tuesday, Wednesday, and Thursday) total driveway volumes by the number of employees. In addition, daily volumes from Saturday were also analyzed in the same way to determine a Saturday trip generation rate. Tables 1 and 4 summarize the daily driveway volumes observed at each study site and the resulting trip generation rates.

AM Peak Hour Trip Generation

Morning peak hour (7:00 AM to 9:00 AM) volumes were analyzed, and an AM Peak hour was determined for weekdays Tuesday, Wednesday, and Thursday. An AM Peak hour trip generation rate was then calculated using two methods. The volumes for the peak hour each day were divided first by the building square footage, and second, by the number of employees. These results were averaged to obtain a weekday AM Peak hour trip generation rate. Tables 2 and 5 summarize the AM Peak driveway volumes observed at each study site and the resulting trip generation rates.

PM Peak Hour Trip Generation

Afternoon peak hour (4:00 AM to 6:00 AM) volumes were analyzed, and a PM Peak hour was determined for weekdays Tuesday, Wednesday, and Thursday. A PM Peak hour trip generation rate was then calculated using two methods. The volumes for the peak hour each day were divided first by the building square footage, and second, by the number of employees. These results were averaged to obtain a weekday PM Peak hour trip generation rate. Tables 3 and 6 summarize the PM Peak driveway volumes observed at each study site and the resulting trip generation rates.

Table 1
Daily Trip Generation Rates (per 1,000 square feet)

Store Number	Store Location	Building Size (sq.ft.)	Total Daily Driveway Trip Ends					Daily Trip Generation Rate	
			Tues.	Wed.	Thurs	Average	Sat.	Weekday	Saturday
7108	Davie, Florida	81,099	2,786	2,380	1,955	2,374	1,704	29.27	21.01
7150	Nashville, TN	55,558	1,490	1,581	1,396	1,489	1,151	26.80	20.71
7207	Plano, Texas	14,012	963	980	932	958	1,391	68.37	99.27
Average Trip Generation Rate:								**41.48**	**47.00**

Table 2
AM Peak Hour Trip Generation Rates (per 1,000 square feet)

Store Number	Store Location	Building Size (sq. ft.)	Total Peak Hour Driveway Trip Ends				AM Peak Hour Rate		Total AM Peak
			Tues. In/out	Wed. In/out	Thurs. In/out	Average In/out	In	Out	
7108	Davie, Florida	81,099	30 / 61	80 / 57	35 / 62	48.3 / 60.0	0.60	0.74	1.34
7150	Nashville, TN	55,558	62 / 28	56 / 24	45 / 25	54.3 / 25.7	0.98	0.46	1.44
7207	Plano, Texas	14,012	17 / 13	14 / 11	18 / 8	16.3 / 10.7	1.16	0.76	1.92
Average Trip Generation Rate:							**0.91**	**0.65**	**1.56**

Table 3
PM Peak Hour Trip Generation Rates (per 1,000 square feet)

Store Number	Store Location	Building Size (sq. ft.)	Total Peak Hour Driveway Trip Ends				PM Peak Hour Rate		Total PM Peak
			Tues. In/out	Wed. In/out	Thurs In/out	Average In/out	In	Out	
7108	Davie, Florida	81,099	198 / 155	114 / 87	98 / 80	136.7 / 107.3	1.69	1.32	3.01
7150	Nashville, TN	55,558	70 / 53	69 / 63	49 / 59	62.7 / 58.3	1.13	1.05	2.18
7207	Plano, Texas	14,012	78 / 46	72 / 36	77 / 24	75.7 / 35.3	5.40	2.52	7.92
Average Trip Generation Rate:							**2.74**	**1.63**	**4.37**

Table 4
Daily Trip Generation Rates (per employee)

Store Number	Store Location	Number of Employees	Total Daily Driveway Trip Ends					Daily Trip Generation Rate	
			Tues.	Wed.	Thurs.	Average	Sat.	Weekday	Saturday
7108	Davie, FL	220	2,786	2,380	1,955	2,374	1,704	10.79	7.75
7150	Nashville, TN	187	1,490	1,581	1,396	1,489	1,151	7.96	6.16
7207	Plano, TX	69	963	980	932	958	1,391	13.88	20.16
Average Trip Generation Rate:								**10.88**	**11.37**

Table 5
AM Peak Hour Trip Generation Rates (per employee)

Store Number	Store Location	Number of Employees	Total Peak Hour Driveway Trip Ends				AM Peak Hour Rate		Total AM Peak
			Tues. In/out	Wed. In/out	Thurs. In/out	Average In/out	In	Out	
7108	Davie, FL	220	30 / 61	80 / 57	35 / 62	48.3 / 60.0	0.22	0.27	0.49
7150	Nashville, TN	187	62 / 28	56 / 24	45 / 25	54.3 / 25.7	0.29	0.14	0.43
7207	Plano, TX	69	17 / 13	14 / 11	18 / 8	16.3 / 10.7	0.24	0.16	0.40
Average Trip Generation Rate:							**0.25**	**0.19**	**0.44**

Table 6
PM Peak Hour Trip Generation Rates (per employee)

Store Number	Store Location	Number of Employees	Total Peak Hour Driveway Trip Ends				PM Peak Hour Rate		Total PM Peak
			Tues. In/out	Wed. In/out	Thurs. In/out	Average In/out	In	Out	
7108	Davie, FL	220	198 / 155	114 / 87	98 / 80	136.7 / 107.3	0.62	0.49	1.11
7150	Nashville, TN	187	70 / 53	69 / 63	49 / 59	62.7 / 58.3	0.34	0.31	0.65
7207	Plano, TX	69	78 / 46	72 / 36	77 / 24	75.7 / 35.3	1.10	0.51	1.61
Average Trip Generation Rate:							**0.69**	**0.44**	**1.13**

CONCLUSION

The purpose of this trip generation study was to estimate how much daily and peak hour traffic a proposed Carmax Auto Superstore may generate during a weekday and Saturday period. Since different size stores were studied, the trip generation analysis produced trip rates that can be applied to the store size or to the number of employees. The results of this trip generation study were compared against the trip rates published in the Institute of Transportation Engineers *Trip Generation Manual (6th Edition)*. The ITE Manual provides a land use code for New Car Sales (Land use 841). The comparison of ITE rates with the rates found in this study is summarized below in Table 7.

Table 7
Trip Generation Rate Comparison

Period	Based on 1,000 Square Feet		Based on Number of Employees	
	KHA Study	ITE Manual	KHA Study	ITE Manual
Weekday	41.48	37.50	10.88	21.14
Saturday	47.00	21.03	11.37	10.55
AM Peak Hour	1.56	2.21	0.44	0.67
PM Peak Hour	4.37	2.80	1.13	0.96

From Table 7, the trip rates observed based on square footage from this study are slightly lower than the ITE rates for the weekday and AM peak hour. However, the Saturday and PM peak hour rates observed were noticeably higher than the rates indicated in the ITE Manual.

The trip rates based on number of employees were observed to be considerably less than ITE rates when evaluating the weekday period, and similar to ITE rates when comparing Saturday. It should be noted that this trip generation study utilized a relatively small sample size (3 locations).

APPENDIX A:
Location Maps

Figure 1
CarMax Auto Superstore # 7108- Davie, Florida

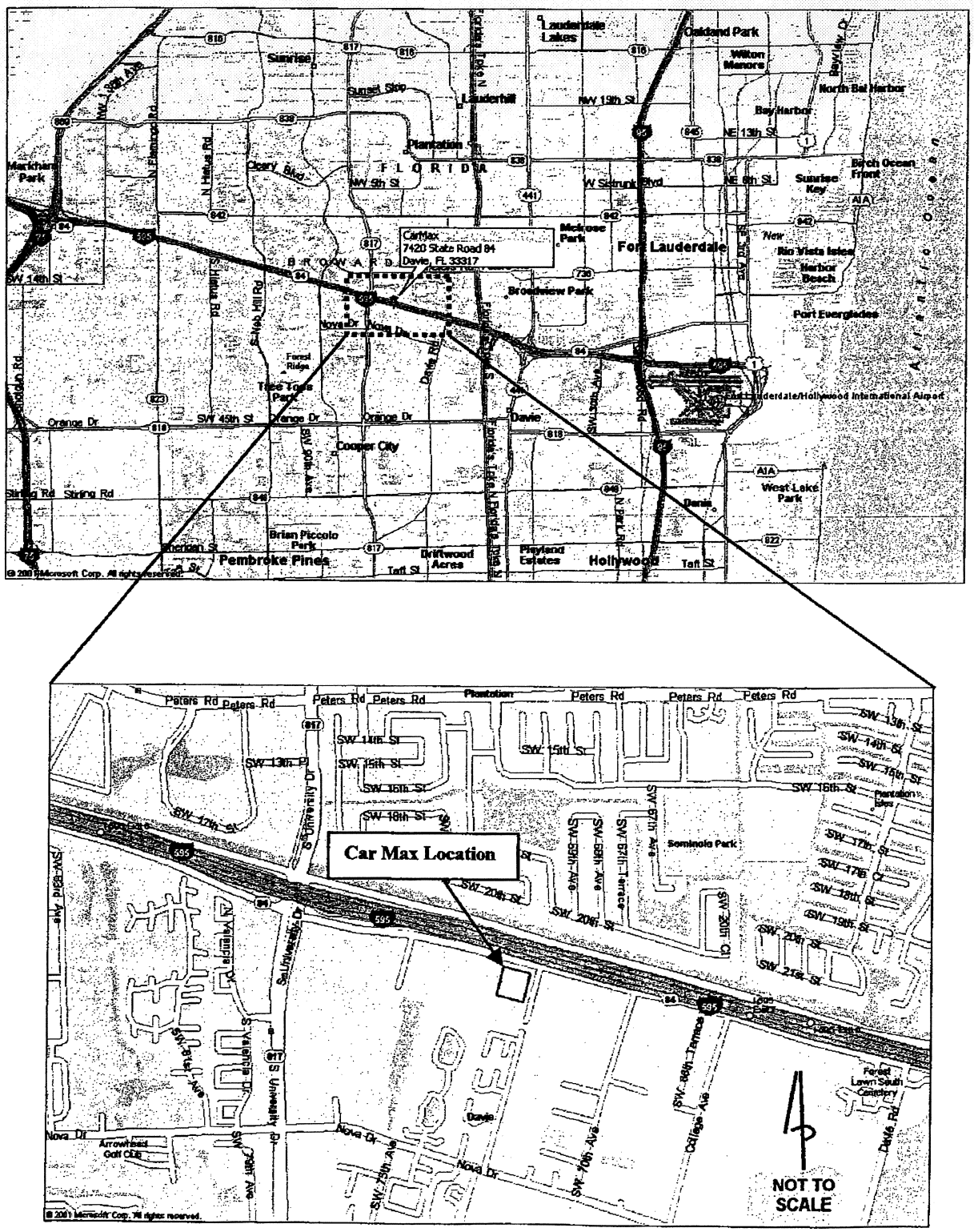


Figure 2
CarMax Auto Superstore #7150- Nashville, Tennesee

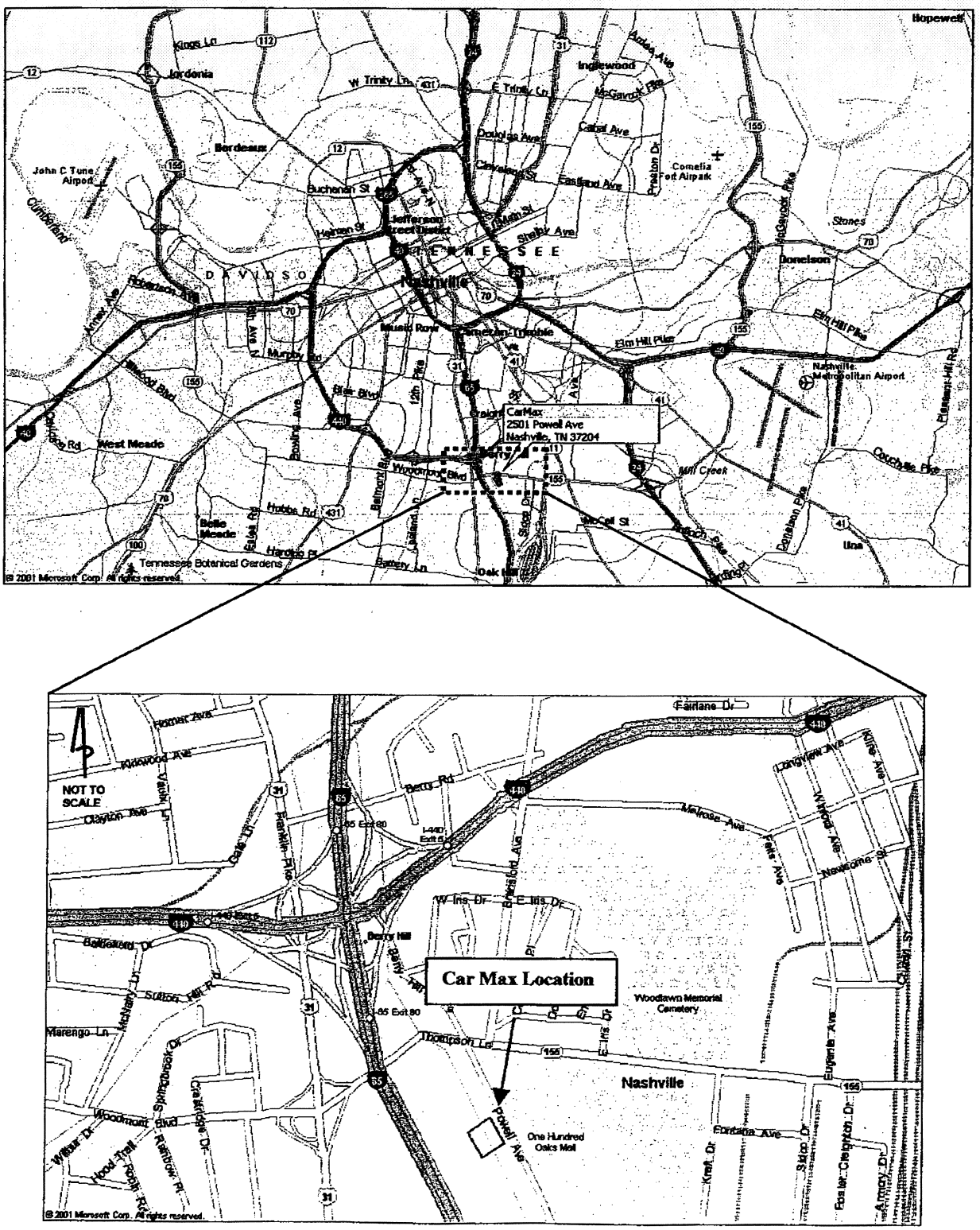
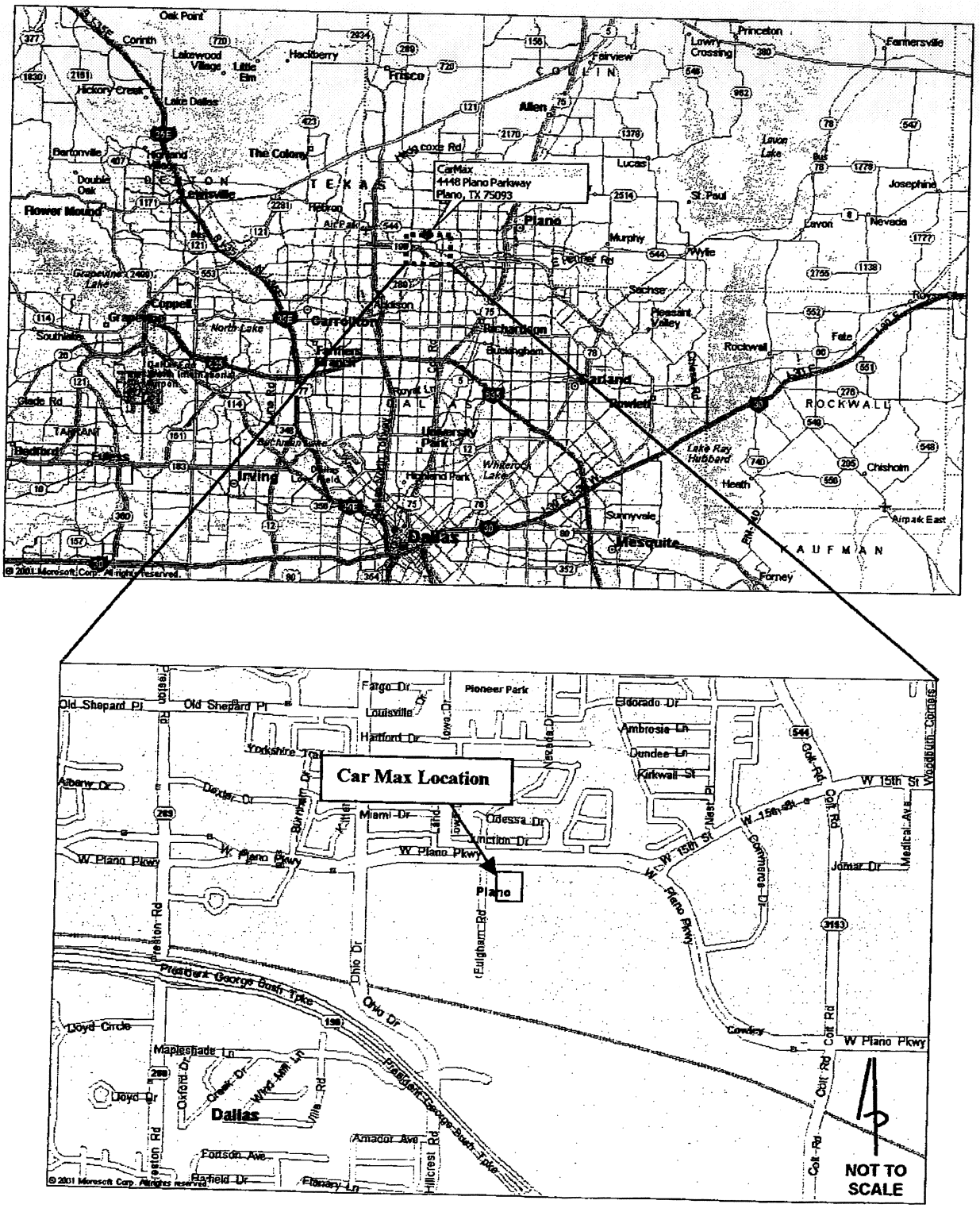


Figure 3
CarMax Auto Superstore #7207- Plano, Texas



Land Use: 841
Automobile Sales (Used)

Description

A used automobile sales dealership is typically located along a major arterial street characterized by abundant commercial development. The sale or lease of used cars is the primary business at these facilities; however, automobile services and parts sales may also be available. Some dealerships also include leasing options, truck sales, and servicing. Automobile sales (new) (Land Use 840) and recreational vehicle sales (Land Use 842) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the 14 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 9:45 and 10:45 a.m. and 4:30 and 5:30 p.m., respectively.

The sites were surveyed in the 2010s in Texas.

Source Numbers

880, 881

Automobile Sales (Used)
(841)

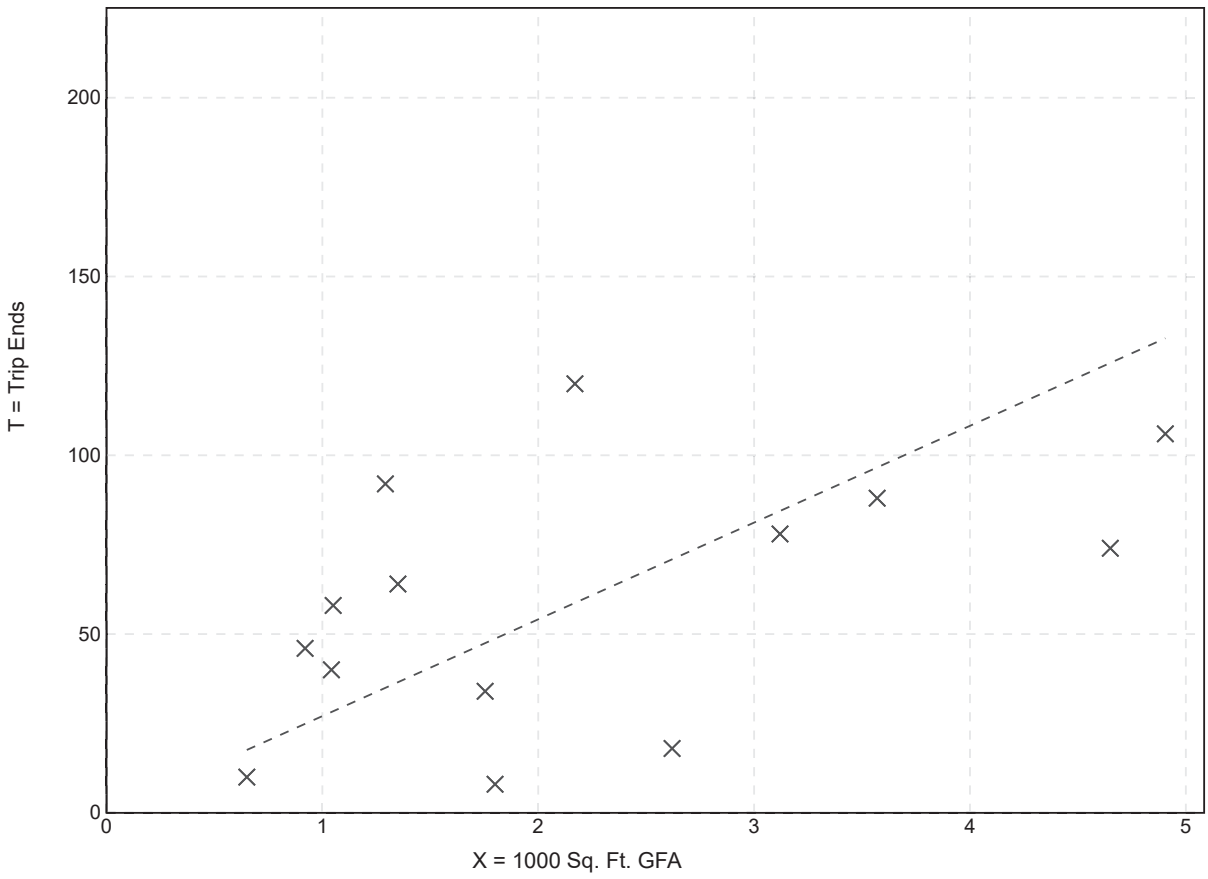
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 14
1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
27.06	4.44 - 71.21	17.91

Data Plot and Equation



Fitted Curve Equation: Not Given

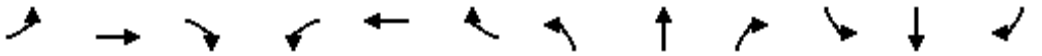
R^2= **

Appendix H

Existing + Project Intersection LOS Calculations

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	121	392	421	279	277	185	717	609	26	1460
Protected Phases	7	4	5	3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.0	8.5	8.5	20.5	8.5	8.5	20.5	8.5	8.5	20.5
Total Split (s)	8.5	20.0	17.0	19.0	30.5	15.0	17.0	36.0	19.0	15.0	34.0
Total Split (%)	9.4%	22.2%	18.9%	21.1%	33.9%	16.7%	18.9%	40.0%	21.1%	16.7%	37.8%
Maximum Green (s)	4.0	15.5	12.5	14.5	26.0	10.5	12.5	31.5	14.5	10.5	29.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max
Walk Time (s)					5.0			5.0			5.0
Flash Dont Walk (s)					11.0			11.0			11.0
Pedestrian Calls (#/hr)					5			5			5
v/c Ratio	0.26	0.31	0.74	0.71	0.61	0.42	0.39	0.32	0.32	0.10	0.76
Control Delay	42.9	35.7	26.1	39.7	33.2	14.2	35.1	16.1	1.1	37.5	26.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	35.7	26.1	39.7	33.2	14.2	35.1	16.1	1.1	37.5	26.1
Queue Length 50th (ft)	11	31	119	105	130	68	44	86	0	6	239
Queue Length 95th (ft)	30	56	216	#170	211	132	80	131	20	19	336
Internal Link Dist (ft)		491			575			528			491
Turn Bay Length (ft)	170		200	280			150		100	165	
Base Capacity (vph)	176	705	558	640	622	747	551	2237	1938	463	1922
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.17	0.70	0.66	0.45	0.37	0.34	0.32	0.31	0.06	0.76

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 78.9
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



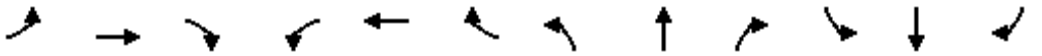
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	111	361	387	257	255	170	660	560	24	1300	43
Future Volume (veh/h)	42	111	361	387	257	255	170	660	560	24	1300	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	121	392	421	279	277	185	717	609	26	1413	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	110	675	426	513	574	521	273	2139	1574	75	1835	61
Arrive On Green	0.03	0.19	0.19	0.15	0.31	0.31	0.08	0.42	0.42	0.02	0.36	0.36
Sat Flow, veh/h	3456	3554	1585	3456	1870	1585	3456	5106	2770	3456	5073	169
Grp Volume(v), veh/h	46	121	392	421	279	277	185	717	609	26	948	512
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1870	1585	1728	1702	1385	1728	1702	1837
Q Serve(g_s), s	1.1	2.3	15.5	9.6	9.9	11.6	4.2	7.7	9.9	0.6	20.1	20.1
Cycle Q Clear(g_c), s	1.1	2.3	15.5	9.6	9.9	11.6	4.2	7.7	9.9	0.6	20.1	20.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	110	675	426	513	574	521	273	2139	1574	75	1231	665
V/C Ratio(X)	0.42	0.18	0.92	0.82	0.49	0.53	0.68	0.34	0.39	0.34	0.77	0.77
Avail Cap(c_a), veh/h	170	675	426	614	596	540	530	2139	1574	445	1231	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	27.7	28.9	33.7	23.0	22.3	36.5	16.0	9.8	39.3	23.0	23.0
Incr Delay (d2), s/veh	2.5	0.1	24.9	7.4	0.6	0.9	2.9	0.4	0.7	2.7	4.7	8.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.0	10.1	4.5	4.3	4.3	1.9	2.9	2.9	0.3	8.4	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.3	27.8	53.8	41.1	23.7	23.2	39.5	16.4	10.5	42.0	27.7	31.4
LnGrp LOS	D	C	D	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		559			977			1511			1486	
Approach Delay, s/veh		47.2			31.0			16.9			29.2	
Approach LOS		D			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	38.7	16.6	20.0	10.9	34.0	7.1	29.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	31.5	14.5	15.5	12.5	29.5	4.0	26.0
Max Q Clear Time (g_c+I1), s	2.6	11.9	11.6	17.5	6.2	22.1	3.1	13.6
Green Ext Time (p_c), s	0.0	7.8	0.5	0.0	0.3	5.1	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	27.7
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	63	49	123	17	218	25	659	204	614	1380
Protected Phases	7	4	3	8	1	5	2	3	1	6
Permitted Phases					8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	8.5	8.5	20.5	8.5	8.5	20.5
Total Split (s)	13.3	20.5	17.4	24.6	29.0	10.0	23.1	17.4	29.0	42.1
Total Split (%)	14.8%	22.8%	19.3%	27.3%	32.2%	11.1%	25.7%	19.3%	32.2%	46.8%
Maximum Green (s)	8.8	16.0	12.9	20.1	24.5	5.5	18.6	12.9	24.5	37.6
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	None	None	Max
Walk Time (s)		5.0					5.0			5.0
Flash Dont Walk (s)		11.0					11.0			11.0
Pedestrian Calls (#/hr)		5					5			5
v/c Ratio	0.19	0.22	0.49	0.07	0.30	0.17	0.43	0.25	0.71	0.48
Control Delay	29.3	26.8	38.5	31.2	6.4	40.0	24.3	3.5	30.2	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.3	26.8	38.5	31.2	6.4	40.0	24.3	3.5	30.2	12.8
Queue Length 50th (ft)	20	15	52	7	19	11	93	0	128	119
Queue Length 95th (ft)	74	47	120	25	47	39	165	41	217	271
Internal Link Dist (ft)		470		1268			481			528
Turn Bay Length (ft)	90		140			130		100	260	
Base Capacity (vph)	365	433	338	555	880	144	1519	869	1248	2876
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.11	0.36	0.03	0.25	0.17	0.43	0.23	0.49	0.48

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 70.5
Control Type: Actuated-Uncoordinated



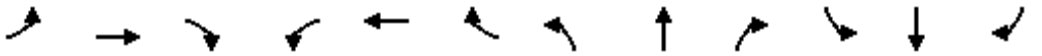
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	31	14	113	16	201	23	606	188	565	1196	74
Future Volume (veh/h)	58	31	14	113	16	201	23	606	188	565	1196	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	63	34	15	123	17	218	25	659	204	614	1300	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	117	51	159	259	573	39	1718	665	769	2637	162
Arrive On Green	0.05	0.09	0.09	0.09	0.14	0.14	0.02	0.34	0.34	0.22	0.54	0.54
Sat Flow, veh/h	1781	1230	543	1781	1870	1585	1781	5106	1557	3456	4910	302
Grp Volume(v), veh/h	63	0	49	123	17	218	25	659	204	614	901	479
Grp Sat Flow(s),veh/h/ln	1781	0	1773	1781	1870	1585	1781	1702	1557	1728	1702	1808
Q Serve(g_s), s	2.5	0.0	1.8	4.7	0.6	7.1	1.0	6.9	6.1	11.8	11.7	11.7
Cycle Q Clear(g_c), s	2.5	0.0	1.8	4.7	0.6	7.1	1.0	6.9	6.1	11.8	11.7	11.7
Prop In Lane	1.00		0.31	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	81	0	168	159	259	573	39	1718	665	769	1828	971
V/C Ratio(X)	0.78	0.00	0.29	0.77	0.07	0.38	0.64	0.38	0.31	0.80	0.49	0.49
Avail Cap(c_a), veh/h	224	0	405	328	537	808	140	1718	665	1209	1828	971
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	0.0	29.5	31.2	26.2	16.6	34.0	17.7	13.3	25.7	10.2	10.2
Incr Delay (d2), s/veh	15.0	0.0	0.9	7.8	0.1	0.4	15.9	0.7	1.2	2.1	1.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.8	2.3	0.2	2.5	0.6	2.6	2.2	4.8	4.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.0	0.0	30.4	39.0	26.3	17.0	49.9	18.4	14.5	27.8	11.2	12.0
LnGrp LOS	D	A	C	D	C	B	D	B	B	C	B	B
Approach Vol, veh/h		112			358			888			1994	
Approach Delay, s/veh		40.3			25.0			18.4			16.5	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.1	28.1	10.7	11.1	6.0	42.1	7.7	14.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	24.5	18.6	12.9	16.0	5.5	37.6	8.8	20.1
Max Q Clear Time (g_c+I1), s	13.8	8.9	6.7	3.8	3.0	13.7	4.5	9.1
Green Ext Time (p_c), s	1.8	3.7	0.1	0.1	0.0	10.8	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	617	196	39	283	25	25	8	80	55
Protected Phases	7	4	3	8	2	2		6	6
Permitted Phases							2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5
Total Split (s)	28.2	38.0	10.7	20.5	20.8	20.8	20.8	20.5	20.5
Total Split (%)	31.3%	42.2%	11.9%	22.8%	23.1%	23.1%	23.1%	22.8%	22.8%
Maximum Green (s)	23.7	33.5	6.2	16.0	16.3	16.3	16.3	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max	None	None
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		5		5	5	5	5	5	5
v/c Ratio	0.72	0.14	0.25	0.51	0.06	0.06	0.02	0.34	0.22
Control Delay	31.0	15.4	40.0	31.3	27.6	27.5	0.0	35.2	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	15.4	40.0	31.3	27.6	27.5	0.0	35.2	18.7
Queue Length 50th (ft)	129	29	17	58	9	9	0	33	9
Queue Length 95th (ft)	220	58	54	111	35	35	0	81	42
Internal Link Dist (ft)		1268		162		397			490
Turn Bay Length (ft)	165		90					190	
Base Capacity (vph)	1195	1716	161	827	402	413	517	415	419
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.11	0.24	0.34	0.06	0.06	0.02	0.19	0.13

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 71.1
Control Type: Actuated-Uncoordinated



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	568	158	22	36	227	33	35	11	7	74	19	31
Future Volume (veh/h)	568	158	22	36	227	33	35	11	7	74	19	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	617	172	24	39	247	36	25	30	8	80	21	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	799	1035	142	57	407	59	477	501	424	134	48	78
Arrive On Green	0.23	0.33	0.33	0.03	0.13	0.13	0.27	0.27	0.27	0.08	0.08	0.08
Sat Flow, veh/h	3456	3137	431	1781	3118	449	1781	1870	1585	1781	641	1038
Grp Volume(v), veh/h	617	96	100	39	139	144	25	30	8	80	0	55
Grp Sat Flow(s),veh/h/ln	1728	1777	1791	1781	1777	1790	1781	1870	1585	1781	0	1679
Q Serve(g_s), s	10.2	2.3	2.4	1.3	4.5	4.6	0.6	0.7	0.2	2.6	0.0	1.9
Cycle Q Clear(g_c), s	10.2	2.3	2.4	1.3	4.5	4.6	0.6	0.7	0.2	2.6	0.0	1.9
Prop In Lane	1.00		0.24	1.00		0.25	1.00		1.00	1.00		0.62
Lane Grp Cap(c), veh/h	799	586	591	57	232	234	477	501	424	134	0	126
V/C Ratio(X)	0.77	0.16	0.17	0.69	0.60	0.61	0.05	0.06	0.02	0.60	0.00	0.44
Avail Cap(c_a), veh/h	1345	978	985	181	467	470	477	501	424	468	0	441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.9	14.5	14.5	29.2	25.0	25.0	16.6	16.6	16.4	27.3	0.0	26.9
Incr Delay (d2), s/veh	1.6	0.1	0.1	13.9	2.5	2.6	0.2	0.2	0.1	4.2	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.9	0.9	0.8	2.0	2.0	0.3	0.3	0.1	1.2	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.5	14.6	14.6	43.1	27.5	27.6	16.8	16.8	16.5	31.5	0.0	29.3
LnGrp LOS	C	B	B	D	C	C	B	B	B	C	A	C
Approach Vol, veh/h		813			322			63			135	
Approach Delay, s/veh		21.4			29.4			16.8			30.6	
Approach LOS		C			C			B			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		20.8	6.4	24.6		9.1	18.6	12.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		16.3	6.2	33.5		16.0	23.7	16.0				
Max Q Clear Time (g_c+I1), s		2.7	3.3	4.4		4.6	12.2	6.6				
Green Ext Time (p_c), s		0.1	0.0	1.1		0.3	1.9	1.0				

Intersection Summary												
HCM 6th Ctrl Delay			24.0									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	235	1	1	297	0	1
Future Vol, veh/h	235	1	1	297	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	255	1	1	323	0	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	256	0	581	128
Stage 1	-	-	-	-	256	-
Stage 2	-	-	-	-	325	-
Critical Hdwy	-	-	4.13	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1307	-	460	899
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	731	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1307	-	460	899
Mov Cap-2 Maneuver	-	-	-	-	550	-
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	730	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	899	-	-	1307	-
HCM Lane V/C Ratio	0.001	-	-	0.001	-
HCM Control Delay (s)	9	-	-	7.8	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	244	203	192	128	105
Protected Phases	4	3	8	2	3
Permitted Phases					2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	8.5	20.5	20.5	8.5
Total Split (s)	20.5	18.0	38.5	21.5	18.0
Total Split (%)	34.2%	30.0%	64.2%	35.8%	30.0%
Maximum Green (s)	16.0	13.5	34.0	17.0	13.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Max	None
Walk Time (s)	5.0				
Flash Dont Walk (s)	11.0				
Pedestrian Calls (#/hr)	5				
v/c Ratio	0.35	0.53	0.24	0.20	0.11
Control Delay	15.1	23.8	8.1	14.9	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.1	23.8	8.1	14.9	1.7
Queue Length 50th (ft)	25	52	30	25	0
Queue Length 95th (ft)	52	122	56	73	15
Internal Link Dist (ft)	332		458	303	
Turn Bay Length (ft)		125		100	
Base Capacity (vph)	1213	518	1354	652	1051
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.20	0.39	0.14	0.20	0.10

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 48.1
Control Type: Actuated-Uncoordinated

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	168	56	187	177	118	97
Future Volume (veh/h)	168	56	187	177	118	97
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.98	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	183	61	203	192	128	105
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	374	120	265	740	704	862
Arrive On Green	0.14	0.14	0.15	0.40	0.40	0.40
Sat Flow, veh/h	2724	847	1781	1870	1781	1585
Grp Volume(v), veh/h	121	123	203	192	128	105
Grp Sat Flow(s),veh/h/ln	1777	1700	1781	1870	1781	1585
Q Serve(g_s), s	2.7	2.9	4.7	3.0	2.0	1.4
Cycle Q Clear(g_c), s	2.7	2.9	4.7	3.0	2.0	1.4
Prop In Lane		0.50	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	253	242	265	740	704	862
V/C Ratio(X)	0.48	0.51	0.77	0.26	0.18	0.12
Avail Cap(c_a), veh/h	661	632	559	1478	704	862
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	17.1	17.6	8.8	8.5	4.8
Incr Delay (d2), s/veh	1.4	1.6	4.6	0.2	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.1	2.0	1.0	0.7	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.4	18.7	22.2	8.9	9.0	5.1
LnGrp LOS	B	B	C	A	A	A
Approach Vol, veh/h	244			395	233	
Approach Delay, s/veh	18.5			15.8	7.3	
Approach LOS	B			B	A	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		21.5	10.9	10.6		21.5
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		17.0	13.5	16.0		34.0
Max Q Clear Time (g_c+I1), s		4.0	6.7	4.9		5.0
Green Ext Time (p_c), s		0.6	0.3	1.0		1.1

Intersection Summary	
HCM 6th Ctrl Delay	14.3
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	0	1	171	209	4
Future Vol, veh/h	3	0	1	171	209	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	0	1	186	227	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	417	229	231	0	-	0
Stage 1	229	-	-	-	-	-
Stage 2	188	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	592	810	1337	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	844	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	591	810	1337	-	-	-
Mov Cap-2 Maneuver	591	-	-	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	844	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1337	-	591	-	-
HCM Lane V/C Ratio	0.001	-	0.006	-	-
HCM Control Delay (s)	7.7	0	11.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

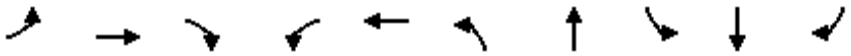
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	0	1	169	206	3
Future Vol, veh/h	3	0	1	169	206	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	0	1	184	224	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	412	226	227	0	-	0
Stage 1	226	-	-	-	-	-
Stage 2	186	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	596	813	1341	-	-	-
Stage 1	812	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	595	813	1341	-	-	-
Mov Cap-2 Maneuver	595	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	846	-	-	-	-	-

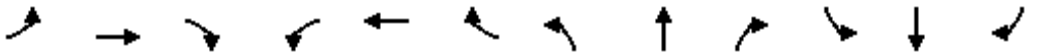
Approach	EB	NB	SB
HCM Control Delay, s	11.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1341	-	595	-	-
HCM Lane V/C Ratio	0.001	-	0.005	-	-
HCM Control Delay (s)	7.7	0	11.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	90	220	2	1	489	0	4	0	58	184
Protected Phases	7	4		3	8		2		6	7
Permitted Phases			4			2		6		6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	8.5
Total Split (s)	14.0	27.0	27.0	9.0	22.0	24.0	24.0	24.0	24.0	14.0
Total Split (%)	23.3%	45.0%	45.0%	15.0%	36.7%	40.0%	40.0%	40.0%	40.0%	23.3%
Maximum Green (s)	9.5	22.5	22.5	4.5	17.5	19.5	19.5	19.5	19.5	9.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag					Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	None
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	
v/c Ratio	0.34	0.29	0.00	0.01	0.56		0.01		0.10	0.17
Control Delay	25.4	11.7	0.0	25.0	19.2		13.2		13.8	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	25.4	11.7	0.0	25.0	19.2		13.2		13.8	2.2
Queue Length 50th (ft)	26	39	0	0	67		1		12	3
Queue Length 95th (ft)	66	100	0	5	110		6		37	26
Internal Link Dist (ft)		321			351		325		639	
Turn Bay Length (ft)	100		100	25						150
Base Capacity (vph)	334	897	801	158	1220		658		575	1107
Starvation Cap Reductn	0	0	0	0	0		0		0	0
Spillback Cap Reductn	0	0	0	0	0		0		0	0
Storage Cap Reductn	0	0	0	0	0		0		0	0
Reduced v/c Ratio	0.27	0.25	0.00	0.01	0.40		0.01		0.10	0.17

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 51.8
Control Type: Actuated-Uncoordinated



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	202	2	1	387	63	3	1	0	51	3	169
Future Volume (veh/h)	83	202	2	1	387	63	3	1	0	51	3	169
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	90	220	2	1	421	68	3	1	0	55	3	184
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	526	435	4	666	107	536	160	672	731	36	775
Arrive On Green	0.06	0.28	0.28	0.00	0.22	0.22	0.42	0.42	0.00	0.42	0.42	0.42
Sat Flow, veh/h	1781	1870	1549	1781	3063	491	941	378	1585	1364	85	1585
Grp Volume(v), veh/h	90	220	2	1	243	246	4	0	0	58	0	184
Grp Sat Flow(s),veh/h/ln	1781	1870	1549	1781	1777	1778	1319	0	1585	1449	0	1585
Q Serve(g_s), s	2.3	4.4	0.0	0.0	5.7	5.8	0.0	0.0	0.0	0.0	0.0	3.1
Cycle Q Clear(g_c), s	2.3	4.4	0.0	0.0	5.7	5.8	0.9	0.0	0.0	0.9	0.0	3.1
Prop In Lane	1.00		1.00	1.00		0.28	0.75		1.00	0.95		1.00
Lane Grp Cap(c), veh/h	115	526	435	4	386	387	697	0	672	767	0	775
V/C Ratio(X)	0.78	0.42	0.00	0.26	0.63	0.64	0.01	0.00	0.00	0.08	0.00	0.24
Avail Cap(c_a), veh/h	368	915	758	174	676	677	697	0	672	767	0	775
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.2	13.5	11.9	22.9	16.3	16.3	7.6	0.0	0.0	7.9	0.0	6.8
Incr Delay (d2), s/veh	10.7	0.5	0.0	31.9	1.7	1.7	0.0	0.0	0.0	0.2	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.6	0.0	0.0	2.2	2.2	0.0	0.0	0.0	0.3	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	14.0	11.9	54.8	18.0	18.1	7.7	0.0	0.0	8.1	0.0	7.5
LnGrp LOS	C	B	B	D	B	B	A	A	A	A	A	A
Approach Vol, veh/h		312			490			4			242	
Approach Delay, s/veh		19.1			18.1			7.7			7.6	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.0	4.6	17.4		24.0	7.5	14.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.5	4.5	22.5		19.5	9.5	17.5				
Max Q Clear Time (g_c+I1), s		2.9	2.0	6.4		5.1	4.3	7.8				
Green Ext Time (p_c), s		0.0	0.0	1.1		0.8	0.1	2.1				
Intersection Summary												
HCM 6th Ctrl Delay			16.0									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	236	298	0	0	0
Future Vol, veh/h	0	236	298	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	50	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	257	324	0	0	0

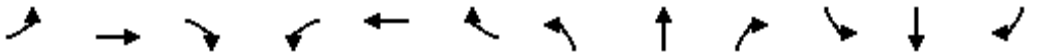
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	324	0	-	0	453	324
Stage 1	-	-	-	-	324	-
Stage 2	-	-	-	-	129	-
Critical Hdwy	4.13	-	-	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	1234	-	-	-	550	716
Stage 1	-	-	-	-	732	-
Stage 2	-	-	-	-	884	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1234	-	-	-	550	716
Mov Cap-2 Maneuver	-	-	-	-	550	-
Stage 1	-	-	-	-	732	-
Stage 2	-	-	-	-	884	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1234	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	130	197	462	508	371	329	390	1564	635	25	1262
Protected Phases	7	4	5	3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.0	8.5	8.5	20.5	8.5	8.5	20.5	8.5	8.5	20.5
Total Split (s)	10.0	20.0	18.5	20.0	30.0	10.8	18.5	39.2	20.0	10.8	31.5
Total Split (%)	11.1%	22.2%	20.6%	22.2%	33.3%	12.0%	20.6%	43.6%	22.2%	12.0%	35.0%
Maximum Green (s)	5.5	15.5	14.0	15.5	25.5	6.3	14.0	34.7	15.5	6.3	27.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max
Walk Time (s)					5.0			5.0			5.0
Flash Dont Walk (s)					11.0			11.0			11.0
Pedestrian Calls (#/hr)					5			15			5
v/c Ratio	0.59	0.41	0.74	0.83	0.80	0.56	0.73	0.76	0.35	0.10	0.78
Control Delay	52.1	36.3	25.3	48.1	43.7	16.2	44.2	25.4	2.3	39.9	30.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.1	36.3	25.3	48.1	43.7	16.2	44.2	25.4	2.3	39.9	30.9
Queue Length 50th (ft)	36	52	157	139	188	78	105	263	14	6	226
Queue Length 95th (ft)	#73	84	270	#229	289	152	#159	343	39	19	297
Internal Link Dist (ft)		491			575			528			491
Turn Bay Length (ft)	170		200	280			150		100	165	
Base Capacity (vph)	219	638	639	620	553	591	560	2061	1801	252	1621
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.31	0.72	0.82	0.67	0.56	0.70	0.76	0.35	0.10	0.78

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 86
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	181	425	467	341	303	359	1439	584	23	1064	97
Future Volume (veh/h)	120	181	425	467	341	303	359	1439	584	23	1064	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	130	197	462	508	371	329	390	1564	635	25	1157	105
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	632	499	584	541	490	473	2175	1633	72	1474	134
Arrive On Green	0.06	0.18	0.18	0.17	0.29	0.29	0.14	0.43	0.43	0.02	0.31	0.31
Sat Flow, veh/h	3456	3554	1585	3456	1870	1580	3456	5106	2727	3456	4758	432
Grp Volume(v), veh/h	130	197	462	508	371	329	390	1564	635	25	828	434
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1870	1580	1728	1702	1363	1728	1702	1786
Q Serve(g_s), s	3.2	4.2	15.5	12.5	15.3	15.8	9.6	22.1	10.7	0.6	19.3	19.3
Cycle Q Clear(g_c), s	3.2	4.2	15.5	12.5	15.3	15.8	9.6	22.1	10.7	0.6	19.3	19.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	198	632	499	584	541	490	473	2175	1633	72	1054	553
V/C Ratio(X)	0.66	0.31	0.93	0.87	0.69	0.67	0.82	0.72	0.39	0.35	0.78	0.79
Avail Cap(c_a), veh/h	218	632	499	615	547	495	555	2175	1633	250	1054	553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	31.2	28.9	35.3	27.5	26.2	36.6	20.7	9.3	42.1	27.4	27.4
Incr Delay (d2), s/veh	6.1	0.3	23.4	12.4	3.5	3.5	8.6	2.1	0.7	2.8	5.9	10.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.8	12.2	6.1	7.2	6.2	4.5	8.7	3.0	0.3	8.4	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	31.5	52.3	47.7	31.0	29.7	45.1	22.8	10.0	44.9	33.3	38.2
LnGrp LOS	D	C	D	D	C	C	D	C	B	D	C	D
Approach Vol, veh/h		789			1208			2589			1287	
Approach Delay, s/veh		46.1			37.7			23.0			35.2	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	41.6	19.2	20.0	16.4	31.5	9.5	29.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.3	34.7	15.5	15.5	14.0	27.0	5.5	25.5
Max Q Clear Time (g_c+I1), s	2.6	24.1	14.5	17.5	11.6	21.3	5.2	17.8
Green Ext Time (p_c), s	0.0	8.5	0.2	0.0	0.4	3.7	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	31.8
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	86	76	184	18	518	32	1380	332	727	1421
Protected Phases	7	4	3	8	1	5	2	3	1	6
Permitted Phases					8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	8.5	8.5	20.5	8.5	8.5	20.5
Total Split (s)	14.4	20.5	14.9	21.0	24.6	10.4	30.0	14.9	24.6	44.2
Total Split (%)	16.0%	22.8%	16.6%	23.3%	27.3%	11.6%	33.3%	16.6%	27.3%	49.1%
Maximum Green (s)	9.9	16.0	10.4	16.5	20.1	5.9	25.5	10.4	20.1	39.7
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	None	None	Max
Walk Time (s)		5.0					5.0			5.0
Flash Dont Walk (s)		11.0					11.0			11.0
Pedestrian Calls (#/hr)		5					10			5
v/c Ratio	0.28	0.36	0.80	0.08	0.79	0.25	0.86	0.41	0.86	0.49
Control Delay	34.6	35.3	63.7	33.1	28.5	43.3	33.7	6.8	42.8	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.6	35.3	63.7	33.1	28.5	43.3	33.7	6.8	42.8	13.1
Queue Length 50th (ft)	33	33	94	9	~262	16	245	30	186	130
Queue Length 95th (ft)	93	72	#228	27	289	47	#380	95	#322	269
Internal Link Dist (ft)		470		1268			481			528
Turn Bay Length (ft)	90		140			130		100	260	
Base Capacity (vph)	328	368	229	383	664	130	1614	816	859	2877
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.21	0.80	0.05	0.78	0.25	0.86	0.41	0.85	0.49

Intersection Summary

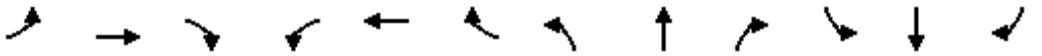
Cycle Length: 90

Actuated Cycle Length: 81

Control Type: Actuated-Uncoordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



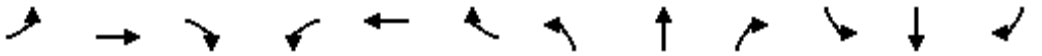
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	59	11	169	17	477	29	1270	305	669	1220	87
Future Volume (veh/h)	79	59	11	169	17	477	29	1270	305	669	1220	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	64	12	184	18	518	32	1380	332	727	1326	95
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	205	38	218	363	675	44	1533	660	799	2460	176
Arrive On Green	0.06	0.13	0.13	0.12	0.19	0.19	0.02	0.30	0.30	0.23	0.51	0.51
Sat Flow, veh/h	1781	1530	287	1781	1870	1585	1781	5106	1551	3456	4855	348
Grp Volume(v), veh/h	86	0	76	184	18	518	32	1380	332	727	930	491
Grp Sat Flow(s),veh/h/ln	1781	0	1817	1781	1870	1585	1781	1702	1551	1728	1702	1799
Q Serve(g_s), s	4.0	0.0	3.2	8.6	0.7	16.5	1.5	22.0	13.4	17.4	15.7	15.7
Cycle Q Clear(g_c), s	4.0	0.0	3.2	8.6	0.7	16.5	1.5	22.0	13.4	17.4	15.7	15.7
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	111	0	244	218	363	675	44	1533	660	799	1724	911
V/C Ratio(X)	0.77	0.00	0.31	0.84	0.05	0.77	0.72	0.90	0.50	0.91	0.54	0.54
Avail Cap(c_a), veh/h	208	0	342	218	363	675	124	1533	660	818	1724	911
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	0.0	33.2	36.5	27.8	20.8	41.1	28.5	18.0	31.8	14.2	14.2
Incr Delay (d2), s/veh	10.9	0.0	0.7	24.9	0.1	5.3	19.5	8.9	2.7	13.9	1.2	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.4	5.2	0.3	9.2	0.9	9.8	5.0	8.6	5.9	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.1	0.0	34.0	61.3	27.9	26.2	60.6	37.4	20.7	45.7	15.4	16.5
LnGrp LOS	D	A	C	E	C	C	E	D	C	D	B	B
Approach Vol, veh/h		162			720			1744			2148	
Approach Delay, s/veh		42.5			35.2			34.6			25.9	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.2	30.0	14.9	15.9	6.6	47.5	9.8	21.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.1	25.5	10.4	16.0	5.9	39.7	9.9	16.5
Max Q Clear Time (g_c+I1), s	19.4	24.0	10.6	5.2	3.5	17.7	6.0	18.5
Green Ext Time (p_c), s	0.3	1.2	0.0	0.2	0.0	10.7	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	31.1
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	691	426	120	537	123	125	58	153	86
Protected Phases	7	4	3	8	2	2		6	6
Permitted Phases							2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5
Total Split (s)	27.0	30.9	17.1	21.0	21.5	21.5	21.5	20.5	20.5
Total Split (%)	30.0%	34.3%	19.0%	23.3%	23.9%	23.9%	23.9%	22.8%	22.8%
Maximum Green (s)	22.5	26.4	12.6	16.5	17.0	17.0	17.0	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max	None	None
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		5		5	5	5	5	5	5
v/c Ratio	0.82	0.36	0.55	0.81	0.36	0.36	0.13	0.60	0.31
Control Delay	39.9	21.7	45.5	43.6	34.1	33.9	0.5	44.1	29.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.9	21.7	45.5	43.6	34.1	33.9	0.5	44.1	29.0
Queue Length 50th (ft)	180	84	62	145	62	63	0	79	32
Queue Length 95th (ft)	#259	135	119	#234	120	122	0	140	73
Internal Link Dist (ft)		1268		162		397			490
Turn Bay Length (ft)	165		90					190	
Base Capacity (vph)	931	1185	268	701	344	352	463	341	358
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.36	0.45	0.77	0.36	0.36	0.13	0.45	0.24

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 83.5
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	636	309	83	110	439	55	180	48	53	141	55	24
Future Volume (veh/h)	636	309	83	110	439	55	180	48	53	141	55	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	691	336	90	120	477	60	124	153	58	153	60	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	817	933	246	154	593	74	396	416	351	212	147	64
Arrive On Green	0.24	0.34	0.34	0.09	0.19	0.19	0.22	0.22	0.22	0.12	0.12	0.12
Sat Flow, veh/h	3456	2770	730	1781	3176	398	1781	1870	1576	1781	1233	534
Grp Volume(v), veh/h	691	214	212	120	266	271	124	153	58	153	0	86
Grp Sat Flow(s),veh/h/ln	1728	1777	1724	1781	1777	1797	1781	1870	1576	1781	0	1768
Q Serve(g_s), s	14.6	6.9	7.1	5.0	10.9	11.0	4.4	5.3	2.3	6.3	0.0	3.4
Cycle Q Clear(g_c), s	14.6	6.9	7.1	5.0	10.9	11.0	4.4	5.3	2.3	6.3	0.0	3.4
Prop In Lane	1.00		0.42	1.00		0.22	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	817	598	581	154	332	335	396	416	351	212	0	210
V/C Ratio(X)	0.85	0.36	0.37	0.78	0.80	0.81	0.31	0.37	0.17	0.72	0.00	0.41
Avail Cap(c_a), veh/h	1017	614	595	294	383	388	396	416	351	373	0	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.9	19.1	19.2	34.2	29.7	29.8	24.8	25.2	24.0	32.5	0.0	31.2
Incr Delay (d2), s/veh	5.6	0.4	0.4	8.3	10.2	10.6	2.1	2.5	1.0	4.6	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	2.8	2.8	2.5	5.4	5.6	2.0	2.6	0.9	2.9	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.4	19.5	19.6	42.5	40.0	40.4	26.9	27.7	25.0	37.0	0.0	32.5
LnGrp LOS	C	B	B	D	D	D	C	C	C	D	A	C
Approach Vol, veh/h		1117			657			335			239	
Approach Delay, s/veh		28.1			40.6			26.9			35.4	
Approach LOS		C			D			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		21.5	11.1	30.2		13.6	22.6	18.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		17.0	12.6	26.4		16.0	22.5	16.5				
Max Q Clear Time (g_c+I1), s		7.3	7.0	9.1		8.3	16.6	13.0				
Green Ext Time (p_c), s		1.0	0.1	2.4		0.5	1.5	1.1				

