Appendix A

Initial Study

Environmental Checklist/Initial Study

PACKAGE DELIVERY WAREHOUSE PLANNED DEVELOPMENT PERMIT

1. Project Title and Location

Package Delivery Warehouse Planned Development Permit
1680 West Stowell Road
Santa Maria, California 93458
Assessor's Parcel Number: 117-820-012 and 117-820-013 (32 acres)

2. Lead Agency, Contact and Preparer

City of Santa Maria
Cody Graybehl, Senior Planner
Planning Division, Community Development Department
110 South Pine Street, Suite 101
Santa Maria, California 93454
805-925-0951, x2552
cgraybehl@cityofsantamaria.org

3. Project Applicant Name and Address

Scott Irwin and Ben Ochoa
Seefried Industrial Properties, Inc.
2321 Rosecrans Avenue, Suite 2220
El Segundo, California 90245

4. Property Information

Lot Size: 33.3 acres/1,449,993 square feet (gross); 32.0 acres/1,395,195 square feet (net)

Existing Land Use: Vacant – interim row crop production

General Plan Designation: Heavy Commercial/Manufacturing (HCM)

Specific Plan: West Stowell Specific Plan

Zoning Designation: West Stowell Specific Plan's Planned Development/Commercial Manufacturing – Agricultural Overlay (PD/CM-AG) Designation

5. Brief Description of Project

Location and Existing Setting

The Package Delivery Warehouse Planned Development Permit (project) would be located at 1680 West Stowell Road in the city of Santa Maria (City) in Santa Barabra County. The property is located in the western portion of the city (Figure 1) within the West Stowell Specific Plan area. The project is in zone district PD/CM-AG (Planned Development/Commercial Manufacturing - Agriculture Overlay) of the Specific Plan.[1] The project would be built on a 32-acre site consisting of two parcels (Assessor's Parcel Numbers:

[1] Santa Maria, City of. 1994. West Stowell Specific Plan, Land Development Pattern, Zoning Map. Available: https://www.cityofsantamaria.org/home/showpublisheddocument/6437/635530503431800000. (accessed March 2025).

117-820-012 and 117-820-013)[2] currently used for growing row crops. As shown in Figure 2, the project site is vacant.

The project site is bordered on the north by West Stowell Road. The land north of West Stowell Road is in unincorporated Santa Barbara County. There is an operating freight rail track abutting the south boundary of the site owned by Santa Maria Valley Railroad. The facility would not be using the rail tracks for the project. Neighboring land uses include agricultural, industrial, and commercial uses, including a Driscoll's packaging facility, an animal shelter, trucking facility, and various farms. The project site is located approximately 0.25 mile west of small-lot single family residential housing. To the east of the project site is a vacant parcel currently being developed as an agriculture box warehouse. Surrounding land uses, General Plan designations, and zoning designations are summarized in Table 1 below.

Table 1 Surrounding Land Use