Intersection Summary	
HCM 6th Ctrl Delay	32.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	524	3	1	582	1	1
Future Vol, veh/h	524	3	1	582	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	570	3	1	633	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	573	0	1207	287
Stage 1	-	-	-	-	572	-
Stage 2	-	-	-	-	635	-
Critical Hdwy	-	-	4.13	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	998	-	189	710
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	527	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	998	-	189	710
Mov Cap-2 Maneuver	-	-	-	-	189	-
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	526	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	17.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	299	-	-	998	-
HCM Lane V/C Ratio	0.007	-	-	0.001	-
HCM Control Delay (s)	17.1	-	-	8.6	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	576	245	428	180	292
Protected Phases	4	3	8	2	3
Permitted Phases					2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	8.5	20.5	20.5	8.5
Total Split (s)	20.5	19.0	39.5	20.5	19.0
Total Split (%)	34.2%	31.7%	65.8%	34.2%	31.7%
Maximum Green (s)	16.0	14.5	35.0	16.0	14.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Max	None
Walk Time (s)	5.0				
Flash Dont Walk (s)	11.0				
Pedestrian Calls (#/hr)	10				
v/c Ratio	0.65	0.64	0.43	0.34	0.33
Control Delay	18.7	28.4	8.8	19.2	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	28.4	8.8	19.2	4.3
Queue Length 50th (ft)	70	74	73	48	19
Queue Length 95th (ft)	119	142	124	102	52
Internal Link Dist (ft)	372		458	303	
Turn Bay Length (ft)		125		100	
Base Capacity (vph)	1070	474	1204	523	949
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.54	0.52	0.36	0.34	0.31

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 54.7
Control Type: Actuated-Uncoordinated

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	364	166	225	394	166	269
Future Volume (veh/h)	364	166	225	394	166	269
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	396	180	245	428	180	292
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	561	251	308	937	569	780
Arrive On Green	0.24	0.24	0.17	0.50	0.32	0.32
Sat Flow, veh/h	2450	1054	1781	1870	1781	1585
Grp Volume(v), veh/h	297	279	245	428	180	292
Grp Sat Flow(s),veh/h/ln	1777	1634	1781	1870	1781	1585
Q Serve(g_s), s	7.7	7.9	6.6	7.4	3.8	5.7
Cycle Q Clear(g_c), s	7.7	7.9	6.6	7.4	3.8	5.7
Prop In Lane		0.65	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	423	389	308	937	569	780
V/C Ratio(X)	0.70	0.72	0.80	0.46	0.32	0.37
Avail Cap(c_a), veh/h	567	522	516	1307	569	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	17.5	19.9	8.1	12.9	7.9
Incr Delay (d2), s/veh	2.5	3.1	4.7	0.3	1.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	2.9	2.8	2.3	1.6	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.9	20.6	24.5	8.4	14.4	9.3
LnGrp LOS	B	C	C	A	B	A
Approach Vol, veh/h	576			673	472	
Approach Delay, s/veh	20.3			14.3	11.2	
Approach LOS	C			B	B	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		20.5	13.2	16.4		29.6
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		16.0	14.5	16.0		35.0
Max Q Clear Time (g_c+I1), s		7.7	8.6	9.9		9.4
Green Ext Time (p_c), s		1.1	0.4	1.9		2.8

Intersection Summary	
HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	1	2	382	327	11
Future Vol, veh/h	7	1	2	382	327	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	1	2	415	355	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	780	361	367	0	-	0
Stage 1	361	-	-	-	-	-
Stage 2	419	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	364	684	1192	-	-	-
Stage 1	705	-	-	-	-	-
Stage 2	664	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	363	684	1192	-	-	-
Mov Cap-2 Maneuver	363	-	-	-	-	-
Stage 1	704	-	-	-	-	-
Stage 2	664	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1192	-	386	-	-
HCM Lane V/C Ratio	0.002	-	0.023	-	-
HCM Control Delay (s)	8	0	14.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	1	2	377	317	11
Future Vol, veh/h	7	1	2	377	317	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	1	2	410	345	12

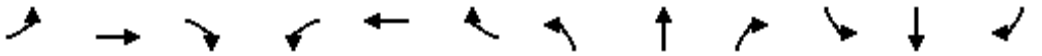
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	765	351	357	0	-	0
Stage 1	351	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	371	692	1202	-	-	-
Stage 1	713	-	-	-	-	-
Stage 2	667	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	370	692	1202	-	-	-
Mov Cap-2 Maneuver	370	-	-	-	-	-
Stage 1	712	-	-	-	-	-
Stage 2	667	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1202	-	393	-	-
HCM Lane V/C Ratio	0.002	-	0.022	-	-
HCM Control Delay (s)	8	0	14.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	290	630	3	3	430	0	6	2	0	155	150
Protected Phases	7	4		3	8		2			6	7
Permitted Phases			4			2		2	6		6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5	8.5
Total Split (s)	18.0	30.0	30.0	8.5	20.5	21.5	21.5	21.5	21.5	21.5	18.0
Total Split (%)	30.0%	50.0%	50.0%	14.2%	34.2%	35.8%	35.8%	35.8%	35.8%	35.8%	30.0%
Maximum Green (s)	13.5	25.5	25.5	4.0	16.0	17.0	17.0	17.0	17.0	17.0	13.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag						Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max	None
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	5	
v/c Ratio	0.73	0.69	0.00	0.02	0.56		0.01	0.00		0.36	0.16
Control Delay	33.0	17.0	0.0	26.0	18.7		15.0	0.0		19.1	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	33.0	17.0	0.0	26.0	18.7		15.0	0.0		19.1	1.7
Queue Length 50th (ft)	86	132	0	1	54		1	0		39	0
Queue Length 95th (ft)	#200	#357	0	8	91		9	0		92	18
Internal Link Dist (ft)		321			351		325			639	
Turn Bay Length (ft)	100		100	25				40			150
Base Capacity (vph)	443	948	836	131	1058		551	616		425	954
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.65	0.66	0.00	0.02	0.41		0.01	0.00		0.36	0.16

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 54.3
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	580	3	3	294	101	2	4	2	141	2	138
Future Volume (veh/h)	267	580	3	3	294	101	2	4	2	141	2	138
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	290	630	3	3	320	110	2	4	2	153	2	150
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	353	743	613	6	526	177	94	142	527	141	1	843
Arrive On Green	0.20	0.40	0.40	0.00	0.20	0.20	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1781	1870	1544	1781	2602	877	0	426	1576	0	3	1584
Grp Volume(v), veh/h	290	630	3	3	217	213	6	0	2	155	0	150
Grp Sat Flow(s),veh/h/ln	1781	1870	1544	1781	1777	1702	426	0	1576	3	0	1584
Q Serve(g_s), s	7.9	15.6	0.1	0.1	5.6	5.8	0.0	0.0	0.0	0.0	0.0	2.5
Cycle Q Clear(g_c), s	7.9	15.6	0.1	0.1	5.6	5.8	17.0	0.0	0.0	17.0	0.0	2.5
Prop In Lane	1.00		1.00	1.00		0.52	0.33		1.00	0.99		1.00
Lane Grp Cap(c), veh/h	353	743	613	6	359	344	237	0	527	142	0	843
V/C Ratio(X)	0.82	0.85	0.00	0.52	0.60	0.62	0.03	0.00	0.00	1.09	0.00	0.18
Avail Cap(c_a), veh/h	473	938	774	140	559	536	237	0	527	142	0	843
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.5	13.9	9.3	25.3	18.4	18.5	13.0	0.0	11.3	25.3	0.0	6.1
Incr Delay (d2), s/veh	8.4	6.0	0.0	56.6	1.6	1.8	0.2	0.0	0.0	103.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	6.6	0.0	0.1	2.2	2.2	0.1	0.0	0.0	5.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	20.0	9.3	81.9	20.1	20.3	13.2	0.0	11.3	128.5	0.0	6.6
LnGrp LOS	C	B	A	F	C	C	B	A	B	F	A	A
Approach Vol, veh/h		923			433			8			305	
Approach Delay, s/veh		22.5			20.6			12.7			68.5	
Approach LOS		C			C			B			E	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		21.5	4.7	24.7		21.5	14.6	14.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		17.0	4.0	25.5		17.0	13.5	16.0				
Max Q Clear Time (g_c+I1), s		19.0	2.1	17.6		19.0	9.9	7.8				
Green Ext Time (p_c), s		0.0	0.0	2.6		0.0	0.3	1.6				

Intersection Summary												
HCM 6th Ctrl Delay			30.4									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	526	582	1	0	1
Future Vol, veh/h	0	526	582	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	50	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	572	633	1	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	634	0	-	0	919	633
Stage 1	-	-	-	-	633	-
Stage 2	-	-	-	-	286	-
Critical Hdwy	4.13	-	-	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	947	-	-	-	285	479
Stage 1	-	-	-	-	528	-
Stage 2	-	-	-	-	738	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	947	-	-	-	285	479
Mov Cap-2 Maneuver	-	-	-	-	285	-
Stage 1	-	-	-	-	528	-
Stage 2	-	-	-	-	738	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	947	-	-	-	479
HCM Lane V/C Ratio	-	-	-	-	0.002
HCM Control Delay (s)	0	-	-	-	12.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Appendix I

Cumulative Project Information

SECTION I – INTRODUCTION

PROJECT DESCRIPTION

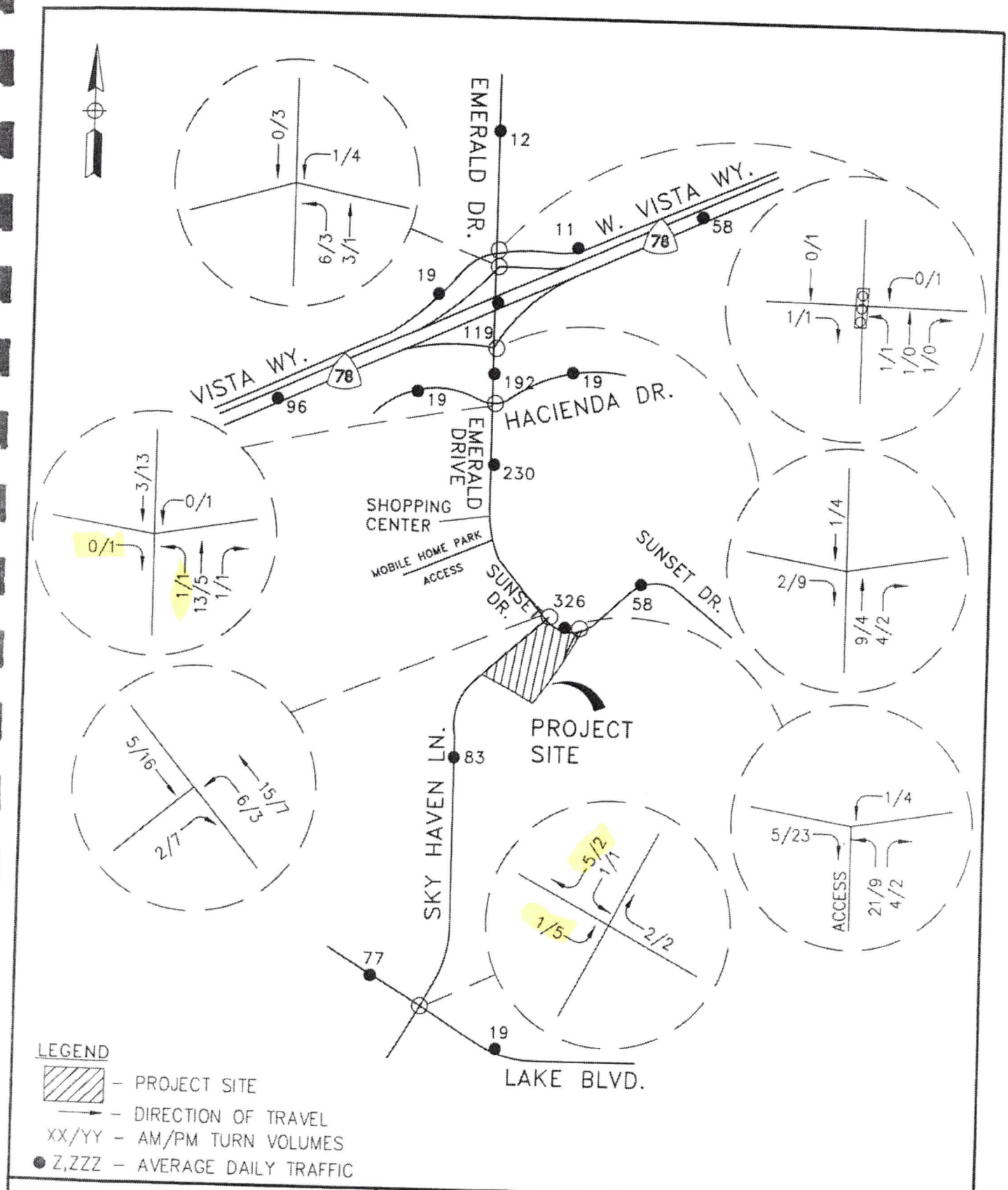
The project is a 48 unit residential condominium development located on the southeast corner of the intersection of Sky Haven Lane and Sunset Drive in the City of Oceanside. Figure 1 provides a general vicinity map of the project location.

The site plan for the proposed project is depicted on Figure 2. Access to the site is proposed to provide one (1) lane in and one (1) lane out from Sunset Drive.

As detailed in this report, development of the proposed Emerald Ridge Development is estimated to generate 384 average daily trips, 31 AM peak hour trips and 35 PM peak hour trips.

REPORT ORGANIZATION

Following Section I - Introduction, Section II discusses Description of Analysis. Section III discusses Existing Conditions. Section IV provides analysis of Existing Plus Project Conditions, including Project Trip Generation Project Impact Analysis and Sunset Drive/Sky Haven Lane Signal Warrants Analysis. Section V provides an analysis of Impacts and Mitigation. Section VI provides a Summary of Findings and Recommendation.



Darnell & ASSOCIATES, INC.

150304-AC 08-02-2018 JAM

FIGURE 6

PROJECT TRAFFIC

INTRODUCTION

This study analyzes the forecast traffic impact of the proposed Tri-City Medical Office Building located adjacent to the existing Tri-City Hospital north of Vista Way and west of Thunder Drive in the City of Oceanside. **Exhibit 1** shows the regional project location.

The project site is located adjacent to Tri-City Medical Center. As shown in **Exhibit 2**, the proposed site plan includes 60,000 square feet of medical office space. The proposed land use is consistent with the General Plan land use for the project site.

As required by the City of Oceanside, this traffic impact study has been prepared in accordance with the City's 1995 Circulation Element and SANDAG Congestion Management Program (CMP) traffic impact study guidelines.

SITE ACCESS AND CIRCULATION

The proposed project will take access from the existing entrance to the Tri-City Hospital on Vista Way. The existing Vista Way entrance is an unsignalized full access driveway that serves the Tri-City Hospital.

PROJECT STUDY AREA

The project study area was defined based on the distribution of project-generated trips on the roadway network. The SANDAG CMP guidelines indicate that all signalized intersections where 50 or more project-generated trips are forecast to be added should be included in the traffic impact study. A total of 14 study intersections and 11 roadway segments were identified for inclusion in this traffic study. The City of Vista does not require roadway segment analysis for traffic impact studies; however, three roadway segments located in the City of Vista were included for analysis for a comprehensive analysis. Based on the City of Oceanside thresholds and discussions with City staff, the study area consists of the following intersections and roadway segments:

Intersections

1. College Boulevard / Waring Road
2. College Boulevard / Vista Way
3. Vista Way / SR-78 Westbound Ramps
4. Vista Way / Tri-City Hospital Access
5. Vista Way / Thunder Drive
6. Vista Way / Emerald Drive
7. College Boulevard / SR-78 Eastbound Off-Ramp
8. College Boulevard / Plaza Drive
9. College Boulevard / Lake Boulevard-Marron Road
10. Plaza Drive / SR-78 Eastbound Ramps
11. Emerald Drive / SR-78 Westbound Ramps
12. Emerald Drive / SR-78 Eastbound Ramps
13. Vista Way / Buena Hills Drive
14. Vista Way / Rancho Del Oro Drive

Table 6
Proposed Project Trip Generation Rates

Land Use	Daily Rate	AM Peak Hour			PM Peak Hour		
		Total (% of Daily)	In (% AM)	Out (% AM)	Total (% of Daily)	In (% PM)	Out (% PM)
Medical Office	50/KSF	6%	80%	20%	11%	30%	70%

Source: SANDAG, "Not So Brief Guide", April 2002.
Note: KSF = 1000 square feet.

Table 7 summarizes the forecast project-generated trips based on the trip generation rates contained in Table 6. As summarized in Table 7, the proposed project is forecast to generate approximately 3,000 trips per day, which includes approximately 180 a.m. peak hour trips and approximately 330 p.m. peak hour trips.

Table 7
Proposed Project Trip Generation

Land Use	Intensity	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			Total	In	Out	Total	In	Out
Medical Office	60 KSF	3,000	180	144	36	330	99	231

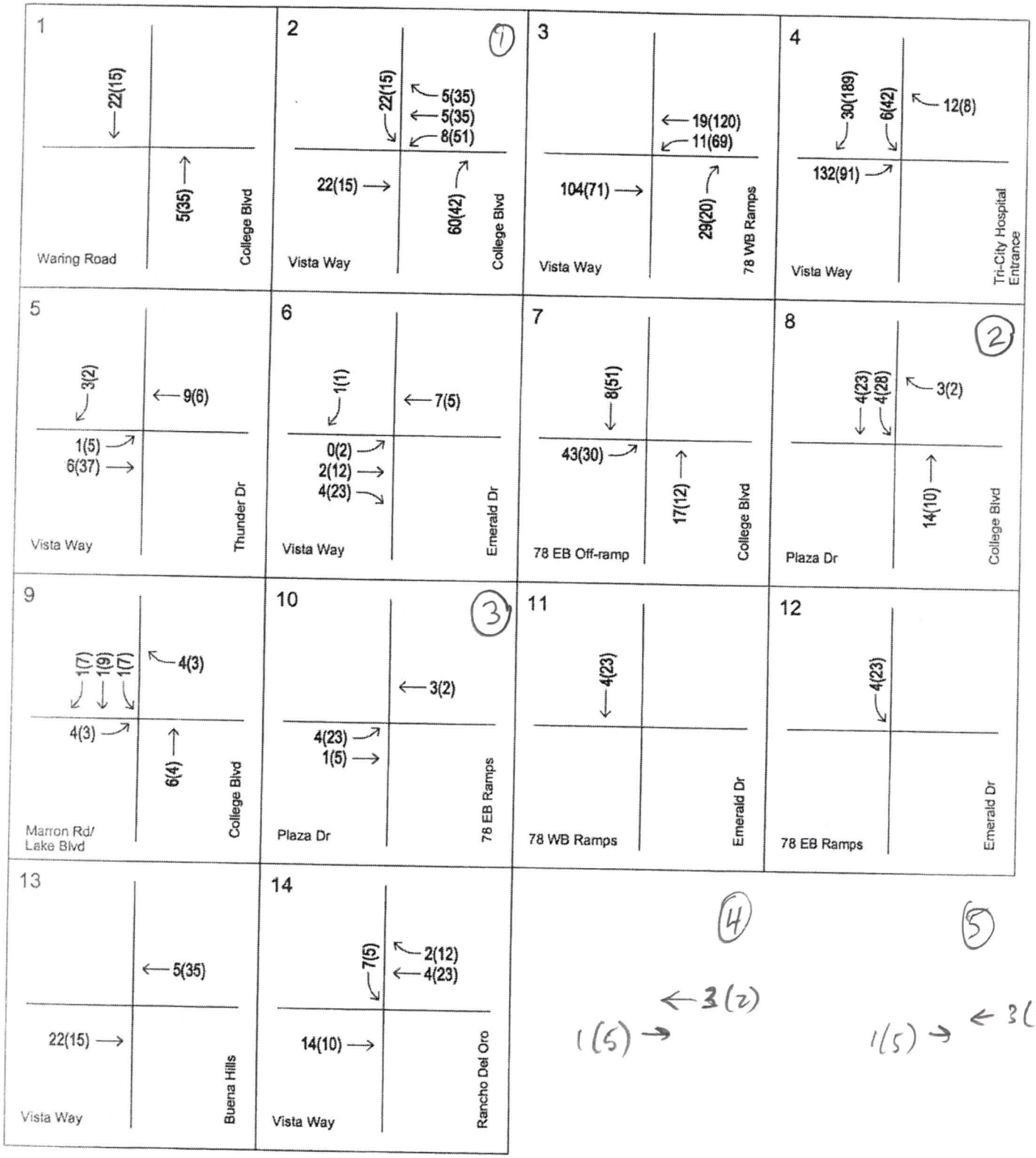
Note: KSF = 1000 square feet.

Project Trip Distribution

Project traffic was distributed on the roadway network based on the trip distribution that was approved for the approved Ambulatory Care Facility project, which is located on a site adjacent to the northwest corner of the Tri-City Hospital. The Ambulatory Care Facility Project would take access from Waring Road, so the distribution of trips was adjusted for the proposed Tri-City Medical Office project to reflect the access from the Tri-City Hospital Entrance on Vista Way. **Exhibit 7** illustrates the trip distribution for the proposed project.

Project Trip Assignment

Utilizing the project trip distribution shown in Exhibit 7, the forecast project-generated trips were assigned to the roadway network. **Exhibit 8** illustrates the forecast assignment of project-generated a.m. and p.m. peak hour volumes at the study intersections. Project-generated ADT volumes are illustrated in **Exhibit 9**.



LEGEND

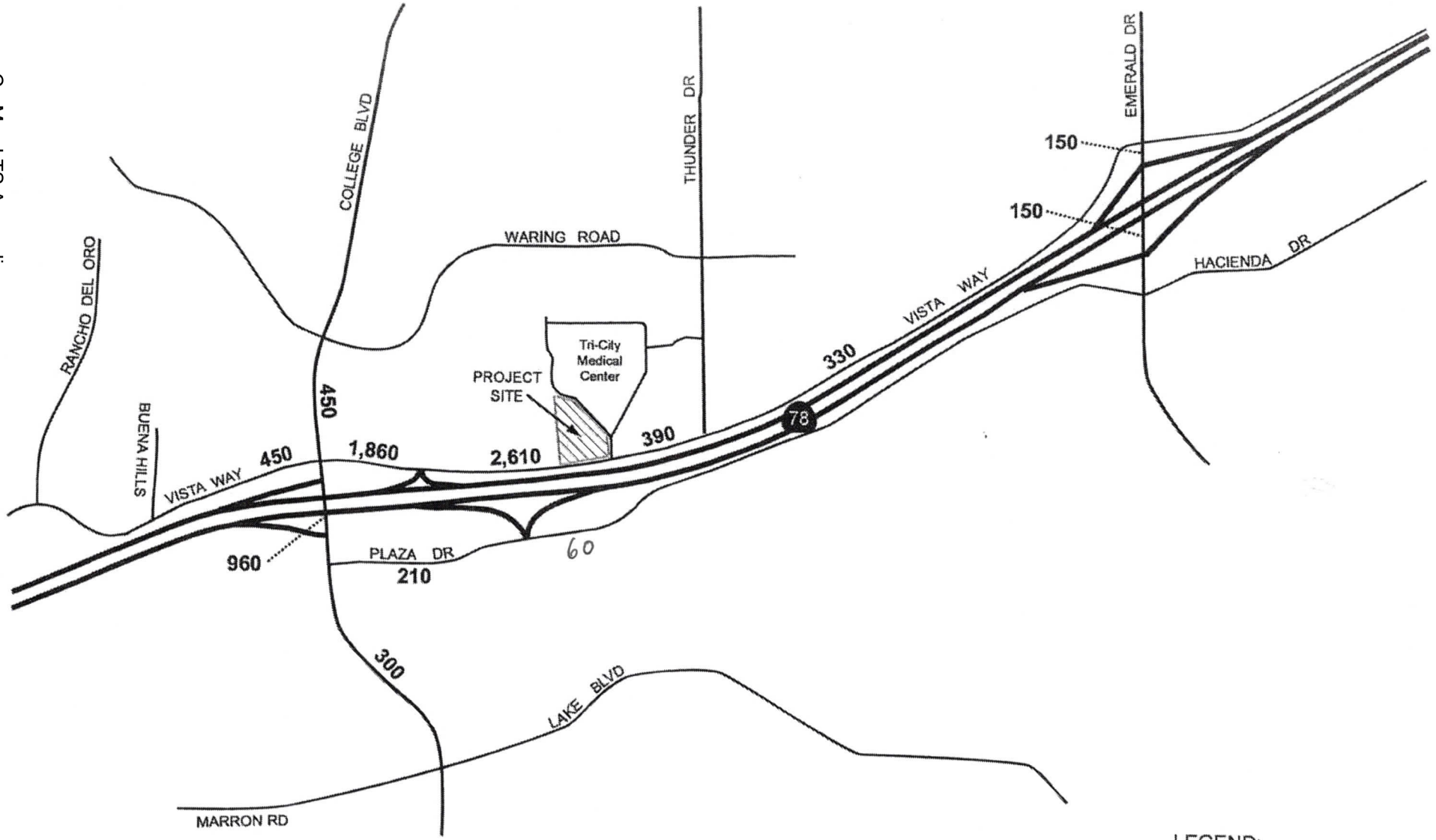
XX(XX) AM/PM PEAK HOUR VOLUME

RBF

55-100702.003 MAY 2011

PROJECT TRIP ASSIGNMENT

EXHIBIT 8



LEGEND:

XX,XXX Project Trips

NOT TO SCALE

RBF

55-100702.003 MAY 2011

DAILY PROJECT TRIPS

EXHIBIT 9

TABLE 4-1

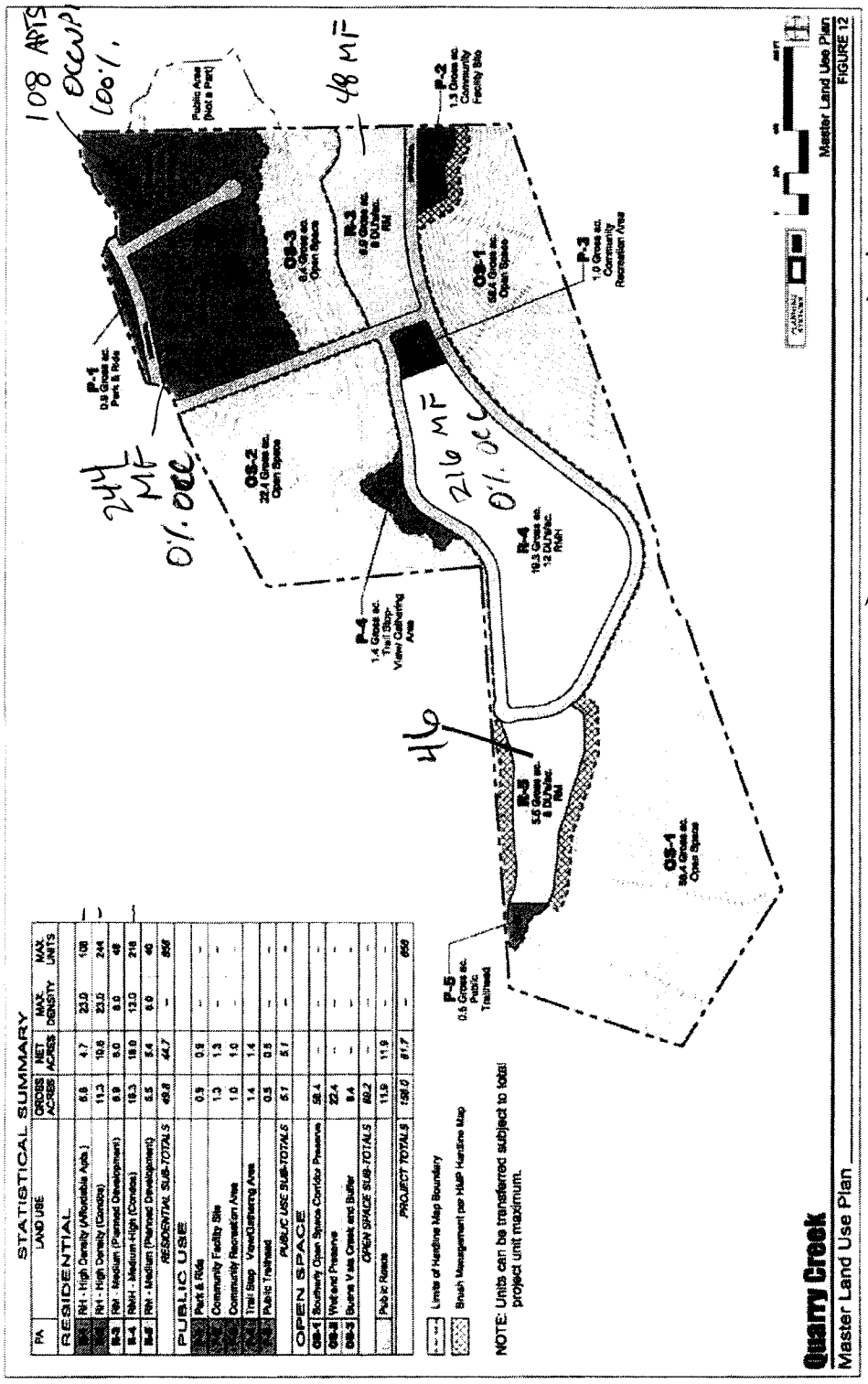
Project Trip Generation

				AM PEAK HOUR					PM PEAK HOUR				
Use	**Amount**	**Trip Rate***	**ADT**	**%***	**#**	**In/Out ***	**In**	**Out**	**%***	**#**	**In/Out ***	**In**	**Out**
Apartments	108 DU	6 / DU	648	8	52	2 : 8	10	42	9	58	7 : 3	41	17
Attached	460 DU	8 / DU	3,680	8	294	2 : 8	59	235	10	368	7 : 3	258	110
Lots	88 DU	10 / DU	880	8	70	3 : 7	21	49	10	88	7 : 3	62	26
Community Facilities	1.5 AC.	100 / AC.**	150	17	26	5 : 5	13	13	18	28	5 : 5	14	14
Park and Ride	1.3 AC.	400 / AC.	520	14	73	7 : 3	51	22	15	78	3 : 7	23	55
Total			**5,878**		**515**		**154**	**361**		**620**		**398**	**222**

***Source: SANDAG Brief Guide Vehicular Traffic Generation Rates For the San Diego Region, April 2002.**
****Note: Trip rate adjusted to account for possible 30 child day-care facility (5 trips / child x 30 = 150ADT).**

1. The project only traffic volumes used in the analysis are slightly higher than shown above, since they were based on a previous land use plan. A slight downward adjustment to project only trip generation would not change the conclusions of this report.

2. This analysis does not reflect any Mixed-Use, Tenant, or Park-and-Ride reductions that may apply.



STATISTICAL SUMMARY

PA	LAND USE	GROSS ACRES	NET ACRES	MAX. DENSITY	MAX. UNITS
	RESIDENTIAL				
R-1	RH - High Density (Affordable Apts.)	6.8	4.7	23.0	108
R-2	RH - High Density (Condos)	11.3	10.6	23.0	244
R-3	RM - Medium (Planned Development)	6.9	6.0	8.0	48
R-4	RMH - Medium-High (Condos)	18.3	16.0	13.0	216
R-5	RM - Medium (Planned Development)	6.5	5.4	8.0	40
	RESIDENTIAL SUB-TOTALS	*49.8*	*44.7*	–	*656*
	PUBLIC USE				
P-1	Park & Ride	0.9	0.9	–	–
P-2	Community Facility Site	1.3	1.3	–	–
P-3	Community Recreation Area	1.0	1.0	–	–
P-4	Trail Stop - View/Gathering Area	1.4	1.4		–
P-5	Public Trailhead	0.5	0.5	–	–
	PUBLIC USE SUB-TOTALS	*5.1*	*5.1*	–	–
	OPEN SPACE				
OS-1	Boundary Open Space Corridor Preserve	38.4	–	–	–
OS-2	Wetland Preserve	22.4	–	–	–
OS-3	Buena Vista Creek and Buffer	8.4	–	–	–
	OPEN SPACE SUB-TOTALS	*69.2*	–	–	–
	Public Roads	11.9	11.9	–	–
	PROJECT TOTALS	*136.0*	*61.7*	–	*656*

108 APTS occupied 100%.
48 MF = 50% occ.
244 MF 0% occ
216 MF 0% occ
49
PLANNED occupied
R-1 108 108
R-2 244 0
R-3 48 24
R-4 216 0
R-5 40 0
659 132 ≈ 20% occupied

FIGURE 4-1

Quarry Creek Master Plan Site Plan

ASSIGNMENT APPLIED AT 80% DUE TO OCCUPIED UNITS DURING DATA COLLECTION

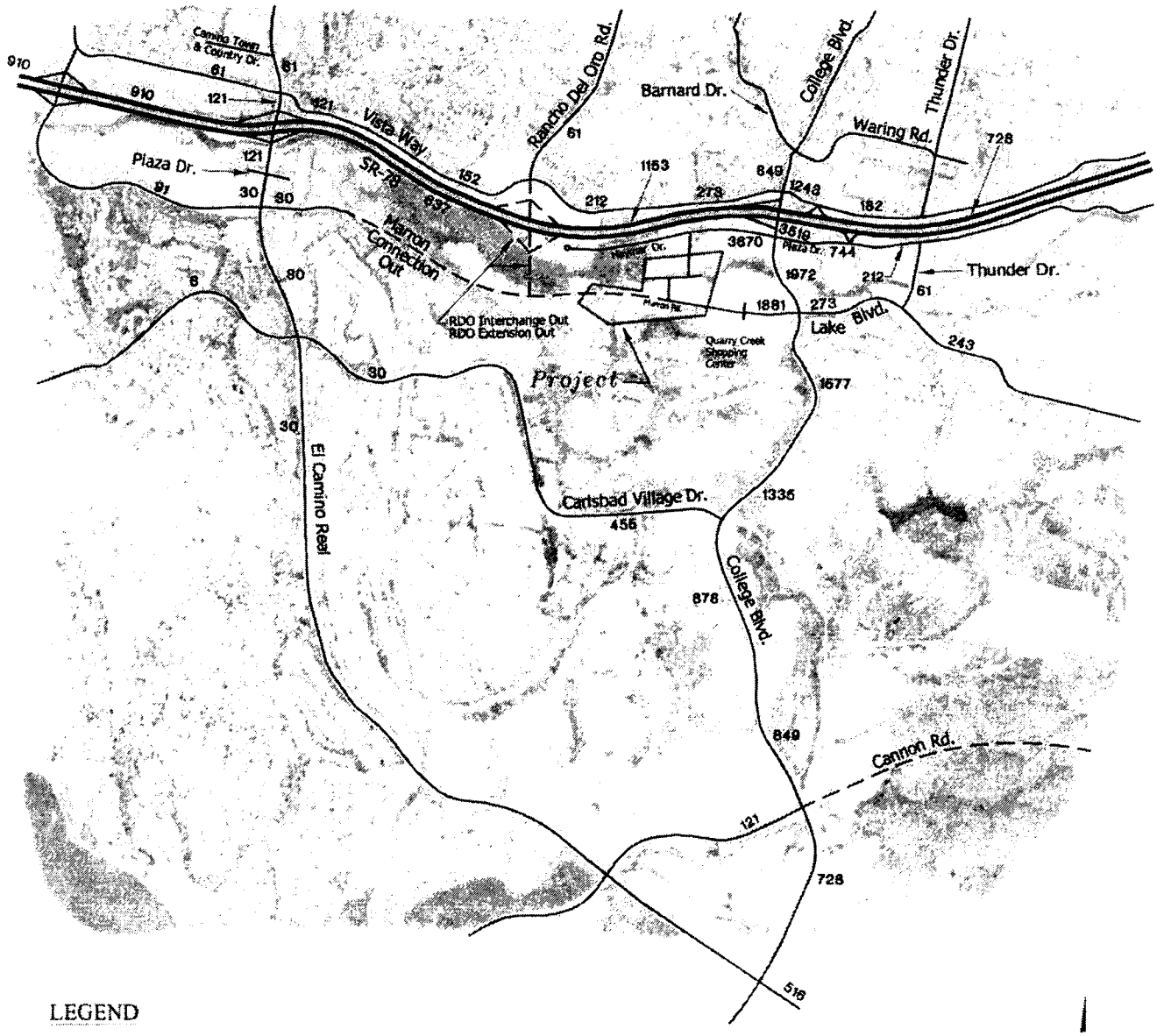


FIGURE 5-2

Project Only Average Daily Traffic Volumes - For Existing Conditions
No RDO Interchange / No RDO Extension / No Marron Road

ASSIGNMENT APPLIED AT 80% DUE TO OCCUPIED UNITS DURING DATA COLLECTION

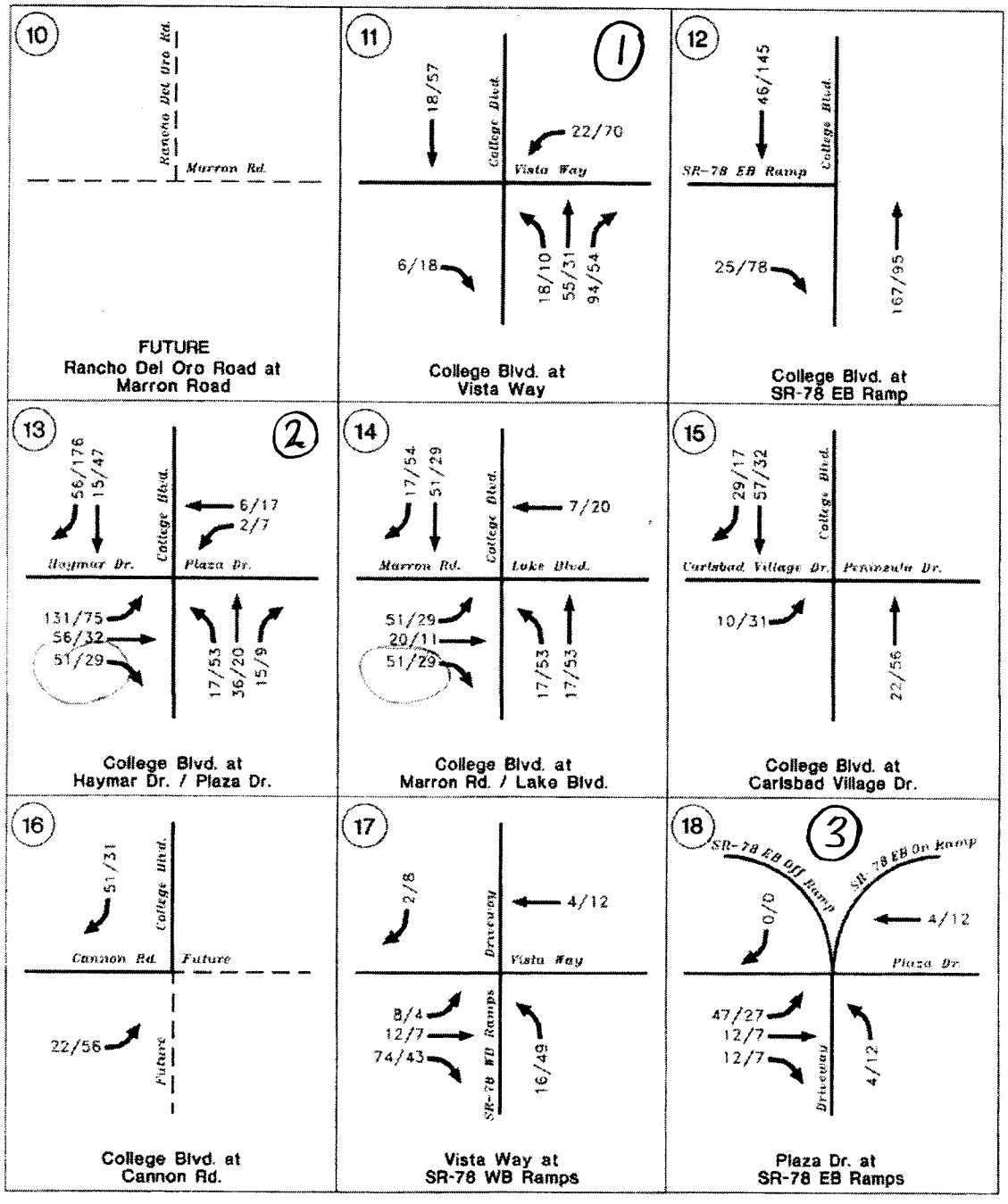
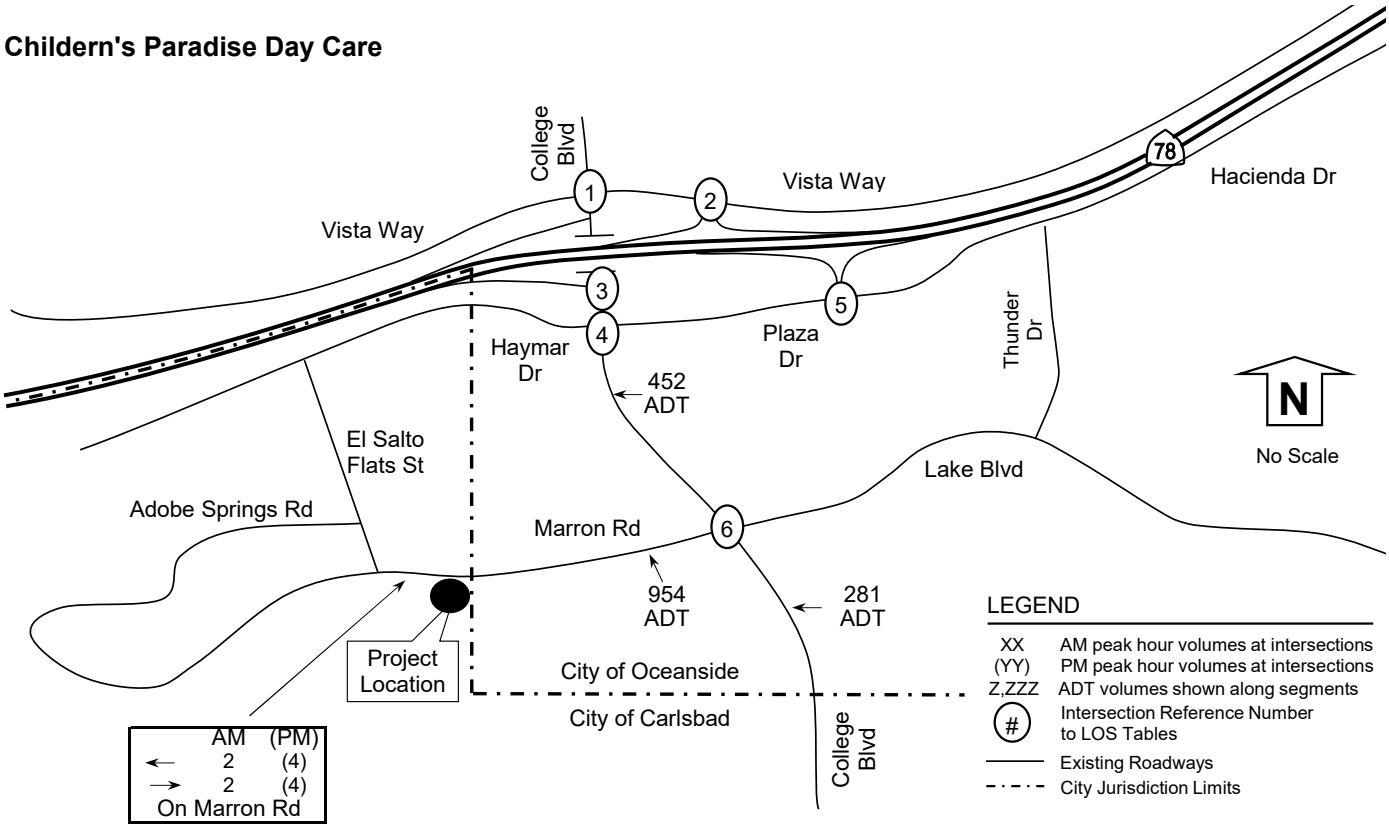
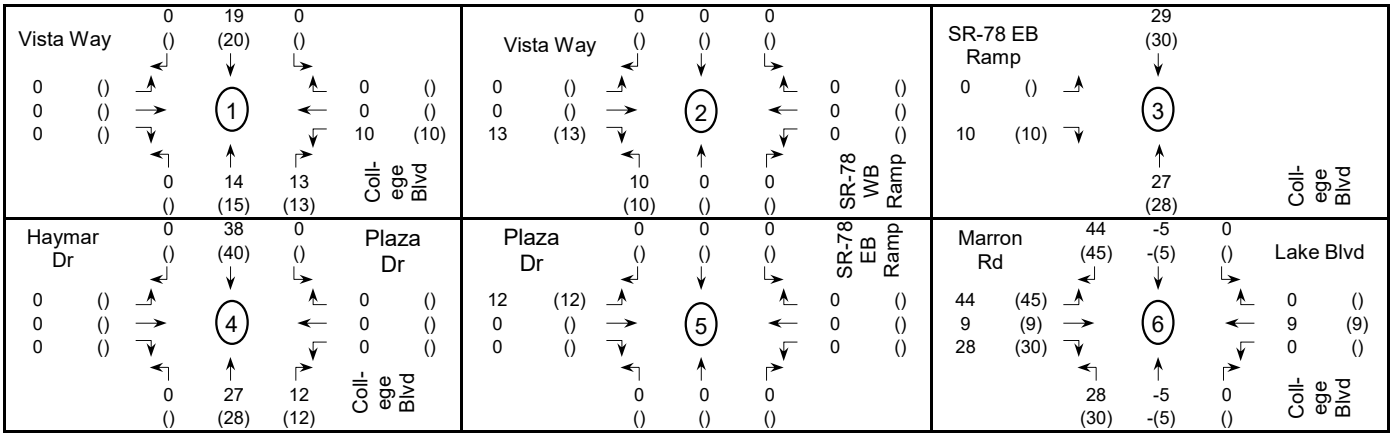


FIGURE 5-3

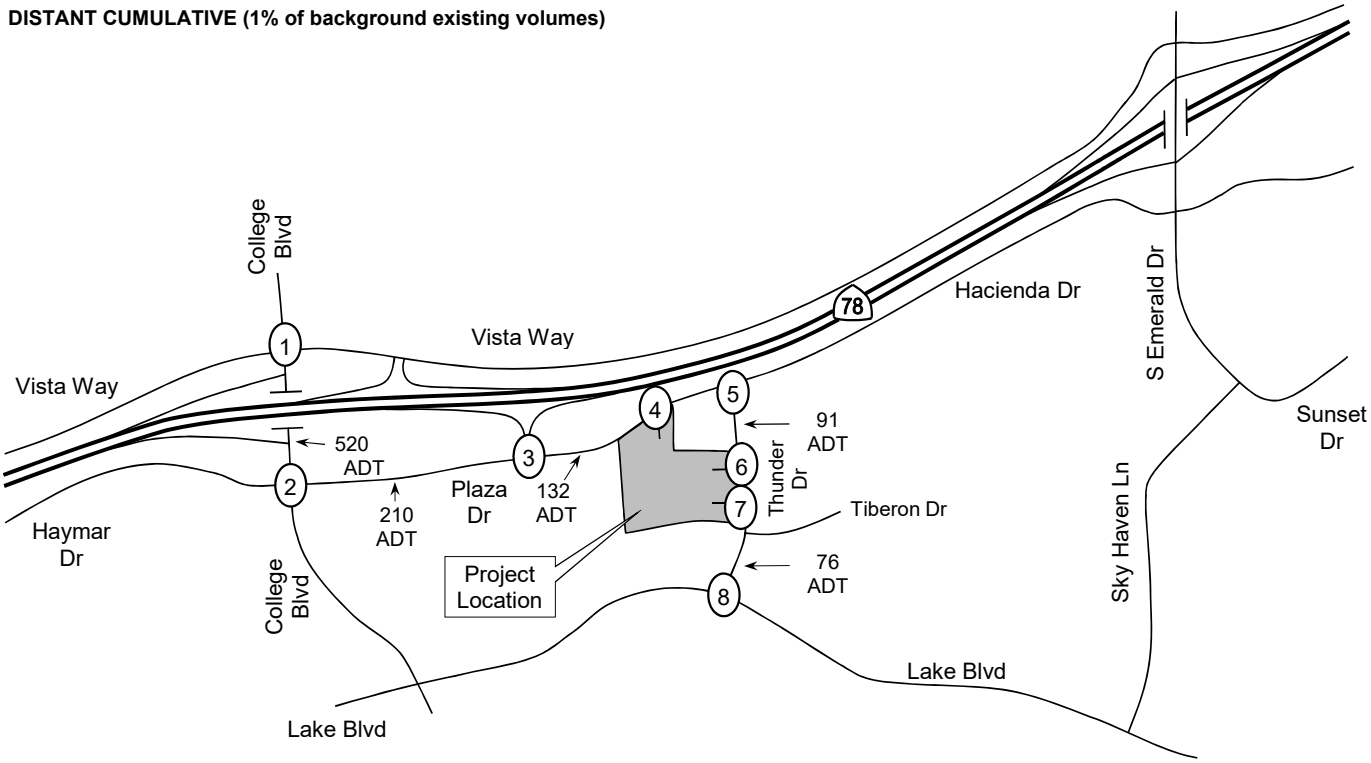
Project Only AM/PM Peak Hour Volumes - Alternative 4
No RDO Interchange / No RDO Extension / No Marron Road

Childern's Paradise Day Care

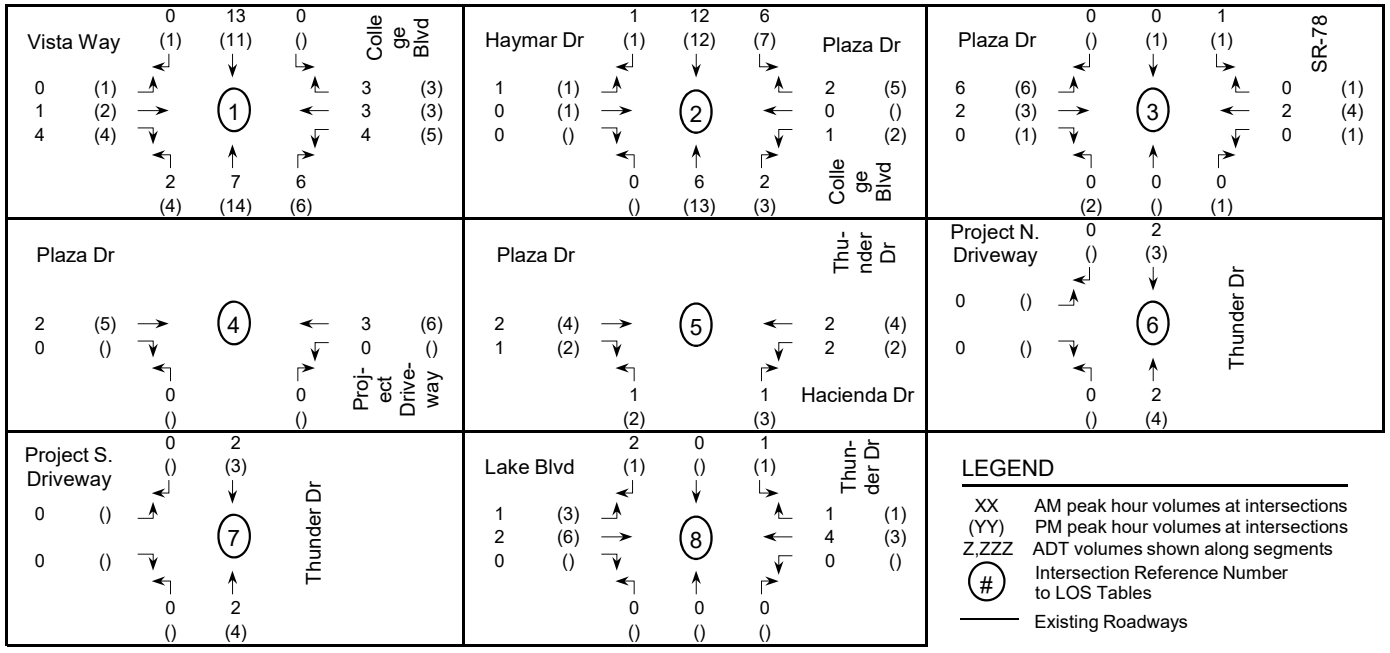




DISTANT CUMULATIVE (1% of background existing volumes)



No Scale

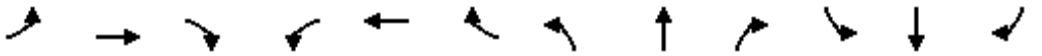


Appendix J

Existing + Cumulative Intersection LOS Calculations

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	146	402	463	288	286	202	788	760	50	1509
Protected Phases	7	4	5	3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.0	8.5	8.5	20.5	8.5	8.5	20.5	8.5	8.5	20.5
Total Split (s)	8.5	20.0	16.2	19.2	30.7	15.6	16.2	35.2	19.2	15.6	34.6
Total Split (%)	9.4%	22.2%	18.0%	21.3%	34.1%	17.3%	18.0%	39.1%	21.3%	17.3%	38.4%
Maximum Green (s)	4.0	15.5	11.7	14.7	26.2	11.1	11.7	30.7	14.7	11.1	30.1
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max
Walk Time (s)					5.0			5.0			5.0
Flash Dont Walk (s)					11.0			11.0			11.0
Pedestrian Calls (#/hr)					5			15			5
v/c Ratio	0.28	0.36	0.73	0.77	0.55	0.46	0.47	0.38	0.40	0.18	0.81
Control Delay	43.8	36.5	25.9	43.2	30.9	15.9	37.9	18.1	1.3	38.0	28.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	36.5	25.9	43.2	30.9	15.9	37.9	18.1	1.3	38.0	28.4
Queue Length 50th (ft)	12	37	127	119	137	81	50	99	0	12	256
Queue Length 95th (ft)	30	65	228	#204	217	143	88	150	23	30	#352
Internal Link Dist (ft)		491			575			528			491
Turn Bay Length (ft)	170		200	280			150		100	165	
Base Capacity (vph)	167	670	580	616	600	698	490	2085	1915	465	1863
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.22	0.69	0.75	0.48	0.41	0.41	0.38	0.40	0.11	0.81

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 82.1
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



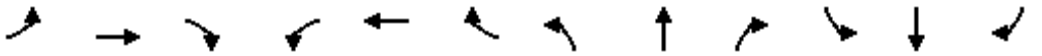
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	134	370	426	265	263	186	725	699	46	1345	43
Future Volume (veh/h)	42	134	370	426	265	263	186	725	699	46	1345	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	146	402	463	288	286	202	788	760	50	1462	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	108	657	425	547	583	545	288	2090	1557	113	1823	59
Arrive On Green	0.03	0.18	0.18	0.16	0.31	0.31	0.08	0.41	0.41	0.03	0.36	0.36
Sat Flow, veh/h	3456	3554	1585	3456	1870	1580	3456	5106	2726	3456	5079	163
Grp Volume(v), veh/h	46	146	402	463	288	286	202	788	760	50	980	529
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1870	1580	1728	1702	1363	1728	1702	1838
Q Serve(g_s), s	1.1	2.9	15.5	10.9	10.5	12.1	4.8	9.0	14.0	1.2	21.7	21.7
Cycle Q Clear(g_c), s	1.1	2.9	15.5	10.9	10.5	12.1	4.8	9.0	14.0	1.2	21.7	21.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	108	657	425	547	583	545	288	2090	1557	113	1222	660
V/C Ratio(X)	0.42	0.22	0.95	0.85	0.49	0.53	0.70	0.38	0.49	0.44	0.80	0.80
Avail Cap(c_a), veh/h	165	657	425	606	584	546	482	2090	1557	457	1222	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	29.1	30.1	34.3	23.5	22.0	37.4	17.3	10.9	39.8	24.2	24.2
Incr Delay (d2), s/veh	2.6	0.2	30.2	10.0	0.6	0.9	3.1	0.5	1.1	2.7	5.6	9.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.2	11.2	5.2	4.6	4.5	2.1	3.5	4.0	0.5	9.2	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	29.2	60.3	44.3	24.1	22.9	40.5	17.8	12.0	42.5	29.8	34.1
LnGrp LOS	D	C	E	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		594			1037			1750			1559	
Approach Delay, s/veh		51.3			32.8			17.9			31.7	
Approach LOS		D			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	38.8	17.8	20.0	11.5	34.6	7.1	30.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	11.1	30.7	14.7	15.5	11.7	30.1	4.0	26.2
Max Q Clear Time (g_c+I1), s	3.2	16.0	12.9	17.5	6.8	23.7	3.1	14.1
Green Ext Time (p_c), s	0.1	7.8	0.4	0.0	0.3	4.6	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	29.4
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	178	154	126	23	222	40	741	220	623	1492
Protected Phases	7	4	3	8	1	5	2		1	6
Permitted Phases					8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	8.5	8.5	20.5	20.5	8.5	20.5
Total Split (s)	19.0	22.1	17.4	20.5	27.0	10.0	23.5	23.5	27.0	40.5
Total Split (%)	21.1%	24.6%	19.3%	22.8%	30.0%	11.1%	26.1%	26.1%	30.0%	45.0%
Maximum Green (s)	14.5	17.6	12.9	16.0	22.5	5.5	19.0	19.0	22.5	36.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Walk Time (s)		5.0					5.0	5.0		5.0
Flash Dont Walk (s)		11.0					11.0	11.0		11.0
Pedestrian Calls (#/hr)		5					10	10		5
v/c Ratio	0.46	0.54	0.52	0.11	0.37	0.30	0.55	0.39	0.73	0.59
Control Delay	33.0	31.3	41.6	33.7	11.0	44.4	28.3	6.7	32.8	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	31.3	41.6	33.7	11.0	44.4	28.3	6.7	32.8	17.2
Queue Length 50th (ft)	67	53	60	11	46	20	119	0	150	208
Queue Length 95th (ft)	162	113	122	32	78	54	182	57	223	303
Internal Link Dist (ft)		470		1268			481			528
Turn Bay Length (ft)	90		140			130		130	260	
Base Capacity (vph)	437	446	311	406	679	132	1345	569	1053	2542
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.35	0.41	0.06	0.33	0.30	0.55	0.39	0.59	0.59

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 75.9
Control Type: Actuated-Uncoordinated



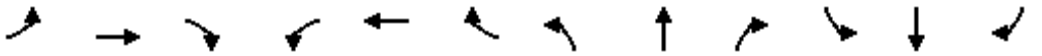
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	76	65	116	21	204	37	682	202	573	1253	120
Future Volume (veh/h)	164	76	65	116	21	204	37	682	202	573	1253	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	178	83	71	126	23	222	40	741	220	623	1362	130
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	220	158	135	161	256	563	53	1455	442	754	2238	214
Arrive On Green	0.12	0.17	0.17	0.09	0.14	0.14	0.03	0.28	0.28	0.22	0.47	0.47
Sat Flow, veh/h	1781	929	795	1781	1870	1585	1781	5106	1550	3456	4730	451
Grp Volume(v), veh/h	178	0	154	126	23	222	40	741	220	623	980	512
Grp Sat Flow(s),veh/h/ln	1781	0	1724	1781	1870	1585	1781	1702	1550	1728	1702	1778
Q Serve(g_s), s	7.4	0.0	6.2	5.3	0.8	8.0	1.7	9.2	9.0	13.1	16.2	16.2
Cycle Q Clear(g_c), s	7.4	0.0	6.2	5.3	0.8	8.0	1.7	9.2	9.0	13.1	16.2	16.2
Prop In Lane	1.00		0.46	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	220	0	293	161	256	563	53	1455	442	754	1611	841
V/C Ratio(X)	0.81	0.00	0.53	0.78	0.09	0.39	0.75	0.51	0.50	0.83	0.61	0.61
Avail Cap(c_a), veh/h	339	0	399	302	393	679	129	1455	442	1022	1611	841
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	0.0	28.8	33.9	28.7	18.4	36.6	22.8	22.7	28.4	14.8	14.8
Incr Delay (d2), s/veh	8.1	0.0	1.5	8.0	0.1	0.4	18.6	1.3	4.0	4.2	1.7	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	2.6	2.6	0.4	2.8	1.0	3.7	3.6	5.6	6.1	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	0.0	30.3	41.9	28.8	18.8	55.2	24.0	26.6	32.5	16.5	18.1
LnGrp LOS	D	A	C	D	C	B	E	C	C	C	B	B
Approach Vol, veh/h		332			371			1001			2115	
Approach Delay, s/veh		35.8			27.3			25.9			21.6	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.1	26.2	11.4	17.4	6.8	40.5	13.9	14.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	22.5	19.0	12.9	17.6	5.5	36.0	14.5	16.0
Max Q Clear Time (g_c+I1), s	15.1	11.2	7.3	8.2	3.7	18.2	9.4	10.0
Green Ext Time (p_c), s	1.5	3.5	0.1	0.5	0.0	10.0	0.2	0.4

Intersection Summary	
HCM 6th Ctrl Delay	24.5
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	683	219	40	288	26	27	8	78	55
Protected Phases	7	4	3	8	2	2		6	6
Permitted Phases							2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5
Total Split (s)	28.0	37.7	10.8	20.5	21.0	21.0	21.0	20.5	20.5
Total Split (%)	31.1%	41.9%	12.0%	22.8%	23.3%	23.3%	23.3%	22.8%	22.8%
Maximum Green (s)	23.5	33.2	6.3	16.0	16.5	16.5	16.5	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max	None	None
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		5		5	5	5	5	5	5
v/c Ratio	0.76	0.16	0.26	0.52	0.07	0.07	0.02	0.34	0.23
Control Delay	32.2	14.8	40.9	32.2	28.0	28.0	0.0	36.1	19.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.2	14.8	40.9	32.2	28.0	28.0	0.0	36.1	19.1
Queue Length 50th (ft)	148	32	18	62	10	10	0	34	9
Queue Length 95th (ft)	248	62	54	114	36	37	0	79	42
Internal Link Dist (ft)		1268		162		397			490
Turn Bay Length (ft)	165		90					190	
Base Capacity (vph)	1156	1653	159	806	397	407	506	406	409
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.13	0.25	0.36	0.07	0.07	0.02	0.19	0.13

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 72.7
Control Type: Actuated-Uncoordinated



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	628	169	32	37	233	32	38	11	7	72	19	31
Future Volume (veh/h)	628	169	32	37	233	32	38	11	7	72	19	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	683	184	35	40	253	35	26	32	8	78	21	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	856	1041	194	57	419	57	461	484	408	138	49	80
Arrive On Green	0.25	0.35	0.35	0.03	0.13	0.13	0.26	0.26	0.26	0.08	0.08	0.08
Sat Flow, veh/h	3456	2981	555	1781	3138	429	1781	1870	1578	1781	636	1030
Grp Volume(v), veh/h	683	108	111	40	142	146	26	32	8	78	0	55
Grp Sat Flow(s),veh/h/ln	1728	1777	1759	1781	1777	1790	1781	1870	1578	1781	0	1666
Q Serve(g_s), s	11.8	2.7	2.8	1.4	4.8	4.9	0.7	0.8	0.2	2.7	0.0	2.0
Cycle Q Clear(g_c), s	11.8	2.7	2.8	1.4	4.8	4.9	0.7	0.8	0.2	2.7	0.0	2.0
Prop In Lane	1.00		0.32	1.00		0.24	1.00		1.00	1.00		0.62
Lane Grp Cap(c), veh/h	856	621	615	57	237	239	461	484	408	138	0	129
V/C Ratio(X)	0.80	0.17	0.18	0.71	0.60	0.61	0.06	0.07	0.02	0.56	0.00	0.43
Avail Cap(c_a), veh/h	1274	925	916	176	446	449	461	484	408	447	0	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.5	14.4	14.4	30.6	26.0	26.1	17.8	17.8	17.6	28.4	0.0	28.0
Incr Delay (d2), s/veh	2.2	0.1	0.1	14.8	2.4	2.5	0.2	0.3	0.1	3.6	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	1.0	1.0	0.8	2.1	2.1	0.3	0.4	0.1	1.2	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	14.5	14.5	45.3	28.4	28.6	18.0	18.1	17.7	31.9	0.0	30.3
LnGrp LOS	C	B	B	D	C	C	B	B	B	C	A	C
Approach Vol, veh/h		902			328			66			133	
Approach Delay, s/veh		22.2			30.5			18.0			31.2	
Approach LOS		C			C			B			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		21.0	6.5	26.8		9.4	20.3	13.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		16.5	6.3	33.2		16.0	23.5	16.0				
Max Q Clear Time (g_c+I1), s		2.8	3.4	4.8		4.7	13.8	6.9				
Green Ext Time (p_c), s		0.1	0.0	1.3		0.3	2.0	1.0				

Intersection Summary												
HCM 6th Ctrl Delay			24.8									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.

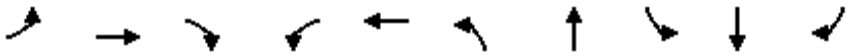
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	254	202	201	126	103
Protected Phases	4	3	8	2	3
Permitted Phases					2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	8.5	20.5	20.5	8.5
Total Split (s)	20.5	18.0	38.5	21.5	18.0
Total Split (%)	34.2%	30.0%	64.2%	35.8%	30.0%
Maximum Green (s)	16.0	13.5	34.0	17.0	13.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Max	None
Walk Time (s)	5.0				
Flash Dont Walk (s)	11.0				
Pedestrian Calls (#/hr)	10				
v/c Ratio	0.36	0.52	0.25	0.19	0.11
Control Delay	15.5	23.8	8.2	14.9	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.5	23.8	8.2	14.9	1.7
Queue Length 50th (ft)	26	52	31	25	0
Queue Length 95th (ft)	54	121	59	72	15
Internal Link Dist (ft)	164		458	303	
Turn Bay Length (ft)		125		100	
Base Capacity (vph)	1211	516	1351	650	1048
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.21	0.39	0.15	0.19	0.10

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 48.3
Control Type: Actuated-Uncoordinated

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	180	53	186	185	116	95
Future Volume (veh/h)	180	53	186	185	116	95
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.95	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	196	58	202	201	126	103
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	400	114	263	748	699	856
Arrive On Green	0.15	0.15	0.15	0.40	0.39	0.39
Sat Flow, veh/h	2789	770	1781	1870	1781	1585
Grp Volume(v), veh/h	127	127	202	201	126	103
Grp Sat Flow(s),veh/h/ln	1777	1688	1781	1870	1781	1585
Q Serve(g_s), s	2.8	3.0	4.7	3.1	2.0	1.4
Cycle Q Clear(g_c), s	2.8	3.0	4.7	3.1	2.0	1.4
Prop In Lane		0.46	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	264	251	263	748	699	856
V/C Ratio(X)	0.48	0.51	0.77	0.27	0.18	0.12
Avail Cap(c_a), veh/h	656	623	555	1467	699	856
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.9	17.0	17.7	8.7	8.6	4.9
Incr Delay (d2), s/veh	1.4	1.6	4.7	0.2	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.1	2.0	1.0	0.7	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.3	18.6	22.4	8.9	9.2	5.2
LnGrp LOS	B	B	C	A	A	A
Approach Vol, veh/h	254			403	229	
Approach Delay, s/veh	18.4			15.7	7.4	
Approach LOS	B			B	A	

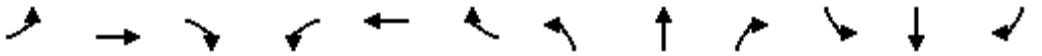
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		21.5	10.9	10.9		21.8
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		17.0	13.5	16.0		34.0
Max Q Clear Time (g_c+I1), s		4.0	6.7	5.0		5.1
Green Ext Time (p_c), s		0.5	0.3	1.0		1.2

Intersection Summary	
HCM 6th Ctrl Delay	14.3
HCM 6th LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	90	233	2	1	508	0	4	0	60	186
Protected Phases	7	4		3	8		2		6	7
Permitted Phases			4			2		6		6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	8.5
Total Split (s)	13.0	26.0	26.0	9.0	22.0	25.0	25.0	25.0	25.0	13.0
Total Split (%)	21.7%	43.3%	43.3%	15.0%	36.7%	41.7%	41.7%	41.7%	41.7%	21.7%
Maximum Green (s)	8.5	21.5	21.5	4.5	17.5	20.5	20.5	20.5	20.5	8.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag					Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	None
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	
v/c Ratio	0.36	0.32	0.00	0.01	0.58		0.01		0.10	0.20
Control Delay	26.9	12.5	0.0	25.0	19.7		12.8		13.3	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	26.9	12.5	0.0	25.0	19.7		12.8		13.3	2.7
Queue Length 50th (ft)	27	44	0	0	73		1		13	5
Queue Length 95th (ft)	67	109	0	5	114		6		37	29
Internal Link Dist (ft)		321			351		325		639	
Turn Bay Length (ft)	100		100	25						150
Base Capacity (vph)	292	861	770	154	1195		678		591	947
Starvation Cap Reductn	0	0	0	0	0		0		0	0
Spillback Cap Reductn	0	0	0	0	0		0		0	0
Storage Cap Reductn	0	0	0	0	0		0		0	0
Reduced v/c Ratio	0.31	0.27	0.00	0.01	0.43		0.01		0.10	0.20

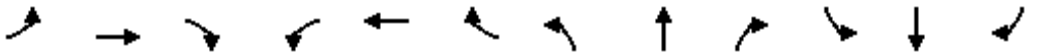
Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 52.8
Control Type: Actuated-Uncoordinated



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	214	2	1	405	63	3	1	0	52	3	171
Future Volume (veh/h)	83	214	2	1	405	63	3	1	0	52	3	171
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	90	233	2	1	440	68	3	1	0	57	3	186
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	535	441	4	686	105	536	161	681	733	35	783
Arrive On Green	0.06	0.29	0.29	0.00	0.22	0.22	0.43	0.43	0.00	0.43	0.43	0.43
Sat Flow, veh/h	1781	1870	1540	1781	3083	473	939	374	1585	1363	81	1584
Grp Volume(v), veh/h	90	233	2	1	252	256	4	0	0	60	0	186
Grp Sat Flow(s),veh/h/ln	1781	1870	1540	1781	1777	1780	1313	0	1585	1444	0	1584
Q Serve(g_s), s	2.4	4.8	0.0	0.0	6.1	6.2	0.0	0.0	0.0	0.0	0.0	3.2
Cycle Q Clear(g_c), s	2.4	4.8	0.0	0.0	6.1	6.2	0.9	0.0	0.0	0.9	0.0	3.2
Prop In Lane	1.00		1.00	1.00		0.27	0.75		1.00	0.95		1.00
Lane Grp Cap(c), veh/h	115	535	441	4	395	396	696	0	681	768	0	783
V/C Ratio(X)	0.78	0.44	0.00	0.27	0.64	0.65	0.01	0.00	0.00	0.08	0.00	0.24
Avail Cap(c_a), veh/h	317	843	694	168	652	653	696	0	681	768	0	783
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.0	13.9	12.2	23.8	16.8	16.8	7.8	0.0	0.0	8.0	0.0	6.9
Incr Delay (d2), s/veh	10.8	0.6	0.0	34.5	1.7	1.8	0.0	0.0	0.0	0.2	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.8	0.0	0.0	2.4	2.4	0.0	0.0	0.0	0.3	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.8	14.4	12.2	58.3	18.5	18.6	7.8	0.0	0.0	8.2	0.0	7.6
LnGrp LOS	C	B	B	E	B	B	A	A	A	A	A	A
Approach Vol, veh/h		325			509			4			246	
Approach Delay, s/veh		19.5			18.6			7.8			7.8	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.0	4.6	18.1		25.0	7.6	15.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.5	4.5	21.5		20.5	8.5	17.5				
Max Q Clear Time (g_c+I1), s		2.9	2.0	6.8		5.2	4.4	8.2				
Green Ext Time (p_c), s		0.0	0.0	1.1		0.8	0.1	2.1				
Intersection Summary												
HCM 6th Ctrl Delay			16.4									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	132	215	482	637	412	371	403	1622	741	41	1345
Protected Phases	7	4	5	3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.0	8.5	8.5	20.5	8.5	8.5	20.5	8.5	8.5	20.5
Total Split (s)	10.0	20.0	17.0	22.0	32.0	10.0	17.0	38.0	22.0	10.0	31.0
Total Split (%)	11.1%	22.2%	18.9%	24.4%	35.6%	11.1%	18.9%	42.2%	24.4%	11.1%	34.4%
Maximum Green (s)	5.5	15.5	12.5	17.5	27.5	5.5	12.5	33.5	17.5	5.5	26.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max
Walk Time (s)					5.0			5.0			5.0
Flash Dont Walk (s)					11.0			11.0			11.0
Pedestrian Calls (#/hr)					5			15			5
v/c Ratio	0.61	0.44	0.79	0.92	0.80	0.60	0.82	0.82	0.41	0.19	0.86
Control Delay	52.9	37.0	29.4	54.5	41.9	17.5	51.9	28.6	3.2	41.7	35.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.9	37.0	29.4	54.5	41.9	17.5	51.9	28.6	3.2	41.7	35.4
Queue Length 50th (ft)	37	57	175	176	208	96	111	284	27	11	249
Queue Length 95th (ft)	#75	91	298	#293	315	178	#192	369	57	27	#352
Internal Link Dist (ft)		491			575			528			491
Turn Bay Length (ft)	170		200	280			150		100	165	
Base Capacity (vph)	218	635	613	695	593	614	496	1972	1808	218	1561
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.34	0.79	0.92	0.69	0.60	0.81	0.82	0.41	0.19	0.86

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 86.5
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



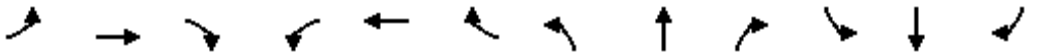
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	198	443	586	379	341	371	1492	682	38	1139	98
Future Volume (veh/h)	121	198	443	586	379	341	371	1492	682	38	1139	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	215	482	637	412	371	403	1622	741	41	1238	107
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	614	490	674	580	535	473	2060	1643	99	1411	122
Arrive On Green	0.06	0.17	0.17	0.19	0.31	0.31	0.14	0.40	0.40	0.03	0.30	0.30
Sat Flow, veh/h	3456	3554	1585	3456	1870	1580	3456	5106	2725	3456	4780	413
Grp Volume(v), veh/h	132	215	482	637	412	371	403	1622	741	41	882	463
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1870	1580	1728	1702	1363	1728	1702	1789
Q Serve(g_s), s	3.4	4.8	15.5	16.3	17.5	18.2	10.2	24.9	13.5	1.0	22.1	22.1
Cycle Q Clear(g_c), s	3.4	4.8	15.5	16.3	17.5	18.2	10.2	24.9	13.5	1.0	22.1	22.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	199	614	490	674	580	535	473	2060	1643	99	1005	528
V/C Ratio(X)	0.66	0.35	0.98	0.95	0.71	0.69	0.85	0.79	0.45	0.42	0.88	0.88
Avail Cap(c_a), veh/h	212	614	490	674	580	535	481	2060	1643	212	1005	528
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	32.7	30.8	35.7	27.4	25.7	37.9	23.4	9.9	42.9	30.1	30.1
Incr Delay (d2), s/veh	7.0	0.3	36.1	22.3	4.0	3.8	13.6	3.1	0.9	2.8	10.7	18.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.1	14.8	8.8	8.2	7.2	5.1	10.1	3.8	0.5	10.2	11.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.5	33.0	66.8	57.9	31.4	29.5	51.5	26.5	10.8	45.7	40.8	48.4
LnGrp LOS	D	C	E	E	C	C	D	C	B	D	D	D
Approach Vol, veh/h		829			1420			2766			1386	
Approach Delay, s/veh		55.1			42.8			26.0			43.5	
Approach LOS		E			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	40.7	22.0	20.0	16.8	31.0	9.7	32.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	33.5	17.5	15.5	12.5	26.5	5.5	27.5
Max Q Clear Time (g_c+I1), s	3.0	26.9	18.3	17.5	12.2	24.1	5.4	20.2
Green Ext Time (p_c), s	0.0	5.7	0.0	0.0	0.0	1.8	0.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	37.3
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	152	141	191	34	518	77	1453	340	760	1687
Protected Phases	7	4	3	8	1	5	2		1	6
Permitted Phases					8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	8.5	8.5	20.5	20.5	8.5	20.5
Total Split (s)	13.2	20.5	14.7	22.0	24.4	11.2	30.4	30.4	24.4	43.6
Total Split (%)	14.7%	22.8%	16.3%	24.4%	27.1%	12.4%	33.8%	33.8%	27.1%	48.4%
Maximum Green (s)	8.7	16.0	10.2	17.5	19.9	6.7	25.9	25.9	19.9	39.1
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Walk Time (s)		5.0					5.0	5.0		5.0
Flash Dont Walk (s)		11.0					11.0	11.0		11.0
Pedestrian Calls (#/hr)		5					10	10		5
v/c Ratio	0.51	0.57	0.90	0.14	0.83	0.57	0.94	0.54	0.95	0.69
Control Delay	44.5	37.6	80.9	32.5	31.9	56.4	42.3	12.7	54.8	19.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.5	37.6	80.9	32.5	31.9	56.4	42.3	12.7	54.8	19.4
Queue Length 50th (ft)	81	59	102	16	189	40	274	47	206	250
Queue Length 95th (ft)	#199	116	#241	42	306	#102	#408	136	#346	343
Internal Link Dist (ft)		470		1268			481			528
Turn Bay Length (ft)	90		140			130		130	260	
Base Capacity (vph)	299	351	212	384	626	139	1551	625	804	2446
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.40	0.90	0.09	0.83	0.55	0.94	0.54	0.95	0.69

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 85
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



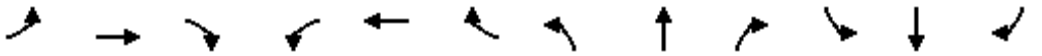
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	86	44	176	31	477	71	1337	313	699	1323	229
Future Volume (veh/h)	140	86	44	176	31	477	71	1337	313	699	1323	229
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	152	93	48	191	34	518	77	1453	340	760	1438	249
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	206	107	202	364	659	99	1469	446	764	1979	342
Arrive On Green	0.10	0.18	0.18	0.11	0.19	0.19	0.06	0.29	0.29	0.22	0.45	0.45
Sat Flow, veh/h	1781	1161	599	1781	1870	1585	1781	5106	1550	3456	4365	755
Grp Volume(v), veh/h	152	0	141	191	34	518	77	1453	340	760	1121	566
Grp Sat Flow(s),veh/h/ln	1781	0	1760	1781	1870	1585	1781	1702	1550	1728	1702	1716
Q Serve(g_s), s	7.6	0.0	6.4	9.6	1.3	17.5	3.8	25.5	18.0	19.8	24.2	24.2
Cycle Q Clear(g_c), s	7.6	0.0	6.4	9.6	1.3	17.5	3.8	25.5	18.0	19.8	24.2	24.2
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	172	0	313	202	364	659	99	1469	446	764	1543	778
V/C Ratio(X)	0.88	0.00	0.45	0.95	0.09	0.79	0.78	0.99	0.76	0.99	0.73	0.73
Avail Cap(c_a), veh/h	172	0	313	202	364	659	133	1469	446	764	1543	778
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.1	0.0	33.1	39.6	29.7	22.8	42.0	31.9	29.2	35.0	20.0	20.1
Incr Delay (d2), s/veh	37.5	0.0	1.0	48.1	0.1	6.3	18.5	21.0	11.7	31.2	3.0	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	2.8	6.8	0.6	10.2	2.2	12.9	7.9	11.4	9.6	10.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.7	0.0	34.1	87.7	29.9	29.1	60.4	52.9	40.9	66.1	23.1	26.0
LnGrp LOS	E	A	C	F	C	C	E	D	D	E	C	C
Approach Vol, veh/h		293			743			1870			2447	
Approach Delay, s/veh		56.7			44.2			51.0			37.1	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.4	30.4	14.7	20.5	9.5	45.3	13.2	22.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	19.9	25.9	10.2	16.0	6.7	39.1	8.7	17.5
Max Q Clear Time (g_c+I1), s	21.8	27.5	11.6	8.4	5.8	26.2	9.6	19.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	9.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	44.0
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	760	441	122	545	130	131	60	145	87
Protected Phases	7	4	3	8	2	2		6	6
Permitted Phases							2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5
Total Split (s)	27.0	30.3	17.2	20.5	22.0	22.0	22.0	20.5	20.5
Total Split (%)	30.0%	33.7%	19.1%	22.8%	24.4%	24.4%	24.4%	22.8%	22.8%
Maximum Green (s)	22.5	25.8	12.7	16.0	17.5	17.5	17.5	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max	None	None
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		5		5	5	5	5	5	5
v/c Ratio	0.87	0.37	0.56	0.84	0.37	0.37	0.13	0.58	0.33
Control Delay	43.2	21.8	46.0	46.6	34.0	33.8	0.6	44.1	29.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	21.8	46.0	46.6	34.0	33.8	0.6	44.1	29.4
Queue Length 50th (ft)	202	87	63	147	64	65	0	75	32
Queue Length 95th (ft)	#315	141	120	#245	125	126	0	133	75
Internal Link Dist (ft)		1268		162		397			490
Turn Bay Length (ft)	165		90					190	
Base Capacity (vph)	917	1200	266	670	348	357	467	336	353
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.37	0.46	0.81	0.37	0.37	0.13	0.43	0.25

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 84.6
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	699	316	90	112	447	54	192	48	55	133	56	24
Future Volume (veh/h)	699	316	90	112	447	54	192	48	55	133	56	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	760	343	98	122	486	59	130	162	60	145	61	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	870	951	267	156	588	71	395	415	350	203	141	60
Arrive On Green	0.25	0.35	0.35	0.09	0.18	0.18	0.22	0.22	0.22	0.11	0.11	0.11
Sat Flow, veh/h	3456	2727	767	1781	3190	386	1781	1870	1576	1781	1240	529
Grp Volume(v), veh/h	760	222	219	122	270	275	130	162	60	145	0	87
Grp Sat Flow(s),veh/h/ln	1728	1777	1717	1781	1777	1799	1781	1870	1576	1781	0	1769
Q Serve(g_s), s	16.6	7.3	7.5	5.3	11.5	11.6	4.8	5.8	2.4	6.2	0.0	3.6
Cycle Q Clear(g_c), s	16.6	7.3	7.5	5.3	11.5	11.6	4.8	5.8	2.4	6.2	0.0	3.6
Prop In Lane	1.00		0.45	1.00		0.21	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	870	619	599	156	328	332	395	415	350	203	0	201
V/C Ratio(X)	0.87	0.36	0.37	0.78	0.82	0.83	0.33	0.39	0.17	0.72	0.00	0.43
Avail Cap(c_a), veh/h	986	619	599	287	360	365	395	415	350	361	0	359
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.3	19.1	19.2	35.3	30.9	31.0	25.8	26.1	24.8	33.7	0.0	32.6
Incr Delay (d2), s/veh	8.0	0.3	0.4	8.3	13.3	13.8	2.2	2.7	1.1	4.7	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	2.9	2.9	2.6	6.0	6.1	2.2	2.8	1.0	2.9	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	19.5	19.6	43.5	44.2	44.7	28.0	28.9	25.9	38.4	0.0	34.0
LnGrp LOS	D	B	B	D	D	D	C	C	C	D	A	C
Approach Vol, veh/h		1201			667			352			232	
Approach Delay, s/veh		30.2			44.3			28.0			36.8	
Approach LOS		C			D			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.0	11.4	32.0		13.5	24.4	19.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		17.5	12.7	25.8		16.0	22.5	16.0				
Max Q Clear Time (g_c+I1), s		7.8	7.3	9.5		8.2	18.6	13.6				
Green Ext Time (p_c), s		1.0	0.1	2.4		0.5	1.2	0.8				

Intersection Summary												
HCM 6th Ctrl Delay			34.3									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	580	237	443	175	288
Protected Phases	4	3	8	2	3
Permitted Phases					2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	8.5	20.5	20.5	8.5
Total Split (s)	20.5	19.0	39.5	20.5	19.0
Total Split (%)	34.2%	31.7%	65.8%	34.2%	31.7%
Maximum Green (s)	16.0	14.5	35.0	16.0	14.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Max	None
Walk Time (s)	5.0				
Flash Dont Walk (s)	11.0				
Pedestrian Calls (#/hr)	10				
v/c Ratio	0.66	0.63	0.44	0.33	0.33
Control Delay	19.5	28.0	9.0	19.1	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.5	28.0	9.0	19.1	4.5
Queue Length 50th (ft)	74	72	77	46	21
Queue Length 95th (ft)	124	137	129	99	53
Internal Link Dist (ft)	164		458	303	
Turn Bay Length (ft)		125		100	
Base Capacity (vph)	1060	473	1203	523	944
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.55	0.50	0.37	0.33	0.31

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 54.8
Control Type: Actuated-Uncoordinated

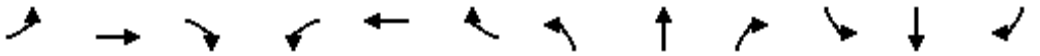
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	379	155	218	408	161	265
Future Volume (veh/h)	379	155	218	408	161	265
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	412	168	237	443	175	288
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	585	235	300	931	573	776
Arrive On Green	0.24	0.24	0.17	0.50	0.32	0.32
Sat Flow, veh/h	2538	983	1781	1870	1781	1585
Grp Volume(v), veh/h	298	282	237	443	175	288
Grp Sat Flow(s),veh/h/ln	1777	1650	1781	1870	1781	1585
Q Serve(g_s), s	7.6	7.8	6.4	7.8	3.7	5.6
Cycle Q Clear(g_c), s	7.6	7.8	6.4	7.8	3.7	5.6
Prop In Lane		0.60	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	425	395	300	931	573	776
V/C Ratio(X)	0.70	0.71	0.79	0.48	0.31	0.37
Avail Cap(c_a), veh/h	571	530	519	1315	573	776
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.3	17.4	19.9	8.2	12.7	7.9
Incr Delay (d2), s/veh	2.4	3.0	4.7	0.4	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	2.9	2.7	2.4	1.5	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.8	20.4	24.5	8.6	14.1	9.3
LnGrp LOS	B	C	C	A	B	A
Approach Vol, veh/h	580			680	463	
Approach Delay, s/veh	20.0			14.2	11.1	
Approach LOS	C			B	B	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		20.5	12.9	16.4		29.3
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		16.0	14.5	16.0		35.0
Max Q Clear Time (g_c+I1), s		7.6	8.4	9.8		9.8
Green Ext Time (p_c), s		1.1	0.4	1.9		2.9

Intersection Summary	
HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	291	652	3	3	444	0	6	2	0	155	150
Protected Phases	7	4		3	8		2			6	7
Permitted Phases			4			2		2	6		6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5	8.5
Total Split (s)	17.5	28.0	28.0	11.0	21.5	21.0	21.0	21.0	21.0	21.0	17.5
Total Split (%)	29.2%	46.7%	46.7%	18.3%	35.8%	35.0%	35.0%	35.0%	35.0%	35.0%	29.2%
Maximum Green (s)	13.0	23.5	23.5	6.5	17.0	16.5	16.5	16.5	16.5	16.5	13.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag						Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max	None
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	5	
v/c Ratio	0.74	0.72	0.00	0.02	0.56		0.01	0.00		0.37	0.17
Control Delay	34.1	18.6	0.0	24.0	18.5		15.2	0.0		19.4	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	34.1	18.6	0.0	24.0	18.5		15.2	0.0		19.4	1.8
Queue Length 50th (ft)	85	136	0	1	56		1	0		39	0
Queue Length 95th (ft)	#207	#395	0	8	93		9	0		93	19
Internal Link Dist (ft)		321			351		325			639	
Turn Bay Length (ft)	100		100	25				40			150
Base Capacity (vph)	429	927	821	214	1125		537	606		416	933
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.68	0.70	0.00	0.01	0.39		0.01	0.00		0.37	0.16

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 53.9
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



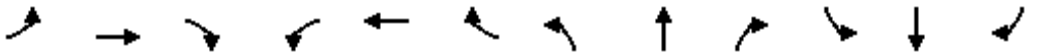
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	600	3	3	308	100	2	4	2	141	2	138
Future Volume (veh/h)	268	600	3	3	308	100	2	4	2	141	2	138
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	291	652	3	3	335	109	2	4	2	153	2	150
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	353	750	619	6	544	174	95	143	516	142	1	833
Arrive On Green	0.20	0.40	0.40	0.00	0.21	0.21	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1781	1870	1544	1781	2641	845	0	437	1575	0	3	1584
Grp Volume(v), veh/h	291	652	3	3	223	221	6	0	2	155	0	150
Grp Sat Flow(s),veh/h/ln	1781	1870	1544	1781	1777	1709	437	0	1575	3	0	1584
Q Serve(g_s), s	7.9	16.1	0.1	0.1	5.8	5.9	0.0	0.0	0.0	0.0	0.0	2.5
Cycle Q Clear(g_c), s	7.9	16.1	0.1	0.1	5.8	5.9	16.5	0.0	0.0	16.5	0.0	2.5
Prop In Lane	1.00		1.00	1.00		0.49	0.33		1.00	0.99		1.00
Lane Grp Cap(c), veh/h	353	750	619	6	366	352	239	0	516	143	0	833
V/C Ratio(X)	0.82	0.87	0.00	0.52	0.61	0.63	0.03	0.00	0.00	1.08	0.00	0.18
Avail Cap(c_a), veh/h	460	873	721	230	600	577	239	0	516	143	0	833
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.3	13.9	9.1	25.1	18.2	18.2	13.0	0.0	11.4	25.1	0.0	6.2
Incr Delay (d2), s/veh	9.1	8.4	0.0	56.6	1.7	1.8	0.2	0.0	0.0	99.3	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	7.2	0.0	0.1	2.3	2.3	0.1	0.0	0.0	5.5	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	22.3	9.1	81.6	19.8	20.1	13.2	0.0	11.4	124.4	0.0	6.7
LnGrp LOS	C	C	A	F	B	C	B	A	B	F	A	A
Approach Vol, veh/h		946			447			8			305	
Approach Delay, s/veh		24.1			20.4			12.7			66.5	
Approach LOS		C			C			B			E	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		21.0	4.7	24.7		21.0	14.5	14.9				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		16.5	6.5	23.5		16.5	13.0	17.0				
Max Q Clear Time (g_c+I1), s		18.5	2.1	18.1		18.5	9.9	7.9				
Green Ext Time (p_c), s		0.0	0.0	2.0		0.0	0.3	1.8				
Intersection Summary												
HCM 6th Ctrl Delay			30.7									
HCM 6th LOS			C									

Appendix K

Existing + Cumulative + Project Intersection LOS Calculations

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	146	402	464	288	286	202	788	762	50	1510
Protected Phases	7	4	5	3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.0	8.5	8.5	20.5	8.5	8.5	20.5	8.5	8.5	20.5
Total Split (s)	8.5	20.0	16.2	19.2	30.7	15.6	16.2	35.2	19.2	15.6	34.6
Total Split (%)	9.4%	22.2%	18.0%	21.3%	34.1%	17.3%	18.0%	39.1%	21.3%	17.3%	38.4%
Maximum Green (s)	4.0	15.5	11.7	14.7	26.2	11.1	11.7	30.7	14.7	11.1	30.1
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max
Walk Time (s)					5.0			5.0			5.0
Flash Dont Walk (s)					11.0			11.0			11.0
Pedestrian Calls (#/hr)					5			15			5
v/c Ratio	0.28	0.36	0.73	0.77	0.55	0.46	0.47	0.38	0.40	0.18	0.81
Control Delay	43.8	36.5	25.9	43.2	30.9	15.9	37.9	18.1	1.3	38.0	28.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	36.5	25.9	43.2	30.9	15.9	37.9	18.1	1.3	38.0	28.4
Queue Length 50th (ft)	12	37	127	120	137	81	50	99	0	12	257
Queue Length 95th (ft)	30	65	228	#204	217	143	88	150	23	30	#353
Internal Link Dist (ft)		491			575			528			491
Turn Bay Length (ft)	170		200	280			150		100	165	
Base Capacity (vph)	167	670	580	616	600	698	490	2085	1916	465	1863
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.22	0.69	0.75	0.48	0.41	0.41	0.38	0.40	0.11	0.81

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 82.1
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



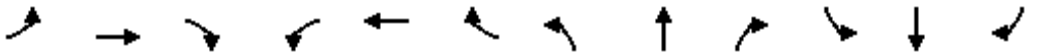
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	134	370	427	265	263	186	725	701	46	1346	43
Future Volume (veh/h)	42	134	370	427	265	263	186	725	701	46	1346	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	146	402	464	288	286	202	788	762	50	1463	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	108	657	425	548	583	545	288	2090	1558	113	1823	59
Arrive On Green	0.03	0.18	0.18	0.16	0.31	0.31	0.08	0.41	0.41	0.03	0.36	0.36
Sat Flow, veh/h	3456	3554	1585	3456	1870	1580	3456	5106	2726	3456	5079	163
Grp Volume(v), veh/h	46	146	402	464	288	286	202	788	762	50	980	530
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1870	1580	1728	1702	1363	1728	1702	1838
Q Serve(g_s), s	1.1	2.9	15.5	10.9	10.5	12.1	4.8	9.0	14.1	1.2	21.8	21.8
Cycle Q Clear(g_c), s	1.1	2.9	15.5	10.9	10.5	12.1	4.8	9.0	14.1	1.2	21.8	21.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	108	657	425	548	583	545	288	2090	1558	113	1222	660
V/C Ratio(X)	0.42	0.22	0.95	0.85	0.49	0.52	0.70	0.38	0.49	0.44	0.80	0.80
Avail Cap(c_a), veh/h	165	657	425	606	584	546	482	2090	1558	457	1222	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	29.1	30.1	34.3	23.5	22.0	37.4	17.3	10.9	39.8	24.2	24.2
Incr Delay (d2), s/veh	2.6	0.2	30.3	10.1	0.6	0.9	3.1	0.5	1.1	2.7	5.6	10.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.2	11.2	5.2	4.6	4.5	2.1	3.5	4.0	0.5	9.2	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	29.2	60.4	44.4	24.1	22.9	40.5	17.8	12.0	42.5	29.9	34.2
LnGrp LOS	D	C	E	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		594			1038			1752			1560	
Approach Delay, s/veh		51.4			32.8			17.9			31.7	
Approach LOS		D			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	38.8	17.8	20.0	11.5	34.6	7.1	30.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	11.1	30.7	14.7	15.5	11.7	30.1	4.0	26.2
Max Q Clear Time (g_c+I1), s	3.2	16.1	12.9	17.5	6.8	23.8	3.1	14.1
Green Ext Time (p_c), s	0.1	7.8	0.4	0.0	0.3	4.6	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	29.4
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	178	154	126	23	224	40	741	220	625	1492
Protected Phases	7	4	3	8	1	5	2	3	1	6
Permitted Phases					8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	8.5	8.5	20.5	8.5	8.5	20.5
Total Split (s)	19.0	22.1	17.4	20.5	24.0	10.0	26.5	17.4	24.0	40.5
Total Split (%)	21.1%	24.6%	19.3%	22.8%	26.7%	11.1%	29.4%	19.3%	26.7%	45.0%
Maximum Green (s)	14.5	17.6	12.9	16.0	19.5	5.5	22.0	12.9	19.5	36.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	None	None	Max
Walk Time (s)		5.0					5.0			5.0
Flash Dont Walk (s)		11.0					11.0			11.0
Pedestrian Calls (#/hr)		5					10			5
v/c Ratio	0.42	0.58	0.55	0.12	0.40	0.33	0.52	0.29	0.80	0.60
Control Delay	32.3	32.8	43.0	33.9	12.4	45.7	27.0	3.3	38.9	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	32.8	43.0	33.9	12.4	45.7	27.0	3.3	38.9	17.6
Queue Length 50th (ft)	67	53	60	11	49	20	117	0	152	208
Queue Length 95th (ft)	162	113	122	32	87	54	173	38	#255	303
Internal Link Dist (ft)		470		1268			481			528
Turn Bay Length (ft)	90		140			130		130	260	
Base Capacity (vph)	426	418	289	378	590	123	1419	812	849	2483
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.37	0.44	0.06	0.38	0.33	0.52	0.27	0.74	0.60

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 79.6
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



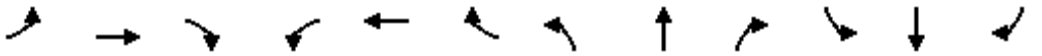
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	76	65	116	21	206	37	682	202	575	1253	120
Future Volume (veh/h)	164	76	65	116	21	206	37	682	202	575	1253	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	178	83	71	126	23	224	40	741	220	625	1362	130
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	220	159	136	161	259	558	53	1473	591	738	2234	213
Arrive On Green	0.12	0.17	0.17	0.09	0.14	0.14	0.03	0.29	0.29	0.21	0.47	0.47
Sat Flow, veh/h	1781	929	795	1781	1870	1585	1781	5106	1550	3456	4730	451
Grp Volume(v), veh/h	178	0	154	126	23	224	40	741	220	625	980	512
Grp Sat Flow(s),veh/h/ln	1781	0	1724	1781	1870	1585	1781	1702	1550	1728	1702	1778
Q Serve(g_s), s	7.4	0.0	6.2	5.3	0.8	8.1	1.7	9.2	7.8	13.2	16.3	16.3
Cycle Q Clear(g_c), s	7.4	0.0	6.2	5.3	0.8	8.1	1.7	9.2	7.8	13.2	16.3	16.3
Prop In Lane	1.00		0.46	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	220	0	295	161	259	558	53	1473	591	738	1607	840
V/C Ratio(X)	0.81	0.00	0.52	0.78	0.09	0.40	0.75	0.50	0.37	0.85	0.61	0.61
Avail Cap(c_a), veh/h	339	0	398	301	393	671	129	1473	591	884	1607	840
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	0.0	28.8	33.9	28.7	18.6	36.7	22.6	17.1	28.8	14.9	14.9
Incr Delay (d2), s/veh	8.2	0.0	1.4	8.0	0.1	0.5	18.7	1.2	1.8	6.6	1.7	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	2.6	2.6	0.4	2.9	1.0	3.7	2.9	5.9	6.1	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	0.0	30.2	41.9	28.8	19.1	55.4	23.8	18.9	35.4	16.6	18.2
LnGrp LOS	D	A	C	D	C	B	E	C	B	D	B	B
Approach Vol, veh/h		332			373			1001			2117	
Approach Delay, s/veh		35.8			27.4			24.0			22.6	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.8	26.5	11.4	17.6	6.8	40.5	13.9	15.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	19.5	22.0	12.9	17.6	5.5	36.0	14.5	16.0
Max Q Clear Time (g_c+I1), s	15.2	11.2	7.3	8.2	3.7	18.3	9.4	10.1
Green Ext Time (p_c), s	1.1	4.4	0.1	0.5	0.0	10.0	0.2	0.4

Intersection Summary	
HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	683	221	40	291	26	27	8	82	55
Protected Phases	7	4	3	8	2	2		6	6
Permitted Phases							2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5
Total Split (s)	28.0	37.7	10.8	20.5	21.0	21.0	21.0	20.5	20.5
Total Split (%)	31.1%	41.9%	12.0%	22.8%	23.3%	23.3%	23.3%	22.8%	22.8%
Maximum Green (s)	23.5	33.2	6.3	16.0	16.5	16.5	16.5	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max	None	None
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		5		5	5	5	5	5	5
v/c Ratio	0.76	0.16	0.26	0.52	0.07	0.07	0.02	0.36	0.22
Control Delay	32.3	14.9	41.0	32.3	28.1	28.1	0.0	36.3	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	14.9	41.0	32.3	28.1	28.1	0.0	36.3	19.0
Queue Length 50th (ft)	148	32	18	63	10	10	0	36	9
Queue Length 95th (ft)	248	63	54	114	36	37	0	82	42
Internal Link Dist (ft)		1268		162		397			490
Turn Bay Length (ft)	165		90					190	
Base Capacity (vph)	1153	1648	159	804	396	406	505	405	408
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.13	0.25	0.36	0.07	0.07	0.02	0.20	0.13

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 72.9
Control Type: Actuated-Uncoordinated



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	628	171	32	37	235	33	38	11	7	75	19	31
Future Volume (veh/h)	628	171	32	37	235	33	38	11	7	75	19	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	683	186	35	40	255	36	26	32	8	82	21	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	854	1044	192	57	420	59	459	482	406	143	51	82
Arrive On Green	0.25	0.35	0.35	0.03	0.13	0.13	0.26	0.26	0.26	0.08	0.08	0.08
Sat Flow, veh/h	3456	2987	550	1781	3129	436	1781	1870	1578	1781	636	1030
Grp Volume(v), veh/h	683	109	112	40	143	148	26	32	8	82	0	55
Grp Sat Flow(s),veh/h/ln	1728	1777	1760	1781	1777	1788	1781	1870	1578	1781	0	1666
Q Serve(g_s), s	11.9	2.7	2.8	1.4	4.9	5.0	0.7	0.8	0.2	2.8	0.0	2.0
Cycle Q Clear(g_c), s	11.9	2.7	2.8	1.4	4.9	5.0	0.7	0.8	0.2	2.8	0.0	2.0
Prop In Lane	1.00		0.31	1.00		0.24	1.00		1.00	1.00		0.62
Lane Grp Cap(c), veh/h	854	621	615	57	239	240	459	482	406	143	0	133
V/C Ratio(X)	0.80	0.18	0.18	0.71	0.60	0.61	0.06	0.07	0.02	0.58	0.00	0.41
Avail Cap(c_a), veh/h	1268	921	912	175	444	447	459	482	406	445	0	416
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.6	14.4	14.5	30.7	26.1	26.2	17.9	18.0	17.7	28.4	0.0	28.0
Incr Delay (d2), s/veh	2.3	0.1	0.1	14.8	2.4	2.5	0.2	0.3	0.1	3.6	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	1.0	1.1	0.8	2.1	2.2	0.3	0.4	0.1	1.3	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	14.6	14.6	45.6	28.5	28.7	18.2	18.2	17.8	32.0	0.0	30.1
LnGrp LOS	C	B	B	D	C	C	B	B	B	C	A	C
Approach Vol, veh/h		904			331			66			137	
Approach Delay, s/veh		22.4			30.7			18.2			31.3	
Approach LOS		C			C			B			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		21.0	6.5	26.9		9.6	20.3	13.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		16.5	6.3	33.2		16.0	23.5	16.0				
Max Q Clear Time (g_c+I1), s		2.8	3.4	4.8		4.8	13.9	7.0				
Green Ext Time (p_c), s		0.1	0.0	1.3		0.3	2.0	1.1				

Intersection Summary												
HCM 6th Ctrl Delay			24.9									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	248	1	1	307	0	1
Future Vol, veh/h	248	1	1	307	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	270	1	1	334	0	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	271	0	607	136
Stage 1	-	-	-	-	271	-
Stage 2	-	-	-	-	336	-
Critical Hdwy	-	-	4.13	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1291	-	443	888
Stage 1	-	-	-	-	751	-
Stage 2	-	-	-	-	723	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1291	-	443	888
Mov Cap-2 Maneuver	-	-	-	-	443	-
Stage 1	-	-	-	-	751	-
Stage 2	-	-	-	-	722	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	888	-	-	1291	-
HCM Lane V/C Ratio	0.001	-	-	0.001	-
HCM Control Delay (s)	9.1	-	-	7.8	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	259	205	202	129	107
Protected Phases	4	3	8	2	3
Permitted Phases					2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	8.5	20.5	20.5	8.5
Total Split (s)	20.5	18.0	38.5	21.5	18.0
Total Split (%)	34.2%	30.0%	64.2%	35.8%	30.0%
Maximum Green (s)	16.0	13.5	34.0	17.0	13.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Max	None
Walk Time (s)	5.0				
Flash Dont Walk (s)	11.0				
Pedestrian Calls (#/hr)	10				
v/c Ratio	0.37	0.53	0.25	0.20	0.11
Control Delay	15.3	23.9	8.2	15.0	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	23.9	8.2	15.0	1.7
Queue Length 50th (ft)	27	53	32	26	0
Queue Length 95th (ft)	55	122	59	74	15
Internal Link Dist (ft)	342		458	303	
Turn Bay Length (ft)		125		100	
Base Capacity (vph)	1209	516	1349	649	1049
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.21	0.40	0.15	0.20	0.10

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 48.3
Control Type: Actuated-Uncoordinated

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	181	57	189	186	119	98
Future Volume (veh/h)	181	57	189	186	119	98
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.95	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	197	62	205	202	129	107
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	398	121	267	754	695	856
Arrive On Green	0.15	0.15	0.15	0.40	0.39	0.39
Sat Flow, veh/h	2747	804	1781	1870	1781	1585
Grp Volume(v), veh/h	129	130	205	202	129	107
Grp Sat Flow(s),veh/h/ln	1777	1681	1781	1870	1781	1585
Q Serve(g_s), s	2.9	3.1	4.8	3.1	2.1	1.5
Cycle Q Clear(g_c), s	2.9	3.1	4.8	3.1	2.1	1.5
Prop In Lane		0.48	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	267	252	267	754	695	856
V/C Ratio(X)	0.49	0.51	0.77	0.27	0.19	0.13
Avail Cap(c_a), veh/h	653	617	552	1460	695	856
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	17.0	17.8	8.7	8.7	4.9
Incr Delay (d2), s/veh	1.4	1.6	4.6	0.2	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.2	2.1	1.0	0.7	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.3	18.7	22.4	8.9	9.3	5.2
LnGrp LOS	B	B	C	A	A	A
Approach Vol, veh/h	259			407	236	
Approach Delay, s/veh	18.5			15.7	7.5	
Approach LOS	B			B	A	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		21.5	11.0	11.0		22.1
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		17.0	13.5	16.0		34.0
Max Q Clear Time (g_c+I1), s		4.1	6.8	5.1		5.1
Green Ext Time (p_c), s		0.6	0.3	1.0		1.2

Intersection Summary	
HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	0	1	173	211	4
Future Vol, veh/h	3	0	1	173	211	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	0	1	188	229	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	421	231	233	0	-	0
Stage 1	231	-	-	-	-	-
Stage 2	190	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	589	808	1335	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	842	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	588	808	1335	-	-	-
Mov Cap-2 Maneuver	588	-	-	-	-	-
Stage 1	806	-	-	-	-	-
Stage 2	842	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1335	-	588	-	-
HCM Lane V/C Ratio	0.001	-	0.006	-	-
HCM Control Delay (s)	7.7	0	11.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

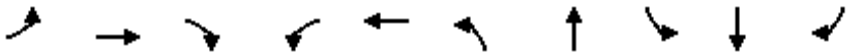
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	0	1	171	208	3
Future Vol, veh/h	3	0	1	171	208	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	0	1	186	226	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	416	228	229	0	-	0
Stage 1	228	-	-	-	-	-
Stage 2	188	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	593	811	1339	-	-	-
Stage 1	810	-	-	-	-	-
Stage 2	844	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	592	811	1339	-	-	-
Mov Cap-2 Maneuver	592	-	-	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	844	-	-	-	-	-

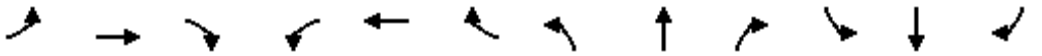
Approach	EB	NB	SB
HCM Control Delay, s	11.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1339	-	592	-	-
HCM Lane V/C Ratio	0.001	-	0.006	-	-
HCM Control Delay (s)	7.7	0	11.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	91	233	2	1	510	0	4	0	60	186
Protected Phases	7	4		3	8		2		6	7
Permitted Phases			4			2		6		6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	8.5
Total Split (s)	13.0	26.0	26.0	9.0	22.0	25.0	25.0	25.0	25.0	13.0
Total Split (%)	21.7%	43.3%	43.3%	15.0%	36.7%	41.7%	41.7%	41.7%	41.7%	21.7%
Maximum Green (s)	8.5	21.5	21.5	4.5	17.5	20.5	20.5	20.5	20.5	8.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag					Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	None
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	
v/c Ratio	0.36	0.32	0.00	0.01	0.58		0.01		0.10	0.20
Control Delay	27.0	12.4	0.0	25.0	19.7		12.8		13.4	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	27.0	12.4	0.0	25.0	19.7		12.8		13.4	2.7
Queue Length 50th (ft)	28	44	0	0	73		1		13	5
Queue Length 95th (ft)	68	109	0	5	114		6		37	29
Internal Link Dist (ft)		321			351		325		639	
Turn Bay Length (ft)	100		100	25						150
Base Capacity (vph)	292	862	771	154	1193		678		591	946
Starvation Cap Reductn	0	0	0	0	0		0		0	0
Spillback Cap Reductn	0	0	0	0	0		0		0	0
Storage Cap Reductn	0	0	0	0	0		0		0	0
Reduced v/c Ratio	0.31	0.27	0.00	0.01	0.43		0.01		0.10	0.20

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 52.8
Control Type: Actuated-Uncoordinated



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	214	2	1	405	64	3	1	0	52	3	171
Future Volume (veh/h)	84	214	2	1	405	64	3	1	0	52	3	171
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	91	233	2	1	440	70	3	1	0	57	3	186
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	117	537	443	4	684	108	535	160	680	732	35	783
Arrive On Green	0.07	0.29	0.29	0.00	0.22	0.22	0.43	0.43	0.00	0.43	0.43	0.43
Sat Flow, veh/h	1781	1870	1541	1781	3070	485	939	374	1585	1363	81	1584
Grp Volume(v), veh/h	91	233	2	1	253	257	4	0	0	60	0	186
Grp Sat Flow(s),veh/h/ln	1781	1870	1541	1781	1777	1778	1313	0	1585	1444	0	1584
Q Serve(g_s), s	2.4	4.8	0.0	0.0	6.2	6.3	0.0	0.0	0.0	0.0	0.0	3.2
Cycle Q Clear(g_c), s	2.4	4.8	0.0	0.0	6.2	6.3	0.9	0.0	0.0	0.9	0.0	3.2
Prop In Lane	1.00		1.00	1.00		0.27	0.75		1.00	0.95		1.00
Lane Grp Cap(c), veh/h	117	537	443	4	396	396	695	0	680	766	0	783
V/C Ratio(X)	0.78	0.43	0.00	0.27	0.64	0.65	0.01	0.00	0.00	0.08	0.00	0.24
Avail Cap(c_a), veh/h	317	842	693	168	651	651	695	0	680	766	0	783
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.0	13.9	12.1	23.8	16.8	16.9	7.8	0.0	0.0	8.1	0.0	6.9
Incr Delay (d2), s/veh	10.6	0.6	0.0	34.6	1.7	1.8	0.0	0.0	0.0	0.2	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.8	0.0	0.0	2.4	2.4	0.0	0.0	0.0	0.3	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.6	14.4	12.2	58.4	18.6	18.6	7.8	0.0	0.0	8.3	0.0	7.6
LnGrp LOS	C	B	B	E	B	B	A	A	A	A	A	A
Approach Vol, veh/h		326			511			4			246	
Approach Delay, s/veh		19.5			18.7			7.8			7.8	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.0	4.6	18.2		25.0	7.6	15.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.5	4.5	21.5		20.5	8.5	17.5				
Max Q Clear Time (g_c+I1), s		2.9	2.0	6.8		5.2	4.4	8.3				
Green Ext Time (p_c), s		0.0	0.0	1.1		0.8	0.1	2.1				
Intersection Summary												
HCM 6th Ctrl Delay			16.4									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	249	308	0	0	0
Future Vol, veh/h	0	249	308	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	50	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	271	335	0	0	0

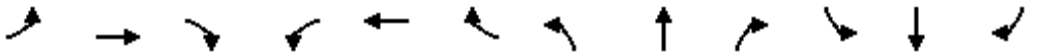
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	335	0	-	0	471	335
Stage 1	-	-	-	-	335	-
Stage 2	-	-	-	-	136	-
Critical Hdwy	4.13	-	-	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	1223	-	-	-	536	706
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	877	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1223	-	-	-	536	706
Mov Cap-2 Maneuver	-	-	-	-	536	-
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	877	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1223	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	132	215	482	640	412	371	403	1623	748	41	1347
Protected Phases	7	4	5	3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.0	8.5	8.5	20.5	8.5	8.5	20.5	8.5	8.5	20.5
Total Split (s)	10.0	20.0	16.6	22.2	32.2	9.8	16.6	38.0	22.2	9.8	31.2
Total Split (%)	11.1%	22.2%	18.4%	24.7%	35.8%	10.9%	18.4%	42.2%	24.7%	10.9%	34.7%
Maximum Green (s)	5.5	15.5	12.1	17.7	27.7	5.3	12.1	33.5	17.7	5.3	26.7
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max
Walk Time (s)					5.0			5.0			5.0
Flash Dont Walk (s)					11.0			11.0			11.0
Pedestrian Calls (#/hr)					5			15			5
v/c Ratio	0.61	0.45	0.80	0.91	0.80	0.61	0.84	0.82	0.41	0.19	0.86
Control Delay	52.8	37.0	30.1	53.2	41.3	17.5	54.0	28.6	3.3	42.1	35.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	37.0	30.1	53.2	41.3	17.5	54.0	28.6	3.3	42.1	35.2
Queue Length 50th (ft)	36	57	176	176	207	96	111	283	28	11	247
Queue Length 95th (ft)	#75	91	301	#292	314	178	#197	369	60	28	#350
Internal Link Dist (ft)		491			575			528			491
Turn Bay Length (ft)	170		200	280			150		100	165	
Base Capacity (vph)	218	635	606	704	598	613	481	1974	1810	211	1565
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.34	0.80	0.91	0.69	0.61	0.84	0.82	0.41	0.19	0.86

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 86.4
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



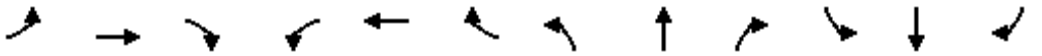
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	198	443	589	379	341	371	1493	688	38	1141	98
Future Volume (veh/h)	121	198	443	589	379	341	371	1493	688	38	1141	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	215	482	640	412	371	403	1623	748	41	1240	107
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	612	486	680	582	537	465	2056	1646	98	1418	122
Arrive On Green	0.06	0.17	0.17	0.20	0.31	0.31	0.13	0.40	0.40	0.03	0.30	0.30
Sat Flow, veh/h	3456	3554	1585	3456	1870	1580	3456	5106	2725	3456	4781	412
Grp Volume(v), veh/h	132	215	482	640	412	371	403	1623	748	41	883	464
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1870	1580	1728	1702	1363	1728	1702	1789
Q Serve(g_s), s	3.4	4.8	15.5	16.4	17.5	18.2	10.3	25.1	13.6	1.0	22.2	22.2
Cycle Q Clear(g_c), s	3.4	4.8	15.5	16.4	17.5	18.2	10.3	25.1	13.6	1.0	22.2	22.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	199	612	486	680	582	537	465	2056	1646	98	1010	531
V/C Ratio(X)	0.66	0.35	0.99	0.94	0.71	0.69	0.87	0.79	0.45	0.42	0.87	0.87
Avail Cap(c_a), veh/h	211	612	486	680	582	537	465	2056	1646	204	1010	531
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.6	32.8	31.1	35.6	27.4	25.6	38.2	23.5	10.0	43.0	30.1	30.1
Incr Delay (d2), s/veh	7.1	0.3	38.5	21.4	3.9	3.7	15.9	3.2	0.9	2.8	10.5	17.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.1	15.2	8.8	8.2	7.2	5.3	10.2	3.9	0.5	10.2	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.6	33.2	69.6	57.0	31.3	29.4	54.0	26.7	10.9	45.8	40.5	48.0
LnGrp LOS	D	C	E	E	C	C	D	C	B	D	D	D
Approach Vol, veh/h		829			1423			2774			1388	
Approach Delay, s/veh		56.8			42.4			26.4			43.2	
Approach LOS		E			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	40.7	22.2	20.0	16.6	31.2	9.7	32.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.3	33.5	17.7	15.5	12.1	26.7	5.5	27.7
Max Q Clear Time (g_c+I1), s	3.0	27.1	18.4	17.5	12.3	24.2	5.4	20.2
Green Ext Time (p_c), s	0.0	5.7	0.0	0.0	0.0	1.9	0.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	37.5
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	152	141	192	34	526	77	1453	342	765	1687
Protected Phases	7	4	3	8	1	5	2	3	1	6
Permitted Phases					8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	8.5	8.5	20.5	8.5	8.5	20.5
Total Split (s)	13.0	20.5	14.8	22.3	25.0	11.0	29.7	14.8	25.0	43.7
Total Split (%)	14.4%	22.8%	16.4%	24.8%	27.8%	12.2%	33.0%	16.4%	27.8%	48.6%
Maximum Green (s)	8.5	16.0	10.3	17.8	20.5	6.5	25.2	10.3	20.5	39.2
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	None	None	Max
Walk Time (s)		5.0					5.0			5.0
Flash Dont Walk (s)		11.0					11.0			11.0
Pedestrian Calls (#/hr)		5					10			5
v/c Ratio	0.51	0.57	0.90	0.14	0.82	0.58	0.96	0.44	0.92	0.69
Control Delay	44.9	37.6	79.7	32.2	30.9	57.8	46.9	7.9	50.8	19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	37.6	79.7	32.2	30.9	57.8	46.9	7.9	50.8	19.3
Queue Length 50th (ft)	81	59	103	16	190	40	277	38	205	249
Queue Length 95th (ft)	#201	116	#240	41	307	#104	#417	106	#343	342
Internal Link Dist (ft)		470		1268			481			528
Turn Bay Length (ft)	90		140			130		100	260	
Base Capacity (vph)	298	351	214	390	640	135	1508	773	828	2449
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.40	0.90	0.09	0.82	0.57	0.96	0.44	0.92	0.69

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 85
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



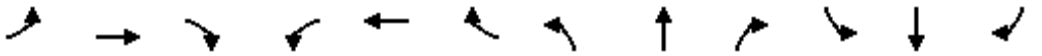
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	86	44	177	31	484	71	1337	315	704	1323	229
Future Volume (veh/h)	140	86	44	177	31	484	71	1337	315	704	1323	229
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	152	93	48	192	34	526	77	1453	342	765	1438	249
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	168	206	107	204	370	675	99	1430	615	787	1974	341
Arrive On Green	0.09	0.18	0.18	0.11	0.20	0.20	0.06	0.28	0.28	0.23	0.45	0.45
Sat Flow, veh/h	1781	1161	599	1781	1870	1585	1781	5106	1550	3456	4365	755
Grp Volume(v), veh/h	152	0	141	192	34	526	77	1453	342	765	1121	566
Grp Sat Flow(s),veh/h/ln	1781	0	1760	1781	1870	1585	1781	1702	1550	1728	1702	1716
Q Serve(g_s), s	7.6	0.0	6.4	9.6	1.3	17.8	3.8	25.2	15.4	19.8	24.2	24.3
Cycle Q Clear(g_c), s	7.6	0.0	6.4	9.6	1.3	17.8	3.8	25.2	15.4	19.8	24.2	24.3
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	168	0	313	204	370	675	99	1430	615	787	1540	776
V/C Ratio(X)	0.90	0.00	0.45	0.94	0.09	0.78	0.78	1.02	0.56	0.97	0.73	0.73
Avail Cap(c_a), veh/h	168	0	313	204	370	675	129	1430	615	787	1540	776
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.3	0.0	33.1	39.6	29.5	22.2	42.0	32.4	21.2	34.5	20.1	20.1
Incr Delay (d2), s/veh	42.8	0.0	1.0	46.7	0.1	5.8	19.8	27.9	3.6	25.2	3.1	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	2.8	6.8	0.6	10.1	2.2	13.7	6.0	10.8	9.7	10.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.2	0.0	34.1	86.2	29.6	28.1	61.8	60.3	24.8	59.7	23.2	26.1
LnGrp LOS	F	A	C	F	C	C	E	F	C	E	C	C
Approach Vol, veh/h		293			752			1872			2452	
Approach Delay, s/veh		59.5			43.0			53.9			35.3	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	29.7	14.8	20.5	9.5	45.2	13.0	22.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.5	25.2	10.3	16.0	6.5	39.2	8.5	17.8
Max Q Clear Time (g_c+I1), s	21.8	27.2	11.6	8.4	5.8	26.3	9.6	19.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	9.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	44.2
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	760	449	122	556	130	131	60	154	87
Protected Phases	7	4	3	8	2	2		6	6
Permitted Phases							2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5
Total Split (s)	27.0	30.9	17.1	21.0	21.5	21.5	21.5	20.5	20.5
Total Split (%)	30.0%	34.3%	19.0%	23.3%	23.9%	23.9%	23.9%	22.8%	22.8%
Maximum Green (s)	22.5	26.4	12.6	16.5	17.0	17.0	17.0	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max	None	None
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		5		5	5	5	5	5	5
v/c Ratio	0.87	0.37	0.56	0.84	0.38	0.38	0.13	0.60	0.32
Control Delay	43.5	21.7	46.3	46.1	34.8	34.6	0.6	44.8	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	21.7	46.3	46.1	34.8	34.6	0.6	44.8	29.1
Queue Length 50th (ft)	203	90	63	151	65	66	0	80	32
Queue Length 95th (ft)	#315	142	120	#247	126	127	0	141	75
Internal Link Dist (ft)		1268		162		397			490
Turn Bay Length (ft)	165		90					190	
Base Capacity (vph)	914	1214	263	689	338	345	458	335	352
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.37	0.46	0.81	0.38	0.38	0.13	0.46	0.25

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 84.9
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	699	323	90	112	455	56	192	48	55	142	56	24
Future Volume (veh/h)	699	323	90	112	455	56	192	48	55	142	56	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	760	351	98	122	495	61	130	162	60	154	61	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	869	965	265	156	598	73	383	402	339	211	147	63
Arrive On Green	0.25	0.35	0.35	0.09	0.19	0.19	0.21	0.21	0.21	0.12	0.12	0.12
Sat Flow, veh/h	3456	2742	754	1781	3184	391	1781	1870	1576	1781	1240	529
Grp Volume(v), veh/h	760	226	223	122	275	281	130	162	60	154	0	87
Grp Sat Flow(s),veh/h/ln	1728	1777	1719	1781	1777	1798	1781	1870	1576	1781	0	1769
Q Serve(g_s), s	16.7	7.5	7.7	5.3	11.8	11.9	4.9	5.9	2.5	6.6	0.0	3.6
Cycle Q Clear(g_c), s	16.7	7.5	7.7	5.3	11.8	11.9	4.9	5.9	2.5	6.6	0.0	3.6
Prop In Lane	1.00		0.44	1.00		0.22	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	869	625	605	156	334	338	383	402	339	211	0	210
V/C Ratio(X)	0.87	0.36	0.37	0.78	0.82	0.83	0.34	0.40	0.18	0.73	0.00	0.42
Avail Cap(c_a), veh/h	982	625	605	284	370	375	383	402	339	360	0	358
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.4	19.0	19.1	35.4	30.9	30.9	26.3	26.7	25.4	33.7	0.0	32.3
Incr Delay (d2), s/veh	8.1	0.4	0.4	8.3	13.0	13.5	2.4	3.0	1.1	4.8	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	3.0	3.0	2.6	6.1	6.2	2.3	2.9	1.0	3.1	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.6	19.4	19.5	43.7	43.9	44.4	28.7	29.7	26.5	38.5	0.0	33.7
LnGrp LOS	D	B	B	D	D	D	C	C	C	D	A	C
Approach Vol, veh/h		1209			678			352			241	
Approach Delay, s/veh		30.2			44.1			28.8			36.7	
Approach LOS		C			D			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		21.5	11.4	32.4		13.9	24.4	19.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		17.0	12.6	26.4		16.0	22.5	16.5				
Max Q Clear Time (g_c+I1), s		7.9	7.3	9.7		8.6	18.7	13.9				
Green Ext Time (p_c), s		1.0	0.1	2.5		0.5	1.2	0.9				

Intersection Summary	
HCM 6th Ctrl Delay	34.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	541	3	1	601	1	1
Future Vol, veh/h	541	3	1	601	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	588	3	1	653	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	591	0	1245	296
Stage 1	-	-	-	-	590	-
Stage 2	-	-	-	-	655	-
Critical Hdwy	-	-	4.13	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	983	-	179	701
Stage 1	-	-	-	-	518	-
Stage 2	-	-	-	-	516	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	983	-	179	701
Mov Cap-2 Maneuver	-	-	-	-	179	-
Stage 1	-	-	-	-	518	-
Stage 2	-	-	-	-	515	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	17.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	285	-	-	983	-
HCM Lane V/C Ratio	0.008	-	-	0.001	-
HCM Control Delay (s)	17.7	-	-	8.7	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	596	247	447	183	296
Protected Phases	4	3	8	2	3
Permitted Phases					2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	8.5	20.5	20.5	8.5
Total Split (s)	20.5	19.0	39.5	20.5	19.0
Total Split (%)	34.2%	31.7%	65.8%	34.2%	31.7%
Maximum Green (s)	16.0	14.5	35.0	16.0	14.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Max	None
Walk Time (s)	5.0				
Flash Dont Walk (s)	11.0				
Pedestrian Calls (#/hr)	10				
v/c Ratio	0.67	0.65	0.44	0.35	0.34
Control Delay	19.3	28.7	9.0	19.4	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.3	28.7	9.0	19.4	4.7
Queue Length 50th (ft)	75	76	78	50	22
Queue Length 95th (ft)	125	143	130	103	56
Internal Link Dist (ft)	372		458	303	
Turn Bay Length (ft)		125		100	
Base Capacity (vph)	1062	471	1197	520	939
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.56	0.52	0.37	0.35	0.32

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 55
Control Type: Actuated-Uncoordinated

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	380	168	227	411	168	272
Future Volume (veh/h)	380	168	227	411	168	272
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	413	183	247	447	183	296
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	576	252	310	945	564	778
Arrive On Green	0.24	0.24	0.17	0.51	0.32	0.32
Sat Flow, veh/h	2470	1038	1781	1870	1781	1585
Grp Volume(v), veh/h	307	289	247	447	183	296
Grp Sat Flow(s),veh/h/ln	1777	1638	1781	1870	1781	1585
Q Serve(g_s), s	8.0	8.2	6.7	7.9	4.0	5.9
Cycle Q Clear(g_c), s	8.0	8.2	6.7	7.9	4.0	5.9
Prop In Lane		0.63	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	431	397	310	945	564	778
V/C Ratio(X)	0.71	0.73	0.80	0.47	0.32	0.38
Avail Cap(c_a), veh/h	563	519	511	1295	564	778
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	17.6	20.0	8.1	13.2	8.1
Incr Delay (d2), s/veh	2.9	3.6	4.7	0.4	1.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	3.1	2.9	2.5	1.6	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.5	21.2	24.7	8.5	14.7	9.5
LnGrp LOS	C	C	C	A	B	A
Approach Vol, veh/h	596			694	479	
Approach Delay, s/veh	20.8			14.3	11.5	
Approach LOS	C			B	B	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		20.5	13.3	16.7		30.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		16.0	14.5	16.0		35.0
Max Q Clear Time (g_c+I1), s		7.9	8.7	10.2		9.9
Green Ext Time (p_c), s		1.1	0.4	1.9		2.9

Intersection Summary	
HCM 6th Ctrl Delay	15.7
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	1	2	386	330	11
Future Vol, veh/h	7	1	2	386	330	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	1	2	420	359	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	789	365	371	0	-	0
Stage 1	365	-	-	-	-	-
Stage 2	424	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	359	680	1188	-	-	-
Stage 1	702	-	-	-	-	-
Stage 2	660	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	358	680	1188	-	-	-
Mov Cap-2 Maneuver	358	-	-	-	-	-
Stage 1	701	-	-	-	-	-
Stage 2	660	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1188	-	381	-	-
HCM Lane V/C Ratio	0.002	-	0.023	-	-
HCM Control Delay (s)	8	0	14.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	1	2	381	320	11
Future Vol, veh/h	7	1	2	381	320	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	1	2	414	348	12

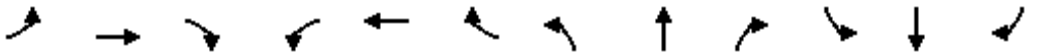
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	772	354	360	0	-	0
Stage 1	354	-	-	-	-	-
Stage 2	418	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	368	690	1199	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	664	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	367	690	1199	-	-	-
Mov Cap-2 Maneuver	367	-	-	-	-	-
Stage 1	709	-	-	-	-	-
Stage 2	664	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1199	-	390	-	-
HCM Lane V/C Ratio	0.002	-	0.022	-	-
HCM Control Delay (s)	8	0	14.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	293	652	3	3	446	0	6	2	0	156	151
Protected Phases	7	4		3	8		2			6	7
Permitted Phases			4			2		2	6		6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5	8.5
Total Split (s)	18.5	27.0	27.0	12.0	20.5	21.0	21.0	21.0	21.0	21.0	18.5
Total Split (%)	30.8%	45.0%	45.0%	20.0%	34.2%	35.0%	35.0%	35.0%	35.0%	35.0%	30.8%
Maximum Green (s)	14.0	22.5	22.5	7.5	16.0	16.5	16.5	16.5	16.5	16.5	14.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag						Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max	None
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	5	
v/c Ratio	0.72	0.71	0.00	0.02	0.57		0.01	0.00		0.38	0.17
Control Delay	32.0	18.4	0.0	24.0	19.1		15.5	0.0		19.8	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	32.0	18.4	0.0	24.0	19.1		15.5	0.0		19.8	1.7
Queue Length 50th (ft)	86	136	0	1	58		1	0		40	0
Queue Length 95th (ft)	#197	#395	0	8	95		9	0		94	18
Internal Link Dist (ft)		321			351		325			639	
Turn Bay Length (ft)	100		100	25				40			150
Base Capacity (vph)	459	927	820	246	1056		534	603		413	955
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.64	0.70	0.00	0.01	0.42		0.01	0.00		0.38	0.16

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 54.3
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	600	3	3	308	102	2	4	2	142	2	139
Future Volume (veh/h)	270	600	3	3	308	102	2	4	2	142	2	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	293	652	3	3	335	111	2	4	2	154	2	151
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	358	743	613	6	524	171	96	144	520	143	1	841
Arrive On Green	0.20	0.40	0.40	0.00	0.20	0.20	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1781	1870	1544	1781	2628	855	0	437	1575	0	3	1584
Grp Volume(v), veh/h	293	652	3	3	225	221	6	0	2	156	0	151
Grp Sat Flow(s),veh/h/ln	1781	1870	1544	1781	1777	1706	437	0	1575	3	0	1584
Q Serve(g_s), s	7.9	16.1	0.1	0.1	5.8	6.0	0.0	0.0	0.0	0.0	0.0	2.5
Cycle Q Clear(g_c), s	7.9	16.1	0.1	0.1	5.8	6.0	16.5	0.0	0.0	16.5	0.0	2.5
Prop In Lane	1.00		1.00	1.00		0.50	0.33		1.00	0.99		1.00
Lane Grp Cap(c), veh/h	358	743	613	6	355	341	240	0	520	144	0	841
V/C Ratio(X)	0.82	0.88	0.00	0.52	0.63	0.65	0.02	0.00	0.00	1.08	0.00	0.18
Avail Cap(c_a), veh/h	498	841	694	267	568	546	240	0	520	144	0	841
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.1	14.0	9.1	24.9	18.3	18.4	12.9	0.0	11.3	24.9	0.0	6.1
Incr Delay (d2), s/veh	7.4	9.6	0.0	56.6	1.9	2.1	0.2	0.0	0.0	99.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	7.5	0.0	0.1	2.3	2.3	0.1	0.0	0.0	5.5	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	23.5	9.1	81.5	20.2	20.5	13.1	0.0	11.3	124.1	0.0	6.6
LnGrp LOS	C	C	A	F	C	C	B	A	B	F	A	A
Approach Vol, veh/h		948			449			8			307	
Approach Delay, s/veh		24.4			20.8			12.6			66.3	
Approach LOS		C			C			B			E	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		21.0	4.7	24.4		21.0	14.5	14.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		16.5	7.5	22.5		16.5	14.0	16.0				
Max Q Clear Time (g_c+I1), s		18.5	2.1	18.1		18.5	9.9	8.0				
Green Ext Time (p_c), s		0.0	0.0	1.7		0.0	0.4	1.7				

Intersection Summary												
HCM 6th Ctrl Delay			30.9									
HCM 6th LOS			C									

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	543	601	1	0	1
Future Vol, veh/h	0	543	601	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	50	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	590	653	1	0	1

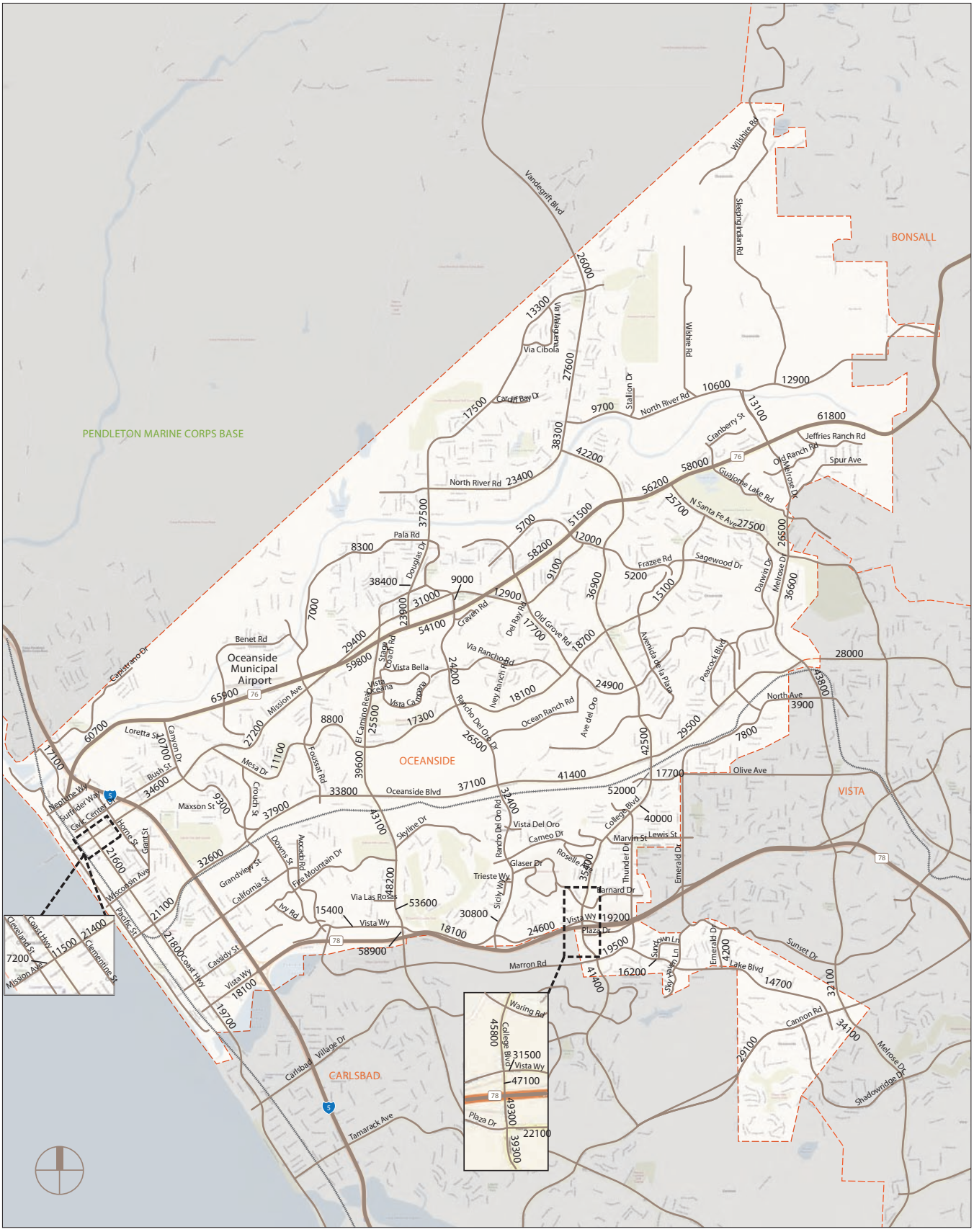
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	654	0	-	0	948	653
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	295	-
Critical Hdwy	4.13	-	-	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	931	-	-	-	274	466
Stage 1	-	-	-	-	517	-
Stage 2	-	-	-	-	730	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	931	-	-	-	274	466
Mov Cap-2 Maneuver	-	-	-	-	274	-
Stage 1	-	-	-	-	517	-
Stage 2	-	-	-	-	730	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	931	-	-	-	466
HCM Lane V/C Ratio	-	-	-	-	0.002
HCM Control Delay (s)	0	-	-	-	12.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Appendix L

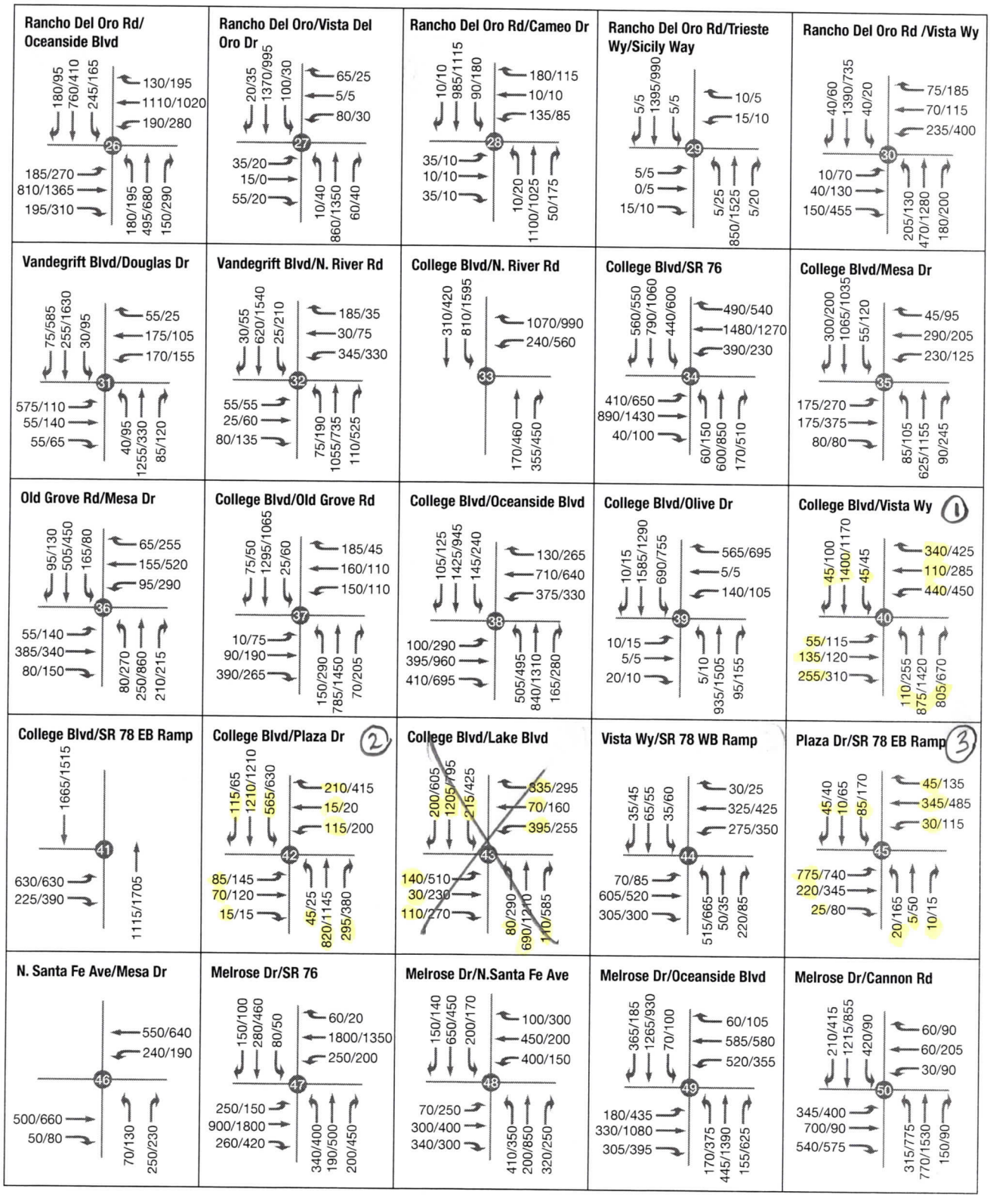
Horizon Year 2030 Corridor Study Volumes



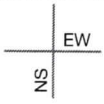
PENDLETON MARINE CORPS BASE
BONSALL
OCEANSIDE
VISTA
CARLSBAD
Oceanside Municipal Airport
Vandegrift Blvd
26000
Wilshire Rd
Sleeping Indian Rd
Wilshire Rd
13300
Via Malaguena
Via Cibola
27600
Stallion Dr
North River Rd
10600
12900
13100
61800
Jeffries Ranch Rd
Spur Ave
Old Ranch Rd
Melrose Dr
17500
Cardiff Bay Dr
9700
38300
42200
Cranberry St
58000
56200
76
Guajome Lake Rd
North River Rd
23400
37500
25700
N Santa Fe Ave
27500
26500
Pala Rd
8300
5700
51500
12000
Frazee Rd
5200
Sagewood Dr
Darwin Dr
Melrose Dr
36600
Douglas Dr
58200
9100
36900
15100
38400
9000
12900
31000
23900
Craven Rd
Del Ray Rd
Old Grove Rd
17700
18700
7000
54100
Benet Rd
29400
Stage Coach Rd
Via Rancho Rd
Avenida de la Plata
Peacock Blvd
28000
59800
Vista Bella
24200
Ivey Ranch Rd
18100
24900
43800
Capistrano Dr
65900
Mission Ave
Vista Oceana
Vista Campana
North Ave
3900
El Camino Real
25500
Rancho Del Oro Dr
Ocean Ranch Rd
Ave del Oro
60700
Loretta St
Canyon Dr
10700
8800
27200
17300
26500
42500
29500
7800
17100
Mesa Dr
11100
Foussat Rd
39600
Olive Ave
Bush St
34600
41400
17700
Neptune Wy
Surfrider Way
Civic Center Dr
5
Maxson St
9300
Crouch St
37900
33800
Oceanside Blvd
37100
32400
52000
College Blvd
40000
Horne St
Grant St
21600
Downs St
Avocado Rd
Skyline Dr
43100
Rancho Del Oro Rd
Vista Del Oro
Cameo Dr
Marvin St
Lewis St
Thunder Dr
Emerald Dr
78
32600
Grandview St
California St
Fire Mountain Dr
Roselle St
35400
Glaser Dr
Trieste Wy
Wisconsin Ave
Pacific St
21100
Ivy Rd
Via Las Rosas
48200
53600
Sicily Wy
30800
Barnard Dr
15400
Vista Wy
18100
24600
Vista Wy
19200
Plaza Dr
21800
Coast Hwy
Cassidy St
78
58900
19500
Sunset Dr
Sundown Ln
Sky Haven Ln
Emerald Dr
4200
Marron Rd
Lake Blvd
Sunset Dr
16200
41400
14700
32100
Vista Wy
18100
19700
Cleveland St
Coast Hwy
21400
11500
7200
Clementine St
Mission Ave
Waring Rd
45800
College Blvd
31500
Vista Wy
47100
78
49300
Plaza Dr
22100
39300
Cannon Rd
34100
29100
Melrose Dr
Shadowridge Dr
Carlsbad Village Dr
5
Tamarack Ave

2030 Master Transportation Roadway Plan Traffic Volumes

Figure 3.7



LEGEND: NS Street/EW Street #/# AM/PM Peak Hour Volume
#s Rounded to the Nearest 5th

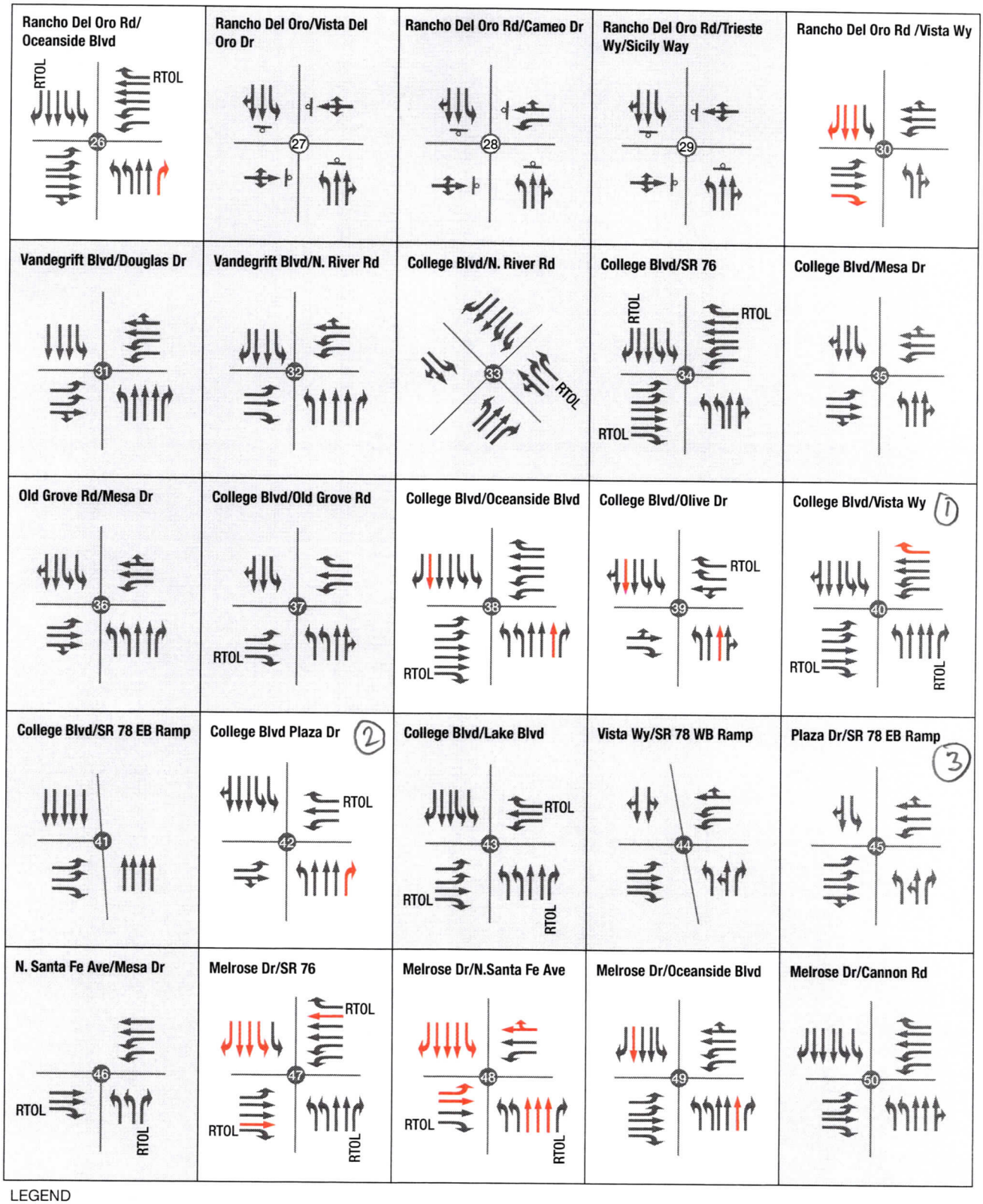


IBI GROUP

City of Oceanside Circulation Element

Modified 1995 CE Volumes Year 2030 AM/PM Peak Hour Volumes

Figure 7.5



LEGEND

NS Street/EW Street

EW

NS

● Study Intersection - Signalized

○ Study Intersection - Unsignalized

\# Study Intersection Number

RTOL Right-turn overlap

Lane Geometry

Stop Sign Control

Unshaded intersection and red coloring indicates a geometric change from the Existing intersection geometry

IBI GROUP

City of Oceanside Circulation Element

Modified 1995 CE Year 2030 Intersection Geometry

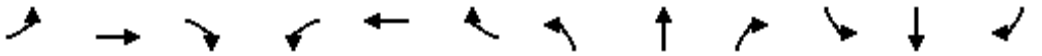
Figure 7.4

Appendix M

Horizon Year 2030 Intersection LOS Calculations

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	60	147	277	478	120	370	120	951	875	49	1571
Protected Phases	7	4	5	3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.0	8.5	8.5	20.5	8.5	8.5	20.5	8.5	8.5	20.5
Total Split (s)	9.4	20.0	12.3	20.4	31.0	18.8	12.3	30.8	20.4	18.8	37.3
Total Split (%)	10.4%	22.2%	13.7%	22.7%	34.4%	20.9%	13.7%	34.2%	22.7%	20.9%	41.4%
Maximum Green (s)	4.9	15.5	7.8	15.9	26.5	14.3	7.8	26.3	15.9	14.3	32.8
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max
Walk Time (s)					5.0			5.0			5.0
Flash Dont Walk (s)					11.0			11.0			11.0
Pedestrian Calls (#/hr)					5			15			5
v/c Ratio	0.29	0.39	0.52	0.75	0.25	0.64	0.39	0.46	0.45	0.17	0.78
Control Delay	42.1	37.7	13.4	40.3	27.0	21.5	40.0	19.3	1.3	37.0	25.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	37.7	13.4	40.3	27.0	21.5	40.0	19.3	1.3	37.0	25.2
Queue Length 50th (ft)	15	38	40	122	51	121	30	128	0	12	256
Queue Length 95th (ft)	36	66	109	#180	96	199	58	181	22	29	330
Internal Link Dist (ft)		491			575			528			491
Turn Bay Length (ft)	170		200	280			150		100	165	
Base Capacity (vph)	204	667	540	664	600	717	325	2056	1978	597	2022
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.22	0.51	0.72	0.20	0.52	0.37	0.46	0.44	0.08	0.78

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 82.3
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



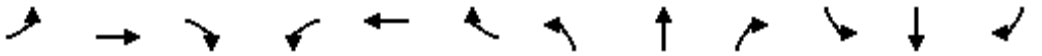
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	135	255	440	110	340	110	875	805	45	1400	45
Future Volume (veh/h)	55	135	255	440	110	340	110	875	805	45	1400	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	147	277	478	120	370	120	951	875	49	1522	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	649	377	566	581	542	190	2090	1572	112	1963	63
Arrive On Green	0.04	0.18	0.18	0.16	0.31	0.31	0.06	0.41	0.41	0.03	0.39	0.39
Sat Flow, veh/h	3456	3554	1585	3456	1870	1580	3456	5106	2726	3456	5079	164
Grp Volume(v), veh/h	60	147	277	478	120	370	120	951	875	49	1020	551
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1870	1580	1728	1702	1363	1728	1702	1838
Q Serve(g_s), s	1.4	3.0	13.7	11.4	4.0	17.0	2.9	11.5	17.1	1.2	22.3	22.3
Cycle Q Clear(g_c), s	1.4	3.0	13.7	11.4	4.0	17.0	2.9	11.5	17.1	1.2	22.3	22.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	123	649	377	566	581	542	190	2090	1572	112	1316	711
V/C Ratio(X)	0.49	0.23	0.74	0.85	0.21	0.68	0.63	0.46	0.56	0.44	0.78	0.78
Avail Cap(c_a), veh/h	200	649	377	647	584	545	318	2090	1572	582	1316	711
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	29.6	29.9	34.4	21.5	23.9	39.2	18.2	11.4	40.3	22.8	22.8
Incr Delay (d2), s/veh	3.0	0.2	7.3	9.1	0.2	3.5	3.4	0.7	1.4	2.7	4.5	8.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.3	5.8	5.4	1.7	6.6	1.3	4.4	4.9	0.5	9.3	10.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	29.7	37.2	43.5	21.7	27.4	42.7	18.9	12.8	43.0	27.3	30.9
LnGrp LOS	D	C	D	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		484			968			1946			1620	
Approach Delay, s/veh		35.7			34.6			17.6			29.0	
Approach LOS		D			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	39.2	18.4	20.0	9.2	37.3	7.5	30.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	14.3	26.3	15.9	15.5	7.8	32.8	4.9	26.5
Max Q Clear Time (g_c+I1), s	3.2	19.1	13.4	15.7	4.9	24.3	3.4	19.0
Green Ext Time (p_c), s	0.1	5.3	0.5	0.0	0.1	6.1	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	26.3
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	92	92	125	16	228	49	891	321	614	1440
Protected Phases	7	4	3	8	1	5	2		1	6
Permitted Phases					8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	8.5	8.5	20.5	20.5	8.5	20.5
Total Split (s)	12.0	20.5	14.2	22.7	24.6	11.2	30.7	30.7	24.6	44.1
Total Split (%)	13.3%	22.8%	15.8%	25.2%	27.3%	12.4%	34.1%	34.1%	27.3%	49.0%
Maximum Green (s)	7.5	16.0	9.7	18.2	20.1	6.7	26.2	26.2	20.1	39.6
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Walk Time (s)		5.0					5.0	5.0		5.0
Flash Dont Walk (s)		11.0					11.0	11.0		11.0
Pedestrian Calls (#/hr)		5					10	10		5
v/c Ratio	0.25	0.41	0.61	0.08	0.41	0.34	0.52	0.44	0.78	0.52
Control Delay	32.3	36.3	50.5	33.5	17.4	44.6	24.3	5.1	37.7	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	36.3	50.5	33.5	17.4	44.6	24.3	5.1	37.7	14.7
Queue Length 50th (ft)	36	41	63	8	68	25	139	0	152	189
Queue Length 95th (ft)	#119	85	#145	24	96	63	202	59	#247	274
Internal Link Dist (ft)		470		1268			481			528
Turn Bay Length (ft)	90		140			130		130	260	
Base Capacity (vph)	373	380	220	436	597	152	1714	732	887	2746
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.24	0.57	0.04	0.38	0.32	0.52	0.44	0.69	0.52

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 79.4
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	70	15	115	15	210	45	820	295	565	1210	115
Future Volume (veh/h)	85	70	15	115	15	210	45	820	295	565	1210	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	76	16	125	16	228	49	891	321	614	1315	125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	178	37	159	265	560	62	1756	534	733	2466	234
Arrive On Green	0.07	0.12	0.12	0.09	0.14	0.14	0.03	0.34	0.34	0.21	0.52	0.52
Sat Flow, veh/h	1781	1497	315	1781	1870	1585	1781	5106	1553	3456	4732	450
Grp Volume(v), veh/h	92	0	92	125	16	228	49	891	321	614	946	494
Grp Sat Flow(s),veh/h/ln	1781	0	1812	1781	1870	1585	1781	1702	1553	1728	1702	1778
Q Serve(g_s), s	3.9	0.0	3.6	5.2	0.6	8.3	2.1	10.6	13.0	13.0	14.0	14.0
Cycle Q Clear(g_c), s	3.9	0.0	3.6	5.2	0.6	8.3	2.1	10.6	13.0	13.0	14.0	14.0
Prop In Lane	1.00		0.17	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	118	0	215	159	265	560	62	1756	534	733	1774	927
V/C Ratio(X)	0.78	0.00	0.43	0.79	0.06	0.41	0.79	0.51	0.60	0.84	0.53	0.53
Avail Cap(c_a), veh/h	175	0	380	227	447	715	157	1756	534	912	1774	927
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	31.2	34.0	28.3	18.6	36.5	19.9	20.7	28.8	12.1	12.1
Incr Delay (d2), s/veh	12.1	0.0	1.3	11.2	0.1	0.5	19.9	1.1	4.9	5.8	1.2	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	1.6	2.7	0.3	2.9	1.2	4.1	5.2	5.7	5.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	0.0	32.5	45.2	28.4	19.1	56.4	20.9	25.6	34.5	13.2	14.3
LnGrp LOS	D	A	C	D	C	B	E	C	C	C	B	B
Approach Vol, veh/h		184			369			1261			2054	
Approach Delay, s/veh		39.8			28.3			23.5			19.9	
Approach LOS		D			C			C			B	

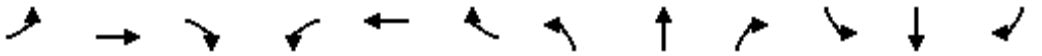
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.7	30.7	11.3	13.6	7.1	44.2	9.6	15.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.1	26.2	9.7	16.0	6.7	39.6	7.5	18.2
Max Q Clear Time (g_c+I1), s	15.0	15.0	7.2	5.6	4.1	16.0	5.9	10.3
Green Ext Time (p_c), s	1.2	5.5	0.1	0.3	0.0	11.3	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	842	266	33	424	13	14	11	92	60
Protected Phases	7	4	3	8	2	2		6	6
Permitted Phases							2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5
Total Split (s)	28.0	38.1	10.4	20.5	21.0	21.0	21.0	20.5	20.5
Total Split (%)	31.1%	42.3%	11.6%	22.8%	23.3%	23.3%	23.3%	22.8%	22.8%
Maximum Green (s)	23.5	33.6	5.9	16.0	16.5	16.5	16.5	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max	None	None
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		5		5	5	5	5	5	5
v/c Ratio	0.86	0.17	0.25	0.68	0.04	0.04	0.02	0.41	0.24
Control Delay	38.9	15.2	43.2	36.9	29.4	29.4	0.1	39.4	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	15.2	43.2	36.9	29.4	29.4	0.1	39.4	15.4
Queue Length 50th (ft)	211	43	17	104	6	6	0	45	5
Queue Length 95th (ft)	#358	77	48	166	23	24	0	91	39
Internal Link Dist (ft)		1268		162		397			490
Turn Bay Length (ft)	165		90					190	
Base Capacity (vph)	1050	1595	136	734	361	368	476	368	374
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.17	0.24	0.58	0.04	0.04	0.02	0.25	0.16

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 78.8
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	775	220	25	30	345	45	20	5	10	85	10	45
Future Volume (veh/h)	775	220	25	30	345	45	20	5	10	85	10	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	842	239	27	33	375	49	26	0	11	92	11	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	969	1339	150	48	514	67	805	0	356	150	25	111
Arrive On Green	0.28	0.42	0.42	0.03	0.16	0.16	0.23	0.00	0.23	0.08	0.08	0.08
Sat Flow, veh/h	3456	3216	359	1781	3161	410	3563	0	1577	1781	295	1316
Grp Volume(v), veh/h	842	131	135	33	210	214	26	0	11	92	0	60
Grp Sat Flow(s),veh/h/ln	1728	1777	1799	1781	1777	1794	1781	0	1577	1781	0	1611
Q Serve(g_s), s	16.9	3.4	3.5	1.3	8.2	8.3	0.4	0.0	0.4	3.6	0.0	2.6
Cycle Q Clear(g_c), s	16.9	3.4	3.5	1.3	8.2	8.3	0.4	0.0	0.4	3.6	0.0	2.6
Prop In Lane	1.00		0.20	1.00		0.23	1.00		1.00	1.00		0.82
Lane Grp Cap(c), veh/h	969	740	749	48	289	292	805	0	356	150	0	136
V/C Ratio(X)	0.87	0.18	0.18	0.69	0.73	0.74	0.03	0.00	0.03	0.61	0.00	0.44
Avail Cap(c_a), veh/h	1113	818	828	144	390	393	805	0	356	391	0	353
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.0	13.4	13.4	35.2	29.0	29.1	22.0	0.0	22.0	32.3	0.0	31.8
Incr Delay (d2), s/veh	6.8	0.1	0.1	16.5	4.4	4.7	0.1	0.0	0.2	4.0	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	1.3	1.3	0.8	3.7	3.8	0.2	0.0	0.2	1.7	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.8	13.5	13.6	51.7	33.4	33.8	22.1	0.0	22.2	36.3	0.0	34.0
LnGrp LOS	C	B	B	D	C	C	C	A	C	D	A	C
Approach Vol, veh/h		1108			457			37			152	
Approach Delay, s/veh		27.4			34.9			22.1			35.4	
Approach LOS		C			C			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		21.0	6.5	34.9		10.6	25.0	16.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		16.5	5.9	33.6		16.0	23.5	16.0				
Max Q Clear Time (g_c+I1), s		2.4	3.3	5.5		5.6	18.9	10.3				
Green Ext Time (p_c), s		0.0	0.0	1.6		0.4	1.6	1.2				

Intersection Summary												
HCM 6th Ctrl Delay			29.9									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	250	207	207	130	109
Protected Phases	4	3	8	2	3
Permitted Phases					2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	8.5	20.5	20.5	8.5
Total Split (s)	20.5	18.0	38.5	21.5	18.0
Total Split (%)	34.2%	30.0%	64.2%	35.8%	30.0%
Maximum Green (s)	16.0	13.5	34.0	17.0	13.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Max	None
Walk Time (s)	5.0				
Flash Dont Walk (s)	11.0				
Pedestrian Calls (#/hr)	10				
v/c Ratio	0.38	0.56	0.23	0.22	0.12
Control Delay	16.0	25.0	8.0	15.1	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	25.0	8.0	15.1	1.7
Queue Length 50th (ft)	26	53	32	26	0
Queue Length 95th (ft)	54	123	60	74	15
Internal Link Dist (ft)	164		458	303	
Turn Bay Length (ft)		125		100	
Base Capacity (vph)	1127	478	1269	602	1003
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.22	0.43	0.16	0.22	0.11

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 50.5
Control Type: Actuated-Uncoordinated

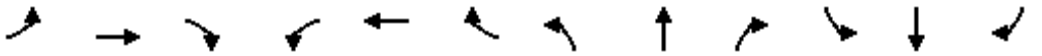
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	180	50	190	190	120	100
Future Volume (veh/h)	180	50	190	190	120	100
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.95	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	196	54	207	207	130	109
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	402	107	269	751	697	860
Arrive On Green	0.15	0.15	0.15	0.40	0.39	0.39
Sat Flow, veh/h	2837	731	1781	1870	1781	1585
Grp Volume(v), veh/h	125	125	207	207	130	109
Grp Sat Flow(s),veh/h/ln	1777	1697	1781	1870	1781	1585
Q Serve(g_s), s	2.8	3.0	4.8	3.2	2.1	1.5
Cycle Q Clear(g_c), s	2.8	3.0	4.8	3.2	2.1	1.5
Prop In Lane		0.43	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	260	249	269	751	697	860
V/C Ratio(X)	0.48	0.50	0.77	0.28	0.19	0.13
Avail Cap(c_a), veh/h	655	625	554	1464	697	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	17.1	17.7	8.8	8.7	4.9
Incr Delay (d2), s/veh	1.4	1.6	4.6	0.2	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.1	2.1	1.0	0.7	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.4	18.7	22.3	8.9	9.3	5.2
LnGrp LOS	B	B	C	A	A	A
Approach Vol, veh/h	250			414	239	
Approach Delay, s/veh	18.5			15.6	7.4	
Approach LOS	B			B	A	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		21.5	11.1	10.9		21.9
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		17.0	13.5	16.0		34.0
Max Q Clear Time (g_c+I1), s		4.1	6.8	5.0		5.2
Green Ext Time (p_c), s		0.6	0.3	1.0		1.2

Intersection Summary	
HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	98	228	5	5	522	0	10	5	0	59	196
Protected Phases	7	4		3	8		2			6	7
Permitted Phases			4			2		2	6		6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5	8.5
Total Split (s)	15.0	28.0	28.0	9.0	22.0	23.0	23.0	23.0	23.0	23.0	15.0
Total Split (%)	25.0%	46.7%	46.7%	15.0%	36.7%	38.3%	38.3%	38.3%	38.3%	38.3%	25.0%
Maximum Green (s)	10.5	23.5	23.5	4.5	17.5	18.5	18.5	18.5	18.5	18.5	10.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag						Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max	None
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	5	
v/c Ratio	0.35	0.29	0.01	0.03	0.58		0.02	0.01		0.11	0.22
Control Delay	25.0	11.1	0.0	25.6	19.1		13.9	0.0		14.5	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	25.0	11.1	0.0	25.6	19.1		13.9	0.0		14.5	3.0
Queue Length 50th (ft)	29	39	0	2	71		2	0		13	7
Queue Length 95th (ft)	69	100	0	10	117		11	0		38	32
Internal Link Dist (ft)		321			351		325			639	
Turn Bay Length (ft)	100		100	25				40			150
Base Capacity (vph)	372	939	829	159	1230		639	691		551	971
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.26	0.24	0.01	0.03	0.42		0.02	0.01		0.11	0.20

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 51.5
Control Type: Actuated-Uncoordinated



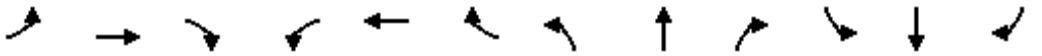
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	210	5	5	410	70	5	5	5	50	5	180
Future Volume (veh/h)	90	210	5	5	410	70	5	5	5	50	5	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	228	5	5	446	76	5	5	5	54	5	196
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	555	457	10	701	119	203	166	636	324	24	752
Arrive On Green	0.07	0.30	0.30	0.01	0.23	0.23	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1781	1870	1541	1781	3036	514	210	412	1577	429	58	1584
Grp Volume(v), veh/h	98	228	5	5	260	262	10	0	5	59	0	196
Grp Sat Flow(s),veh/h/ln	1781	1870	1541	1781	1777	1773	622	0	1577	488	0	1584
Q Serve(g_s), s	2.5	4.5	0.1	0.1	6.0	6.1	0.1	0.0	0.1	1.5	0.0	3.4
Cycle Q Clear(g_c), s	2.5	4.5	0.1	0.1	6.0	6.1	13.2	0.0	0.1	13.9	0.0	3.4
Prop In Lane	1.00		1.00	1.00		0.29	0.50		1.00	0.92		1.00
Lane Grp Cap(c), veh/h	127	555	457	10	410	409	369	0	636	347	0	752
V/C Ratio(X)	0.77	0.41	0.01	0.52	0.63	0.64	0.03	0.00	0.01	0.17	0.00	0.26
Avail Cap(c_a), veh/h	408	959	790	175	678	677	369	0	636	347	0	752
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.9	12.9	11.4	22.7	15.9	15.9	9.6	0.0	8.2	16.2	0.0	7.2
Incr Delay (d2), s/veh	9.6	0.5	0.0	37.6	1.6	1.7	0.1	0.0	0.0	1.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.7	0.0	0.1	2.3	2.3	0.1	0.0	0.0	0.6	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	13.4	11.4	60.4	17.5	17.6	9.7	0.0	8.2	17.3	0.0	8.1
LnGrp LOS	C	B	B	E	B	B	A	A	A	B	A	A
Approach Vol, veh/h		331			527			15			255	
Approach Delay, s/veh		18.4			18.0			9.2			10.2	
Approach LOS		B			B			A			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	4.7	18.1		23.0	7.8	15.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	4.5	23.5		18.5	10.5	17.5				
Max Q Clear Time (g_c+I1), s		15.2	2.1	6.5		15.9	4.5	8.1				
Green Ext Time (p_c), s		0.0	0.0	1.1		0.2	0.1	2.2				

Intersection Summary												
HCM 6th Ctrl Delay			16.2									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	125	130	337	489	310	462	277	1543	728	49	1381
Protected Phases	7	4	5	3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.0	8.5	8.5	20.5	8.5	8.5	20.5	8.5	8.5	20.5
Total Split (s)	9.9	20.0	14.9	19.0	29.1	14.0	14.9	37.0	19.0	14.0	36.1
Total Split (%)	11.0%	22.2%	16.6%	21.1%	32.3%	15.6%	16.6%	41.1%	21.1%	15.6%	40.1%
Maximum Green (s)	5.4	15.5	10.4	14.5	24.6	9.5	10.4	32.5	14.5	9.5	31.6
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max
Walk Time (s)					5.0			5.0			5.0
Flash Dont Walk (s)					11.0			11.0			11.0
Pedestrian Calls (#/hr)					5			15			5
v/c Ratio	0.57	0.30	0.61	0.83	0.73	0.83	0.68	0.76	0.41	0.15	0.73
Control Delay	50.5	35.3	20.4	48.5	40.7	33.1	45.7	25.7	3.0	37.0	25.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.5	35.3	20.4	48.5	40.7	33.1	45.7	25.7	3.0	37.0	25.8
Queue Length 50th (ft)	34	33	93	130	153	175	73	250	20	12	223
Queue Length 95th (ft)	#70	60	178	#228	241	276	#123	352	54	30	307
Internal Link Dist (ft)		491			575			528			491
Turn Bay Length (ft)	170		200	280			150		100	165	
Base Capacity (vph)	219	649	561	589	543	583	423	2031	1784	386	1889
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.20	0.60	0.83	0.57	0.79	0.65	0.76	0.41	0.13	0.73

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 84.6
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



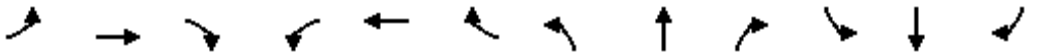
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	120	310	450	285	425	255	1420	670	45	1170	100
Future Volume (veh/h)	115	120	310	450	285	425	255	1420	670	45	1170	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	125	130	337	489	310	462	277	1543	728	49	1272	109
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	623	440	558	526	495	354	2186	1618	109	1709	146
Arrive On Green	0.06	0.18	0.18	0.16	0.28	0.28	0.10	0.43	0.43	0.03	0.36	0.36
Sat Flow, veh/h	3456	3554	1585	3456	1870	1580	3456	5106	2727	3456	4784	410
Grp Volume(v), veh/h	125	130	337	489	310	462	277	1543	728	49	905	476
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1870	1580	1728	1702	1364	1728	1702	1790
Q Serve(g_s), s	3.1	2.8	15.5	12.2	12.6	24.9	6.9	21.9	13.2	1.2	20.6	20.6
Cycle Q Clear(g_c), s	3.1	2.8	15.5	12.2	12.6	24.9	6.9	21.9	13.2	1.2	20.6	20.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	192	623	440	558	526	495	354	2186	1618	109	1216	640
V/C Ratio(X)	0.65	0.21	0.77	0.88	0.59	0.93	0.78	0.71	0.45	0.45	0.74	0.74
Avail Cap(c_a), veh/h	211	623	440	567	526	495	406	2186	1618	371	1216	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	31.2	29.3	36.2	27.4	29.5	38.7	20.7	10.2	42.1	24.9	24.9
Incr Delay (d2), s/veh	6.1	0.2	7.9	14.2	1.7	25.0	8.4	1.9	0.9	2.9	4.2	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.2	7.3	6.2	5.7	12.6	3.3	8.6	3.8	0.6	8.7	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	31.4	37.2	50.5	29.1	54.5	47.2	22.7	11.1	44.9	29.0	32.6
LnGrp LOS	D	C	D	D	C	D	D	C	B	D	C	C
Approach Vol, veh/h		592			1261			2548			1430	
Approach Delay, s/veh		38.0			46.7			22.0			30.8	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	42.4	18.8	20.0	13.6	36.1	9.4	29.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	9.5	32.5	14.5	15.5	10.4	31.6	5.4	24.6
Max Q Clear Time (g_c+I1), s	3.2	23.9	14.2	17.5	8.9	22.6	5.1	26.9
Green Ext Time (p_c), s	0.0	7.2	0.1	0.0	0.2	5.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	31.1
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	158	146	217	22	451	27	1245	413	685	1386
Protected Phases	7	4	3	8	1	5	2		1	6
Permitted Phases					8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	8.5	8.5	20.5	20.5	8.5	20.5
Total Split (s)	13.6	20.5	15.6	22.5	22.0	10.1	31.9	31.9	22.0	43.8
Total Split (%)	15.1%	22.8%	17.3%	25.0%	24.4%	11.2%	35.4%	35.4%	24.4%	48.7%
Maximum Green (s)	9.1	16.0	11.1	18.0	17.5	5.6	27.4	27.4	17.5	39.3
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Walk Time (s)		5.0					5.0	5.0		5.0
Flash Dont Walk (s)		11.0					11.0	11.0		11.0
Pedestrian Calls (#/hr)		5					10	10		5
v/c Ratio	0.40	0.57	0.95	0.10	0.86	0.23	0.77	0.58	0.98	0.52
Control Delay	38.0	42.4	88.0	32.4	39.3	44.6	30.4	9.8	64.9	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.0	42.4	88.0	32.4	39.3	44.6	30.4	9.8	64.9	15.1
Queue Length 50th (ft)	63	72	118	11	~263	14	219	35	190	146
Queue Length 95th (ft)	#204	130	#268	30	258	41	292	127	#324	263
Internal Link Dist (ft)		470		1268			481			528
Turn Bay Length (ft)	90		140			130		130	260	
Base Capacity (vph)	392	346	229	391	526	115	1626	713	701	2682
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.42	0.95	0.06	0.86	0.23	0.77	0.58	0.98	0.52

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 85.8
Control Type: Actuated-Uncoordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	120	15	200	20	415	25	1145	380	630	1210	65
Future Volume (veh/h)	145	120	15	200	20	415	25	1145	380	630	1210	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	158	130	16	217	22	451	27	1245	413	685	1315	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	180	290	36	220	374	625	39	1555	472	672	2363	128
Arrive On Green	0.10	0.18	0.18	0.12	0.20	0.20	0.02	0.30	0.30	0.19	0.48	0.48
Sat Flow, veh/h	1781	1632	201	1781	1870	1585	1781	5106	1551	3456	4952	267
Grp Volume(v), veh/h	158	0	146	217	22	451	27	1245	413	685	904	482
Grp Sat Flow(s),veh/h/ln	1781	0	1833	1781	1870	1585	1781	1702	1551	1728	1702	1816
Q Serve(g_s), s	7.9	0.0	6.4	10.9	0.9	18.0	1.4	20.2	22.7	17.5	17.0	17.0
Cycle Q Clear(g_c), s	7.9	0.0	6.4	10.9	0.9	18.0	1.4	20.2	22.7	17.5	17.0	17.0
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	180	0	326	220	374	625	39	1555	472	672	1624	866
V/C Ratio(X)	0.88	0.00	0.45	0.99	0.06	0.72	0.69	0.80	0.87	1.02	0.56	0.56
Avail Cap(c_a), veh/h	180	0	326	220	374	625	111	1555	472	672	1624	866
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	0.0	33.1	39.4	29.1	23.1	43.7	28.8	29.7	36.3	16.8	16.8
Incr Delay (d2), s/veh	35.2	0.0	1.0	57.1	0.1	4.1	19.9	4.4	19.7	39.7	1.4	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	2.9	8.2	0.4	8.4	0.8	8.6	10.7	10.9	6.6	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.1	0.0	34.0	96.5	29.2	27.1	63.6	33.2	49.4	75.9	18.1	19.3
LnGrp LOS	E	A	C	F	C	C	E	C	D	F	B	B
Approach Vol, veh/h		304			690			1685			2071	
Approach Delay, s/veh		55.4			49.0			37.7			37.5	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	31.9	15.6	20.5	6.5	47.4	13.6	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	17.5	27.4	11.1	16.0	5.6	39.3	9.1	18.0
Max Q Clear Time (g_c+I1), s	19.5	24.7	12.9	8.4	3.4	19.0	9.9	20.0
Green Ext Time (p_c), s	0.0	2.1	0.0	0.4	0.0	9.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	40.4
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	804	462	125	674	115	118	16	185	114
Protected Phases	7	4	3	8	2	2		6	6
Permitted Phases							2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5
Total Split (s)	26.5	31.3	17.4	22.2	20.8	20.8	20.8	20.5	20.5
Total Split (%)	29.4%	34.8%	19.3%	24.7%	23.1%	23.1%	23.1%	22.8%	22.8%
Maximum Green (s)	22.0	26.8	12.9	17.7	16.3	16.3	16.3	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max	None	None
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		5		5	5	5	5	5	5
v/c Ratio	0.93	0.40	0.58	0.94	0.37	0.37	0.04	0.69	0.39
Control Delay	51.8	23.1	47.3	55.6	35.8	35.7	0.1	48.5	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.8	23.1	47.3	55.6	35.8	35.7	0.1	48.5	28.9
Queue Length 50th (ft)	227	97	66	187	60	61	0	98	42
Queue Length 95th (ft)	#351	148	122	#307	114	116	0	167	92
Internal Link Dist (ft)		1268		162		397			490
Turn Bay Length (ft)	165		90					190	
Base Capacity (vph)	865	1156	261	719	313	322	438	324	343
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.40	0.48	0.94	0.37	0.37	0.04	0.57	0.33

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 87.4
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	740	345	80	115	485	135	165	50	15	170	65	40
Future Volume (veh/h)	740	345	80	115	485	135	165	50	15	170	65	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	804	375	87	125	527	147	116	141	16	185	71	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	877	1069	245	158	573	159	342	359	303	237	145	88
Arrive On Green	0.25	0.37	0.37	0.09	0.21	0.21	0.19	0.19	0.19	0.13	0.13	0.13
Sat Flow, veh/h	3456	2861	656	1781	2744	762	1781	1870	1575	1781	1087	658
Grp Volume(v), veh/h	804	231	231	125	340	334	116	141	16	185	0	114
Grp Sat Flow(s),veh/h/ln	1728	1777	1739	1781	1777	1729	1781	1870	1575	1781	0	1745
Q Serve(g_s), s	19.2	7.9	8.1	5.8	15.9	16.0	4.8	5.6	0.7	8.5	0.0	5.1
Cycle Q Clear(g_c), s	19.2	7.9	8.1	5.8	15.9	16.0	4.8	5.6	0.7	8.5	0.0	5.1
Prop In Lane	1.00		0.38	1.00		0.44	1.00		1.00	1.00		0.38
Lane Grp Cap(c), veh/h	877	664	650	158	371	361	342	359	303	237	0	233
V/C Ratio(X)	0.92	0.35	0.36	0.79	0.92	0.92	0.34	0.39	0.05	0.78	0.00	0.49
Avail Cap(c_a), veh/h	896	664	650	271	371	361	342	359	303	336	0	329
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.8	19.1	19.2	37.9	32.9	32.9	29.6	29.9	28.0	35.6	0.0	34.1
Incr Delay (d2), s/veh	13.9	0.3	0.3	8.5	27.2	29.0	2.7	3.2	0.3	7.4	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	3.2	3.2	2.9	9.4	9.4	2.3	2.8	0.3	4.1	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.7	19.4	19.5	46.4	60.1	62.0	32.3	33.1	28.3	42.9	0.0	35.7
LnGrp LOS	D	B	B	D	E	E	C	C	C	D	A	D
Approach Vol, veh/h		1266			799			273			299	
Approach Delay, s/veh		35.5			58.7			32.5			40.2	
Approach LOS		D			E			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		20.8	12.0	36.2		15.8	26.0	22.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		16.3	12.9	26.8		16.0	22.0	17.7				
Max Q Clear Time (g_c+I1), s		7.6	7.8	10.1		10.5	21.2	18.0				
Green Ext Time (p_c), s		0.7	0.1	2.5		0.6	0.3	0.0				

Intersection Summary												
HCM 6th Ctrl Delay			42.7									
HCM 6th LOS			D									

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	587	250	446	185	304
Protected Phases	4	3	8	2	3
Permitted Phases					2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	8.5	20.5	20.5	8.5
Total Split (s)	20.5	19.0	39.5	20.5	19.0
Total Split (%)	34.2%	31.7%	65.8%	34.2%	31.7%
Maximum Green (s)	16.0	14.5	35.0	16.0	14.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Max	None
Walk Time (s)	5.0				
Flash Dont Walk (s)	11.0				
Pedestrian Calls (#/hr)	10				
v/c Ratio	0.66	0.65	0.44	0.36	0.35
Control Delay	19.5	28.9	8.9	19.5	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.5	28.9	8.9	19.5	4.8
Queue Length 50th (ft)	75	77	77	50	23
Queue Length 95th (ft)	125	145	130	104	57
Internal Link Dist (ft)	164		458	303	
Turn Bay Length (ft)		125		100	
Base Capacity (vph)	1057	470	1196	519	938
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.56	0.53	0.37	0.36	0.32

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 55.1
Control Type: Actuated-Uncoordinated

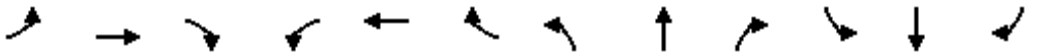
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	380	160	230	410	170	280
Future Volume (veh/h)	380	160	230	410	170	280
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	413	174	250	446	185	304
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	580	241	313	944	565	781
Arrive On Green	0.24	0.24	0.18	0.50	0.32	0.32
Sat Flow, veh/h	2511	1004	1781	1870	1781	1585
Grp Volume(v), veh/h	302	285	250	446	185	304
Grp Sat Flow(s),veh/h/ln	1777	1646	1781	1870	1781	1585
Q Serve(g_s), s	7.9	8.0	6.8	7.8	4.0	6.1
Cycle Q Clear(g_c), s	7.9	8.0	6.8	7.8	4.0	6.1
Prop In Lane		0.61	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	426	395	313	944	565	781
V/C Ratio(X)	0.71	0.72	0.80	0.47	0.33	0.39
Avail Cap(c_a), veh/h	563	522	512	1297	565	781
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	17.6	19.9	8.1	13.1	8.0
Incr Delay (d2), s/veh	2.7	3.3	4.7	0.4	1.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	3.0	2.9	2.5	1.6	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.3	21.0	24.6	8.5	14.7	9.5
LnGrp LOS	C	C	C	A	B	A
Approach Vol, veh/h	587			696	489	
Approach Delay, s/veh	20.6			14.3	11.5	
Approach LOS	C			B	B	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		20.5	13.4	16.6		30.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		16.0	14.5	16.0		35.0
Max Q Clear Time (g_c+I1), s		8.1	8.8	10.0		9.8
Green Ext Time (p_c), s		1.1	0.4	1.9		2.9

Intersection Summary	
HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	304	663	5	5	446	0	10	5	0	168	152
Protected Phases	7	4		3	8		2			6	7
Permitted Phases			4			2		2	6		6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5	8.5
Total Split (s)	18.5	31.0	31.0	8.5	21.0	20.5	20.5	20.5	20.5	20.5	18.5
Total Split (%)	30.8%	51.7%	51.7%	14.2%	35.0%	34.2%	34.2%	34.2%	34.2%	34.2%	30.8%
Maximum Green (s)	14.0	26.5	26.5	4.0	16.5	16.0	16.0	16.0	16.0	16.0	14.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag						Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max	None
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	5	
v/c Ratio	0.73	0.70	0.01	0.04	0.57		0.02	0.01		0.42	0.17
Control Delay	32.7	16.8	0.0	26.2	18.8		15.8	0.0		20.8	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	32.7	16.8	0.0	26.2	18.8		15.8	0.0		20.8	1.7
Queue Length 50th (ft)	89	136	0	2	57		2	0		44	0
Queue Length 95th (ft)	#208	#374	0	11	94		12	0		102	19
Internal Link Dist (ft)		321			351		325			639	
Turn Bay Length (ft)	100		100	25				40			150
Base Capacity (vph)	462	983	863	132	1091		496	593		403	947
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.66	0.67	0.01	0.04	0.41		0.02	0.01		0.42	0.16

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 54
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	610	5	5	310	100	5	5	5	150	5	140
Future Volume (veh/h)	280	610	5	5	310	100	5	5	5	150	5	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	304	663	5	5	337	109	5	5	5	163	5	152
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	368	778	642	10	568	181	106	73	494	139	2	824
Arrive On Green	0.21	0.42	0.42	0.01	0.21	0.21	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	1870	1544	1781	2645	841	0	233	1575	0	7	1584
Grp Volume(v), veh/h	304	663	5	5	224	222	10	0	5	168	0	152
Grp Sat Flow(s),veh/h/ln	1781	1870	1544	1781	1777	1710	233	0	1575	7	0	1584
Q Serve(g_s), s	8.3	16.3	0.1	0.1	5.8	6.0	0.0	0.0	0.1	0.0	0.0	2.6
Cycle Q Clear(g_c), s	8.3	16.3	0.1	0.1	5.8	6.0	16.0	0.0	0.1	16.0	0.0	2.6
Prop In Lane	1.00		1.00	1.00		0.49	0.50		1.00	0.97		1.00
Lane Grp Cap(c), veh/h	368	778	642	10	382	367	179	0	494	141	0	824
V/C Ratio(X)	0.83	0.85	0.01	0.52	0.59	0.60	0.06	0.00	0.01	1.19	0.00	0.18
Avail Cap(c_a), veh/h	489	973	803	140	575	554	179	0	494	141	0	824
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.4	13.5	8.7	25.3	18.0	18.0	14.0	0.0	12.0	25.2	0.0	6.5
Incr Delay (d2), s/veh	8.6	6.1	0.0	38.0	1.4	1.6	0.6	0.0	0.0	135.0	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	6.9	0.0	0.2	2.3	2.3	0.1	0.0	0.0	6.9	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	19.6	8.7	63.3	19.4	19.6	14.6	0.0	12.1	160.2	0.0	7.0
LnGrp LOS	C	B	A	E	B	B	B	A	B	F	A	A
Approach Vol, veh/h		972			451			15			320	
Approach Delay, s/veh		22.2			20.0			13.7			87.4	
Approach LOS		C			C			B			F	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		20.5	4.8	25.7		20.5	15.0	15.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		16.0	4.0	26.5		16.0	14.0	16.5				
Max Q Clear Time (g_c+I1), s		18.0	2.1	18.3		18.0	10.3	8.0				
Green Ext Time (p_c), s		0.0	0.0	2.8		0.0	0.3	1.7				

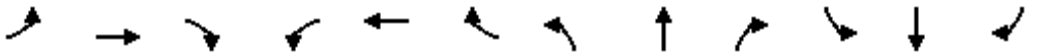
Intersection Summary	
HCM 6th Ctrl Delay	33.4
HCM 6th LOS	C

Appendix N

Horizon Year 2030 + Project Intersection LOS Calculations

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	60	147	277	479	120	370	120	951	877	49	1572
Protected Phases	7	4	5	3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.0	8.5	8.5	20.5	8.5	8.5	20.5	8.5	8.5	20.5
Total Split (s)	9.4	20.0	12.3	20.4	31.0	18.8	12.3	30.8	20.4	18.8	37.3
Total Split (%)	10.4%	22.2%	13.7%	22.7%	34.4%	20.9%	13.7%	34.2%	22.7%	20.9%	41.4%
Maximum Green (s)	4.9	15.5	7.8	15.9	26.5	14.3	7.8	26.3	15.9	14.3	32.8
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max
Walk Time (s)					5.0			5.0			5.0
Flash Dont Walk (s)					11.0			11.0			11.0
Pedestrian Calls (#/hr)					5			15			5
v/c Ratio	0.29	0.39	0.52	0.75	0.25	0.64	0.39	0.46	0.45	0.17	0.78
Control Delay	42.1	37.7	13.4	40.4	27.0	21.5	40.0	19.4	1.3	37.0	25.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	37.7	13.4	40.4	27.0	21.5	40.0	19.4	1.3	37.0	25.2
Queue Length 50th (ft)	15	38	40	122	51	121	30	128	0	12	257
Queue Length 95th (ft)	36	66	109	#181	96	199	58	181	22	29	331
Internal Link Dist (ft)		491			575			528			491
Turn Bay Length (ft)	170		200	280			150		100	165	
Base Capacity (vph)	204	667	540	663	600	717	325	2056	1979	597	2021
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.22	0.51	0.72	0.20	0.52	0.37	0.46	0.44	0.08	0.78

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 82.3
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



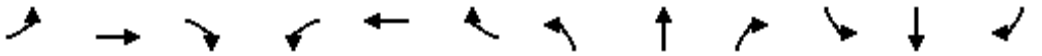
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	135	255	441	110	340	110	875	807	45	1401	45
Future Volume (veh/h)	55	135	255	441	110	340	110	875	807	45	1401	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	147	277	479	120	370	120	951	877	49	1523	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	649	377	566	581	542	190	2089	1573	112	1962	63
Arrive On Green	0.04	0.18	0.18	0.16	0.31	0.31	0.06	0.41	0.41	0.03	0.39	0.39
Sat Flow, veh/h	3456	3554	1585	3456	1870	1580	3456	5106	2726	3456	5079	163
Grp Volume(v), veh/h	60	147	277	479	120	370	120	951	877	49	1021	551
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1870	1580	1728	1702	1363	1728	1702	1838
Q Serve(g_s), s	1.4	3.0	13.7	11.4	4.0	17.0	2.9	11.5	17.2	1.2	22.3	22.3
Cycle Q Clear(g_c), s	1.4	3.0	13.7	11.4	4.0	17.0	2.9	11.5	17.2	1.2	22.3	22.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	123	649	377	566	581	542	190	2089	1573	112	1315	710
V/C Ratio(X)	0.49	0.23	0.74	0.85	0.21	0.68	0.63	0.46	0.56	0.44	0.78	0.78
Avail Cap(c_a), veh/h	199	649	377	647	584	545	318	2089	1573	582	1315	710
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	29.6	29.9	34.4	21.5	23.9	39.3	18.2	11.4	40.3	22.8	22.8
Incr Delay (d2), s/veh	3.0	0.2	7.3	9.1	0.2	3.5	3.4	0.7	1.4	2.7	4.5	8.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.3	5.8	5.4	1.7	6.6	1.3	4.4	4.9	0.5	9.3	10.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	29.8	37.2	43.6	21.7	27.4	42.7	18.9	12.8	43.0	27.4	31.0
LnGrp LOS	D	C	D	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		484			969			1948			1621	
Approach Delay, s/veh		35.7			34.7			17.6			29.1	
Approach LOS		D			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	39.2	18.4	20.0	9.2	37.3	7.5	30.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	14.3	26.3	15.9	15.5	7.8	32.8	4.9	26.5
Max Q Clear Time (g_c+I1), s	3.2	19.2	13.4	15.7	4.9	24.3	3.4	19.0
Green Ext Time (p_c), s	0.1	5.2	0.5	0.0	0.1	6.0	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	26.4
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	92	92	125	16	230	49	891	321	616	1440
Protected Phases	7	4	3	8	1	5	2		1	6
Permitted Phases					8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	8.5	8.5	20.5	20.5	8.5	20.5
Total Split (s)	12.0	20.5	14.2	22.7	24.6	11.2	30.7	30.7	24.6	44.1
Total Split (%)	13.3%	22.8%	15.8%	25.2%	27.3%	12.4%	34.1%	34.1%	27.3%	49.0%
Maximum Green (s)	7.5	16.0	9.7	18.2	20.1	6.7	26.2	26.2	20.1	39.6
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Walk Time (s)		5.0					5.0	5.0		5.0
Flash Dont Walk (s)		11.0					11.0	11.0		11.0
Pedestrian Calls (#/hr)		5					10	10		5
v/c Ratio	0.25	0.41	0.62	0.08	0.42	0.34	0.52	0.44	0.78	0.52
Control Delay	32.3	36.3	50.6	33.5	17.5	44.6	24.3	5.1	37.8	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	36.3	50.6	33.5	17.5	44.6	24.3	5.1	37.8	14.7
Queue Length 50th (ft)	36	41	63	8	69	25	139	0	153	189
Queue Length 95th (ft)	#119	85	#145	24	97	63	202	59	#248	274
Internal Link Dist (ft)		470		1268			481			528
Turn Bay Length (ft)	90		140			130		130	260	
Base Capacity (vph)	373	380	220	436	597	152	1713	732	887	2747
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.24	0.57	0.04	0.39	0.32	0.52	0.44	0.69	0.52

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 79.4
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	70	15	115	15	212	45	820	295	567	1210	115
Future Volume (veh/h)	85	70	15	115	15	212	45	820	295	567	1210	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	76	16	125	16	230	49	891	321	616	1315	125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	179	38	159	266	562	62	1752	533	734	2465	234
Arrive On Green	0.07	0.12	0.12	0.09	0.14	0.14	0.03	0.34	0.34	0.21	0.52	0.52
Sat Flow, veh/h	1781	1497	315	1781	1870	1585	1781	5106	1553	3456	4732	450
Grp Volume(v), veh/h	92	0	92	125	16	230	49	891	321	616	946	494
Grp Sat Flow(s),veh/h/ln	1781	0	1812	1781	1870	1585	1781	1702	1553	1728	1702	1778
Q Serve(g_s), s	3.9	0.0	3.6	5.2	0.6	8.4	2.1	10.6	13.1	13.0	14.1	14.1
Cycle Q Clear(g_c), s	3.9	0.0	3.6	5.2	0.6	8.4	2.1	10.6	13.1	13.0	14.1	14.1
Prop In Lane	1.00		0.17	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	118	0	217	159	266	562	62	1752	533	734	1773	926
V/C Ratio(X)	0.78	0.00	0.42	0.79	0.06	0.41	0.79	0.51	0.60	0.84	0.53	0.53
Avail Cap(c_a), veh/h	175	0	380	226	446	714	156	1752	533	910	1773	926
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.1	0.0	31.2	34.1	28.3	18.6	36.6	20.0	20.8	28.8	12.1	12.1
Incr Delay (d2), s/veh	12.2	0.0	1.3	11.3	0.1	0.5	19.8	1.1	5.0	5.9	1.2	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	1.6	2.7	0.3	3.0	1.2	4.1	5.2	5.8	5.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.3	0.0	32.5	45.3	28.4	19.1	56.4	21.0	25.7	34.7	13.3	14.3
LnGrp LOS	D	A	C	D	C	B	E	C	C	C	B	B
Approach Vol, veh/h		184			371			1261			2056	
Approach Delay, s/veh		39.9			28.3			23.6			19.9	
Approach LOS		D			C			C			B	

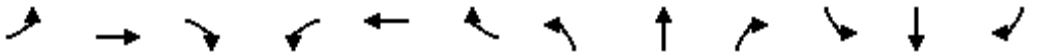
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.7	30.7	11.3	13.6	7.1	44.3	9.6	15.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.1	26.2	9.7	16.0	6.7	39.6	7.5	18.2
Max Q Clear Time (g_c+I1), s	15.0	15.1	7.2	5.6	4.1	16.1	5.9	10.4
Green Ext Time (p_c), s	1.2	5.5	0.1	0.3	0.0	11.3	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	842	268	33	427	13	14	11	96	60
Protected Phases	7	4	3	8	2	2		6	6
Permitted Phases							2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5
Total Split (s)	28.0	38.1	10.4	20.5	21.0	21.0	21.0	20.5	20.5
Total Split (%)	31.1%	42.3%	11.6%	22.8%	23.3%	23.3%	23.3%	22.8%	22.8%
Maximum Green (s)	23.5	33.6	5.9	16.0	16.5	16.5	16.5	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max	None	None
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		5		5	5	5	5	5	5
v/c Ratio	0.86	0.17	0.25	0.69	0.04	0.04	0.02	0.42	0.24
Control Delay	39.1	15.2	43.3	37.1	29.5	29.5	0.1	39.7	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	15.2	43.3	37.1	29.5	29.5	0.1	39.7	15.3
Queue Length 50th (ft)	212	44	17	106	6	6	0	47	5
Queue Length 95th (ft)	#358	78	48	167	23	24	0	93	39
Internal Link Dist (ft)		1268		162		397			490
Turn Bay Length (ft)	165		90					190	
Base Capacity (vph)	1048	1593	135	732	360	367	476	368	373
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.17	0.24	0.58	0.04	0.04	0.02	0.26	0.16

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 79
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	775	222	25	30	347	46	20	5	10	88	10	45
Future Volume (veh/h)	775	222	25	30	347	46	20	5	10	88	10	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	842	241	27	33	377	50	26	0	11	96	11	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	968	1341	149	48	514	68	802	0	355	154	26	114
Arrive On Green	0.28	0.42	0.42	0.03	0.16	0.16	0.22	0.00	0.22	0.09	0.09	0.09
Sat Flow, veh/h	3456	3219	357	1781	3154	415	3563	0	1577	1781	295	1316
Grp Volume(v), veh/h	842	132	136	33	211	216	26	0	11	96	0	60
Grp Sat Flow(s),veh/h/ln	1728	1777	1799	1781	1777	1793	1781	0	1577	1781	0	1612
Q Serve(g_s), s	17.0	3.4	3.5	1.3	8.3	8.4	0.4	0.0	0.4	3.8	0.0	2.6
Cycle Q Clear(g_c), s	17.0	3.4	3.5	1.3	8.3	8.4	0.4	0.0	0.4	3.8	0.0	2.6
Prop In Lane	1.00		0.20	1.00		0.23	1.00		1.00	1.00		0.82
Lane Grp Cap(c), veh/h	968	740	749	48	290	292	802	0	355	154	0	139
V/C Ratio(X)	0.87	0.18	0.18	0.69	0.73	0.74	0.03	0.00	0.03	0.62	0.00	0.43
Avail Cap(c_a), veh/h	1107	814	824	143	388	391	802	0	355	389	0	352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.1	13.5	13.5	35.4	29.1	29.2	22.2	0.0	22.2	32.3	0.0	31.8
Incr Delay (d2), s/veh	6.9	0.1	0.1	16.6	4.6	5.0	0.1	0.0	0.2	4.1	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	1.3	1.3	0.8	3.8	3.9	0.2	0.0	0.2	1.8	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.1	13.6	13.6	51.9	33.8	34.2	22.3	0.0	22.3	36.4	0.0	33.9
LnGrp LOS	C	B	B	D	C	C	C	A	C	D	A	C
Approach Vol, veh/h		1110			460			37			156	
Approach Delay, s/veh		27.6			35.2			22.3			35.4	
Approach LOS		C			D			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		21.0	6.5	35.0		10.8	25.0	16.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		16.5	5.9	33.6		16.0	23.5	16.0				
Max Q Clear Time (g_c+I1), s		2.4	3.3	5.5		5.8	19.0	10.4				
Green Ext Time (p_c), s		0.0	0.0	1.6		0.4	1.5	1.2				

Intersection Summary	
HCM 6th Ctrl Delay	30.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	244	1	1	313	0	1
Future Vol, veh/h	244	1	1	313	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	265	1	1	340	0	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	266	0	608	133
Stage 1	-	-	-	-	266	-
Stage 2	-	-	-	-	342	-
Critical Hdwy	-	-	4.13	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1296	-	443	892
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	718	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1296	-	443	892
Mov Cap-2 Maneuver	-	-	-	-	443	-
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	717	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	892	-	-	1296	-
HCM Lane V/C Ratio	0.001	-	-	0.001	-
HCM Control Delay (s)	9	-	-	7.8	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	256	210	208	134	112
Protected Phases	4	3	8	2	3
Permitted Phases					2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	8.5	20.5	20.5	8.5
Total Split (s)	20.5	18.0	38.5	21.5	18.0
Total Split (%)	34.2%	30.0%	64.2%	35.8%	30.0%
Maximum Green (s)	16.0	13.5	34.0	17.0	13.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Max	None
Walk Time (s)	5.0				
Flash Dont Walk (s)	11.0				
Pedestrian Calls (#/hr)	10				
v/c Ratio	0.39	0.57	0.23	0.22	0.12
Control Delay	15.8	25.2	8.0	15.3	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	25.2	8.0	15.3	1.7
Queue Length 50th (ft)	27	54	33	27	0
Queue Length 95th (ft)	55	125	60	76	16
Internal Link Dist (ft)	292		458	303	
Turn Bay Length (ft)		125		100	
Base Capacity (vph)	1124	477	1266	601	1003
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.23	0.44	0.16	0.22	0.11

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 50.6
Control Type: Actuated-Uncoordinated

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	181	54	193	191	123	103
Future Volume (veh/h)	181	54	193	191	123	103
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.95	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	197	59	210	208	134	112
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	399	115	273	757	693	860
Arrive On Green	0.15	0.15	0.15	0.40	0.39	0.39
Sat Flow, veh/h	2781	776	1781	1870	1781	1585
Grp Volume(v), veh/h	128	128	210	208	134	112
Grp Sat Flow(s),veh/h/ln	1777	1687	1781	1870	1781	1585
Q Serve(g_s), s	2.9	3.1	4.9	3.3	2.2	1.5
Cycle Q Clear(g_c), s	2.9	3.1	4.9	3.3	2.2	1.5
Prop In Lane		0.46	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	264	251	273	757	693	860
V/C Ratio(X)	0.48	0.51	0.77	0.27	0.19	0.13
Avail Cap(c_a), veh/h	651	618	551	1456	693	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	17.1	17.8	8.7	8.8	4.9
Incr Delay (d2), s/veh	1.4	1.6	4.6	0.2	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.1	2.1	1.1	0.8	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.4	18.7	22.3	8.9	9.4	5.2
LnGrp LOS	B	B	C	A	A	A
Approach Vol, veh/h	256			418	246	
Approach Delay, s/veh	18.6			15.6	7.5	
Approach LOS	B			B	A	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		21.5	11.2	11.0		22.2
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		17.0	13.5	16.0		34.0
Max Q Clear Time (g_c+I1), s		4.2	6.9	5.1		5.3
Green Ext Time (p_c), s		0.6	0.3	1.0		1.2

Intersection Summary	
HCM 6th Ctrl Delay	14.3
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	0	1	183	223	4
Future Vol, veh/h	3	0	1	183	223	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	0	1	199	242	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	445	244	246	0	-	0
Stage 1	244	-	-	-	-	-
Stage 2	201	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	571	795	1320	-	-	-
Stage 1	797	-	-	-	-	-
Stage 2	833	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	570	795	1320	-	-	-
Mov Cap-2 Maneuver	570	-	-	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	833	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1320	-	570	-	-
HCM Lane V/C Ratio	0.001	-	0.006	-	-
HCM Control Delay (s)	7.7	0	11.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	0	1	181	220	3
Future Vol, veh/h	3	0	1	181	220	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	0	1	197	239	3

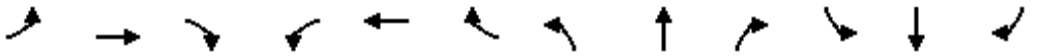
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	440	241	242	0	-	0
Stage 1	241	-	-	-	-	-
Stage 2	199	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	574	798	1324	-	-	-
Stage 1	799	-	-	-	-	-
Stage 2	835	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	573	798	1324	-	-	-
Mov Cap-2 Maneuver	573	-	-	-	-	-
Stage 1	798	-	-	-	-	-
Stage 2	835	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1324	-	573	-	-
HCM Lane V/C Ratio	0.001	-	0.006	-	-
HCM Control Delay (s)	7.7	0	11.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	99	228	5	5	523	0	10	5	0	59	196
Protected Phases	7	4		3	8		2			6	7
Permitted Phases			4			2		2	6		6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5	8.5
Total Split (s)	15.0	28.0	28.0	9.0	22.0	23.0	23.0	23.0	23.0	23.0	15.0
Total Split (%)	25.0%	46.7%	46.7%	15.0%	36.7%	38.3%	38.3%	38.3%	38.3%	38.3%	25.0%
Maximum Green (s)	10.5	23.5	23.5	4.5	17.5	18.5	18.5	18.5	18.5	18.5	10.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag						Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max	None
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	5	
v/c Ratio	0.35	0.29	0.01	0.03	0.58		0.02	0.01		0.11	0.22
Control Delay	25.1	11.1	0.0	25.6	19.1		13.9	0.0		14.5	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	25.1	11.1	0.0	25.6	19.1		13.9	0.0		14.5	3.0
Queue Length 50th (ft)	29	39	0	2	71		2	0		13	7
Queue Length 95th (ft)	69	100	0	10	117		11	0		38	32
Internal Link Dist (ft)		321			351		325			639	
Turn Bay Length (ft)	100		100	25				40			150
Base Capacity (vph)	372	939	829	159	1230		639	691		551	971
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.27	0.24	0.01	0.03	0.43		0.02	0.01		0.11	0.20

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 51.5
Control Type: Actuated-Uncoordinated



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	210	5	5	410	71	5	5	5	50	5	180
Future Volume (veh/h)	91	210	5	5	410	71	5	5	5	50	5	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	99	228	5	5	446	77	5	5	5	54	5	196
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	557	459	10	700	120	202	166	636	322	23	752
Arrive On Green	0.07	0.30	0.30	0.01	0.23	0.23	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1781	1870	1541	1781	3029	519	209	411	1577	427	58	1584
Grp Volume(v), veh/h	99	228	5	5	260	263	10	0	5	59	0	196
Grp Sat Flow(s),veh/h/ln	1781	1870	1541	1781	1777	1772	620	0	1577	486	0	1584
Q Serve(g_s), s	2.5	4.5	0.1	0.1	6.1	6.1	0.1	0.0	0.1	1.5	0.0	3.4
Cycle Q Clear(g_c), s	2.5	4.5	0.1	0.1	6.1	6.1	13.2	0.0	0.1	13.9	0.0	3.4
Prop In Lane	1.00		1.00	1.00		0.29	0.50		1.00	0.92		1.00
Lane Grp Cap(c), veh/h	128	557	459	10	411	409	368	0	636	346	0	752
V/C Ratio(X)	0.77	0.41	0.01	0.52	0.63	0.64	0.03	0.00	0.01	0.17	0.00	0.26
Avail Cap(c_a), veh/h	407	957	789	175	677	675	368	0	636	346	0	752
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.9	12.9	11.4	22.8	15.9	15.9	9.6	0.0	8.2	16.3	0.0	7.2
Incr Delay (d2), s/veh	9.5	0.5	0.0	37.6	1.6	1.7	0.1	0.0	0.0	1.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.7	0.0	0.1	2.3	2.3	0.1	0.0	0.0	0.6	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.4	13.4	11.4	60.4	17.5	17.6	9.7	0.0	8.2	17.3	0.0	8.1
LnGrp LOS	C	B	B	E	B	B	A	A	A	B	A	A
Approach Vol, veh/h		332			528			15			255	
Approach Delay, s/veh		18.4			18.0			9.2			10.2	
Approach LOS		B			B			A			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	4.7	18.2		23.0	7.8	15.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	4.5	23.5		18.5	10.5	17.5				
Max Q Clear Time (g_c+I1), s		15.2	2.1	6.5		15.9	4.5	8.1				
Green Ext Time (p_c), s		0.0	0.0	1.1		0.2	0.1	2.2				
Intersection Summary												
HCM 6th Ctrl Delay			16.2									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	245	314	0	0	0
Future Vol, veh/h	0	245	314	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	50	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	266	341	0	0	0

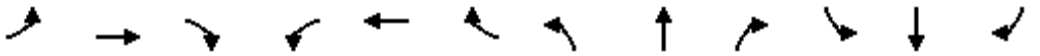
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	341	0	-	0	474	341
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	133	-
Critical Hdwy	4.13	-	-	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	1216	-	-	-	534	701
Stage 1	-	-	-	-	719	-
Stage 2	-	-	-	-	880	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1216	-	-	-	534	701
Mov Cap-2 Maneuver	-	-	-	-	534	-
Stage 1	-	-	-	-	719	-
Stage 2	-	-	-	-	880	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1216	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	125	130	337	492	310	462	277	1545	735	49	1383
Protected Phases	7	4	5	3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.0	8.5	8.5	20.5	8.5	8.5	20.5	8.5	8.5	20.5
Total Split (s)	9.9	20.0	14.9	19.0	29.1	14.0	14.9	37.0	19.0	14.0	36.1
Total Split (%)	11.0%	22.2%	16.6%	21.1%	32.3%	15.6%	16.6%	41.1%	21.1%	15.6%	40.1%
Maximum Green (s)	5.4	15.5	10.4	14.5	24.6	9.5	10.4	32.5	14.5	9.5	31.6
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	None	None	Max
Walk Time (s)					5.0			5.0			5.0
Flash Dont Walk (s)					11.0			11.0			11.0
Pedestrian Calls (#/hr)					5			15			5
v/c Ratio	0.57	0.30	0.61	0.84	0.72	0.83	0.68	0.76	0.41	0.15	0.73
Control Delay	50.5	35.3	20.5	48.7	40.6	33.0	45.7	25.8	3.0	37.0	25.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.5	35.3	20.5	48.7	40.6	33.0	45.7	25.8	3.0	37.0	25.9
Queue Length 50th (ft)	34	33	93	131	153	175	73	250	20	12	224
Queue Length 95th (ft)	#70	60	178	#230	241	276	#123	352	55	30	307
Internal Link Dist (ft)		491			575			528			491
Turn Bay Length (ft)	170		200	280			150		100	165	
Base Capacity (vph)	219	649	561	589	542	583	422	2030	1786	386	1888
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.20	0.60	0.84	0.57	0.79	0.66	0.76	0.41	0.13	0.73

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 84.6
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



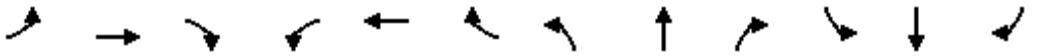
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	120	310	453	285	425	255	1421	676	45	1172	100
Future Volume (veh/h)	115	120	310	453	285	425	255	1421	676	45	1172	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	125	130	337	492	310	462	277	1545	735	49	1274	109
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	622	440	560	527	495	354	2184	1619	109	1708	146
Arrive On Green	0.06	0.18	0.18	0.16	0.28	0.28	0.10	0.43	0.43	0.03	0.36	0.36
Sat Flow, veh/h	3456	3554	1585	3456	1870	1580	3456	5106	2727	3456	4785	409
Grp Volume(v), veh/h	125	130	337	492	310	462	277	1545	735	49	906	477
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1870	1580	1728	1702	1364	1728	1702	1790
Q Serve(g_s), s	3.1	2.8	15.5	12.3	12.6	24.9	6.9	22.0	13.4	1.2	20.7	20.7
Cycle Q Clear(g_c), s	3.1	2.8	15.5	12.3	12.6	24.9	6.9	22.0	13.4	1.2	20.7	20.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	192	622	440	560	527	495	354	2184	1619	109	1215	639
V/C Ratio(X)	0.65	0.21	0.77	0.88	0.59	0.93	0.78	0.71	0.45	0.45	0.75	0.75
Avail Cap(c_a), veh/h	211	622	440	566	527	495	406	2184	1619	371	1215	639
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	31.3	29.3	36.2	27.4	29.5	38.8	20.8	10.2	42.1	24.9	24.9
Incr Delay (d2), s/veh	6.1	0.2	7.9	14.5	1.7	24.7	8.5	2.0	0.9	2.9	4.2	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.2	7.3	6.2	5.7	12.5	3.3	8.7	3.8	0.6	8.7	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	31.4	37.2	50.7	29.1	54.2	47.2	22.7	11.1	45.0	29.1	32.7
LnGrp LOS	D	C	D	D	C	D	D	C	B	D	C	C
Approach Vol, veh/h		592			1264			2557			1432	
Approach Delay, s/veh		38.0			46.7			22.1			30.9	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	42.4	18.9	20.0	13.6	36.1	9.4	29.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	9.5	32.5	14.5	15.5	10.4	31.6	5.4	24.6
Max Q Clear Time (g_c+I1), s	3.2	24.0	14.3	17.5	8.9	22.7	5.1	26.9
Green Ext Time (p_c), s	0.0	7.1	0.0	0.0	0.2	5.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	31.2
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	158	146	218	22	459	27	1245	415	690	1386
Protected Phases	7	4	3	8	1	5	2		1	6
Permitted Phases					8			2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	8.5	8.5	20.5	20.5	8.5	20.5
Total Split (s)	13.6	20.5	15.6	22.5	22.0	10.1	31.9	31.9	22.0	43.8
Total Split (%)	15.1%	22.8%	17.3%	25.0%	24.4%	11.2%	35.4%	35.4%	24.4%	48.7%
Maximum Green (s)	9.1	16.0	11.1	18.0	17.5	5.6	27.4	27.4	17.5	39.3
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Walk Time (s)		5.0					5.0	5.0		5.0
Flash Dont Walk (s)		11.0					11.0	11.0		11.0
Pedestrian Calls (#/hr)		5					10	10		5
v/c Ratio	0.40	0.57	0.95	0.10	0.87	0.23	0.77	0.58	0.98	0.52
Control Delay	38.0	42.4	88.9	32.4	41.0	44.6	30.4	9.8	66.5	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.0	42.4	88.9	32.4	41.0	44.6	30.4	9.8	66.5	15.1
Queue Length 50th (ft)	63	72	119	11	~273	14	219	35	192	146
Queue Length 95th (ft)	#204	130	#270	30	265	41	292	128	#328	263
Internal Link Dist (ft)		470		1268			481			528
Turn Bay Length (ft)	90		140			130		130	260	
Base Capacity (vph)	392	346	229	391	526	115	1626	714	701	2682
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.42	0.95	0.06	0.87	0.23	0.77	0.58	0.98	0.52

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 85.8
Control Type: Actuated-Uncoordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



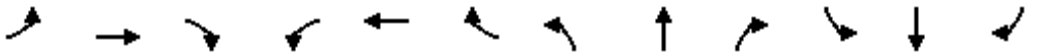
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	120	15	201	20	422	25	1145	382	635	1210	65
Future Volume (veh/h)	145	120	15	201	20	422	25	1145	382	635	1210	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	158	130	16	218	22	459	27	1245	415	690	1315	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	180	290	36	220	374	625	39	1555	472	672	2363	128
Arrive On Green	0.10	0.18	0.18	0.12	0.20	0.20	0.02	0.30	0.30	0.19	0.48	0.48
Sat Flow, veh/h	1781	1632	201	1781	1870	1585	1781	5106	1551	3456	4952	267
Grp Volume(v), veh/h	158	0	146	218	22	459	27	1245	415	690	904	482
Grp Sat Flow(s),veh/h/ln	1781	0	1833	1781	1870	1585	1781	1702	1551	1728	1702	1816
Q Serve(g_s), s	7.9	0.0	6.4	11.0	0.9	18.0	1.4	20.2	22.9	17.5	17.0	17.0
Cycle Q Clear(g_c), s	7.9	0.0	6.4	11.0	0.9	18.0	1.4	20.2	22.9	17.5	17.0	17.0
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	180	0	326	220	374	625	39	1555	472	672	1624	866
V/C Ratio(X)	0.88	0.00	0.45	0.99	0.06	0.73	0.69	0.80	0.88	1.03	0.56	0.56
Avail Cap(c_a), veh/h	180	0	326	220	374	625	111	1555	472	672	1624	866
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	0.0	33.1	39.4	29.1	23.2	43.7	28.8	29.7	36.3	16.8	16.8
Incr Delay (d2), s/veh	35.2	0.0	1.0	58.4	0.1	4.5	19.9	4.4	20.2	41.7	1.4	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	2.9	8.3	0.4	8.7	0.8	8.6	10.9	11.1	6.6	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.1	0.0	34.0	97.8	29.2	27.7	63.6	33.2	49.9	78.0	18.1	19.3
LnGrp LOS	E	A	C	F	C	C	E	C	D	F	B	B
Approach Vol, veh/h		304			699			1687			2076	
Approach Delay, s/veh		55.4			49.6			37.8			38.3	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	31.9	15.6	20.5	6.5	47.4	13.6	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	17.5	27.4	11.1	16.0	5.6	39.3	9.1	18.0
Max Q Clear Time (g_c+I1), s	19.5	24.9	13.0	8.4	3.4	19.0	9.9	20.0
Green Ext Time (p_c), s	0.0	2.0	0.0	0.4	0.0	9.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	40.9
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	804	470	125	685	115	118	16	195	114
Protected Phases	7	4	3	8	2	2		6	6
Permitted Phases							2		
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5
Total Split (s)	26.5	31.3	17.4	22.2	20.8	20.8	20.8	20.5	20.5
Total Split (%)	29.4%	34.8%	19.3%	24.7%	23.1%	23.1%	23.1%	22.8%	22.8%
Maximum Green (s)	22.0	26.8	12.9	17.7	16.3	16.3	16.3	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max	Max	None	None
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		5		5	5	5	5	5	5
v/c Ratio	0.93	0.41	0.58	0.96	0.37	0.37	0.04	0.71	0.39
Control Delay	52.3	23.4	47.5	59.1	35.9	35.8	0.1	49.8	28.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	23.4	47.5	59.1	35.9	35.8	0.1	49.8	28.7
Queue Length 50th (ft)	228	101	67	192	60	62	0	104	42
Queue Length 95th (ft)	#351	151	122	#314	114	116	0	175	92
Internal Link Dist (ft)		1268		162		397			490
Turn Bay Length (ft)	165		90					190	
Base Capacity (vph)	862	1152	260	716	312	320	437	323	342
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.41	0.48	0.96	0.37	0.37	0.04	0.60	0.33

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 87.7
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	740	352	80	115	493	137	165	50	15	179	65	40
Future Volume (veh/h)	740	352	80	115	493	137	165	50	15	179	65	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	804	383	87	125	536	149	116	141	16	195	71	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	874	1067	240	158	569	158	340	357	301	246	150	91
Arrive On Green	0.25	0.37	0.37	0.09	0.21	0.21	0.19	0.19	0.19	0.14	0.14	0.14
Sat Flow, veh/h	3456	2873	645	1781	2746	760	1781	1870	1575	1781	1087	658
Grp Volume(v), veh/h	804	235	235	125	346	339	116	141	16	195	0	114
Grp Sat Flow(s),veh/h/ln	1728	1777	1741	1781	1777	1730	1781	1870	1575	1781	0	1745
Q Serve(g_s), s	19.3	8.2	8.4	5.9	16.4	16.5	4.8	5.6	0.7	9.0	0.0	5.1
Cycle Q Clear(g_c), s	19.3	8.2	8.4	5.9	16.4	16.5	4.8	5.6	0.7	9.0	0.0	5.1
Prop In Lane	1.00		0.37	1.00		0.44	1.00		1.00	1.00		0.38
Lane Grp Cap(c), veh/h	874	660	647	158	368	358	340	357	301	246	0	241
V/C Ratio(X)	0.92	0.36	0.36	0.79	0.94	0.95	0.34	0.39	0.05	0.79	0.00	0.47
Avail Cap(c_a), veh/h	890	660	647	269	368	358	340	357	301	334	0	327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.0	19.4	19.5	38.1	33.3	33.4	29.9	30.2	28.2	35.6	0.0	33.9
Incr Delay (d2), s/veh	14.3	0.3	0.3	8.5	31.7	33.7	2.7	3.3	0.3	8.9	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	3.3	3.3	2.9	10.1	10.1	2.3	2.8	0.3	4.5	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.3	19.8	19.8	46.6	65.0	67.0	32.6	33.5	28.6	44.5	0.0	35.4
LnGrp LOS	D	B	B	D	E	E	C	C	C	D	A	D
Approach Vol, veh/h		1274			810			273			309	
Approach Delay, s/veh		35.9			63.0			32.8			41.2	
Approach LOS		D			E			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		20.8	12.1	36.2		16.3	26.1	22.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		16.3	12.9	26.8		16.0	22.0	17.7				
Max Q Clear Time (g_c+I1), s		7.6	7.9	10.4		11.0	21.3	18.5				
Green Ext Time (p_c), s		0.7	0.1	2.6		0.5	0.3	0.0				

Intersection Summary												
HCM 6th Ctrl Delay			44.4									
HCM 6th LOS			D									

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	553	3	1	619	1	1
Future Vol, veh/h	553	3	1	619	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	601	3	1	673	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	604	0	1278	302
Stage 1	-	-	-	-	603	-
Stage 2	-	-	-	-	675	-
Critical Hdwy	-	-	4.13	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	972	-	170	695
Stage 1	-	-	-	-	510	-
Stage 2	-	-	-	-	505	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	972	-	170	695
Mov Cap-2 Maneuver	-	-	-	-	170	-
Stage 1	-	-	-	-	510	-
Stage 2	-	-	-	-	504	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	273	-	-	972	-
HCM Lane V/C Ratio	0.008	-	-	0.001	-
HCM Control Delay (s)	18.3	-	-	8.7	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	602	260	449	192	312
Protected Phases	4	3	8	2	3
Permitted Phases					2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	8.5	20.5	20.5	8.5
Total Split (s)	20.5	19.0	39.5	20.5	19.0
Total Split (%)	34.2%	31.7%	65.8%	34.2%	31.7%
Maximum Green (s)	16.0	14.5	35.0	16.0	14.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Max	None
Walk Time (s)	5.0				
Flash Dont Walk (s)	11.0				
Pedestrian Calls (#/hr)	10				
v/c Ratio	0.67	0.67	0.44	0.37	0.36
Control Delay	19.4	29.5	8.9	19.7	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.4	29.5	8.9	19.7	4.9
Queue Length 50th (ft)	76	80	78	53	25
Queue Length 95th (ft)	126	151	131	108	60
Internal Link Dist (ft)	273		458	303	
Turn Bay Length (ft)		125		100	
Base Capacity (vph)	1059	468	1191	517	934
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.57	0.56	0.38	0.37	0.33

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 55.3
Control Type: Actuated-Uncoordinated

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	381	173	239	413	177	287
Future Volume (veh/h)	381	173	239	413	177	287
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	414	188	260	449	192	312
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	572	256	323	957	557	783
Arrive On Green	0.24	0.24	0.18	0.51	0.31	0.31
Sat Flow, veh/h	2450	1055	1781	1870	1781	1585
Grp Volume(v), veh/h	311	291	260	449	192	312
Grp Sat Flow(s),veh/h/ln	1777	1634	1781	1870	1781	1585
Q Serve(g_s), s	8.2	8.4	7.2	7.9	4.3	6.4
Cycle Q Clear(g_c), s	8.2	8.4	7.2	7.9	4.3	6.4
Prop In Lane		0.65	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	431	397	323	957	557	783
V/C Ratio(X)	0.72	0.73	0.80	0.47	0.35	0.40
Avail Cap(c_a), veh/h	555	511	504	1278	557	783
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	17.9	20.1	8.0	13.6	8.2
Incr Delay (d2), s/veh	3.3	4.0	5.2	0.4	1.7	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	3.2	3.1	2.5	1.7	2.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.1	21.8	25.3	8.4	15.3	9.7
LnGrp LOS	C	C	C	A	B	A
Approach Vol, veh/h	602			709	504	
Approach Delay, s/veh	21.4			14.6	11.8	
Approach LOS	C			B	B	

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		20.5	13.8	16.9		30.7
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		16.0	14.5	16.0		35.0
Max Q Clear Time (g_c+I1), s		8.4	9.2	10.4		9.9
Green Ext Time (p_c), s		1.1	0.4	1.8		2.9

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	1	2	407	341	11
Future Vol, veh/h	7	1	2	407	341	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	1	2	442	371	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	823	377	383	0	-	0
Stage 1	377	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	343	670	1175	-	-	-
Stage 1	694	-	-	-	-	-
Stage 2	645	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	342	670	1175	-	-	-
Mov Cap-2 Maneuver	342	-	-	-	-	-
Stage 1	693	-	-	-	-	-
Stage 2	645	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1175	-	364	-	-
HCM Lane V/C Ratio	0.002	-	0.024	-	-
HCM Control Delay (s)	8.1	0	15.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	1	2	402	331	11
Future Vol, veh/h	7	1	2	402	331	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	1	2	437	360	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	807	366	372	0	-	0
Stage 1	366	-	-	-	-	-
Stage 2	441	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	351	679	1186	-	-	-
Stage 1	702	-	-	-	-	-
Stage 2	648	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	350	679	1186	-	-	-
Mov Cap-2 Maneuver	350	-	-	-	-	-
Stage 1	701	-	-	-	-	-
Stage 2	648	-	-	-	-	-

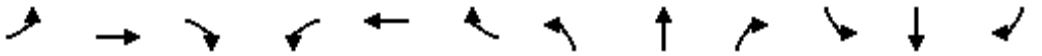
Approach	EB	NB	SB
HCM Control Delay, s	14.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1186	-	373	-	-
HCM Lane V/C Ratio	0.002	-	0.023	-	-
HCM Control Delay (s)	8	0	14.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	307	663	5	5	448	0	10	5	0	169	153
Protected Phases	7	4		3	8		2			6	7
Permitted Phases			4			2		2	6		6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	20.5	8.5	20.5	20.5	20.5	20.5	20.5	20.5	8.5
Total Split (s)	18.6	31.0	31.0	8.5	20.9	20.5	20.5	20.5	20.5	20.5	18.6
Total Split (%)	31.0%	51.7%	51.7%	14.2%	34.8%	34.2%	34.2%	34.2%	34.2%	34.2%	31.0%
Maximum Green (s)	14.1	26.5	26.5	4.0	16.4	16.0	16.0	16.0	16.0	16.0	14.1
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag						Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max	None
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		5	5		5	5	5	5	5	5	
v/c Ratio	0.74	0.70	0.01	0.04	0.57		0.02	0.01		0.42	0.17
Control Delay	32.7	16.7	0.0	26.4	18.9		15.8	0.0		20.9	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	32.7	16.7	0.0	26.4	18.9		15.8	0.0		20.9	1.7
Queue Length 50th (ft)	90	136	0	2	57		2	0		44	0
Queue Length 95th (ft)	#209	#374	0	11	95		12	0		103	19
Internal Link Dist (ft)		321			351		325			639	
Turn Bay Length (ft)	100		100	25				40			150
Base Capacity (vph)	464	983	863	131	1084		495	592		402	948
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.66	0.67	0.01	0.04	0.41		0.02	0.01		0.42	0.16

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 54.1
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	282	610	5	5	310	102	5	5	5	151	5	141
Future Volume (veh/h)	282	610	5	5	310	102	5	5	5	151	5	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	307	663	5	5	337	111	5	5	5	164	5	153
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	371	778	642	10	561	182	106	73	494	139	2	827
Arrive On Green	0.21	0.42	0.42	0.01	0.21	0.21	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	1870	1544	1781	2632	852	0	233	1575	0	7	1584
Grp Volume(v), veh/h	307	663	5	5	226	222	10	0	5	169	0	153
Grp Sat Flow(s),veh/h/ln	1781	1870	1544	1781	1777	1707	233	0	1575	7	0	1584
Q Serve(g_s), s	8.4	16.3	0.1	0.1	5.8	6.0	0.0	0.0	0.1	0.0	0.0	2.6
Cycle Q Clear(g_c), s	8.4	16.3	0.1	0.1	5.8	6.0	16.0	0.0	0.1	16.0	0.0	2.6
Prop In Lane	1.00		1.00	1.00		0.50	0.50		1.00	0.97		1.00
Lane Grp Cap(c), veh/h	371	778	642	10	379	364	179	0	494	141	0	827
V/C Ratio(X)	0.83	0.85	0.01	0.52	0.60	0.61	0.06	0.00	0.01	1.19	0.00	0.18
Avail Cap(c_a), veh/h	493	973	803	140	572	549	179	0	494	141	0	827
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.3	13.5	8.7	25.3	18.1	18.1	14.0	0.0	12.0	25.2	0.0	6.4
Incr Delay (d2), s/veh	8.6	6.1	0.0	38.0	1.5	1.7	0.6	0.0	0.0	137.5	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	6.9	0.0	0.2	2.3	2.3	0.1	0.0	0.0	7.0	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	19.6	8.7	63.3	19.6	19.8	14.6	0.0	12.1	162.7	0.0	6.9
LnGrp LOS	C	B	A	E	B	B	B	A	B	F	A	A
Approach Vol, veh/h		975			453			15			322	
Approach Delay, s/veh		22.2			20.2			13.7			88.7	
Approach LOS		C			C			B			F	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		20.5	4.8	25.7		20.5	15.1	15.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		16.0	4.0	26.5		16.0	14.1	16.4				
Max Q Clear Time (g_c+I1), s		18.0	2.1	18.3		18.0	10.4	8.0				
Green Ext Time (p_c), s		0.0	0.0	2.8		0.0	0.3	1.7				

Intersection Summary	
HCM 6th Ctrl Delay	33.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	555	619	1	0	1
Future Vol, veh/h	0	555	619	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	50	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	603	673	1	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	674	0	-	0	975	673
Stage 1	-	-	-	-	673	-
Stage 2	-	-	-	-	302	-
Critical Hdwy	4.13	-	-	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	915	-	-	-	263	454
Stage 1	-	-	-	-	506	-
Stage 2	-	-	-	-	724	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	915	-	-	-	263	454
Mov Cap-2 Maneuver	-	-	-	-	263	-
Stage 1	-	-	-	-	506	-
Stage 2	-	-	-	-	724	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	915	-	-	-	454
HCM Lane V/C Ratio	-	-	-	-	0.002
HCM Control Delay (s)	0	-	-	-	12.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

APPENDIX P
Summary of Berm Soil Sampling

November 6, 2019 Project No. 80.CARMAX1.19

Stacey Haggerson
CenterPoint Integrated Solutions, LLC
355 Union Boulevard, Suite 301
Lakewood, CO 80228

Subject: Summary of Berm Soil Sampling
Proposed CarMax Development
Southwest Corner of Plaza Drive and Thunder Drive
Oceanside, CA 92056

Dear Ms. Haggerson:

EnviroApplications, Inc. (*EAI*) is pleased to provide this letter summarizing the laboratory results of soil samples collected from two soil berms at the above-referenced subject site. This report is being submitted in accordance with our proposal dated September 20, 2019.

EAI understands that the berm soil sampling is being performed to assess potential contamination and evaluate possible use and/or disposal options for the soil. The scope of work performed by *EAI* included:

- Prepared a site-specific Health and Safety Plan (HASP) to address potential hazards that might be encountered during the field activities;
- Collected 30 soil samples from 10 locations at depths of approximately 1.5-, 3-, and 5-feet below the berm surface;
- Submitted the soil samples for laboratory analysis; and
- Prepared this letter report documenting the field activities, statistical analysis of laboratory results, and recommendations.

SITE DESCRIPTION

The subject site property is located in the southwest corner of Plaza Drive and Thunder Drive in Oceanside, California. The property is located north of Lake Boulevard, east of College Boulevard, south of Highway 78, and west of S. Emerald Drive. The two soil berms are located in the eastern portion of the site directly south of the Oceanside Department of Motor Vehicles (DMV) parking lot (Figure 1). The berms are comprised of soil and sparse vegetation similar to remainder of the site. Berm 1 (western berm) is approximately 71 yards long, 3 yards wide, and 2 yards high, totaling 426 cubic yards. Berm 2 (eastern berm) is approximately 80 yards long, 3 yards wide, and 2 yards high, totaling 480 cubic yards.

SOIL SAMPLING

On October 9th, based on the volume of soil, *EAI* personnel collected a total of 15 soil samples from each berm (from 10 different geographic locations) for a total of 30 soil samples. The sampling locations are shown on Figure 1. The soil samples were collected via hand auger, placed into 8-ounce glass sampling jars, and immediately sealed with Teflon-lined screw-on lids, labeled, and stored in a cooled container until transported to the laboratory.

ANALYTICAL TESTING

All 10 of the soil samples collected from the 3-foot depth interval were analyzed for Volatile Organic Compounds (VOCs) by EPA Method 8260B, Total Petroleum Hydrocarbons (TPH) Extended Range by EPA Method 8015B, California Administrative Manual (CAM) 17 Metals by EPA Method 6010B, mercury by EPA Method 7471A, and organochlorine pesticides by EPA Method 8081A. Based on laboratory results, the remaining 20 samples were not analyzed.

LABORATORY ANALYSIS RESULTS

VOCs, TPH in the gasoline fuel range (TPHg), and organochlorine pesticides were not detected in any of the soil samples collected.

TPH in the diesel fuel range (TPHd) was detected in 4 of the soil samples collected. The concentrations detected range from 4.9 to 217.4 milligrams per kilogram (mg/kg). The highest TPHd concentration was reported in SB10@3'.

Total TPH was detected in 8 of the soil samples collected. The concentrations detected range from 5.1 to 220 mg/kg. The highest total TPH concentration was reported in SB10@3'.

Concentrations of 12 of the 17 CAM metals were detected in the samples collected.

The concentrations detected are presented in the attached Table 1.

SUMMARY AND RECOMMENDATIONS

Based on the laboratory analytical results obtained, the approximate 906 cubic yards of soil is not considered a health risk for a commercial/industrial property with comparisons to Department of Toxic Substances Control (DTSC) Screening Levels (SLs) and San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Tier 1 Environmental Screening Levels (ESLs). The metal concentrations detected are within the range of typical elemental metal concentrations in soils of the western United States (Shacklette, H.T., and Boerngen, J.G, 1984).

EAI concludes the bermed soil on the subject site can be re-used if desired. If not, the soil can be transported as non-hazardous waste to a landfill that accepts contaminated non-hazardous soil. If disposed of off-site, the soil will have to be properly profiled and accepted by the receiving landfill in advance of transport to the disposal facility.

If you have questions regarding this report, please contact the undersigned at (619) 291-3636.

Respectfully,
EnviroApplications, Inc.

Prepared by:

Megan E. Hill
Project Environmental Scientist

Approved by:

Craig A. Smith, PG
Principal Geologist

PROFESSIONAL GEOLOGIST
CRAIG
A.
SMITH
NO. 8225
STATE OF CALIFORNIA

Attachments: Standard Limitations
References
Figure 1 – Site Plan with Soil Sample Locations
Table 1 – Summary of Soil Analytical Results
Attachment 1 – Laboratory Analytical Report and Chain-Of-Custody Documentation

STANDARD LIMITATIONS

This report has been prepared for the exclusive use of CenterPoint Integrated Solutions, LLC. The findings and conclusions rendered in this report are opinions based primarily on testing of soil samples collected during this project. This report does not reflect stockpile variations, which may exist between sampling points. These variations cannot be anticipated nor can they be entirely accounted for even with additional exhaustive testing. All work has been performed with the degree of skill generally exercised by practicing engineers and geologists in the environmental field. *EAI* makes no other warranty, either expressed or implied, concerning the conclusions and professional advice, which is contained within the body of this report.

REFERENCES

Shacklette, H.T., and Boerngen, J.G, "Elemental Concentrations in Soils and Other Surficial Materials of the Conterminous United States," U.S. Survey Professional Paper, 1984.

FIGURE

FIGURE 1

Site Plan with Soil Sampling Locations
Plaza Drive and Thunder Drive, Oceanside, CA
Aerial image, Source – Google, 2019

TABLE

Table 1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
Proposed CarMax Property
Plaza Drive and Thunder Drive
Oceanside, CA
All results reported in milligrams per kilogram (mg/kg) unless otherwise noted

Soil Sample I.D.	Sample Date	VOCs (µg/kg)	TPH			Organochlorine Pesticides (µg/kg)	CAM 17 Metals															
			TPHg (C6-C12)	TPHd (C13-C28)	Total TPH (C6-C44)		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thalium	Vanadium	Zinc
SB-1@3'	10/9/2019	ND	ND	ND	9.1	ND	ND	2.10	61.7	0.468	ND	6.49	2.75	3.42	1.20	<0.0820	ND	2.95	ND	ND	ND	15.4	13.1
SB-2@3'	10/9/2019	ND	ND	ND	5.1	ND	1.59	1.61	41.6	0.383	ND	7.32	2.54	3.90	1.68	<0.0820	0.801	3.08	ND	ND	ND	16.5	9.33
SB-3@3'	10/9/2019	ND	ND	ND	9.4	ND	ND	2.36	51.5	0.407	ND	4.05	1.95	2.54	1.36	<0.0847	ND	2.57	ND	ND	ND	12.0	9.27
SB-4@3'	10/9/2019	ND	ND	ND	ND	ND	0.900	3.52	81.6	0.836	ND	10.2	4.65	7.95	0.963	<0.0794	ND	4.93	ND	ND	ND	21.3	22.8
SB-5@3'	10/9/2019	ND	ND	ND	ND	ND	ND	2.35	24.5	0.505	ND	4.16	1.48	1.25	0.880	<0.0806	ND	2.01	ND	ND	ND	19.7	12.9
SB-6@3'	10/9/2019	ND	ND	ND	9.9	ND	0.919	1.84	45.5	0.459	ND	4.91	1.81	2.72	1.14	<0.0833	ND	2.58	ND	ND	ND	18.0	12.0
SB-7@3'	10/9/2019	ND	ND	4.9	21	ND	1.49	2.18	51.5	0.523	ND	6.72	2.78	7.55	1.86	<0.0794	ND	3.69	ND	ND	ND	21.1	18.5
SB-8@3'	10/9/2019	ND	ND	135	140	ND	1.20	2.70	44.4	0.478	ND	5.88	3.58	8.93	3.63	<0.0794	ND	4.35	ND	ND	ND	22.4	20.8
SB-9@3'	10/9/2019	ND	ND	118.4	130	ND	ND	ND	31.8	ND	ND	3.69	2.56	9.59	1.89	<0.0794	ND	2.99	ND	ND	ND	11.7	15.5
SB-10@3'	10/9/2019	ND	ND	217.4	220	ND	1.97	1.98	57.4	0.315	ND	11.2	6.13	29.6	10.6	<0.0833	ND	8.02	ND	ND	0.923	32.9	44.5
Normal Range in Soil*		**NA**	**NA**	**NA**	**NA**	**NA**	**0.22-1.01**	**2.8-10.9**	**337-998**	**0.30-1.56**	**0.1-0.5**	**19-90**	**3.6-14.0**	**10-43**	**9-31**	**0.02-0.11**	**0.39-1.85**	**7-32**	**0.09-0.56**	**0.1-0.5**	**0.1-0.4**	**36-136**	**31-98**
DTSC TTLC**		**NA**	**NA**	**NA**	**NA**	**NA**	**500**	**500**	**10,000**	**75**	**100**	**500**	**8,000**	**2,500**	**1,000**	**20**	**3,500**	**2,000**	**100**	**500**	**700**	**2,400**	**5,000**
DTSC SL***		**Ranges**	**NA**	**21,000**	**NA**	**NA**	**NA**	**0.36**	**NA**	**6,900**	**4,000**	**6.2**	**NA**	**NA**	**320**	**4.4**	**NA**	**64,000**	**NA**	**NA**	**23**	**NA**	**NA**
SFRWQCB ESL****		**Ranges**	**100**	**260**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Notes:
µg/kg = micrograms per kilogram

ND = Not Detected
VOCs = Volatile Organic Compounds (EPA Method 8260B)
TPHg = Total Petroleum Hydrocarbons, Gasoline Range (EPA Method 8015B)
TPHd = Total Petroleum Hydrocarbons, Diesel Range (EPA Method 8015B)
CAM 17 Metals = California Administrative Manual, 17 heavy metals (EPA Method 6010B)
DTSC TTLC = Department of Toxic Substances Control Total Threshold Limit Concentration
DTSC SL = Department of Toxic Substances Control Screening Level
SFRWQCB ESL = San Francisco Bay Regional Water Quality Control Board Environmental Screening Level

Organochlorine Pesticides (EPA Method 8081A)
Mercury analyzed by EPA Method 7471A

*Typical range of elemental concentrations in soils of the western U.S.
**If the concentration exceeds the TTLC for any of the chemicals, then the waste is categorized as hazardous
***SLs for commercial/industrial soil
****Tier 1 ESL for soil

ATTACHMENT 1

LABORATORY ANALYTICAL REPORT
AND
CHAIN-OF-CUSTODY DOCUMENTATION

ANALYTICAL REPORT

Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841
Tel: (714)895-5494

Laboratory Job ID: 570-9966-1
Client Project/Site: 80.CARMAX1.19/Oceanside CarMax

For:
EnviroApplications, Inc.
2831 Camino Del Rio South
Suite 214
San Diego, California 92108

Attn: Arturo Hoyos

Authorized for release by:
10/24/2019 9:51:37 AM

Sandy Tat, Project Manager I
(714)895-5494
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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: EnviroApplications, Inc. Job ID: 570-9966-1
Project/Site: 80.CARMAX1.19/Oceanside CarMax

Job ID: 570-9966-1

Laboratory: Eurofins Calscience LLC

Narrative

Job Narrative
570-9966-1

Comments
No additional comments.

Receipt
The samples were received on 10/11/2019 7:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1° C.

GC/MS VOA
Method 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 570-25843 and analytical batch 570-25858 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8260B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 570-25843 and analytical batch 570-25858 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8015B: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 570-25769 and 570-26082 and analytical batch 570-26041 was outside control limits. Sample matrix interference is suspected.

Method 8081A: The following analyte(s) recovered outside control limits for the LCS associated with preparation batch 570-25774 and analytical batch 570-26608: Endrin. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method 6010B: The absolute response for Selenium was greater than the method reporting limit (RL) in the following samples: SB-1@3' (570-9966-2), SB-6@3' (570-9966-17) and SB-9@3' (570-9966-26).
The instrument raw data has been manually reviewed and the result can be reported as ND.

Method 6010B: The absolute response for Molybdenum and Selenium was greater than the method reporting limit (RL) in the following samples: SB-4@3' (570-9966-11), SB-7@3' (570-9966-20), SB-8@3' (570-9966-23) and SB-10@3' (570-9966-29).
The instrument raw data has been manually reviewed and the result can be reported as ND.

Method 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 570-26469 and analytical batch 570-26586 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 6010B: Due to the high concentration of Zinc, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 570-26469 and analytical batch 570-26586 could not be evaluated for accuracy and precision. The associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) met acceptance criteria.

Method 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 570-26397 and analytical batch 570-27480 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Job ID: 570-9966-1 (Continued)

Laboratory: Eurofins Calscience LLC (Continued)

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: EnviroApplications, Inc.
Job ID: 570-9966-1
Project/Site: 80.CARMAX1.19/Oceanside CarMax

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-9966-2	SB-1@3'	Solid	10/09/19 13:30	10/11/19 19:30	
570-9966-5	SB-2@3'	Solid	10/09/19 13:50	10/11/19 19:30	
570-9966-8	SB-3@3'	Solid	10/09/19 14:20	10/11/19 19:30	
570-9966-11	SB-4@3'	Solid	10/09/19 14:35	10/11/19 19:30	
570-9966-14	SB-5@3'	Solid	10/09/19 15:00	10/11/19 19:30	
570-9966-17	SB-6@3'	Solid	10/09/19 13:00	10/11/19 19:30	
570-9966-20	SB-7@3'	Solid	10/09/19 11:20	10/11/19 19:30	
570-9966-23	SB-8@3'	Solid	10/09/19 11:45	10/11/19 19:30	
570-9966-26	SB-9@3'	Solid	10/09/19 12:10	10/11/19 19:30	
570-9966-29	SB-10@3'	Solid	10/09/19 12:30	10/11/19 19:30	

Client: EnviroApplications, Inc.
Job ID: 570-9966-1
Project/Site: 80.CARMAX1.19/Oceanside CarMax

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: SB-1@3'
Date Collected: 10/09/19 13:30
Date Received: 10/11/19 19:30

Lab Sample ID: 570-9966-2
Matrix: Solid

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	F1	120		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Benzene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Bromobenzene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Bromochloromethane	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Bromodichloromethane	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Bromoform	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Bromomethane	ND	* F1	26		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
2-Butanone	ND		52		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Carbon disulfide	ND		52		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Carbon tetrachloride	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Chlorobenzene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Chloroethane	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Chloroform	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Chloromethane	ND		26		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
2-Chlorotoluene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
4-Chlorotoluene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
cis-1,2-Dichloroethene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
cis-1,3-Dichloropropene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Dibromochloromethane	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,2-Dibromo-3-Chloropropane	ND		10		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,2-Dibromoethane	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Dibromomethane	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,2-Dichlorobenzene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,3-Dichlorobenzene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,4-Dichlorobenzene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Dichlorodifluoromethane	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,1-Dichloroethane	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,2-Dichloroethane	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,1-Dichloroethene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,2-Dichloropropane	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,3-Dichloropropane	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
2,2-Dichloropropane	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,1-Dichloropropene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Di-isopropyl ether (DIPE)	ND		10		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Ethanol	ND		260		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Ethylbenzene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Ethyl-t-butyl ether (ETBE)	ND		10		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
2-Hexanone	ND	F1 F2	52		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Isopropylbenzene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Methylene Chloride	ND		52		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
4-Methyl-2-pentanone	ND		52		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Methyl-t-Butyl Ether (MTBE)	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
m,p-Xylene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Naphthalene	ND		52		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
n-Butylbenzene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
N-Propylbenzene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
o-Xylene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
p-Isopropyltoluene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
sec-Butylbenzene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: SB-1@3' **Lab Sample ID: 570-9966-2**
Date Collected: 10/09/19 13:30 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Tert-amyl-methyl ether (TAME)	ND		10		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
tert-Butyl alcohol (TBA)	ND		52		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
tert-Butylbenzene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,1,1,2-Tetrachloroethane	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,1,2,2-Tetrachloroethane	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Tetrachloroethene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Toluene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
trans-1,2-Dichloroethene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
trans-1,3-Dichloropropene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,2,3-Trichlorobenzene	ND		10		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,2,4-Trichlorobenzene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,1,1-Trichloroethane	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,1,2-Trichloroethane	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Trichloroethene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Trichlorofluoromethane	ND		52		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,2,3-Trichloropropane	ND	F1 F2	5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		52		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,2,4-Trimethylbenzene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
1,3,5-Trimethylbenzene	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Vinyl acetate	ND	F1	52		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Vinyl chloride	ND		5.2		ug/Kg		10/14/19 15:45	10/14/19 22:14	1
Xylenes, Total	ND		10		ug/Kg		10/14/19 15:45	10/14/19 22:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*	*10/14/19 15:45*	*10/14/19 22:14*	*1*
Dibromofluoromethane (Surr)	*96*		*79 - 133*	*10/14/19 15:45*	*10/14/19 22:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*71 - 155*	*10/14/19 15:45*	*10/14/19 22:14*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*	*10/14/19 15:45*	*10/14/19 22:14*	*1*

Client Sample ID: SB-2@3' **Lab Sample ID: 570-9966-5**
Date Collected: 10/09/19 13:50 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		120		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Benzene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Bromobenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Bromochloromethane	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Bromodichloromethane	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Bromoform	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Bromomethane	ND	*	24		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
2-Butanone	ND		49		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Carbon disulfide	ND		49		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Carbon tetrachloride	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Chlorobenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Chloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Chloroform	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Chloromethane	ND		24		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
2-Chlorotoluene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
4-Chlorotoluene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: SB-2@3' **Lab Sample ID: 570-9966-5**
Date Collected: 10/09/19 13:50 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
cis-1,3-Dichloropropene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Dibromochloromethane	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,2-Dibromo-3-Chloropropane	ND		9.7		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,2-Dibromoethane	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Dibromomethane	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,2-Dichlorobenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,3-Dichlorobenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,4-Dichlorobenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Dichlorodifluoromethane	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,1-Dichloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,2-Dichloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,1-Dichloroethene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,2-Dichloropropane	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,3-Dichloropropane	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
2,2-Dichloropropane	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,1-Dichloropropene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Di-isopropyl ether (DIPE)	ND		9.7		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Ethanol	ND		240		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Ethylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Ethyl-t-butyl ether (ETBE)	ND		9.7		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
2-Hexanone	ND		49		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Isopropylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Methylene Chloride	ND		49		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
4-Methyl-2-pentanone	ND		49		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Methyl-t-Butyl Ether (MTBE)	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
m,p-Xylene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Naphthalene	ND		49		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
n-Butylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
N-Propylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
o-Xylene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
p-Isopropyltoluene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
sec-Butylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Styrene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Tert-amyl-methyl ether (TAME)	ND		9.7		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
tert-Butyl alcohol (TBA)	ND		49		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
tert-Butylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,1,1,2-Tetrachloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,1,2,2-Tetrachloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Tetrachloroethene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Toluene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
trans-1,2-Dichloroethene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
trans-1,3-Dichloropropene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,2,3-Trichlorobenzene	ND		9.7		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,2,4-Trichlorobenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,1,1-Trichloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,1,2-Trichloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Trichloroethene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Trichlorofluoromethane	ND		49		ug/Kg		10/14/19 15:48	10/14/19 23:58	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: SB-2@3'
Date Collected: 10/09/19 13:50
Date Received: 10/11/19 19:30

Lab Sample ID: 570-9966-5
Matrix: Solid

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		49		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,2,4-Trimethylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
1,3,5-Trimethylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Vinyl acetate	ND		49		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Vinyl chloride	ND		4.9		ug/Kg		10/14/19 15:48	10/14/19 23:58	1
Xylenes, Total	ND		9.7		ug/Kg		10/14/19 15:48	10/14/19 23:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*	*10/14/19 15:48*	*10/14/19 23:58*	*1*
Dibromofluoromethane (Surr)	*98*		*79 - 133*	*10/14/19 15:48*	*10/14/19 23:58*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*71 - 155*	*10/14/19 15:48*	*10/14/19 23:58*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*	*10/14/19 15:48*	*10/14/19 23:58*	*1*

Client Sample ID: SB-3@3'
Date Collected: 10/09/19 14:20
Date Received: 10/11/19 19:30

Lab Sample ID: 570-9966-8
Matrix: Solid

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		120		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Benzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Bromobenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Bromochloromethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Bromodichloromethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Bromoform	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Bromomethane	ND	*	24		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
2-Butanone	ND		49		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Carbon disulfide	ND		49		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Carbon tetrachloride	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Chlorobenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Chloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Chloroform	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Chloromethane	ND		24		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
2-Chlorotoluene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
4-Chlorotoluene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
cis-1,2-Dichloroethene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
cis-1,3-Dichloropropene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Dibromochloromethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,2-Dibromo-3-Chloropropane	ND		9.8		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,2-Dibromoethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Dibromomethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,2-Dichlorobenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,3-Dichlorobenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,4-Dichlorobenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Dichlorodifluoromethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,1-Dichloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,2-Dichloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,1-Dichloroethene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,2-Dichloropropane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,3-Dichloropropane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
2,2-Dichloropropane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: SB-3@3' **Lab Sample ID: 570-9966-8**
Date Collected: 10/09/19 14:20 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Di-isopropyl ether (DIPE)	ND		9.8		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Ethanol	ND		240		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Ethylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Ethyl-t-butyl ether (ETBE)	ND		9.8		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
2-Hexanone	ND		49		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Isopropylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Methylene Chloride	ND		49		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
4-Methyl-2-pentanone	ND		49		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Methyl-t-Butyl Ether (MTBE)	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
m,p-Xylene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Naphthalene	ND		49		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
n-Butylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
N-Propylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
o-Xylene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
p-Isopropyltoluene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
sec-Butylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Styrene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Tert-amyl-methyl ether (TAME)	ND		9.8		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
tert-Butyl alcohol (TBA)	ND		49		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
tert-Butylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,1,1,2-Tetrachloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,1,2,2-Tetrachloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Tetrachloroethene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Toluene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
trans-1,2-Dichloroethene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
trans-1,3-Dichloropropene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,2,3-Trichlorobenzene	ND		9.8		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,2,4-Trichlorobenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,1,1-Trichloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,1,2-Trichloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Trichloroethene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Trichlorofluoromethane	ND		49		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,2,3-Trichloropropane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		49		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,2,4-Trimethylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
1,3,5-Trimethylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Vinyl acetate	ND		49		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Vinyl chloride	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 00:24	1
Xylenes, Total	ND		9.8		ug/Kg		10/14/19 15:48	10/15/19 00:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*	*10/14/19 15:48*	*10/15/19 00:24*	*1*
Dibromofluoromethane (Surr)	*97*		*79 - 133*	*10/14/19 15:48*	*10/15/19 00:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*71 - 155*	*10/14/19 15:48*	*10/15/19 00:24*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*	*10/14/19 15:48*	*10/15/19 00:24*	*1*

Client: EnviroApplications, Inc.
Job ID: 570-9966-1
Project/Site: 80.CARMAX1.19/Oceanside CarMax

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: SB-4@3'
Date Collected: 10/09/19 14:35
Date Received: 10/11/19 19:30

Lab Sample ID: 570-9966-11
Matrix: Solid

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		120		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Benzene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Bromobenzene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Bromochloromethane	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Bromodichloromethane	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Bromoform	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Bromomethane	ND	*	24		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
2-Butanone	ND		48		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Carbon disulfide	ND		48		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Carbon tetrachloride	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Chlorobenzene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Chloroethane	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Chloroform	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Chloromethane	ND		24		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
2-Chlorotoluene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
4-Chlorotoluene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
cis-1,2-Dichloroethene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
cis-1,3-Dichloropropene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Dibromochloromethane	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,2-Dibromo-3-Chloropropane	ND		9.7		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,2-Dibromoethane	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Dibromomethane	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,2-Dichlorobenzene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,3-Dichlorobenzene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,4-Dichlorobenzene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Dichlorodifluoromethane	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,1-Dichloroethane	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,2-Dichloroethane	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,1-Dichloroethene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,2-Dichloropropane	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,3-Dichloropropane	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
2,2-Dichloropropane	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,1-Dichloropropene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Di-isopropyl ether (DIPE)	ND		9.7		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Ethanol	ND		240		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Ethylbenzene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Ethyl-t-butyl ether (ETBE)	ND		9.7		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
2-Hexanone	ND		48		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Isopropylbenzene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Methylene Chloride	ND		48		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
4-Methyl-2-pentanone	ND		48		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Methyl-t-Butyl Ether (MTBE)	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
m,p-Xylene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Naphthalene	ND		48		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
n-Butylbenzene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
N-Propylbenzene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
o-Xylene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
p-Isopropyltoluene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
sec-Butylbenzene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: SB-4@3' **Lab Sample ID: 570-9966-11**
Date Collected: 10/09/19 14:35 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Tert-amyl-methyl ether (TAME)	ND		9.7		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
tert-Butyl alcohol (TBA)	ND		48		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
tert-Butylbenzene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,1,1,2-Tetrachloroethane	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,1,2,2-Tetrachloroethane	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Tetrachloroethene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Toluene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
trans-1,2-Dichloroethene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
trans-1,3-Dichloropropene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,2,3-Trichlorobenzene	ND		9.7		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,2,4-Trichlorobenzene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,1,1-Trichloroethane	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,1,2-Trichloroethane	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Trichloroethene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Trichlorofluoromethane	ND		48		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,2,3-Trichloropropane	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		48		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,2,4-Trimethylbenzene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
1,3,5-Trimethylbenzene	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Vinyl acetate	ND		48		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Vinyl chloride	ND		4.8		ug/Kg		10/14/19 15:48	10/15/19 00:51	1
Xylenes, Total	ND		9.7		ug/Kg		10/14/19 15:48	10/15/19 00:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*	*10/14/19 15:48*	*10/15/19 00:51*	*1*
Dibromofluoromethane (Surr)	*96*		*79 - 133*	*10/14/19 15:48*	*10/15/19 00:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*71 - 155*	*10/14/19 15:48*	*10/15/19 00:51*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*	*10/14/19 15:48*	*10/15/19 00:51*	*1*

Client Sample ID: SB-5@3' **Lab Sample ID: 570-9966-14**
Date Collected: 10/09/19 15:00 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		120		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Benzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Bromobenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Bromochloromethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Bromodichloromethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Bromoform	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Bromomethane	ND	*	25		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
2-Butanone	ND		50		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Carbon disulfide	ND		50		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Carbon tetrachloride	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Chlorobenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Chloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Chloroform	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Chloromethane	ND		25		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
2-Chlorotoluene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
4-Chlorotoluene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1

Client: EnviroApplications, Inc.
Job ID: 570-9966-1
Project/Site: 80.CARMAX1.19/Oceanside CarMax

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: SB-5@3'
Date Collected: 10/09/19 15:00
Date Received: 10/11/19 19:30

Lab Sample ID: 570-9966-14
Matrix: Solid

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Dibromochloromethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,2-Dibromo-3-Chloropropane	ND		10		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,2-Dibromoethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Dibromomethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Dichlorodifluoromethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,1-Dichloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,2-Dichloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,1-Dichloroethene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,2-Dichloropropane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,3-Dichloropropane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
2,2-Dichloropropane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,1-Dichloropropene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Di-isopropyl ether (DIPE)	ND		10		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Ethanol	ND		250		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Ethylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Ethyl-t-butyl ether (ETBE)	ND		10		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
2-Hexanone	ND		50		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Isopropylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Methylene Chloride	ND		50		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
4-Methyl-2-pentanone	ND		50		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Methyl-t-Butyl Ether (MTBE)	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
m,p-Xylene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Naphthalene	ND		50		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
n-Butylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
N-Propylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
o-Xylene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
p-Isopropyltoluene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
sec-Butylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Styrene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Tert-amyl-methyl ether (TAME)	ND		10		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
tert-Butyl alcohol (TBA)	ND		50		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
tert-Butylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Tetrachloroethene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Toluene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,2,3-Trichlorobenzene	ND		10		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Trichloroethene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Trichlorofluoromethane	ND		50		ug/Kg		10/14/19 15:48	10/15/19 01:17	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: SB-5@3' **Lab Sample ID: 570-9966-14**
Date Collected: 10/09/19 15:00 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		50		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Vinyl acetate	ND		50		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Vinyl chloride	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 01:17	1
Xylenes, Total	ND		10		ug/Kg		10/14/19 15:48	10/15/19 01:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*	*10/14/19 15:48*	*10/15/19 01:17*	*1*
Dibromofluoromethane (Surr)	*98*		*79 - 133*	*10/14/19 15:48*	*10/15/19 01:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*71 - 155*	*10/14/19 15:48*	*10/15/19 01:17*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*	*10/14/19 15:48*	*10/15/19 01:17*	*1*

Client Sample ID: SB-6@3' **Lab Sample ID: 570-9966-17**
Date Collected: 10/09/19 13:00 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		120		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Benzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Bromobenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Bromochloromethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Bromodichloromethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Bromoform	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Bromomethane	ND	*	25		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
2-Butanone	ND		49		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Carbon disulfide	ND		49		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Carbon tetrachloride	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Chlorobenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Chloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Chloroform	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Chloromethane	ND		25		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
2-Chlorotoluene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
4-Chlorotoluene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
cis-1,2-Dichloroethene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
cis-1,3-Dichloropropene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Dibromochloromethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,2-Dibromo-3-Chloropropane	ND		9.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,2-Dibromoethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Dibromomethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,2-Dichlorobenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,3-Dichlorobenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,4-Dichlorobenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Dichlorodifluoromethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,1-Dichloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,2-Dichloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,1-Dichloroethene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,2-Dichloropropane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,3-Dichloropropane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
2,2-Dichloropropane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: SB-6@3' **Lab Sample ID: 570-9966-17**
Date Collected: 10/09/19 13:00 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Di-isopropyl ether (DIPE)	ND		9.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Ethanol	ND		250		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Ethylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Ethyl-t-butyl ether (ETBE)	ND		9.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
2-Hexanone	ND		49		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Isopropylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Methylene Chloride	ND		49		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
4-Methyl-2-pentanone	ND		49		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Methyl-t-Butyl Ether (MTBE)	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
m,p-Xylene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Naphthalene	ND		49		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
n-Butylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
N-Propylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
o-Xylene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
p-Isopropyltoluene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
sec-Butylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Styrene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Tert-amyl-methyl ether (TAME)	ND		9.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
tert-Butyl alcohol (TBA)	ND		49		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
tert-Butylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,1,1,2-Tetrachloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,1,2,2-Tetrachloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Tetrachloroethene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Toluene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
trans-1,2-Dichloroethene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
trans-1,3-Dichloropropene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,2,3-Trichlorobenzene	ND		9.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,2,4-Trichlorobenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,1,1-Trichloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,1,2-Trichloroethane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Trichloroethene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Trichlorofluoromethane	ND		49		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,2,3-Trichloropropane	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		49		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,2,4-Trimethylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
1,3,5-Trimethylbenzene	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Vinyl acetate	ND		49		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Vinyl chloride	ND		4.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1
Xylenes, Total	ND		9.9		ug/Kg		10/14/19 15:48	10/15/19 01:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*	*10/14/19 15:48*	*10/15/19 01:43*	*1*
Dibromofluoromethane (Surr)	*100*		*79 - 133*	*10/14/19 15:48*	*10/15/19 01:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*71 - 155*	*10/14/19 15:48*	*10/15/19 01:43*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*	*10/14/19 15:48*	*10/15/19 01:43*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: SB-7@3' **Lab Sample ID: 570-9966-20**
Date Collected: 10/09/19 11:20 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		120		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Benzene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Bromobenzene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Bromochloromethane	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Bromodichloromethane	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Bromoform	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Bromomethane	ND	*	26		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
2-Butanone	ND		52		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Carbon disulfide	ND		52		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Carbon tetrachloride	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Chlorobenzene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Chloroethane	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Chloroform	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Chloromethane	ND		26		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
2-Chlorotoluene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
4-Chlorotoluene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
cis-1,2-Dichloroethene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
cis-1,3-Dichloropropene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Dibromochloromethane	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,2-Dibromo-3-Chloropropane	ND		10		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,2-Dibromoethane	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Dibromomethane	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,2-Dichlorobenzene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,3-Dichlorobenzene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,4-Dichlorobenzene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Dichlorodifluoromethane	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,1-Dichloroethane	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,2-Dichloroethane	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,1-Dichloroethene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,2-Dichloropropane	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,3-Dichloropropane	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
2,2-Dichloropropane	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,1-Dichloropropene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Di-isopropyl ether (DIPE)	ND		10		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Ethanol	ND		260		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Ethylbenzene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Ethyl-t-butyl ether (ETBE)	ND		10		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
2-Hexanone	ND		52		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Isopropylbenzene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Methylene Chloride	ND		52		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
4-Methyl-2-pentanone	ND		52		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Methyl-t-Butyl Ether (MTBE)	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
m,p-Xylene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Naphthalene	ND		52		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
n-Butylbenzene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
N-Propylbenzene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
o-Xylene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
p-Isopropyltoluene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
sec-Butylbenzene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: SB-7@3' **Lab Sample ID: 570-9966-20**
Date Collected: 10/09/19 11:20 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Tert-amyl-methyl ether (TAME)	ND		10		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
tert-Butyl alcohol (TBA)	ND		52		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
tert-Butylbenzene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,1,1,2-Tetrachloroethane	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,1,2,2-Tetrachloroethane	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Tetrachloroethene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Toluene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
trans-1,2-Dichloroethene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
trans-1,3-Dichloropropene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,2,3-Trichlorobenzene	ND		10		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,2,4-Trichlorobenzene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,1,1-Trichloroethane	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,1,2-Trichloroethane	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Trichloroethene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Trichlorofluoromethane	ND		52		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,2,3-Trichloropropane	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		52		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,2,4-Trimethylbenzene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
1,3,5-Trimethylbenzene	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Vinyl acetate	ND		52		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Vinyl chloride	ND		5.2		ug/Kg		10/14/19 15:48	10/15/19 02:09	1
Xylenes, Total	ND		10		ug/Kg		10/14/19 15:48	10/15/19 02:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*	*10/14/19 15:48*	*10/15/19 02:09*	*1*
Dibromofluoromethane (Surr)	*100*		*79 - 133*	*10/14/19 15:48*	*10/15/19 02:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*71 - 155*	*10/14/19 15:48*	*10/15/19 02:09*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*	*10/14/19 15:48*	*10/15/19 02:09*	*1*

Client Sample ID: SB-8@3' **Lab Sample ID: 570-9966-23**
Date Collected: 10/09/19 11:45 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		120		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Benzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Bromobenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Bromochloromethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Bromodichloromethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Bromoform	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Bromomethane	ND	*	25		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
2-Butanone	ND		50		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Carbon disulfide	ND		50		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Carbon tetrachloride	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Chlorobenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Chloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Chloroform	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Chloromethane	ND		25		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
2-Chlorotoluene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
4-Chlorotoluene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: SB-8@3' **Lab Sample ID: 570-9966-23**
Date Collected: 10/09/19 11:45 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Dibromochloromethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,2-Dibromo-3-Chloropropane	ND		9.9		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,2-Dibromoethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Dibromomethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Dichlorodifluoromethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,1-Dichloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,2-Dichloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,1-Dichloroethene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,2-Dichloropropane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,3-Dichloropropane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
2,2-Dichloropropane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,1-Dichloropropene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Di-isopropyl ether (DIPE)	ND		9.9		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Ethanol	ND		250		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Ethylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Ethyl-t-butyl ether (ETBE)	ND		9.9		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
2-Hexanone	ND		50		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Isopropylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Methylene Chloride	ND		50		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
4-Methyl-2-pentanone	ND		50		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Methyl-t-Butyl Ether (MTBE)	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
m,p-Xylene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Naphthalene	ND		50		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
n-Butylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
N-Propylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
o-Xylene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
p-Isopropyltoluene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
sec-Butylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Styrene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Tert-amyl-methyl ether (TAME)	ND		9.9		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
tert-Butyl alcohol (TBA)	ND		50		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
tert-Butylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Tetrachloroethene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Toluene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,2,3-Trichlorobenzene	ND		9.9		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Trichloroethene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Trichlorofluoromethane	ND		50		ug/Kg		10/14/19 15:48	10/15/19 02:35	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: SB-8@3' **Lab Sample ID: 570-9966-23**
Date Collected: 10/09/19 11:45 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		50		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Vinyl acetate	ND		50		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Vinyl chloride	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 02:35	1
Xylenes, Total	ND		9.9		ug/Kg		10/14/19 15:48	10/15/19 02:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*	*10/14/19 15:48*	*10/15/19 02:35*	*1*
Dibromofluoromethane (Surr)	*102*		*79 - 133*	*10/14/19 15:48*	*10/15/19 02:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*71 - 155*	*10/14/19 15:48*	*10/15/19 02:35*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*	*10/14/19 15:48*	*10/15/19 02:35*	*1*

Client Sample ID: SB-9@3' **Lab Sample ID: 570-9966-26**
Date Collected: 10/09/19 12:10 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		68		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Benzene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Bromobenzene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Bromochloromethane	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Bromodichloromethane	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Bromoform	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Bromomethane	ND	*	14		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
2-Butanone	ND		28		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Carbon disulfide	ND		28		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Carbon tetrachloride	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Chlorobenzene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Chloroethane	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Chloroform	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Chloromethane	ND		14		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
2-Chlorotoluene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
4-Chlorotoluene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
cis-1,2-Dichloroethene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
cis-1,3-Dichloropropene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Dibromochloromethane	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,2-Dibromo-3-Chloropropane	ND		5.6		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,2-Dibromoethane	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Dibromomethane	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,2-Dichlorobenzene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,3-Dichlorobenzene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,4-Dichlorobenzene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Dichlorodifluoromethane	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,1-Dichloroethane	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,2-Dichloroethane	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,1-Dichloroethene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,2-Dichloropropane	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,3-Dichloropropane	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
2,2-Dichloropropane	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: SB-9@3' **Lab Sample ID: 570-9966-26**
Date Collected: 10/09/19 12:10 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Di-isopropyl ether (DIPE)	ND		5.6		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Ethanol	ND		140		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Ethylbenzene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Ethyl-t-butyl ether (ETBE)	ND		5.6		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
2-Hexanone	ND		28		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Isopropylbenzene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Methylene Chloride	ND		28		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
4-Methyl-2-pentanone	ND		28		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Methyl-t-Butyl Ether (MTBE)	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
m,p-Xylene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Naphthalene	ND		28		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
n-Butylbenzene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
N-Propylbenzene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
o-Xylene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
p-Isopropyltoluene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
sec-Butylbenzene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Styrene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Tert-amyl-methyl ether (TAME)	ND		5.6		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
tert-Butyl alcohol (TBA)	ND		28		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
tert-Butylbenzene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,1,1,2-Tetrachloroethane	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,1,2,2-Tetrachloroethane	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Tetrachloroethene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Toluene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
trans-1,2-Dichloroethene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
trans-1,3-Dichloropropene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,2,3-Trichlorobenzene	ND		5.6		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,2,4-Trichlorobenzene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,1,1-Trichloroethane	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,1,2-Trichloroethane	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Trichloroethene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Trichlorofluoromethane	ND		28		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,2,3-Trichloropropane	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		28		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,2,4-Trimethylbenzene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
1,3,5-Trimethylbenzene	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Vinyl acetate	ND		28		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Vinyl chloride	ND		2.8		ug/Kg		10/14/19 15:48	10/15/19 03:02	1
Xylenes, Total	ND		5.6		ug/Kg		10/14/19 15:48	10/15/19 03:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*	*10/14/19 15:48*	*10/15/19 03:02*	*1*
Dibromofluoromethane (Surr)	*102*		*79 - 133*	*10/14/19 15:48*	*10/15/19 03:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*71 - 155*	*10/14/19 15:48*	*10/15/19 03:02*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*	*10/14/19 15:48*	*10/15/19 03:02*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: SB-10@3' **Lab Sample ID: 570-9966-29**
Date Collected: 10/09/19 12:30 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		120		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Benzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Bromobenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Bromochloromethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Bromodichloromethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Bromoform	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Bromomethane	ND	*	25		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
2-Butanone	ND		50		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Carbon disulfide	ND		50		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Carbon tetrachloride	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Chlorobenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Chloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Chloroform	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Chloromethane	ND		25		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
2-Chlorotoluene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
4-Chlorotoluene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Dibromochloromethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,2-Dibromo-3-Chloropropane	ND		10		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,2-Dibromoethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Dibromomethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Dichlorodifluoromethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,1-Dichloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,2-Dichloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,1-Dichloroethene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,2-Dichloropropane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,3-Dichloropropane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
2,2-Dichloropropane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,1-Dichloropropene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Di-isopropyl ether (DIPE)	ND		10		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Ethanol	ND		250		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Ethylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Ethyl-t-butyl ether (ETBE)	ND		10		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
2-Hexanone	ND		50		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Isopropylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Methylene Chloride	ND		50		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
4-Methyl-2-pentanone	ND		50		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Methyl-t-Butyl Ether (MTBE)	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
m,p-Xylene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Naphthalene	ND		50		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
n-Butylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
N-Propylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
o-Xylene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
p-Isopropyltoluene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
sec-Butylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: SB-10@3' **Lab Sample ID: 570-9966-29**
Date Collected: 10/09/19 12:30 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Tert-amyl-methyl ether (TAME)	ND		10		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
tert-Butyl alcohol (TBA)	ND		50		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
tert-Butylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Tetrachloroethene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Toluene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,2,3-Trichlorobenzene	ND		10		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Trichloroethene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Trichlorofluoromethane	ND		50		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		50		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Vinyl acetate	ND		50		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Vinyl chloride	ND		5.0		ug/Kg		10/14/19 15:48	10/15/19 03:28	1
Xylenes, Total	ND		10		ug/Kg		10/14/19 15:48	10/15/19 03:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*	*10/14/19 15:48*	*10/15/19 03:28*	*1*
Dibromofluoromethane (Surr)	*101*		*79 - 133*	*10/14/19 15:48*	*10/15/19 03:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*71 - 155*	*10/14/19 15:48*	*10/15/19 03:28*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*	*10/14/19 15:48*	*10/15/19 03:28*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Client Sample ID: SB-1@3' **Lab Sample ID: 570-9966-2**
Date Collected: 10/09/19 13:30 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6 as C6	ND		5.1		mg/Kg		10/15/19 14:35	10/16/19 05:02	1
C7 as C7	ND		5.1		mg/Kg		10/15/19 14:35	10/16/19 05:02	1
C8 as C8	ND		5.1		mg/Kg		10/15/19 14:35	10/16/19 05:02	1
C9-C10	ND		5.1		mg/Kg		10/15/19 14:35	10/16/19 05:02	1
C11-C12	ND		5.1		mg/Kg		10/15/19 14:35	10/16/19 05:02	1
C13-C14	ND		5.1		mg/Kg		10/15/19 14:35	10/16/19 05:02	1
C15-C16	ND		5.1		mg/Kg		10/15/19 14:35	10/16/19 05:02	1
C17-C18	ND		5.1		mg/Kg		10/15/19 14:35	10/16/19 05:02	1
C19-C20	ND		5.1		mg/Kg		10/15/19 14:35	10/16/19 05:02	1
C21-C22	ND		5.1		mg/Kg		10/15/19 14:35	10/16/19 05:02	1
C23-C24	ND		5.1		mg/Kg		10/15/19 14:35	10/16/19 05:02	1
C25-C28	ND		5.1		mg/Kg		10/15/19 14:35	10/16/19 05:02	1
C29-C32	ND		5.1		mg/Kg		10/15/19 14:35	10/16/19 05:02	1
C33-C36	ND		5.1		mg/Kg		10/15/19 14:35	10/16/19 05:02	1
C37-C40	ND		5.1		mg/Kg		10/15/19 14:35	10/16/19 05:02	1
C41-C44	ND		5.1		mg/Kg		10/15/19 14:35	10/16/19 05:02	1
C6-C44	**9.1**		5.1		mg/Kg		10/15/19 14:35	10/16/19 05:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*84*		*61 - 145*	*10/15/19 14:35*	*10/16/19 05:02*	*1*

Client Sample ID: SB-2@3' **Lab Sample ID: 570-9966-5**
Date Collected: 10/09/19 13:50 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6 as C6	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 05:23	1
C7 as C7	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 05:23	1
C8 as C8	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 05:23	1
C9-C10	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 05:23	1
C11-C12	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 05:23	1
C13-C14	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 05:23	1
C15-C16	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 05:23	1
C17-C18	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 05:23	1
C19-C20	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 05:23	1
C21-C22	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 05:23	1
C23-C24	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 05:23	1
C25-C28	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 05:23	1
C29-C32	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 05:23	1
C33-C36	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 05:23	1
C37-C40	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 05:23	1
C41-C44	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 05:23	1
C6-C44	**5.1**		5.0		mg/Kg		10/15/19 14:35	10/16/19 05:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*103*		*61 - 145*	*10/15/19 14:35*	*10/16/19 05:23*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Client Sample ID: SB-3@3' **Lab Sample ID: 570-9966-8**
Date Collected: 10/09/19 14:20 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6 as C6	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 05:44	1
C7 as C7	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 05:44	1
C8 as C8	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 05:44	1
C9-C10	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 05:44	1
C11-C12	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 05:44	1
C13-C14	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 05:44	1
C15-C16	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 05:44	1
C17-C18	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 05:44	1
C19-C20	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 05:44	1
C21-C22	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 05:44	1
C23-C24	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 05:44	1
C25-C28	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 05:44	1
C29-C32	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 05:44	1
C33-C36	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 05:44	1
C37-C40	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 05:44	1
C41-C44	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 05:44	1
C6-C44	**9.4**		4.8		mg/Kg		10/15/19 14:35	10/16/19 05:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*91*		*61 - 145*	*10/15/19 14:35*	*10/16/19 05:44*	*1*

Client Sample ID: SB-4@3' **Lab Sample ID: 570-9966-11**
Date Collected: 10/09/19 14:35 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6 as C6	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:05	1
C7 as C7	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:05	1
C8 as C8	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:05	1
C9-C10	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:05	1
C11-C12	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:05	1
C13-C14	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:05	1
C15-C16	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:05	1
C17-C18	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:05	1
C19-C20	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:05	1
C21-C22	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:05	1
C23-C24	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:05	1
C25-C28	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:05	1
C29-C32	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:05	1
C33-C36	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:05	1
C37-C40	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:05	1
C41-C44	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:05	1
C6-C44	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*96*		*61 - 145*	*10/15/19 14:35*	*10/16/19 06:05*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Client Sample ID: SB-5@3' **Lab Sample ID: 570-9966-14**
Date Collected: 10/09/19 15:00 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6 as C6	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 06:26	1
C7 as C7	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 06:26	1
C8 as C8	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 06:26	1
C9-C10	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 06:26	1
C11-C12	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 06:26	1
C13-C14	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 06:26	1
C15-C16	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 06:26	1
C17-C18	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 06:26	1
C19-C20	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 06:26	1
C21-C22	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 06:26	1
C23-C24	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 06:26	1
C25-C28	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 06:26	1
C29-C32	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 06:26	1
C33-C36	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 06:26	1
C37-C40	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 06:26	1
C41-C44	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 06:26	1
C6-C44	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 06:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*93*		*61 - 145*	*10/15/19 14:35*	*10/16/19 06:26*	*1*

Client Sample ID: SB-6@3' **Lab Sample ID: 570-9966-17**
Date Collected: 10/09/19 13:00 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6 as C6	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:46	1
C7 as C7	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:46	1
C8 as C8	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:46	1
C9-C10	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:46	1
C11-C12	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:46	1
C13-C14	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:46	1
C15-C16	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:46	1
C17-C18	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:46	1
C19-C20	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:46	1
C21-C22	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:46	1
C23-C24	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:46	1
C25-C28	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:46	1
C29-C32	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:46	1
C33-C36	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:46	1
C37-C40	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:46	1
C41-C44	ND		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:46	1
C6-C44	**9.9**		5.0		mg/Kg		10/15/19 14:35	10/16/19 06:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*99*		*61 - 145*	*10/15/19 14:35*	*10/16/19 06:46*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Client Sample ID: SB-7@3' **Lab Sample ID: 570-9966-20**
Date Collected: 10/09/19 11:20 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6 as C6	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 07:08	1
C7 as C7	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 07:08	1
C8 as C8	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 07:08	1
C9-C10	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 07:08	1
C11-C12	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 07:08	1
C13-C14	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 07:08	1
C15-C16	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 07:08	1
C17-C18	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 07:08	1
C19-C20	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 07:08	1
C21-C22	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 07:08	1
C23-C24	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 07:08	1
C25-C28	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 07:08	1
C29-C32	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 07:08	1
C33-C36	**4.9**		4.9		mg/Kg		10/15/19 14:35	10/16/19 07:08	1
C37-C40	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 07:08	1
C41-C44	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 07:08	1
C6-C44	**21**		4.9		mg/Kg		10/15/19 14:35	10/16/19 07:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*83*		*61 - 145*	*10/15/19 14:35*	*10/16/19 07:08*	*1*

Client Sample ID: SB-8@3' **Lab Sample ID: 570-9966-23**
Date Collected: 10/09/19 11:45 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6 as C6	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 20:42	1
C7 as C7	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 20:42	1
C8 as C8	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 20:42	1
C9-C10	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 20:42	1
C11-C12	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 20:42	1
C13-C14	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 20:42	1
C15-C16	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 20:42	1
C17-C18	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 20:42	1
C19-C20	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 20:42	1
C21-C22	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 20:42	1
C23-C24	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 20:42	1
C25-C28	**12**		4.9		mg/Kg		10/15/19 14:35	10/16/19 20:42	1
C29-C32	**27**		4.9		mg/Kg		10/15/19 14:35	10/16/19 20:42	1
C33-C36	**35**		4.9		mg/Kg		10/15/19 14:35	10/16/19 20:42	1
C37-C40	**34**		4.9		mg/Kg		10/15/19 14:35	10/16/19 20:42	1
C41-C44	**27**		4.9		mg/Kg		10/15/19 14:35	10/16/19 20:42	1
C6-C44	**140**		4.9		mg/Kg		10/15/19 14:35	10/16/19 20:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*105*		*61 - 145*	*10/15/19 14:35*	*10/16/19 20:42*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Client Sample ID: SB-9@3'
Date Collected: 10/09/19 12:10
Date Received: 10/11/19 19:30

Lab Sample ID: 570-9966-26
Matrix: Solid

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6 as C6	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 21:04	1
C7 as C7	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 21:04	1
C8 as C8	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 21:04	1
C9-C10	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 21:04	1
C11-C12	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 21:04	1
C13-C14	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 21:04	1
C15-C16	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 21:04	1
C17-C18	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 21:04	1
C19-C20	ND		4.8		mg/Kg		10/15/19 14:35	10/16/19 21:04	1
C21-C22	**5.9**		4.8		mg/Kg		10/15/19 14:35	10/16/19 21:04	1
C23-C24	**5.5**		4.8		mg/Kg		10/15/19 14:35	10/16/19 21:04	1
C25-C28	**16**		4.8		mg/Kg		10/15/19 14:35	10/16/19 21:04	1
C29-C32	**24**		4.8		mg/Kg		10/15/19 14:35	10/16/19 21:04	1
C33-C36	**25**		4.8		mg/Kg		10/15/19 14:35	10/16/19 21:04	1
C37-C40	**23**		4.8		mg/Kg		10/15/19 14:35	10/16/19 21:04	1
C41-C44	**19**		4.8		mg/Kg		10/15/19 14:35	10/16/19 21:04	1
C6-C44	**130**		4.8		mg/Kg		10/15/19 14:35	10/16/19 21:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*104*		*61 - 145*	*10/15/19 14:35*	*10/16/19 21:04*	*1*

Client Sample ID: SB-10@3'
Date Collected: 10/09/19 12:30
Date Received: 10/11/19 19:30

Lab Sample ID: 570-9966-29
Matrix: Solid

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6 as C6	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 21:24	1
C7 as C7	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 21:24	1
C8 as C8	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 21:24	1
C9-C10	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 21:24	1
C11-C12	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 21:24	1
C13-C14	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 21:24	1
C15-C16	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 21:24	1
C17-C18	ND		4.9		mg/Kg		10/15/19 14:35	10/16/19 21:24	1
C19-C20	**6.1**		4.9		mg/Kg		10/15/19 14:35	10/16/19 21:24	1
C21-C22	**8.3**		4.9		mg/Kg		10/15/19 14:35	10/16/19 21:24	1
C23-C24	**11**		4.9		mg/Kg		10/15/19 14:35	10/16/19 21:24	1
C25-C28	**32**		4.9		mg/Kg		10/15/19 14:35	10/16/19 21:24	1
C29-C32	**46**		4.9		mg/Kg		10/15/19 14:35	10/16/19 21:24	1
C33-C36	**45**		4.9		mg/Kg		10/15/19 14:35	10/16/19 21:24	1
C37-C40	**39**		4.9		mg/Kg		10/15/19 14:35	10/16/19 21:24	1
C41-C44	**30**		4.9		mg/Kg		10/15/19 14:35	10/16/19 21:24	1
C6-C44	**220**		4.9		mg/Kg		10/15/19 14:35	10/16/19 21:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*106*		*61 - 145*	*10/15/19 14:35*	*10/16/19 21:24*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: SB-1@3' **Lab Sample ID: 570-9966-2**
Date Collected: 10/09/19 13:30 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
alpha-BHC	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
beta-BHC	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
Chlordane	ND		25	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
4,4'-DDD	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
4,4'-DDE	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
4,4'-DDT	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
delta-BHC	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
Dieldrin	ND		1.0	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
Endosulfan I	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
Endosulfan II	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
Endosulfan sulfate	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
Endrin	ND	*	5.0	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
Endrin aldehyde	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
Endrin ketone	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
gamma-BHC	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
Heptachlor	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
Heptachlor epoxide	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
Methoxychlor	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:28	1
Toxaphene	ND		25	ug/Kg		10/14/19 12:29	10/17/19 15:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*48*		*24 - 168*	*10/14/19 12:29*	*10/17/19 15:28*	*1*
Tetrachloro-m-xylene	*25*	*p*	*25 - 145*	*10/14/19 12:29*	*10/17/19 15:28*	*1*

Client Sample ID: SB-2@3' **Lab Sample ID: 570-9966-5**
Date Collected: 10/09/19 13:50 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
alpha-BHC	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
beta-BHC	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
Chlordane	ND		25	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
4,4'-DDD	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
4,4'-DDE	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
4,4'-DDT	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
delta-BHC	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
Dieldrin	ND		1.0	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
Endosulfan I	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
Endosulfan II	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
Endosulfan sulfate	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
Endrin	ND	*	5.0	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
Endrin aldehyde	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
Endrin ketone	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
gamma-BHC	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
Heptachlor	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
Heptachlor epoxide	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
Methoxychlor	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:42	1
Toxaphene	ND		25	ug/Kg		10/14/19 12:29	10/17/19 15:42	1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	37		24 - 168	10/14/19 12:29	10/17/19 15:42	1
Tetrachloro-m-xylene	32		25 - 145	10/14/19 12:29	10/17/19 15:42	1

Client Sample ID: SB-3@3' **Lab Sample ID: 570-9966-8**
Date Collected: 10/09/19 14:20 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
alpha-BHC	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
beta-BHC	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
Chlordane	ND		25	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
4,4'-DDD	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
4,4'-DDE	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
4,4'-DDT	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
delta-BHC	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
Dieldrin	ND		0.99	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
Endosulfan I	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
Endosulfan II	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
Endosulfan sulfate	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
Endrin	ND	*	5.0	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
Endrin aldehyde	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
Endrin ketone	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
gamma-BHC	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
Heptachlor	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
Heptachlor epoxide	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
Methoxychlor	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 15:56	1
Toxaphene	ND		25	ug/Kg		10/14/19 12:29	10/17/19 15:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	63		24 - 168	10/14/19 12:29	10/17/19 15:56	1
Tetrachloro-m-xylene	64		25 - 145	10/14/19 12:29	10/17/19 15:56	1

Client Sample ID: SB-4@3' **Lab Sample ID: 570-9966-11**
Date Collected: 10/09/19 14:35 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 16:10	1
alpha-BHC	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 16:10	1
beta-BHC	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 16:10	1
Chlordane	ND		25	ug/Kg		10/14/19 12:29	10/17/19 16:10	1
4,4'-DDD	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 16:10	1
4,4'-DDE	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 16:10	1
4,4'-DDT	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 16:10	1
delta-BHC	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 16:10	1
Dieldrin	ND		0.99	ug/Kg		10/14/19 12:29	10/17/19 16:10	1
Endosulfan I	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 16:10	1
Endosulfan II	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 16:10	1
Endosulfan sulfate	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 16:10	1
Endrin	ND	*	5.0	ug/Kg		10/14/19 12:29	10/17/19 16:10	1
Endrin aldehyde	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 16:10	1
Endrin ketone	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 16:10	1
gamma-BHC	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 16:10	1
Heptachlor	ND		5.0	ug/Kg		10/14/19 12:29	10/17/19 16:10	1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Client Sample ID: SB-4@3' **Lab Sample ID: 570-9966-11**
Date Collected: 10/09/19 14:35 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:10	1
Methoxychlor	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:10	1
Toxaphene	ND		25		ug/Kg		10/14/19 12:29	10/17/19 16:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*68*		*24 - 168*	*10/14/19 12:29*	*10/17/19 16:10*	*1*
Tetrachloro-m-xylene	*56*		*25 - 145*	*10/14/19 12:29*	*10/17/19 16:10*	*1*

Client Sample ID: SB-5@3' **Lab Sample ID: 570-9966-14**
Date Collected: 10/09/19 15:00 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
alpha-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
beta-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
Chlordane	ND		25		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
4,4'-DDD	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
4,4'-DDE	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
4,4'-DDT	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
delta-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
Dieldrin	ND		1.0		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
Endosulfan I	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
Endosulfan II	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
Endosulfan sulfate	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
Endrin	ND	*	5.0		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
Endrin aldehyde	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
Endrin ketone	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
gamma-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
Heptachlor	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
Heptachlor epoxide	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
Methoxychlor	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:24	1
Toxaphene	ND		25		ug/Kg		10/14/19 12:29	10/17/19 16:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*67*		*24 - 168*	*10/14/19 12:29*	*10/17/19 16:24*	*1*
Tetrachloro-m-xylene	*60*		*25 - 145*	*10/14/19 12:29*	*10/17/19 16:24*	*1*

Client Sample ID: SB-6@3' **Lab Sample ID: 570-9966-17**
Date Collected: 10/09/19 13:00 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:38	1
alpha-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:38	1
beta-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:38	1
Chlordane	ND		25		ug/Kg		10/14/19 12:29	10/17/19 16:38	1
4,4'-DDD	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:38	1
4,4'-DDE	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:38	1
4,4'-DDT	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:38	1
delta-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:38	1
Dieldrin	ND		1.0		ug/Kg		10/14/19 12:29	10/17/19 16:38	1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Client Sample ID: SB-6@3' **Lab Sample ID: 570-9966-17**
Date Collected: 10/09/19 13:00 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:38	1
Endosulfan II	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:38	1
Endosulfan sulfate	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:38	1
Endrin	ND	*	5.0		ug/Kg		10/14/19 12:29	10/17/19 16:38	1
Endrin aldehyde	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:38	1
Endrin ketone	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:38	1
gamma-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:38	1
Heptachlor	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:38	1
Heptachlor epoxide	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:38	1
Methoxychlor	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:38	1
Toxaphene	ND		25		ug/Kg		10/14/19 12:29	10/17/19 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*73*		*24 - 168*	*10/14/19 12:29*	*10/17/19 16:38*	*1*
Tetrachloro-m-xylene	*54*		*25 - 145*	*10/14/19 12:29*	*10/17/19 16:38*	*1*

Client Sample ID: SB-7@3' **Lab Sample ID: 570-9966-20**
Date Collected: 10/09/19 11:20 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
alpha-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
beta-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
Chlordane	ND		25		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
4,4'-DDD	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
4,4'-DDE	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
4,4'-DDT	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
delta-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
Dieldrin	ND		1.0		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
Endosulfan I	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
Endosulfan II	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
Endosulfan sulfate	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
Endrin	ND	*	5.0		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
Endrin aldehyde	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
Endrin ketone	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
gamma-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
Heptachlor	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
Heptachlor epoxide	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
Methoxychlor	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 16:52	1
Toxaphene	ND		25		ug/Kg		10/14/19 12:29	10/17/19 16:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*64*		*24 - 168*	*10/14/19 12:29*	*10/17/19 16:52*	*1*
Tetrachloro-m-xylene	*70*		*25 - 145*	*10/14/19 12:29*	*10/17/19 16:52*	*1*

Client Sample ID: SB-8@3' **Lab Sample ID: 570-9966-23**
Date Collected: 10/09/19 11:45 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:07	1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Client Sample ID: SB-8@3' **Lab Sample ID: 570-9966-23**
Date Collected: 10/09/19 11:45 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:07	1
beta-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:07	1
Chlordane	ND		25		ug/Kg		10/14/19 12:29	10/17/19 17:07	1
4,4'-DDD	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:07	1
4,4'-DDE	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:07	1
4,4'-DDT	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:07	1
delta-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:07	1
Dieldrin	ND		1.0		ug/Kg		10/14/19 12:29	10/17/19 17:07	1
Endosulfan I	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:07	1
Endosulfan II	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:07	1
Endosulfan sulfate	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:07	1
Endrin	ND	*	5.0		ug/Kg		10/14/19 12:29	10/17/19 17:07	1
Endrin aldehyde	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:07	1
Endrin ketone	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:07	1
gamma-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:07	1
Heptachlor	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:07	1
Heptachlor epoxide	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:07	1
Methoxychlor	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:07	1
Toxaphene	ND		25		ug/Kg		10/14/19 12:29	10/17/19 17:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*29*		*24 - 168*	*10/14/19 12:29*	*10/17/19 17:07*	*1*
Tetrachloro-m-xylene	*26*		*25 - 145*	*10/14/19 12:29*	*10/17/19 17:07*	*1*

Client Sample ID: SB-9@3' **Lab Sample ID: 570-9966-26**
Date Collected: 10/09/19 12:10 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
alpha-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
beta-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
Chlordane	ND		25		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
4,4'-DDD	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
4,4'-DDE	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
4,4'-DDT	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
delta-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
Dieldrin	ND		0.99		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
Endosulfan I	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
Endosulfan II	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
Endosulfan sulfate	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
Endrin	ND	*	5.0		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
Endrin aldehyde	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
Endrin ketone	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
gamma-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
Heptachlor	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
Heptachlor epoxide	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
Methoxychlor	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:21	1
Toxaphene	ND		25		ug/Kg		10/14/19 12:29	10/17/19 17:21	1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	33		24 - 168	10/14/19 12:29	10/17/19 17:21	1
Tetrachloro-m-xylene	39		25 - 145	10/14/19 12:29	10/17/19 17:21	1

Client Sample ID: SB-10@3' **Lab Sample ID: 570-9966-29**
Date Collected: 10/09/19 12:30 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
alpha-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
beta-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
Chlordane	ND		25		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
4,4'-DDD	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
4,4'-DDE	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
4,4'-DDT	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
delta-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
Dieldrin	ND		1.0		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
Endosulfan I	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
Endosulfan II	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
Endosulfan sulfate	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
Endrin	ND	*	5.0		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
Endrin aldehyde	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
Endrin ketone	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
gamma-BHC	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
Heptachlor	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
Heptachlor epoxide	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
Methoxychlor	ND		5.0		ug/Kg		10/14/19 12:29	10/17/19 17:35	1
Toxaphene	ND		25		ug/Kg		10/14/19 12:29	10/17/19 17:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	50		24 - 168	10/14/19 12:29	10/17/19 17:35	1
Tetrachloro-m-xylene	55		25 - 145	10/14/19 12:29	10/17/19 17:35	1

Method: 6010B - Metals (ICP)

Client Sample ID: SB-1@3' **Lab Sample ID: 570-9966-2**
Date Collected: 10/09/19 13:30 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.758	mg/Kg		10/16/19 18:51	10/19/19 01:41	1
Arsenic	**2.10**		0.758	mg/Kg		10/16/19 18:51	10/19/19 01:41	1
Barium	**61.7**		0.505	mg/Kg		10/16/19 18:51	10/19/19 01:41	1
Beryllium	**0.468**		0.253	mg/Kg		10/16/19 18:51	10/19/19 01:41	1
Cadmium	ND		0.505	mg/Kg		10/16/19 18:51	10/19/19 01:41	1
Chromium	**6.49**		0.253	mg/Kg		10/16/19 18:51	10/19/19 01:41	1
Cobalt	**2.75**		0.253	mg/Kg		10/16/19 18:51	10/19/19 01:41	1
Copper	**3.42**		0.505	mg/Kg		10/16/19 18:51	10/19/19 01:41	1
Lead	**1.20**		0.505	mg/Kg		10/16/19 18:51	10/19/19 01:41	1
Molybdenum	ND		0.253	mg/Kg		10/16/19 18:51	10/19/19 01:41	1
Nickel	**2.95**		0.253	mg/Kg		10/16/19 18:51	10/19/19 01:41	1
Selenium	ND	L	0.758	mg/Kg		10/16/19 18:51	10/19/19 01:41	1
Silver	ND		0.253	mg/Kg		10/16/19 18:51	10/19/19 01:41	1
Thallium	ND		0.758	mg/Kg		10/16/19 18:51	10/19/19 01:41	1
Vanadium	**15.4**		0.253	mg/Kg		10/16/19 18:51	10/19/19 01:41	1
Zinc	**13.1**		1.01	mg/Kg		10/16/19 18:51	10/19/19 01:41	1

Client Sample ID: SB-2@3' **Lab Sample ID: 570-9966-5**
Date Collected: 10/09/19 13:50 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**1.59**		0.765	mg/Kg		10/16/19 15:19	10/21/19 13:26	1
Arsenic	**1.61**		0.765	mg/Kg		10/16/19 15:19	10/21/19 13:26	1
Barium	**41.6**		0.510	mg/Kg		10/16/19 15:19	10/21/19 13:26	1
Beryllium	**0.383**		0.255	mg/Kg		10/16/19 15:19	10/21/19 13:26	1
Cadmium	ND		0.510	mg/Kg		10/16/19 15:19	10/21/19 13:26	1
Chromium	**7.32**		0.255	mg/Kg		10/16/19 15:19	10/21/19 13:26	1
Cobalt	**2.54**		0.255	mg/Kg		10/16/19 15:19	10/21/19 13:26	1
Copper	**3.90**		0.510	mg/Kg		10/16/19 15:19	10/21/19 13:26	1
Lead	**1.68**		0.510	mg/Kg		10/16/19 15:19	10/21/19 13:26	1
Molybdenum	**0.801**		0.255	mg/Kg		10/16/19 15:19	10/21/19 13:26	1
Nickel	**3.08**		0.255	mg/Kg		10/16/19 15:19	10/21/19 13:26	1
Selenium	ND		0.765	mg/Kg		10/16/19 15:19	10/21/19 13:26	1
Silver	ND		0.255	mg/Kg		10/16/19 15:19	10/21/19 13:26	1
Thallium	ND		0.765	mg/Kg		10/16/19 15:19	10/21/19 13:26	1
Vanadium	**16.5**		0.255	mg/Kg		10/16/19 15:19	10/21/19 13:26	1
Zinc	**9.33**		1.02	mg/Kg		10/16/19 15:19	10/21/19 13:26	1

Client Sample ID: SB-3@3' **Lab Sample ID: 570-9966-8**
Date Collected: 10/09/19 14:20 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.746	mg/Kg		10/16/19 18:51	10/19/19 01:44	1
Arsenic	**2.36**		0.746	mg/Kg		10/16/19 18:51	10/19/19 01:44	1
Barium	**51.5**		0.498	mg/Kg		10/16/19 18:51	10/19/19 01:44	1
Beryllium	**0.407**		0.249	mg/Kg		10/16/19 18:51	10/19/19 01:44	1
Cadmium	ND		0.498	mg/Kg		10/16/19 18:51	10/19/19 01:44	1
Chromium	**4.05**		0.249	mg/Kg		10/16/19 18:51	10/19/19 01:44	1
Cobalt	**1.95**		0.249	mg/Kg		10/16/19 18:51	10/19/19 01:44	1
Copper	**2.54**		0.498	mg/Kg		10/16/19 18:51	10/19/19 01:44	1

Method: 6010B - Metals (ICP) (Continued)

Client Sample ID: SB-3@3' **Lab Sample ID: 570-9966-8**
Date Collected: 10/09/19 14:20 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.36**		0.498		mg/Kg		10/16/19 18:51	10/19/19 01:44	1
Molybdenum	ND		0.249		mg/Kg		10/16/19 18:51	10/19/19 01:44	1
Nickel	**2.57**		0.249		mg/Kg		10/16/19 18:51	10/19/19 01:44	1
Selenium	ND		0.746		mg/Kg		10/16/19 18:51	10/19/19 01:44	1
Silver	ND		0.249		mg/Kg		10/16/19 18:51	10/19/19 01:44	1
Thallium	ND		0.746		mg/Kg		10/16/19 18:51	10/19/19 01:44	1
Vanadium	**12.0**		0.249		mg/Kg		10/16/19 18:51	10/19/19 01:44	1
Zinc	**9.27**		0.995		mg/Kg		10/16/19 18:51	10/19/19 01:44	1

Client Sample ID: SB-4@3' **Lab Sample ID: 570-9966-11**
Date Collected: 10/09/19 14:35 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.900**		0.754		mg/Kg		10/16/19 18:51	10/19/19 01:46	1
Arsenic	**3.52**		0.754		mg/Kg		10/16/19 18:51	10/19/19 01:46	1
Barium	**81.6**		0.503		mg/Kg		10/16/19 18:51	10/19/19 01:46	1
Beryllium	**0.836**		0.251		mg/Kg		10/16/19 18:51	10/19/19 01:46	1
Cadmium	ND		0.503		mg/Kg		10/16/19 18:51	10/19/19 01:46	1
Chromium	**10.2**		0.251		mg/Kg		10/16/19 18:51	10/19/19 01:46	1
Cobalt	**4.65**		0.251		mg/Kg		10/16/19 18:51	10/19/19 01:46	1
Copper	**7.95**		0.503		mg/Kg		10/16/19 18:51	10/19/19 01:46	1
Lead	**0.963**		0.503		mg/Kg		10/16/19 18:51	10/19/19 01:46	1
Molybdenum	ND	L	0.251		mg/Kg		10/16/19 18:51	10/19/19 01:46	1
Nickel	**4.93**		0.251		mg/Kg		10/16/19 18:51	10/19/19 01:46	1
Selenium	ND	L	0.754		mg/Kg		10/16/19 18:51	10/19/19 01:46	1
Silver	ND		0.251		mg/Kg		10/16/19 18:51	10/19/19 01:46	1
Thallium	ND		0.754		mg/Kg		10/16/19 18:51	10/19/19 01:46	1
Vanadium	**21.3**		0.251		mg/Kg		10/16/19 18:51	10/19/19 01:46	1
Zinc	**22.8**		1.01		mg/Kg		10/16/19 18:51	10/19/19 01:46	1

Client Sample ID: SB-5@3' **Lab Sample ID: 570-9966-14**
Date Collected: 10/09/19 15:00 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.750		mg/Kg		10/16/19 18:51	10/19/19 01:48	1
Arsenic	**2.35**		0.750		mg/Kg		10/16/19 18:51	10/19/19 01:48	1
Barium	**24.5**		0.500		mg/Kg		10/16/19 18:51	10/19/19 01:48	1
Beryllium	**0.505**		0.250		mg/Kg		10/16/19 18:51	10/19/19 01:48	1
Cadmium	ND		0.500		mg/Kg		10/16/19 18:51	10/19/19 01:48	1
Chromium	**4.16**		0.250		mg/Kg		10/16/19 18:51	10/19/19 01:48	1
Cobalt	**1.48**		0.250		mg/Kg		10/16/19 18:51	10/19/19 01:48	1
Copper	**1.25**		0.500		mg/Kg		10/16/19 18:51	10/19/19 01:48	1
Lead	**0.880**		0.500		mg/Kg		10/16/19 18:51	10/19/19 01:48	1
Molybdenum	ND		0.250		mg/Kg		10/16/19 18:51	10/19/19 01:48	1
Nickel	**2.01**		0.250		mg/Kg		10/16/19 18:51	10/19/19 01:48	1
Selenium	ND		0.750		mg/Kg		10/16/19 18:51	10/19/19 01:48	1
Silver	ND		0.250		mg/Kg		10/16/19 18:51	10/19/19 01:48	1
Thallium	ND		0.750		mg/Kg		10/16/19 18:51	10/19/19 01:48	1
Vanadium	**19.7**		0.250		mg/Kg		10/16/19 18:51	10/19/19 01:48	1
Zinc	**12.9**		1.00		mg/Kg		10/16/19 18:51	10/19/19 01:48	1

Method: 6010B - Metals (ICP)

Client Sample ID: SB-6@3' **Lab Sample ID: 570-9966-17**
Date Collected: 10/09/19 13:00 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.919**		0.761	mg/Kg		10/16/19 18:51	10/19/19 01:50	1
Arsenic	**1.84**		0.761	mg/Kg		10/16/19 18:51	10/19/19 01:50	1
Barium	**45.5**		0.508	mg/Kg		10/16/19 18:51	10/19/19 01:50	1
Beryllium	**0.459**		0.254	mg/Kg		10/16/19 18:51	10/19/19 01:50	1
Cadmium	ND		0.508	mg/Kg		10/16/19 18:51	10/19/19 01:50	1
Chromium	**4.91**		0.254	mg/Kg		10/16/19 18:51	10/19/19 01:50	1
Cobalt	**1.81**		0.254	mg/Kg		10/16/19 18:51	10/19/19 01:50	1
Copper	**2.72**		0.508	mg/Kg		10/16/19 18:51	10/19/19 01:50	1
Lead	**1.14**		0.508	mg/Kg		10/16/19 18:51	10/19/19 01:50	1
Molybdenum	ND		0.254	mg/Kg		10/16/19 18:51	10/19/19 01:50	1
Nickel	**2.58**		0.254	mg/Kg		10/16/19 18:51	10/19/19 01:50	1
Selenium	ND	L	0.761	mg/Kg		10/16/19 18:51	10/19/19 01:50	1
Silver	ND		0.254	mg/Kg		10/16/19 18:51	10/19/19 01:50	1
Thallium	ND		0.761	mg/Kg		10/16/19 18:51	10/19/19 01:50	1
Vanadium	**18.0**		0.254	mg/Kg		10/16/19 18:51	10/19/19 01:50	1
Zinc	**12.0**		1.02	mg/Kg		10/16/19 18:51	10/19/19 01:50	1

Client Sample ID: SB-7@3' **Lab Sample ID: 570-9966-20**
Date Collected: 10/09/19 11:20 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**1.49**		0.754	mg/Kg		10/16/19 18:51	10/19/19 02:00	1
Arsenic	**2.18**		0.754	mg/Kg		10/16/19 18:51	10/19/19 02:00	1
Barium	**51.5**		0.503	mg/Kg		10/16/19 18:51	10/19/19 02:00	1
Beryllium	**0.523**		0.251	mg/Kg		10/16/19 18:51	10/19/19 02:00	1
Cadmium	ND		0.503	mg/Kg		10/16/19 18:51	10/19/19 02:00	1
Chromium	**6.72**		0.251	mg/Kg		10/16/19 18:51	10/19/19 02:00	1
Cobalt	**2.78**		0.251	mg/Kg		10/16/19 18:51	10/19/19 02:00	1
Copper	**7.55**		0.503	mg/Kg		10/16/19 18:51	10/19/19 02:00	1
Lead	**1.86**		0.503	mg/Kg		10/16/19 18:51	10/19/19 02:00	1
Molybdenum	ND	L	0.251	mg/Kg		10/16/19 18:51	10/19/19 02:00	1
Nickel	**3.69**		0.251	mg/Kg		10/16/19 18:51	10/19/19 02:00	1
Selenium	ND	L	0.754	mg/Kg		10/16/19 18:51	10/19/19 02:00	1
Silver	ND		0.251	mg/Kg		10/16/19 18:51	10/19/19 02:00	1
Thallium	ND		0.754	mg/Kg		10/16/19 18:51	10/19/19 02:00	1
Vanadium	**21.1**		0.251	mg/Kg		10/16/19 18:51	10/19/19 02:00	1
Zinc	**18.5**		1.01	mg/Kg		10/16/19 18:51	10/19/19 02:00	1

Client Sample ID: SB-8@3' **Lab Sample ID: 570-9966-23**
Date Collected: 10/09/19 11:45 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**1.20**		0.761	mg/Kg		10/16/19 18:51	10/19/19 02:02	1
Arsenic	**2.70**		0.761	mg/Kg		10/16/19 18:51	10/19/19 02:02	1
Barium	**44.4**		0.508	mg/Kg		10/16/19 18:51	10/19/19 02:02	1
Beryllium	**0.478**		0.254	mg/Kg		10/16/19 18:51	10/19/19 02:02	1
Cadmium	ND		0.508	mg/Kg		10/16/19 18:51	10/19/19 02:02	1
Chromium	**5.88**		0.254	mg/Kg		10/16/19 18:51	10/19/19 02:02	1
Cobalt	**3.58**		0.254	mg/Kg		10/16/19 18:51	10/19/19 02:02	1
Copper	**8.93**		0.508	mg/Kg		10/16/19 18:51	10/19/19 02:02	1

Method: 6010B - Metals (ICP) (Continued)

Client Sample ID: SB-8@3' **Lab Sample ID: 570-9966-23**
Date Collected: 10/09/19 11:45 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.63**		0.508	mg/Kg		10/16/19 18:51	10/19/19 02:02	1
Molybdenum	ND	L	0.254	mg/Kg		10/16/19 18:51	10/19/19 02:02	1
Nickel	**4.35**		0.254	mg/Kg		10/16/19 18:51	10/19/19 02:02	1
Selenium	ND	L	0.761	mg/Kg		10/16/19 18:51	10/19/19 02:02	1
Silver	ND		0.254	mg/Kg		10/16/19 18:51	10/19/19 02:02	1
Thallium	ND		0.761	mg/Kg		10/16/19 18:51	10/19/19 02:02	1
Vanadium	**22.4**		0.254	mg/Kg		10/16/19 18:51	10/19/19 02:02	1
Zinc	**20.8**		1.02	mg/Kg		10/16/19 18:51	10/19/19 02:02	1

Client Sample ID: SB-9@3' **Lab Sample ID: 570-9966-26**
Date Collected: 10/09/19 12:10 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.750	mg/Kg		10/16/19 18:51	10/19/19 02:04	1
Arsenic	ND		0.750	mg/Kg		10/16/19 18:51	10/19/19 02:04	1
Barium	**31.8**		0.500	mg/Kg		10/16/19 18:51	10/19/19 02:04	1
Beryllium	ND		0.250	mg/Kg		10/16/19 18:51	10/19/19 02:04	1
Cadmium	ND		0.500	mg/Kg		10/16/19 18:51	10/19/19 02:04	1
Chromium	**3.69**		0.250	mg/Kg		10/16/19 18:51	10/19/19 02:04	1
Cobalt	**2.56**		0.250	mg/Kg		10/16/19 18:51	10/19/19 02:04	1
Copper	**9.59**		0.500	mg/Kg		10/16/19 18:51	10/19/19 02:04	1
Lead	**1.89**		0.500	mg/Kg		10/16/19 18:51	10/19/19 02:04	1
Molybdenum	ND		0.250	mg/Kg		10/16/19 18:51	10/19/19 02:04	1
Nickel	**2.99**		0.250	mg/Kg		10/16/19 18:51	10/19/19 02:04	1
Selenium	ND	L	0.750	mg/Kg		10/16/19 18:51	10/19/19 02:04	1
Silver	ND		0.250	mg/Kg		10/16/19 18:51	10/19/19 02:04	1
Thallium	ND		0.750	mg/Kg		10/16/19 18:51	10/19/19 02:04	1
Vanadium	**11.7**		0.250	mg/Kg		10/16/19 18:51	10/19/19 02:04	1
Zinc	**15.5**		1.00	mg/Kg		10/16/19 18:51	10/19/19 02:04	1

Client Sample ID: SB-10@3' **Lab Sample ID: 570-9966-29**
Date Collected: 10/09/19 12:30 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**1.97**		0.754	mg/Kg		10/16/19 18:51	10/19/19 02:07	1
Arsenic	**1.98**		0.754	mg/Kg		10/16/19 18:51	10/19/19 02:07	1
Barium	**57.4**		0.503	mg/Kg		10/16/19 18:51	10/19/19 02:07	1
Beryllium	**0.315**		0.251	mg/Kg		10/16/19 18:51	10/19/19 02:07	1
Cadmium	ND		0.503	mg/Kg		10/16/19 18:51	10/19/19 02:07	1
Chromium	**11.2**		0.251	mg/Kg		10/16/19 18:51	10/19/19 02:07	1
Cobalt	**6.13**		0.251	mg/Kg		10/16/19 18:51	10/19/19 02:07	1
Copper	**29.6**		0.503	mg/Kg		10/16/19 18:51	10/19/19 02:07	1
Lead	**10.6**		0.503	mg/Kg		10/16/19 18:51	10/19/19 02:07	1
Molybdenum	ND	L	0.251	mg/Kg		10/16/19 18:51	10/19/19 02:07	1
Nickel	**8.02**		0.251	mg/Kg		10/16/19 18:51	10/19/19 02:07	1
Selenium	ND	L	0.754	mg/Kg		10/16/19 18:51	10/19/19 02:07	1
Silver	ND		0.251	mg/Kg		10/16/19 18:51	10/19/19 02:07	1
Thallium	**0.923**		0.754	mg/Kg		10/16/19 18:51	10/19/19 02:07	1
Vanadium	**32.9**		0.251	mg/Kg		10/16/19 18:51	10/19/19 02:07	1
Zinc	**44.5**		1.01	mg/Kg		10/16/19 18:51	10/19/19 02:07	1

Method: 7471A - Mercury (CVAA)

Client Sample ID: SB-1@3' **Lab Sample ID: 570-9966-2**
Date Collected: 10/09/19 13:30 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0820		mg/Kg		10/17/19 11:00	10/17/19 13:25	1

Client Sample ID: SB-2@3' **Lab Sample ID: 570-9966-5**
Date Collected: 10/09/19 13:50 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0847		mg/Kg		10/17/19 12:00	10/17/19 15:17	1

Client Sample ID: SB-3@3' **Lab Sample ID: 570-9966-8**
Date Collected: 10/09/19 14:20 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0794		mg/Kg		10/17/19 11:00	10/17/19 13:31	1

Client Sample ID: SB-4@3' **Lab Sample ID: 570-9966-11**
Date Collected: 10/09/19 14:35 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0806		mg/Kg		10/17/19 11:00	10/17/19 13:34	1

Client Sample ID: SB-5@3' **Lab Sample ID: 570-9966-14**
Date Collected: 10/09/19 15:00 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0833		mg/Kg		10/17/19 11:00	10/17/19 13:36	1

Client Sample ID: SB-6@3' **Lab Sample ID: 570-9966-17**
Date Collected: 10/09/19 13:00 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0794		mg/Kg		10/17/19 11:00	10/17/19 13:38	1

Client Sample ID: SB-7@3' **Lab Sample ID: 570-9966-20**
Date Collected: 10/09/19 11:20 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0794		mg/Kg		10/17/19 11:00	10/17/19 13:45	1

Client Sample ID: SB-8@3' **Lab Sample ID: 570-9966-23**
Date Collected: 10/09/19 11:45 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0794		mg/Kg		10/17/19 11:00	10/17/19 13:48	1

Client Sample ID: SB-9@3' **Lab Sample ID: 570-9966-26**
Date Collected: 10/09/19 12:10 **Matrix: Solid**
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0833		mg/Kg		10/17/19 11:00	10/17/19 13:50	1

Client: EnviroApplications, Inc.
Job ID: 570-9966-1
Project/Site: 80.CARMAX1.19/Oceanside CarMax

Method: 7471A - Mercury (CVAA)

Client Sample ID: SB-10@3'
Lab Sample ID: 570-9966-29
Date Collected: 10/09/19 12:30
Matrix: Solid
Date Received: 10/11/19 19:30

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0820		mg/Kg		10/17/19 11:00	10/17/19 13:52	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 570-25843/1-A
Matrix: Solid
Analysis Batch: 25858

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25843

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		120		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Benzene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Bromobenzene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Bromochloromethane	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Bromodichloromethane	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Bromoform	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Bromomethane	ND		25		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
2-Butanone	ND		49		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Carbon disulfide	ND		49		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Carbon tetrachloride	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Chlorobenzene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Chloroethane	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Chloroform	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Chloromethane	ND		25		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
2-Chlorotoluene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
4-Chlorotoluene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
cis-1,2-Dichloroethene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
cis-1,3-Dichloropropene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Dibromochloromethane	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,2-Dibromo-3-Chloropropane	ND		9.8		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,2-Dibromoethane	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Dibromomethane	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,2-Dichlorobenzene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,3-Dichlorobenzene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,4-Dichlorobenzene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Dichlorodifluoromethane	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,1-Dichloroethane	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,2-Dichloroethane	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,1-Dichloroethene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,2-Dichloropropane	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,3-Dichloropropane	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
2,2-Dichloropropane	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,1-Dichloropropene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Di-isopropyl ether (DIPE)	ND		9.8		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Ethanol	ND		250		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Ethylbenzene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Ethyl-t-butyl ether (ETBE)	ND		9.8		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
2-Hexanone	ND		49		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Isopropylbenzene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Methylene Chloride	ND		49		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
4-Methyl-2-pentanone	ND		49		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Methyl-t-Butyl Ether (MTBE)	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
m,p-Xylene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Naphthalene	ND		49		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
n-Butylbenzene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
N-Propylbenzene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
o-Xylene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
p-Isopropyltoluene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 570-25843/1-A
Matrix: Solid
Analysis Batch: 25858

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25843

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Styrene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Tert-amyl-methyl ether (TAME)	ND		9.8		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
tert-Butyl alcohol (TBA)	ND		49		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
tert-Butylbenzene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,1,1,2-Tetrachloroethane	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,1,2,2-Tetrachloroethane	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Tetrachloroethene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Toluene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
trans-1,2-Dichloroethene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
trans-1,3-Dichloropropene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,2,3-Trichlorobenzene	ND		9.8		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,2,4-Trichlorobenzene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,1,1-Trichloroethane	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,1,2-Trichloroethane	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Trichloroethene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Trichlorofluoromethane	ND		49		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,2,3-Trichloropropane	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		49		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,2,4-Trimethylbenzene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
1,3,5-Trimethylbenzene	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Vinyl acetate	ND		49		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Vinyl chloride	ND		4.9		ug/Kg		10/14/19 15:40	10/14/19 21:47	1
Xylenes, Total	ND		9.8		ug/Kg		10/14/19 15:40	10/14/19 21:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*	*10/14/19 15:40*	*10/14/19 21:47*	*1*
Dibromofluoromethane (Surr)	*95*		*79 - 133*	*10/14/19 15:40*	*10/14/19 21:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*71 - 155*	*10/14/19 15:40*	*10/14/19 21:47*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*	*10/14/19 15:40*	*10/14/19 21:47*	*1*

Lab Sample ID: LCS 570-25843/2-A
Matrix: Solid
Analysis Batch: 25858

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25843

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	43.86		ug/Kg		88	78 - 120
Carbon tetrachloride	50.0	40.88		ug/Kg		82	49 - 139
Chlorobenzene	50.0	43.01		ug/Kg		86	79 - 120
1,2-Dibromoethane	50.0	46.03		ug/Kg		92	70 - 130
1,2-Dichlorobenzene	50.0	44.98		ug/Kg		90	75 - 120
1,2-Dichloroethane	50.0	40.12		ug/Kg		80	70 - 130
1,1-Dichloroethene	50.0	42.01		ug/Kg		84	74 - 122
Di-isopropyl ether (DIPE)	50.0	48.44		ug/Kg		97	78 - 120
Ethanol	500	408.3		ug/Kg		82	56 - 140
Ethylbenzene	50.0	45.03		ug/Kg		90	76 - 120
Ethyl-t-butyl ether (ETBE)	50.0	52.29		ug/Kg		105	70 - 124
Methyl-t-Butyl Ether (MTBE)	50.0	49.76		ug/Kg		100	70 - 124

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 570-25843/2-A
Matrix: Solid
Analysis Batch: 25858

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25843

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
m,p-Xylene	100	88.97		ug/Kg		89	70 - 130
o-Xylene	50.0	46.14		ug/Kg		92	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*79 - 133*
1,2-Dichloroethane-d4 (Surr)	*93*		*71 - 155*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: 570-9966-2 MS
Matrix: Solid
Analysis Batch: 25858

Client Sample ID: SB-1@3'
Prep Type: Total/NA
Prep Batch: 25843

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		49.8	43.50		ug/Kg		87	61 - 127
Carbon tetrachloride	ND		49.8	42.25		ug/Kg		85	51 - 135
Chlorobenzene	ND		49.8	42.85		ug/Kg		86	57 - 123
1,2-Dibromoethane	ND		49.8	45.72		ug/Kg		92	64 - 124
1,2-Dichlorobenzene	ND		49.8	43.24		ug/Kg		87	35 - 131
1,2-Dichloroethane	ND		49.8	40.54		ug/Kg		81	70 - 130
1,1-Dichloroethene	ND		49.8	43.21		ug/Kg		87	47 - 143
Di-isopropyl ether (DIPE)	ND		49.8	48.79		ug/Kg		98	57 - 129
Ethanol	ND		498	341.4		ug/Kg		69	17 - 167
Ethylbenzene	ND		49.8	44.84		ug/Kg		90	57 - 129
Ethyl-t-butyl ether (ETBE)	ND		49.8	51.60		ug/Kg		104	55 - 127
Methyl-t-Butyl Ether (MTBE)	ND		49.8	50.51		ug/Kg		101	57 - 123
m,p-Xylene	ND		99.6	88.90		ug/Kg		89	70 - 130
o-Xylene	ND		49.8	46.04		ug/Kg		92	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*79 - 133*
1,2-Dichloroethane-d4 (Surr)	*97*		*71 - 155*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: 570-9966-2 MSD
Matrix: Solid
Analysis Batch: 25858

Client Sample ID: SB-1@3'
Prep Type: Total/NA
Prep Batch: 25843

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		49.2	42.90		ug/Kg		87	61 - 127	1	20
Carbon tetrachloride	ND		49.2	41.11		ug/Kg		84	51 - 135	3	29
Chlorobenzene	ND		49.2	40.81		ug/Kg		83	57 - 123	5	20
1,2-Dibromoethane	ND		49.2	41.98		ug/Kg		85	64 - 124	9	20
1,2-Dichlorobenzene	ND		49.2	40.57		ug/Kg		82	35 - 131	6	25
1,2-Dichloroethane	ND		49.2	38.71		ug/Kg		79	70 - 130	5	20
1,1-Dichloroethene	ND		49.2	42.57		ug/Kg		87	47 - 143	1	25
Di-isopropyl ether (DIPE)	ND		49.2	47.41		ug/Kg		96	57 - 129	3	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 570-9966-2 MSD **Client Sample ID: SB-1@3'**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 25858 **Prep Batch: 25843**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol	ND		492	311.3		ug/Kg		63	17 - 167	9	47
Ethylbenzene	ND		49.2	43.42		ug/Kg		88	57 - 129	3	22
Ethyl-t-butyl ether (ETBE)	ND		49.2	49.50		ug/Kg		101	55 - 127	4	20
Methyl-t-Butyl Ether (MTBE)	ND		49.2	48.26		ug/Kg		98	57 - 123	5	21
m,p-Xylene	ND		98.4	85.49		ug/Kg		87	70 - 130	4	20
o-Xylene	ND		49.2	43.72		ug/Kg		89	70 - 130	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*79 - 133*
1,2-Dichloroethane-d4 (Surr)	*97*		*71 - 155*
Toluene-d8 (Surr)	*98*		*80 - 120*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 570-26082/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 26041 **Prep Batch: 26082**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6 as C6	ND		5.0		mg/Kg		10/15/19 14:35	10/15/19 23:46	1
C7 as C7	ND		5.0		mg/Kg		10/15/19 14:35	10/15/19 23:46	1
C8 as C8	ND		5.0		mg/Kg		10/15/19 14:35	10/15/19 23:46	1
C9-C10	ND		5.0		mg/Kg		10/15/19 14:35	10/15/19 23:46	1
C11-C12	ND		5.0		mg/Kg		10/15/19 14:35	10/15/19 23:46	1
C13-C14	ND		5.0		mg/Kg		10/15/19 14:35	10/15/19 23:46	1
C15-C16	ND		5.0		mg/Kg		10/15/19 14:35	10/15/19 23:46	1
C17-C18	ND		5.0		mg/Kg		10/15/19 14:35	10/15/19 23:46	1
C19-C20	ND		5.0		mg/Kg		10/15/19 14:35	10/15/19 23:46	1
C21-C22	ND		5.0		mg/Kg		10/15/19 14:35	10/15/19 23:46	1
C23-C24	ND		5.0		mg/Kg		10/15/19 14:35	10/15/19 23:46	1
C25-C28	ND		5.0		mg/Kg		10/15/19 14:35	10/15/19 23:46	1
C29-C32	ND		5.0		mg/Kg		10/15/19 14:35	10/15/19 23:46	1
C33-C36	ND		5.0		mg/Kg		10/15/19 14:35	10/15/19 23:46	1
C37-C40	ND		5.0		mg/Kg		10/15/19 14:35	10/15/19 23:46	1
C41-C44	ND		5.0		mg/Kg		10/15/19 14:35	10/15/19 23:46	1
C6-C44	ND		5.0		mg/Kg		10/15/19 14:35	10/15/19 23:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*98*		*61 - 145*	*10/15/19 14:35*	*10/15/19 23:46*	*1*

Lab Sample ID: LCS 570-26082/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 26041 **Prep Batch: 26082**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
TPH as Diesel (C10-C28)			400	418.4		mg/Kg		105	67 - 121		

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 570-26082/2-A
Matrix: Solid
Analysis Batch: 26041

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 26082

Surrogate	LCS %Recovery	LCS Qualifier	Limits
n-Octacosane (Surr)	103		61 - 145

Lab Sample ID: 570-9961-A-1-D MSD
Matrix: Solid
Analysis Batch: 26041

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 26082

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH as Diesel (C10-C28)	520	F2	400	696.4	F2	mg/Kg		44	33 - 153	40	32

Surrogate	MSD %Recovery	MSD Qualifier	Limits
n-Octacosane (Surr)	110		61 - 145

Lab Sample ID: 570-9961-A-1-F MS
Matrix: Solid
Analysis Batch: 26041

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 26082

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
TPH as Diesel (C10-C28)	520	F2	400	1049		mg/Kg		132	33 - 153

Surrogate	MS %Recovery	MS Qualifier	Limits
n-Octacosane (Surr)	106		61 - 145

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 570-25774/1-A
Matrix: Solid
Analysis Batch: 26608

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25774

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		5.0		ug/Kg		10/11/19 15:20	10/17/19 13:19	1
alpha-BHC	ND		5.0		ug/Kg		10/11/19 15:20	10/17/19 13:19	1
beta-BHC	ND		5.0		ug/Kg		10/11/19 15:20	10/17/19 13:19	1
Chlordane	ND		25		ug/Kg		10/11/19 15:20	10/17/19 13:19	1
4,4'-DDD	ND		5.0		ug/Kg		10/11/19 15:20	10/17/19 13:19	1
4,4'-DDE	ND		5.0		ug/Kg		10/11/19 15:20	10/17/19 13:19	1
4,4'-DDT	ND		5.0		ug/Kg		10/11/19 15:20	10/17/19 13:19	1
delta-BHC	ND		5.0		ug/Kg		10/11/19 15:20	10/17/19 13:19	1
Dieldrin	ND		1.0		ug/Kg		10/11/19 15:20	10/17/19 13:19	1
Endosulfan I	ND		5.0		ug/Kg		10/11/19 15:20	10/17/19 13:19	1
Endosulfan II	ND		5.0		ug/Kg		10/11/19 15:20	10/17/19 13:19	1
Endosulfan sulfate	ND		5.0		ug/Kg		10/11/19 15:20	10/17/19 13:19	1
Endrin	ND		5.0		ug/Kg		10/11/19 15:20	10/17/19 13:19	1
Endrin aldehyde	ND		5.0		ug/Kg		10/11/19 15:20	10/17/19 13:19	1
Endrin ketone	ND		5.0		ug/Kg		10/11/19 15:20	10/17/19 13:19	1
gamma-BHC	ND		5.0		ug/Kg		10/11/19 15:20	10/17/19 13:19	1
Heptachlor	ND		5.0		ug/Kg		10/11/19 15:20	10/17/19 13:19	1
Heptachlor epoxide	ND		5.0		ug/Kg		10/11/19 15:20	10/17/19 13:19	1
Methoxychlor	ND		5.0		ug/Kg		10/11/19 15:20	10/17/19 13:19	1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 570-25774/1-A
Matrix: Solid
Analysis Batch: 26608

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25774

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene	ND		25		ug/Kg		10/11/19 15:20	10/17/19 13:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*85*		*24 - 168*	*10/11/19 15:20*	*10/17/19 13:19*	*1*
Tetrachloro-m-xylene	*82*		*25 - 145*	*10/11/19 15:20*	*10/17/19 13:19*	*1*

Lab Sample ID: LCS 570-25774/2-A
Matrix: Solid
Analysis Batch: 26608

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25774

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aldrin			25.0	18.01		ug/Kg		72	50 - 135		
alpha-BHC			25.0	17.19		ug/Kg		69	50 - 135		
beta-BHC			25.0	17.37		ug/Kg		69	50 - 135		
4,4'-DDD			25.0	18.62		ug/Kg		74	50 - 135		
4,4'-DDE			25.0	18.60		ug/Kg		74	50 - 135		
4,4'-DDT			25.0	18.62		ug/Kg		74	50 - 135		
delta-BHC			25.0	19.10		ug/Kg		76	50 - 135		
Dieldrin			25.0	17.78		ug/Kg		71	50 - 135		
Endosulfan I			25.0	16.40		ug/Kg		66	50 - 135		
Endosulfan II			25.0	19.08		ug/Kg		76	50 - 135		
Endosulfan sulfate			25.0	19.61		ug/Kg		78	50 - 135		
Endrin			25.0	10.80	* me	ug/Kg		43	50 - 135		
Endrin aldehyde			25.0	19.96		ug/Kg		80	50 - 135		
gamma-BHC			25.0	19.33		ug/Kg		77	50 - 135		
Heptachlor			25.0	19.21		ug/Kg		77	50 - 135		
Heptachlor epoxide			25.0	16.01		ug/Kg		64	50 - 135		
Methoxychlor			25.0	17.64		ug/Kg		71	50 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*78*		*24 - 168*
Tetrachloro-m-xylene	*64*		*25 - 145*

Lab Sample ID: 570-9966-11 MS
Matrix: Solid
Analysis Batch: 26608

Client Sample ID: SB-4@3'
Prep Type: Total/NA
Prep Batch: 25774

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aldrin	ND		25.0	21.69		ug/Kg		87	50 - 135		
alpha-BHC	ND		25.0	20.71		ug/Kg		83	50 - 135		
beta-BHC	ND		25.0	20.64		ug/Kg		83	50 - 135		
4,4'-DDD	ND		25.0	22.16		ug/Kg		89	50 - 135		
4,4'-DDE	ND		25.0	22.94		ug/Kg		92	50 - 135		
4,4'-DDT	ND		25.0	25.04		ug/Kg		100	50 - 135		
delta-BHC	ND		25.0	22.85		ug/Kg		91	50 - 135		
Dieldrin	ND		25.0	21.55		ug/Kg		86	50 - 135		
Endosulfan I	ND		25.0	19.29		ug/Kg		77	50 - 135		
Endosulfan II	ND		25.0	22.35		ug/Kg		89	50 - 135		

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 570-9966-11 MS
Matrix: Solid
Analysis Batch: 26608

Client Sample ID: SB-4@3'
Prep Type: Total/NA
Prep Batch: 25774

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Endosulfan sulfate	ND		25.0	22.62		ug/Kg		90	50 - 135
Endrin	ND	*	25.0	16.40		ug/Kg		66	50 - 135
Endrin aldehyde	ND		25.0	23.53		ug/Kg		94	50 - 135
gamma-BHC	ND		25.0	23.24		ug/Kg		93	50 - 135
Heptachlor	ND		25.0	23.66		ug/Kg		95	50 - 135
Heptachlor epoxide	ND		25.0	20.05		ug/Kg		80	50 - 135
Methoxychlor	ND		25.0	20.92		ug/Kg		84	50 - 135

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*86*		*24 - 168*
Tetrachloro-m-xylene	*81*		*25 - 145*

Lab Sample ID: 570-9966-11 MSD
Matrix: Solid
Analysis Batch: 26608

Client Sample ID: SB-4@3'
Prep Type: Total/NA
Prep Batch: 25774

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aldrin	ND		25.0	19.97		ug/Kg		80	50 - 135	8	25
alpha-BHC	ND		25.0	18.48		ug/Kg		74	50 - 135	11	25
beta-BHC	ND		25.0	20.81		ug/Kg		83	50 - 135	1	25
4,4'-DDD	ND		25.0	23.82		ug/Kg		95	50 - 135	7	25
4,4'-DDE	ND		25.0	22.97		ug/Kg		92	50 - 135	0	25
4,4'-DDT	ND		25.0	26.94		ug/Kg		108	50 - 135	7	25
delta-BHC	ND		25.0	22.72		ug/Kg		91	50 - 135	1	25
Dieldrin	ND		25.0	21.96		ug/Kg		88	50 - 135	2	25
Endosulfan I	ND		25.0	18.85		ug/Kg		75	50 - 135	2	25
Endosulfan II	ND		25.0	23.69		ug/Kg		95	50 - 135	3	25
Endosulfan sulfate	ND		25.0	23.42		ug/Kg		94	50 - 135	4	25
Endrin	ND	*	25.0	16.57		ug/Kg		66	50 - 135	1	25
Endrin aldehyde	ND		25.0	24.28		ug/Kg		97	50 - 135	1	25
gamma-BHC	ND		25.0	21.35		ug/Kg		85	50 - 135	8	25
Heptachlor	ND		25.0	21.63		ug/Kg		87	50 - 135	9	25
Heptachlor epoxide	ND		25.0	17.70		ug/Kg		71	50 - 135	12	25
Methoxychlor	ND		25.0	21.64		ug/Kg		87	50 - 135	3	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*90*		*24 - 168*
Tetrachloro-m-xylene	*65*		*25 - 145*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 570-26397/1-A
Matrix: Solid
Analysis Batch: 27753

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 26397

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.769		mg/Kg		10/16/19 15:19	10/22/19 13:29	1
Arsenic	ND		0.769		mg/Kg		10/16/19 15:19	10/22/19 13:29	1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: MB 570-26397/1-A
Matrix: Solid
Analysis Batch: 27753

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 26397

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Barium	ND		0.513		mg/Kg		10/16/19 15:19	10/22/19 13:29	1
Beryllium	ND		0.256		mg/Kg		10/16/19 15:19	10/22/19 13:29	1
Cadmium	ND		0.513		mg/Kg		10/16/19 15:19	10/22/19 13:29	1
Chromium	ND		0.256		mg/Kg		10/16/19 15:19	10/22/19 13:29	1
Cobalt	ND		0.256		mg/Kg		10/16/19 15:19	10/22/19 13:29	1
Copper	ND		0.513		mg/Kg		10/16/19 15:19	10/22/19 13:29	1
Lead	ND		0.513		mg/Kg		10/16/19 15:19	10/22/19 13:29	1
Molybdenum	ND		0.256		mg/Kg		10/16/19 15:19	10/22/19 13:29	1
Nickel	ND		0.256		mg/Kg		10/16/19 15:19	10/22/19 13:29	1
Selenium	ND		0.769		mg/Kg		10/16/19 15:19	10/22/19 13:29	1
Silver	ND		0.256		mg/Kg		10/16/19 15:19	10/22/19 13:29	1
Thallium	ND		0.769		mg/Kg		10/16/19 15:19	10/22/19 13:29	1
Vanadium	ND		0.256		mg/Kg		10/16/19 15:19	10/22/19 13:29	1
Zinc	ND		1.03		mg/Kg		10/16/19 15:19	10/22/19 13:29	1

Lab Sample ID: LCS 570-26397/2-A
Matrix: Solid
Analysis Batch: 27480

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 26397

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Antimony			25.3	26.50		mg/Kg		105	80 - 120		
Arsenic			25.3	23.86		mg/Kg		94	80 - 120		
Barium			25.3	27.56		mg/Kg		109	80 - 120		
Beryllium			25.3	24.36		mg/Kg		96	80 - 120		
Cadmium			25.3	25.04		mg/Kg		99	80 - 120		
Chromium			25.3	24.40		mg/Kg		97	80 - 120		
Cobalt			25.3	25.58		mg/Kg		101	80 - 120		
Copper			25.3	24.99		mg/Kg		99	80 - 120		
Lead			25.3	25.56		mg/Kg		101	80 - 120		
Molybdenum			25.3	24.60		mg/Kg		97	80 - 120		
Nickel			25.3	25.61		mg/Kg		101	80 - 120		
Selenium			25.3	23.55		mg/Kg		93	80 - 120		
Silver			12.6	12.61		mg/Kg		100	80 - 120		
Thallium			25.3	25.38		mg/Kg		101	80 - 120		
Vanadium			25.3	23.77		mg/Kg		94	80 - 120		
Zinc			25.3	24.37		mg/Kg		97	80 - 120		

Lab Sample ID: LCSD 570-26397/3-A
Matrix: Solid
Analysis Batch: 27480

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 26397

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony			25.0	25.41		mg/Kg		102	80 - 120	4	20
Arsenic			25.0	23.51		mg/Kg		94	80 - 120	1	20
Barium			25.0	27.32		mg/Kg		109	80 - 120	1	20
Beryllium			25.0	24.02		mg/Kg		96	80 - 120	1	20
Cadmium			25.0	24.79		mg/Kg		99	80 - 120	1	20
Chromium			25.0	24.16		mg/Kg		97	80 - 120	1	20
Cobalt			25.0	25.27		mg/Kg		101	80 - 120	1	20

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCSD 570-26397/3-A
Matrix: Solid
Analysis Batch: 27480

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 26397

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Copper			25.0	24.81		mg/Kg		99	80 - 120	1	20
Lead			25.0	25.04		mg/Kg		100	80 - 120	2	20
Molybdenum			25.0	24.59		mg/Kg		98	80 - 120	0	20
Nickel			25.0	25.22		mg/Kg		101	80 - 120	2	20
Selenium			25.0	23.22		mg/Kg		93	80 - 120	1	20
Silver			12.5	12.50		mg/Kg		100	80 - 120	1	20
Thallium			25.0	24.94		mg/Kg		100	80 - 120	2	20
Vanadium			25.0	23.59		mg/Kg		94	80 - 120	1	20
Zinc			25.0	24.08		mg/Kg		96	80 - 120	1	20

Lab Sample ID: 570-9888-A-1-E MS
Matrix: Solid
Analysis Batch: 27480

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 26397

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.930	F1	24.9	10.38	F1	mg/Kg		38	50 - 115
Arsenic	1.64		24.9	24.87		mg/Kg		93	75 - 125
Barium	43.4	F1	24.9	59.91	F1	mg/Kg		67	75 - 125
Beryllium	0.399		24.9	23.91		mg/Kg		95	75 - 125
Cadmium	0.673		24.9	23.82		mg/Kg		93	75 - 125
Chromium	6.68		24.9	28.46		mg/Kg		88	75 - 125
Cobalt	1.78		24.9	24.56		mg/Kg		92	75 - 125
Copper	4.28		24.9	26.93		mg/Kg		91	75 - 125
Lead	2.59		24.9	25.82		mg/Kg		93	75 - 125
Molybdenum	1.75		24.9	22.32		mg/Kg		83	75 - 125
Nickel	11.2		24.9	31.53		mg/Kg		82	75 - 125
Selenium	ND	L	24.9	21.30		mg/Kg		86	75 - 125
Silver	ND		12.4	11.37		mg/Kg		91	75 - 125
Thallium	ND		24.9	21.16		mg/Kg		84	75 - 125
Vanadium	18.4	F1	24.9	36.69	F1	mg/Kg		74	75 - 125
Zinc	15.2		24.9	34.87		mg/Kg		79	75 - 125

Lab Sample ID: 570-9888-A-1-F MSD
Matrix: Solid
Analysis Batch: 27480

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 26397

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.930	F1	25.4	10.44	F1	mg/Kg		37	50 - 115	1	20
Arsenic	1.64		25.4	26.56		mg/Kg		98	75 - 125	7	20
Barium	43.4	F1	25.4	61.92	F1	mg/Kg		73	75 - 125	3	20
Beryllium	0.399		25.4	25.74		mg/Kg		100	75 - 125	7	20
Cadmium	0.673		25.4	25.84		mg/Kg		99	75 - 125	8	20
Chromium	6.68		25.4	30.24		mg/Kg		93	75 - 125	6	20
Cobalt	1.78		25.4	26.46		mg/Kg		97	75 - 125	7	20
Copper	4.28		25.4	28.70		mg/Kg		96	75 - 125	6	20
Lead	2.59		25.4	27.66		mg/Kg		99	75 - 125	7	20
Molybdenum	1.75		25.4	24.16		mg/Kg		88	75 - 125	8	20
Nickel	11.2		25.4	33.65		mg/Kg		89	75 - 125	7	20
Selenium	ND	L	25.4	24.47		mg/Kg		96	75 - 125	14	20

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 570-9888-A-1-F MSD
Matrix: Solid
Analysis Batch: 27480

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 26397

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	ND		12.7	12.38		mg/Kg		98	75 - 125	8	20
Thallium	ND		25.4	23.23		mg/Kg		90	75 - 125	9	20
Vanadium	18.4	F1	25.4	38.38		mg/Kg		79	75 - 125	5	20
Zinc	15.2		25.4	36.84		mg/Kg		85	75 - 125	6	20

Lab Sample ID: MB 570-26469/1-A
Matrix: Solid
Analysis Batch: 26586

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 26469

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.758		mg/Kg		10/16/19 18:51	10/17/19 00:26	1
Arsenic	ND		0.758		mg/Kg		10/16/19 18:51	10/17/19 00:26	1
Barium	ND		0.505		mg/Kg		10/16/19 18:51	10/17/19 00:26	1
Beryllium	ND		0.253		mg/Kg		10/16/19 18:51	10/17/19 00:26	1
Cadmium	ND		0.505		mg/Kg		10/16/19 18:51	10/17/19 00:26	1
Chromium	ND		0.253		mg/Kg		10/16/19 18:51	10/17/19 00:26	1
Cobalt	ND		0.253		mg/Kg		10/16/19 18:51	10/17/19 00:26	1
Copper	ND		0.505		mg/Kg		10/16/19 18:51	10/17/19 00:26	1
Lead	ND		0.505		mg/Kg		10/16/19 18:51	10/17/19 00:26	1
Molybdenum	ND		0.253		mg/Kg		10/16/19 18:51	10/17/19 00:26	1
Nickel	ND		0.253		mg/Kg		10/16/19 18:51	10/17/19 00:26	1
Selenium	ND		0.758		mg/Kg		10/16/19 18:51	10/17/19 00:26	1
Silver	ND		0.253		mg/Kg		10/16/19 18:51	10/17/19 00:26	1
Thallium	ND		0.758		mg/Kg		10/16/19 18:51	10/17/19 00:26	1
Vanadium	ND		0.253		mg/Kg		10/16/19 18:51	10/17/19 00:26	1
Zinc	ND		1.01		mg/Kg		10/16/19 18:51	10/17/19 00:26	1

Lab Sample ID: LCS 570-26469/2-A
Matrix: Solid
Analysis Batch: 26586

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 26469

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Antimony			24.4	25.62		mg/Kg		105	80 - 120		
Arsenic			24.4	23.66		mg/Kg		97	80 - 120		
Barium			24.4	25.89		mg/Kg		106	80 - 120		
Beryllium			24.4	24.14		mg/Kg		99	80 - 120		
Cadmium			24.4	25.84		mg/Kg		106	80 - 120		
Chromium			24.4	26.10		mg/Kg		107	80 - 120		
Cobalt			24.4	23.85		mg/Kg		98	80 - 120		
Copper			24.4	25.29		mg/Kg		104	80 - 120		
Lead			24.4	26.61		mg/Kg		109	80 - 120		
Molybdenum			24.4	23.69		mg/Kg		97	80 - 120		
Nickel			24.4	25.64		mg/Kg		105	80 - 120		
Selenium			24.4	23.26		mg/Kg		95	80 - 120		
Silver			12.2	12.68		mg/Kg		104	80 - 120		
Thallium			24.4	25.05		mg/Kg		103	80 - 120		
Vanadium			24.4	24.23		mg/Kg		99	80 - 120		
Zinc			24.4	24.38		mg/Kg		100	80 - 120		

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCSD 570-26469/3-A
Matrix: Solid
Analysis Batch: 26586

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 26469

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony			25.0	25.36		mg/Kg		101	80 - 120	1	20
Arsenic			25.0	23.56		mg/Kg		94	80 - 120	0	20
Barium			25.0	25.95		mg/Kg		104	80 - 120	0	20
Beryllium			25.0	24.43		mg/Kg		98	80 - 120	1	20
Cadmium			25.0	25.79		mg/Kg		103	80 - 120	0	20
Chromium			25.0	26.23		mg/Kg		105	80 - 120	0	20
Cobalt			25.0	23.79		mg/Kg		95	80 - 120	0	20
Copper			25.0	25.59		mg/Kg		102	80 - 120	1	20
Lead			25.0	26.44		mg/Kg		106	80 - 120	1	20
Molybdenum			25.0	23.71		mg/Kg		95	80 - 120	0	20
Nickel			25.0	25.89		mg/Kg		104	80 - 120	1	20
Selenium			25.0	22.85		mg/Kg		91	80 - 120	2	20
Silver			12.5	12.87		mg/Kg		103	80 - 120	2	20
Thallium			25.0	24.72		mg/Kg		99	80 - 120	1	20
Vanadium			25.0	24.52		mg/Kg		98	80 - 120	1	20
Zinc			25.0	24.08		mg/Kg		96	80 - 120	1	20

Lab Sample ID: 570-10078-B-1-C MS
Matrix: Solid
Analysis Batch: 26586

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 26469

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	1.42	F1	24.5	9.725	F1	mg/Kg		34	50 - 115
Arsenic	2.26		24.5	23.77		mg/Kg		88	75 - 125
Barium	27.2		24.5	48.67		mg/Kg		88	75 - 125
Beryllium	0.333		24.5	24.88		mg/Kg		100	75 - 125
Cadmium	0.812		24.5	25.09		mg/Kg		99	75 - 125
Chromium	9.42		24.5	33.33		mg/Kg		98	75 - 125
Cobalt	2.44		24.5	24.52		mg/Kg		90	75 - 125
Copper	2.37		24.5	25.93		mg/Kg		96	75 - 125
Lead	8.58		24.5	31.57		mg/Kg		94	75 - 125
Molybdenum	ND		24.5	21.28		mg/Kg		87	75 - 125
Nickel	3.19		24.5	26.53		mg/Kg		95	75 - 125
Selenium	ND	L	24.5	19.50		mg/Kg		80	75 - 125
Silver	ND		12.3	11.51		mg/Kg		94	75 - 125
Thallium	0.992		24.5	23.28		mg/Kg		91	75 - 125
Vanadium	25.0		24.5	47.52		mg/Kg		92	75 - 125
Zinc	226		24.5	222.7	4	mg/Kg		-12	75 - 125

Lab Sample ID: 570-10078-B-1-D MSD
Matrix: Solid
Analysis Batch: 26586

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 26469

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	1.42	F1	25.3	9.174	F1	mg/Kg		31	50 - 115	6	20
Arsenic	2.26		25.3	23.75		mg/Kg		85	75 - 125	0	20
Barium	27.2		25.3	49.77		mg/Kg		89	75 - 125	2	20
Beryllium	0.333		25.3	24.19		mg/Kg		94	75 - 125	3	20
Cadmium	0.812		25.3	24.85		mg/Kg		95	75 - 125	1	20

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 570-10078-B-1-D MSD
Matrix: Solid
Analysis Batch: 26586

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 26469

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium	9.42		25.3	32.20		mg/Kg		90	75 - 125	3	20
Cobalt	2.44		25.3	23.54		mg/Kg		84	75 - 125	4	20
Copper	2.37		25.3	25.60		mg/Kg		92	75 - 125	1	20
Lead	8.58		25.3	29.30		mg/Kg		82	75 - 125	7	20
Molybdenum	ND		25.3	21.11		mg/Kg		84	75 - 125	1	20
Nickel	3.19		25.3	26.19		mg/Kg		91	75 - 125	1	20
Selenium	ND	L	25.3	19.52		mg/Kg		77	75 - 125	0	20
Silver	ND		12.6	11.42		mg/Kg		90	75 - 125	1	20
Thallium	0.992		25.3	23.37		mg/Kg		89	75 - 125	0	20
Vanadium	25.0		25.3	45.30		mg/Kg		80	75 - 125	5	20
Zinc	226		25.3	229.4	4	mg/Kg		15	75 - 125	3	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 570-26399/1-A
Matrix: Solid
Analysis Batch: 26739

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 26399

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0833		mg/Kg		10/17/19 12:00	10/17/19 14:29	1

Lab Sample ID: LCS 570-26399/2-A
Matrix: Solid
Analysis Batch: 26739

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 26399

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.820	0.7460		mg/Kg		91	85 - 121		

Lab Sample ID: LCSD 570-26399/3-A
Matrix: Solid
Analysis Batch: 26739

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 26399

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.806	0.7411		mg/Kg		92	85 - 121	1	10

Lab Sample ID: 570-9888-A-1-H MS
Matrix: Solid
Analysis Batch: 26739

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 26399

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	ND		0.847	0.7849		mg/Kg		92	71 - 137		

Lab Sample ID: 570-9888-A-1-I MSD
Matrix: Solid
Analysis Batch: 26739

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 26399

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.847	0.7301		mg/Kg		85	71 - 137	7	14

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: MB 570-26478/1-A
Matrix: Solid
Analysis Batch: 26741

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 26478

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0794		mg/Kg		10/17/19 11:00	10/17/19 13:18	1

Lab Sample ID: LCS 570-26478/2-A
Matrix: Solid
Analysis Batch: 26741

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 26478

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.862	0.8292		mg/Kg		96	85 - 121		

Lab Sample ID: LCSD 570-26478/3-A
Matrix: Solid
Analysis Batch: 26741

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 26478

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.833	0.8040		mg/Kg		96	85 - 121	3	10

Lab Sample ID: 570-9966-2 MS
Matrix: Solid
Analysis Batch: 26741

Client Sample ID: SB-1@3'
Prep Type: Total/NA
Prep Batch: 26478

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	ND		0.833	0.8050		mg/Kg		95	71 - 137		

Lab Sample ID: 570-9966-2 MSD
Matrix: Solid
Analysis Batch: 26741

Client Sample ID: SB-1@3'
Prep Type: Total/NA
Prep Batch: 26478

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.794	0.7729		mg/Kg		95	71 - 137	4	14

Marginal Exceedance (ME) Summary

Client: EnviroApplications, Inc.
Job ID: 570-9966-1
Project/Site: 80.CARMAX1.19/Oceanside CarMax

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: LCS 570-25774/2-A
Matrix: Solid

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	%Rec	%Rec. Limits	ME %Rec. Limits	Marginal Exceedance Status
Aldrin	25.0	18.01		ug/Kg	72	50 - 135	36 - 149	
alpha-BHC	25.0	17.19		ug/Kg	69	50 - 135	36 - 149	
beta-BHC	25.0	17.37		ug/Kg	69	50 - 135	36 - 149	
4,4'-DDD	25.0	18.62		ug/Kg	74	50 - 135	36 - 149	
4,4'-DDE	25.0	18.60		ug/Kg	74	50 - 135	36 - 149	
4,4'-DDT	25.0	18.62		ug/Kg	74	50 - 135	36 - 149	
delta-BHC	25.0	19.10		ug/Kg	76	50 - 135	36 - 149	
Dieldrin	25.0	17.78		ug/Kg	71	50 - 135	36 - 149	
Endosulfan I	25.0	16.40		ug/Kg	66	50 - 135	36 - 149	
Endosulfan II	25.0	19.08		ug/Kg	76	50 - 135	36 - 149	
Endosulfan sulfate	25.0	19.61		ug/Kg	78	50 - 135	36 - 149	
Endrin	25.0	10.80	* me	ug/Kg	43	50 - 135	36 - 149	ME
Endrin aldehyde	25.0	19.96		ug/Kg	80	50 - 135	36 - 149	
gamma-BHC	25.0	19.33		ug/Kg	77	50 - 135	36 - 149	
Heptachlor	25.0	19.21		ug/Kg	77	50 - 135	36 - 149	
Heptachlor epoxide	25.0	16.01		ug/Kg	64	50 - 135	36 - 149	
Methoxychlor	25.0	17.64		ug/Kg	71	50 - 135	36 - 149	

Summary

Number of Analytes Reported	Number of Marginal Exceedances Allowed	Number of Marginal Exceedances Found
17	1	1

ME = Marginal Exceedance

GC/MS VOA

Prep Batch: 25843

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-2	SB-1@3'	Total/NA	Solid	5030C	
570-9966-5	SB-2@3'	Total/NA	Solid	5030C	
570-9966-8	SB-3@3'	Total/NA	Solid	5030C	
570-9966-11	SB-4@3'	Total/NA	Solid	5030C	
570-9966-14	SB-5@3'	Total/NA	Solid	5030C	
570-9966-17	SB-6@3'	Total/NA	Solid	5030C	
570-9966-20	SB-7@3'	Total/NA	Solid	5030C	
570-9966-23	SB-8@3'	Total/NA	Solid	5030C	
570-9966-26	SB-9@3'	Total/NA	Solid	5030C	
570-9966-29	SB-10@3'	Total/NA	Solid	5030C	
MB 570-25843/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 570-25843/2-A	Lab Control Sample	Total/NA	Solid	5030C	
570-9966-2 MS	SB-1@3'	Total/NA	Solid	5030C	
570-9966-2 MSD	SB-1@3'	Total/NA	Solid	5030C	

Analysis Batch: 25858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-2	SB-1@3'	Total/NA	Solid	8260B	25843
570-9966-5	SB-2@3'	Total/NA	Solid	8260B	25843
570-9966-8	SB-3@3'	Total/NA	Solid	8260B	25843
570-9966-11	SB-4@3'	Total/NA	Solid	8260B	25843
570-9966-14	SB-5@3'	Total/NA	Solid	8260B	25843
570-9966-17	SB-6@3'	Total/NA	Solid	8260B	25843
570-9966-20	SB-7@3'	Total/NA	Solid	8260B	25843
570-9966-23	SB-8@3'	Total/NA	Solid	8260B	25843
570-9966-26	SB-9@3'	Total/NA	Solid	8260B	25843
570-9966-29	SB-10@3'	Total/NA	Solid	8260B	25843
MB 570-25843/1-A	Method Blank	Total/NA	Solid	8260B	25843
LCS 570-25843/2-A	Lab Control Sample	Total/NA	Solid	8260B	25843
570-9966-2 MS	SB-1@3'	Total/NA	Solid	8260B	25843
570-9966-2 MSD	SB-1@3'	Total/NA	Solid	8260B	25843

GC Semi VOA

Cleanup Batch: 25769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9961-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	Homogenize Prep	
570-9961-A-1-F MS	Matrix Spike	Total/NA	Solid	Homogenize Prep	

Prep Batch: 25774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-2	SB-1@3'	Total/NA	Solid	3545	
570-9966-5	SB-2@3'	Total/NA	Solid	3545	
570-9966-8	SB-3@3'	Total/NA	Solid	3545	
570-9966-11	SB-4@3'	Total/NA	Solid	3545	
570-9966-14	SB-5@3'	Total/NA	Solid	3545	
570-9966-17	SB-6@3'	Total/NA	Solid	3545	
570-9966-20	SB-7@3'	Total/NA	Solid	3545	
570-9966-23	SB-8@3'	Total/NA	Solid	3545	
570-9966-26	SB-9@3'	Total/NA	Solid	3545	

GC Semi VOA (Continued)

Prep Batch: 25774 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-29	SB-10@3'	Total/NA	Solid	3545	
MB 570-25774/1-A	Method Blank	Total/NA	Solid	3545	
LCS 570-25774/2-A	Lab Control Sample	Total/NA	Solid	3545	
570-9966-11 MS	SB-4@3'	Total/NA	Solid	3545	
570-9966-11 MSD	SB-4@3'	Total/NA	Solid	3545	

Analysis Batch: 26041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-2	SB-1@3'	Total/NA	Solid	8015B	26082
570-9966-5	SB-2@3'	Total/NA	Solid	8015B	26082
570-9966-8	SB-3@3'	Total/NA	Solid	8015B	26082
570-9966-11	SB-4@3'	Total/NA	Solid	8015B	26082
570-9966-14	SB-5@3'	Total/NA	Solid	8015B	26082
570-9966-17	SB-6@3'	Total/NA	Solid	8015B	26082
570-9966-20	SB-7@3'	Total/NA	Solid	8015B	26082
MB 570-26082/1-A	Method Blank	Total/NA	Solid	8015B	26082
LCS 570-26082/2-A	Lab Control Sample	Total/NA	Solid	8015B	26082
570-9961-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	26082
570-9961-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B	26082

Prep Batch: 26082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-2	SB-1@3'	Total/NA	Solid	3550C	
570-9966-5	SB-2@3'	Total/NA	Solid	3550C	
570-9966-8	SB-3@3'	Total/NA	Solid	3550C	
570-9966-11	SB-4@3'	Total/NA	Solid	3550C	
570-9966-14	SB-5@3'	Total/NA	Solid	3550C	
570-9966-17	SB-6@3'	Total/NA	Solid	3550C	
570-9966-20	SB-7@3'	Total/NA	Solid	3550C	
570-9966-23	SB-8@3'	Total/NA	Solid	3550C	
570-9966-26	SB-9@3'	Total/NA	Solid	3550C	
570-9966-29	SB-10@3'	Total/NA	Solid	3550C	
MB 570-26082/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 570-26082/2-A	Lab Control Sample	Total/NA	Solid	3550C	
570-9961-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	3550C	25769
570-9961-A-1-F MS	Matrix Spike	Total/NA	Solid	3550C	25769

Analysis Batch: 26276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-23	SB-8@3'	Total/NA	Solid	8015B	26082
570-9966-26	SB-9@3'	Total/NA	Solid	8015B	26082
570-9966-29	SB-10@3'	Total/NA	Solid	8015B	26082

Analysis Batch: 26608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-2	SB-1@3'	Total/NA	Solid	8081A	25774
570-9966-5	SB-2@3'	Total/NA	Solid	8081A	25774
570-9966-8	SB-3@3'	Total/NA	Solid	8081A	25774
570-9966-11	SB-4@3'	Total/NA	Solid	8081A	25774
570-9966-14	SB-5@3'	Total/NA	Solid	8081A	25774
570-9966-17	SB-6@3'	Total/NA	Solid	8081A	25774

GC Semi VOA (Continued)

Analysis Batch: 26608 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-20	SB-7@3'	Total/NA	Solid	8081A	25774
570-9966-23	SB-8@3'	Total/NA	Solid	8081A	25774
570-9966-26	SB-9@3'	Total/NA	Solid	8081A	25774
570-9966-29	SB-10@3'	Total/NA	Solid	8081A	25774
MB 570-25774/1-A	Method Blank	Total/NA	Solid	8081A	25774
LCS 570-25774/2-A	Lab Control Sample	Total/NA	Solid	8081A	25774
570-9966-11 MS	SB-4@3'	Total/NA	Solid	8081A	25774
570-9966-11 MSD	SB-4@3'	Total/NA	Solid	8081A	25774

Metals

Prep Batch: 26397

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-5	SB-2@3'	Total/NA	Solid	3050B	
MB 570-26397/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 570-26397/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 570-26397/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
570-9888-A-1-E MS	Matrix Spike	Total/NA	Solid	3050B	
570-9888-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	3050B	

Prep Batch: 26399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-5	SB-2@3'	Total/NA	Solid	7471A	
MB 570-26399/1-A	Method Blank	Total/NA	Solid	7471A	
LCS 570-26399/2-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 570-26399/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	
570-9888-A-1-H MS	Matrix Spike	Total/NA	Solid	7471A	
570-9888-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	7471A	

Prep Batch: 26469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-2	SB-1@3'	Total/NA	Solid	3050B	
570-9966-8	SB-3@3'	Total/NA	Solid	3050B	
570-9966-11	SB-4@3'	Total/NA	Solid	3050B	
570-9966-14	SB-5@3'	Total/NA	Solid	3050B	
570-9966-17	SB-6@3'	Total/NA	Solid	3050B	
570-9966-20	SB-7@3'	Total/NA	Solid	3050B	
570-9966-23	SB-8@3'	Total/NA	Solid	3050B	
570-9966-26	SB-9@3'	Total/NA	Solid	3050B	
570-9966-29	SB-10@3'	Total/NA	Solid	3050B	
MB 570-26469/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 570-26469/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 570-26469/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
570-10078-B-1-C MS	Matrix Spike	Total/NA	Solid	3050B	
570-10078-B-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	3050B	

Prep Batch: 26478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-2	SB-1@3'	Total/NA	Solid	7471A	
570-9966-8	SB-3@3'	Total/NA	Solid	7471A	
570-9966-11	SB-4@3'	Total/NA	Solid	7471A	

Metals (Continued)

Prep Batch: 26478 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-14	SB-5@3'	Total/NA	Solid	7471A	
570-9966-17	SB-6@3'	Total/NA	Solid	7471A	
570-9966-20	SB-7@3'	Total/NA	Solid	7471A	
570-9966-23	SB-8@3'	Total/NA	Solid	7471A	
570-9966-26	SB-9@3'	Total/NA	Solid	7471A	
570-9966-29	SB-10@3'	Total/NA	Solid	7471A	
MB 570-26478/1-A	Method Blank	Total/NA	Solid	7471A	
LCS 570-26478/2-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 570-26478/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	
570-9966-2 MS	SB-1@3'	Total/NA	Solid	7471A	
570-9966-2 MSD	SB-1@3'	Total/NA	Solid	7471A	

Analysis Batch: 26586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-26469/1-A	Method Blank	Total/NA	Solid	6010B	26469
LCS 570-26469/2-A	Lab Control Sample	Total/NA	Solid	6010B	26469
LCSD 570-26469/3-A	Lab Control Sample Dup	Total/NA	Solid	6010B	26469
570-10078-B-1-C MS	Matrix Spike	Total/NA	Solid	6010B	26469
570-10078-B-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	6010B	26469

Analysis Batch: 26739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-5	SB-2@3'	Total/NA	Solid	7471A	26399
MB 570-26399/1-A	Method Blank	Total/NA	Solid	7471A	26399
LCS 570-26399/2-A	Lab Control Sample	Total/NA	Solid	7471A	26399
LCSD 570-26399/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	26399
570-9888-A-1-H MS	Matrix Spike	Total/NA	Solid	7471A	26399
570-9888-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	7471A	26399

Analysis Batch: 26741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-2	SB-1@3'	Total/NA	Solid	7471A	26478
570-9966-8	SB-3@3'	Total/NA	Solid	7471A	26478
570-9966-11	SB-4@3'	Total/NA	Solid	7471A	26478
570-9966-14	SB-5@3'	Total/NA	Solid	7471A	26478
570-9966-17	SB-6@3'	Total/NA	Solid	7471A	26478
570-9966-20	SB-7@3'	Total/NA	Solid	7471A	26478
570-9966-23	SB-8@3'	Total/NA	Solid	7471A	26478
570-9966-26	SB-9@3'	Total/NA	Solid	7471A	26478
570-9966-29	SB-10@3'	Total/NA	Solid	7471A	26478
MB 570-26478/1-A	Method Blank	Total/NA	Solid	7471A	26478
LCS 570-26478/2-A	Lab Control Sample	Total/NA	Solid	7471A	26478
LCSD 570-26478/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	26478
570-9966-2 MS	SB-1@3'	Total/NA	Solid	7471A	26478
570-9966-2 MSD	SB-1@3'	Total/NA	Solid	7471A	26478

Analysis Batch: 27150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-2	SB-1@3'	Total/NA	Solid	6010B	26469
570-9966-8	SB-3@3'	Total/NA	Solid	6010B	26469
570-9966-11	SB-4@3'	Total/NA	Solid	6010B	26469

Metals (Continued)

Analysis Batch: 27150 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-14	SB-5@3'	Total/NA	Solid	6010B	26469
570-9966-17	SB-6@3'	Total/NA	Solid	6010B	26469
570-9966-20	SB-7@3'	Total/NA	Solid	6010B	26469
570-9966-23	SB-8@3'	Total/NA	Solid	6010B	26469
570-9966-26	SB-9@3'	Total/NA	Solid	6010B	26469
570-9966-29	SB-10@3'	Total/NA	Solid	6010B	26469

Analysis Batch: 27480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-9966-5	SB-2@3'	Total/NA	Solid	6010B	26397
LCS 570-26397/2-A	Lab Control Sample	Total/NA	Solid	6010B	26397
LCSD 570-26397/3-A	Lab Control Sample Dup	Total/NA	Solid	6010B	26397
570-9888-A-1-E MS	Matrix Spike	Total/NA	Solid	6010B	26397
570-9888-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	6010B	26397

Analysis Batch: 27753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-26397/1-A	Method Blank	Total/NA	Solid	6010B	26397

Method Summary

Client: EnviroApplications, Inc.
Job ID: 570-9966-1
Project/Site: 80.CARMAX1.19/Oceanside CarMax

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	ECL 2
8015B	Diesel Range Organics (DRO) (GC)	SW846	ECL 1
8081A	Organochlorine Pesticides (GC)	SW846	ECL 1
6010B	Metals (ICP)	SW846	ECL 1
7471A	Mercury (CVAA)	SW846	ECL 1
3050B	Preparation, Metals	SW846	ECL 1
3545	Pressurized Fluid Extraction	SW846	ECL 1
3550C	Ultrasonic Extraction	SW846	ECL 1
5030C	Purge and Trap	SW846	ECL 2
7471A	Preparation, Mercury	SW846	ECL 1

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

ECL 2 = Eurofins Calscience LLC Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

Client: EnviroApplications, Inc. Job ID: 570-9966-1
Project/Site: 80.CARMAX1.19/Oceanside CarMax

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

GC Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
me	LCS Recovery is within Marginal Exdeedance (ME) control limit range (± 4 SD from the mean).
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery is outside acceptance limits.
L	A negative instrument reading had an absolute value greater than the reporting limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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570-9966 Chain of Custody

CHAIN OF CUSTODY RECORD

DATE: 10/10/19

PAGE: 1 OF 3

LABORATORY CLIENT: EnviroApplications, Inc.	CLIENT PROJECT NAME / NUMBER: 80.CARMAX1.19 / Oceanside CarMax
ADDRESS: 2831 Camino Del Rio S, Suite 214	P.O. NO.:
CITY: San Diego STATE: CA ZIP: 92108	PROJECT CONTACT: Megan Hill
TEL: 619-291-3636 E-MAIL: mhill@enviroapplications.com	SAMPLER(S): (PRINT) Megan Hill

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

☐ COELT EDF | GLOBAL ID: T0607302654 | LOG CODE: EASD

SPECIAL INSTRUCTIONS:
Only analyze 3' samples. Hold 1.5' & 5' samples.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	☐ TPH(g) ☐ GRO	☐ TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH Extended range (8015B)	BTEX / MTBE ☐ 8260 ☐	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	CAM Metals (6020B)			
1	SB-1@1.5'	10/09/19	1320	Soil	1																					
2	SB-1@3'		1330									X		X				X					X			
3	SB-1@5'		1340																							
4	SB-2@1.5'		1345																							
5	SB-2@3'		1350									X		X				X					X			
6	SB-2@5'		1410																							
7	SB-3@1.5'		1415																							
8	SB-3@3'		1420									X		X				X					X			
9	SB-3@5'		1425																							
10	SB-4@1.5'		1430																							

Relinquished by: (Signature) Megan Hill	Received by: (Signature/Affiliation) EC	Date: 10/11/19	Time: 1445
Relinquished by: (Signature)	Received by: (Signature/Affiliation) Mendoza EC	Date: 10/11/19	Time: 1930
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

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CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY:

DATE: 10/10/19

PAGE: 2 OF 3

LABORATORY CLIENT: EnviroApplications, Inc.

ADDRESS: 2831 Camino Del Rio S, Suite 214

CITY: San Diego STATE: CA ZIP: 92108

TEL: 619-291-3636 E-MAIL: mhill@enviroapplications.com

CLIENT PROJECT NAME / NUMBER: 80.CARMAX1.19 / Oceanside CarMax

P.O. NO.:

PROJECT CONTACT: Megan Hill

SAMPLER(S): (PRINT) Megan Hill

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

☐ COELT EDF GLOBAL ID: T0607302654 LOG CODE: EASD

SPECIAL INSTRUCTIONS:
only analyze 3' samples. Hold 1.5' + 5' samples.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) GRO	TPH(d) DRO	TPH C6-C36 C6-C44	TPH extended range (8015B)	BTEX / MTBE 8260	VOCs (8260)	Oxygenates (8260)	Prep (5035) En Core Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs 8270 8270 SIM	T22 Metals 6010/747X 6020/747X	Cr(VI) 7196 7199 218.6	CAM Metals (6010B)			
11	SB-4@3'	10/09/19	1435	Soil	1							X		X				X					X			
12	SB-4@5'		1440																							
13	SB-5@1.5'		1450																							
14	SB-5@3'		1500									X		X				X					X			
15	SB-5@5'		1505																							
16	SB-6@1.5'		1255																							
17	SB-6@3'		1300									X		X				X					X			
18	SB-6@5'		1303																							
19	SB-7@1.5'		1100																							
20	SB-7@3'		1120									X		X				X					X			

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Megan Hill	EC	10/11/19	1445
	EC	10/11/19	1930
		Date:	Time:

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WO # / LAB USE ONLY

DATE: 10/10/19

PAGE: 3 OF 3

LABORATORY CLIENT: EnviroApplications, Inc.

ADDRESS: 2831 Camino Del Rio S, Suite 214

CITY: San Diego STATE: CA ZIP: 92108

TEL: 619-291-3636 E-MAIL: mhill@enviroapplications.com

CLIENT PROJECT NAME / NUMBER: 80.CARMAX1.19 / Oceanside CarMax

P.O. NO.:

PROJECT CONTACT: Megan Hill

SAMPLER(S): (PRINT) Megan Hill

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

☐ COELT EDF GLOBAL ID: T0607302654 LOG CODE: EASD

SPECIAL INSTRUCTIONS:
only analyze 3' samples. Hold 1.5' + 5' samples.

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ GRO	TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH extended range (8015B)	BTEX / MTBE ☐ 8260 ☐	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	CAM Metals (6010B)			
21	SB-7@5'	10/09/19	1130	SOIL	1																					
22	SB-8@1.5'		1138																							
23	SB-8@3'		1145									X		X				X					X			
24	SB-8@5'		1150																							
25	SB-9@1.5'		1200																							
26	SB-9@3'		1210									X		X				X					X			
27	SB-9@5'		1215																							
28	SB-10@1.5'		1222																							
29	SB-10@3'		1230									X		X				X					X			
30	SB-10@5'		1237																							

Relinquished by: (Signature) Megan Hill	Received by: (Signature/Affiliation) EC	Date: 10/11/19	Time: 1445
Relinquished by: (Signature)	Received by: (Signature/Affiliation) Cllambel CC	Date: 10/11/19	Time: 1930
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

06/02/14 Revision

Login Sample Receipt Checklist

Client: EnviroApplications, Inc.

Job Number: 570-9966-1

Login Number: 9966
List Number: 1
Creator: Patel, Jayesh

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX Q
Cortese List Verification

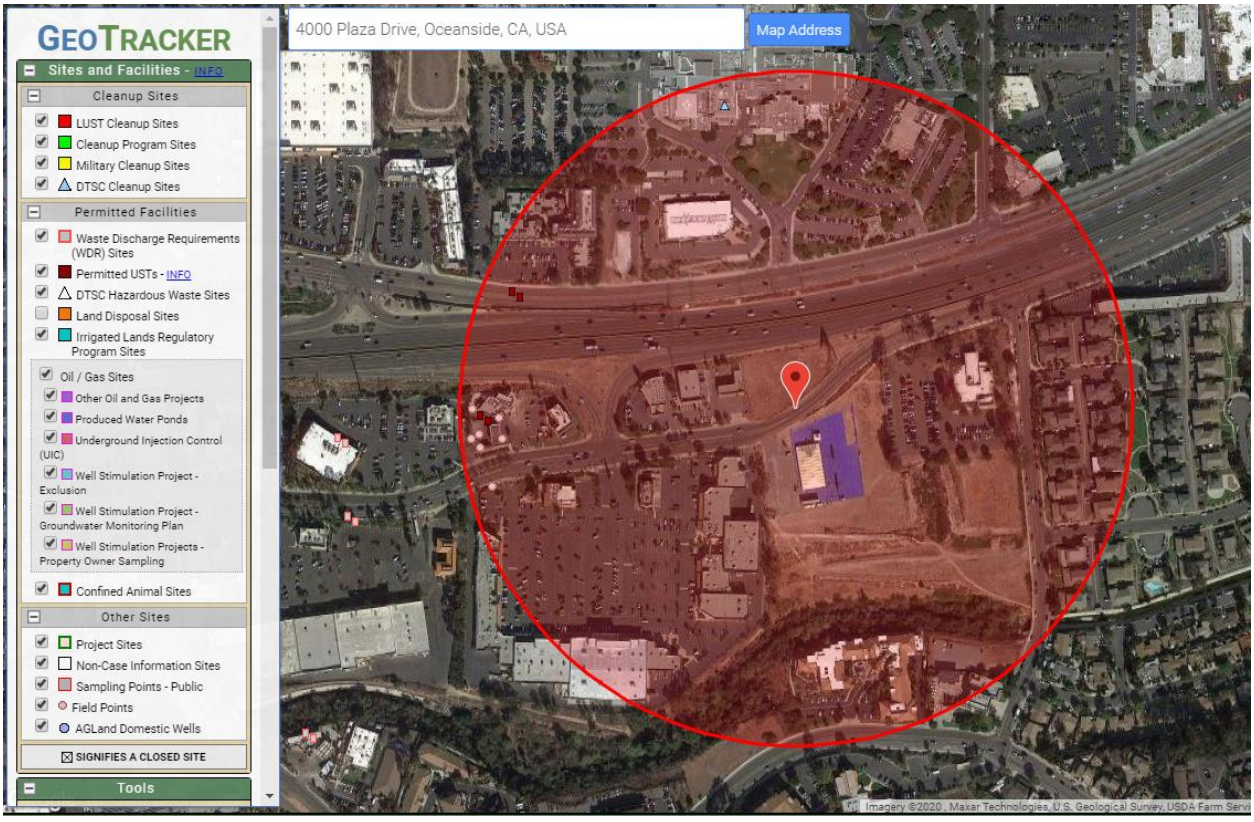
CORTESE LIST VERIFICATION

CarMax Auto Superstore Project
Location: Plaza Drive and Thunder Drive
APN: 168-012-42 and -43

1. After reviewing the California Department of Toxic Substance Control (DTSC) EnviroStor database, it is concluded that the property of interest is NOT included in the Hazardous Waste and Substances Site List.

[REPORT]	[MAP]	OCEANSIDE SITE DISCOVERY	60002805	STATE RESPONSE	ACTIVE	STUDY AREA BOUNDED BY OCEANSIDE BOULEVARD AND S COAST HIGHWAY	OCEANSIDE	92054	66-70%	SAN DIEGO
[REPORT]	[MAP]	TRI-CITY PLATING, INCORPORATED	37340034	STATE RESPONSE	ACTIVE	1307 SOUTH COAST HIGHWAY	OCEANSIDE	92054	66-70%	SAN DIEGO

2. After reviewing the List of Leaking Underground Storage Tank Sites by County from the Water Board GeoTracker database, it is concluded that the property of interest is NOT included in this list.



3. After reviewing the list of solid waste disposal sites identified by Water Board with waste constituents above hazardous waste levels outside the waste management unit, it is concluded that the property of interest is NOT included in the list.

SITES IDENTIFIED WITH WASTE CONSTITUENTS ABOVE HAZARDOUS WASTE LEVELS OUTSIDE THE WASTE MANAGEMENT UNIT

COUNTY	CITY	REGION	SWAT I	WASTE DISCHARGER SYSTEM NO.	SOLID WASTE ID NO.	WASTE MANAGEMENT UNIT NAME	FACILITY NAME	AGENCY NAME
DEL NORTE	CRESCENT CITY	1	2	1A880520NSL-01		DEL NORTE COUNTY- PESTICIDE STORAGE	DEL NORTE PESTICIDE STORAGE AR	DEL NORTE, COUNTY OF
CONTRA COSTA	PITTSBURG	2	1	2 071059002-02	07-A1-0001	U.S. STEEL CORP.-PITTSBURG SITE LA	WDR-USS-POSCO	USS-POSCO
SOLANO	VALLEJO	2	1	2 482011003-01	48-AA-0008	US NAVY MARE ISLAND SANITARY LANDFILL	WDR-NAVAL SHIPYARD/CLASS I LAN	MARE ISLAND NAVAL SHIPYARD
CONTRA COSTA	RICHMOND	2	3	2 071007002-01		CHEVRON CHEMICAL COMPANY-OLD SITES	WDR-ORTHO DIV-RICHMOND PLANT	CHEVRON CHEMICAL COMPANY
MONTEREY	FORT ORD (Marina)	3	1	3 270301004-01	27-AA-0015	FORT ORD LANDFILL	SANITARY LANDFILL	U.S. ARMY, FORT ORD
SANTA BARBARA	LOMPOC	3	3	3 420305001-01	42-AA-0017	LOMPOC CITY LANDFILL	SOLID WASTE DISPOSAL SITE	LOMPOC CITY
LOS ANGELES	MONTEREY PARK	4	1	4B190332001-01	19-AM-0001	OPERATING INDUSTRIES LANDFILL	OPERATING INDUSTRIES, INC.	OPERATING INDUSTRIES, INC.
TULARE	WOODLAKE	5F	1	5D540300010-01	54-AA-0007	TULARE COUNTY-WOODLAKE LANDFILL	WOODLAKE SWDS	TULARE, COUNTY OF
FRESNO	FRESNO	5F	2	5D100300001-01		MCKINLEY AVE. YARD	T.H. AGRICULTURE AND NUTRITION	NORTH AMERICAN PHILLIPS
KINGS	CORCORAN	5F	2	5D160302001-01	16-AA-0011	KINGS COUNTY-CORCORAN LANDFILL	CORCORAN SWDS	KINGS COUNTY WASTE MGMT AUTH.
FRESNO	FRESNO	5F	3	5D100319001-01	10-AA-0013	ORANGE AVENUE DISPOSAL COMPANY	ORANGE AVENUE LANDFILL	ORANGE AVENUE DISP CO. INC
TULARE	EXETER	5F	3	5D540300003-01	54-AA-0002	TULARE COUNTY-EXETER DISPOSAL SITE	EXETER SWDS	TULARE, COUNTY OF
MERCED	ATWATER	5F	4	5C240115001-01		ATWATER CITY	BERT CRANE ROAD LANDFILL	ATWATER, CITY OF
FRESNO	FOWLER	5F	5	5D100325N01-01		FOWLER CITY	FOWLER CITY LANDFILL (OLD)	FOWLER, CITY OF
BUTTE	OROVILLE	5R	2	5A042005001-01		KOPPERS COMPANY-OROVILLE SITE	KOPPERS WOOD PRESERVING ISW	KOPPERS INDUSTRIES INC.
BUTTE	CHICO	5R	4	5A040302N01-01		CHICO CITY BURN DUMP	HUMBOLDT ROAD LANDFILL	CHICO, CITY OF
SACRAMENTO	SACRAMENTO	5S	1	5A340700003-01	34-AA-0008	US AIR FORCE-MCCLELLAN AFB LANDFILL	CLASS III SITE 8 (CLOSURE)	US AIR FORCE-MCCLELLAN AFB
SACRAMENTO	MATHER (Rancho Cordova)	5S	2	5A340700001-01		US AIR FORCE-MATHER FIELD LANDFILL	MATHER AFB ENVIRONMENTAL MGMT	US AIR FORCE – MATHER AFB
SACRAMENTO	SACRAMENTO	5S	3	5B342000N01-01		SACRAMENTO ARMY DEPOT	SACRAMENTO ARMY DEPOT	U.S. ARMY
SAN JOAQUIN	STOCKTON	5S	3	5 390002NUR-01	39-AA-0006	US NAVY COMMUNICATIONS LANDFILL	U.S.N. COMMUNICATION STA. LANDF	U.S. NAVY COMMUNICATIONS
SAN JOAQUIN	FRENCH CAMP	5S	3	5 390003NUR-01		US ARMY-SHARPE ARMY DEPOT	US ARMY-SHARPE ARMY DEPOT	US ARMY
SAN JOAQUIN	TRACY	5S	5	5 390006NUR-01		SITE 300 (OTHER 39 WMUS)	LAWRENCE LIVERMORE LAB	LAWRENCE LIVERMORE LABS
INYO	KEELER	6V	1	6B142000041-01	14-AA-0008	US TUNGSTEN OWENS LAKE LANDFILL	OWENS LAKE LANDFILL	UMETCO MINERALS CORPORATION
ORANGE	FULLERTON	8	1	8300002NUR-01		MCCOLL SITE	MCCOLL SLUDGE DISPOSAL SITE	TOXIC SUBSTANCES CONTROL DIVIS
RIVERSIDE	RIVERSIDE	8	1	8 330325001-01		STRINGFELLOW QUARRY ACID PITS	STATE OF CALIFORNIA-STRINGFELLOW	TOXIC PROGRAM MANAGEMENT SECT

4. After reviewing the (MS Excel) list of “active” CDO and CAO from the Water Board, it is concluded that the property of interest is NOT included in this list.

5. After reviewing the list of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC, it is concluded that the property of interest is NOT included in the list.

Cortese List: Section 65962.5(a)

Information Required From the Department of Toxic Substances Control (DTSC) Under Government Code Section 65962.5(a)

Section 65962.5(a)(1) requires that DTSC "shall compile and update as appropriate, but at least annually, and shall submit to the Secretary for Environmental Protection, a list of all the following: ....(1) [a]ll hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code ("HSC")."

The hazardous waste facilities identified in HSC § 25187.5 are those where DTSC has taken or contracted for corrective action because a facility owner/operator has failed to comply with a date for taking corrective action in an order issued under HSC § 25187, or because DTSC determined that immediate corrective action was necessary to abate an imminent or substantial endangerment. This is a very small and specific subgroup of facilities and they are not separately posted on the DTSC or CalEPA's website.

The facilities listed below fall under this category:

- AAD Distribution & Dry Cleaning Inc. EPA ID CAD981397417 2306 E. 38th StreetVernon, CA 90058
- The Marquardt Co. CA ID CAD044696102 16555 Saticoy Street Van Nuys, CA 91406

Section 65962.5(a)(2) requires that DTSC "shall compile and update as appropriate, but at least annually, and shall submit to the Secretary for Environmental Protection, a list of all the following: ... (2) [a]ll land designated as hazardous waste property or border zone property pursuant to Article 11 (commencing with Section 25220) of Chapter 6.5 of Division 20 of the Health and Safety Code."

No facilities or lands are listed under this provision because DTSC has not designated any hazardous waste property or border zone property pursuant to the cited provisions.

Section 65962.5(a)(3) requires that DTSC "shall compile and update as appropriate, but at least annually, and shall submit to the Secretary for Environmental Protection, a list of all the following: ....(3) [a]ll information received by the Department of Toxic Substances Control pursuant to Section 25242 of the Health and Safety Code on hazardous waste disposals on public land.

HSC § 25242(a) requires a city, county, or state agency that owns or leases land to notify DTSC if it "has probable cause to believe that a disposal of hazardous waste, which is not authorized pursuant to this chapter has occurred on, under or into the land which the city, county, or state agency owns or leases..."; DTSC then shall determine if there has been an unauthorized disposal of hazardous waste.

In practice, if a city, county or state agency contacts DTSC to provide such information, they also will have contacted or will be directed to contact DTSC's Emergency Response Duty Officer, who determines whether to authorize DTSC-funding for an emergency action to properly remove and dispose of the hazardous waste.

DTSC's Emergency Response program does not keep separate records of such reports that relate to city, county or state agency property.

In the future, DTSC will track any reports received from cities, counties, or state agencies of hazardous waste disposal on land owned or leased by a city, county or state agency, where hazardous waste was released into the environment, and provide the information to CalEPA for inclusion in this section of the Cortese list.

Section 65962.5(a)(4)requires that DTSC "shall compile and update as appropriate, but at least annually, and shall submit to the Secretary for Environmental Protection, a list of all the following: ....(4) [a]ll sites listed pursuant to Section 25356 of the Health and Safety Code."

HSC § 25356(b)(1) requires "a listing of hazardous substance release sites selected for, and subject to, a response action under this chapter." HSC § 25356(b)(2) requires DTSC to "update the list of sites at least annually to reflect new information regarding previously listed sites or the addition of new sites requiring response action." The implementing regulations provide that sites may be listed pursuant to HSC § 25356 if (a) they are not owned by the Federal Government and (b) a release or threatened release of hazardous substances has been confirmed by on-site sampling. (California Code of Regulations, Title 22, Section 67400.1). DTSC's list of sites that meet those criteria as well as the criteria in HSC § 25356(c), is found in a report in DTSC's "Envirostor" database:

- Hazardous Waste and Substances site "Cortese" list

Sites where response actions have been completed and no operation and maintenance activities are required are not included on the list.

Section 65962.5(a)(3) requires that DTSC "shall compile and update as appropriate, but at least annually, and shall submit to the Secretary for Environmental Protection, a list of all the following: ....(3) [a]ll sites included in the Abandoned Site Assessment Program."

DTSC had an abandoned site program in the 1980s. HSC § 25369, which was enacted in 1985, required an abandoned site survey in "rural unsurveyed counties." Sites identified in the abandoned site program were included in the "CalSites" database of known and potential hazardous substance release sites. After further investigation, many sites were removed from the "CalSites" database because there was no evidence that a release of hazardous substances occurred. Some time in the early 1990s, DTSC's activities under HSC § 25369, and the entire Abandoned Site Program, were concluded.

DTSC recently replaced the "CalSites" database with a new database of hazardous substance release sites, known as the "EnviroStor" database. The EnviroStor database does not indicate if a specific site was at one time included in the abandoned site program and does not have a category for sites that are considered abandoned. The CalSites database also did not include this information. Consequently, DTSC does not provide the information to CalEPA originally called for under section 65962.5(a)(3).

Background and History

APPENDIX R
Police Department Correspondence

From: Fred Armijo
To: Rayna del Rosario
Subject: RE: CarMax Oceanside - Information for Environmental Review
Date: Thursday, March 19, 2020 5:47:42 PM
Attachments: image005.png

Hello Rayna,

Please see our responses below. Please feel free to call or email me with any questions.

1. What is the address of the City of Oceanside Police Department station(s) that serves the project area?

We have a centralized police station that serves the city. It is located at 3855 Mission Avenue, Oceanside, CA 92058

2. What are the approximate response times for emergency and non-emergency calls in the project area?

5.47 minutes for Priority 1 – Emergency
8.43 minutes for Priority 2- Timing Critical/Felony Just Occurred
25.84 minutes for Priority 3- Non-Violent/Misdemeanor just occurred
38.24 minutes for Priority 4- Routine Calls for Service.

3. Are existing City of Oceanside Police Department staff levels adequate to meet current demands for police protection services in the project area?

Yes.

4. Do the proposed project components present any unique law enforcement problems for the City of Oceanside Police Department?

We do not foresee any unique law enforcement problems associated with this project.

5. Would the project require the City of Oceanside Police Department to hire more officers or staff?

We do not anticipate needing to hire more officers in order to provide services for the project.

6. Would the project impact existing response times?

We anticipate the project to have a de minimis impact on response times.

7. Do you have any recommendations that might ensure that the proposed project would not "significantly" impact City of Oceanside Police Department services?

We recommend the utilization of inventory control measures to prevent loss, to include driveway barriers after hours along with strict control of keys and access to vehicles. Onsite security and video surveillance cameras are also recommended.

Fred Armijo, Captain
Investigations Division
Oceanside Police Department
3855 Mission Avenue
Oceanside, CA 92058
760-435-4797

Please note my email has changed to: farmijo@oceansideca.org

From: Rayna del Rosario <Rayna@rec-consultants.com>
Sent: Tuesday, March 03, 2020 08:35
To: Fred Armijo <FArmijo@oceansideca.org>
Subject: CarMax Oceanside - Information for Environmental Review

Warning: External Source

Hello Fred,

We are preparing the environmental document for a proposed CarMax Facility within the City of Oceanside and would like to obtain information regarding police services within the City. Please see the letter attached and let me know if you have any questions. I look forward to hearing from you.

Thank you,

Rayna Del Rosario
Environmental Analyst

REC Consultants, Inc.

Environmental • Engineering • Land Surveying • Water Resources • GIS Services
2442 Second Avenue
San Diego, CA 92101
(619) 232-9200 Ext. 103
(619) 326-6003 Direct
(619) 232-9210 Fax
www.rec-consultants.com

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Consultants, Inc.
San Diego • Temecula

APPENDIX S
Water and Sewer Will Serve Letter

CITY OF OCEANSIDE
WATER UTILITIES DEPARTMENT

October 7, 2020

Rayna Del Rosario
Environmental Analyst
REC Consultants, Inc.
2442 Second Avenue
San Diego, CA 92101

RE: CarMax Auto Superstore
APN 168-012-42 and 168-012-43
WATER AND SEWER WILL SERVE LETTER REQUEST

Dear Ms. Del Rosario,

The City has received your email request dated October 6, 2020, regarding a water and sewer will serve letter from the City of Oceanside for the proposed CarMax automobile dealership located near the intersection of Plaza Drive and Thunder Drive.

The City of Oceanside does not issue will serve letters. The project will be subject to an entitlement review process for approval by the Planning Commission or City Council. As part of this process, any off-site improvements to the City's water and sewer systems that are necessary to accommodate the proposed project must be identified and included as part of the development. Once the entitlement process is complete, the flow and capacity allowances will be set aside for the approved project.

Should you have any questions regarding this matter, please do not hesitate to contact me or Bryan Kallenbaugh at (760) 435-5860.

Sincerely,

Mabel Uyeda
Digitally signed by Mabel Uyeda
Date: 2020.10.07 08:35:02-07'00'

Mabel Uyeda, P.E.
Senior Civil Engineer

CC: Cari Dale, Water Utilities Director
Lindsay Leahy, Principal Water Engineer
Bryan Kallenbaugh, Associate Engineer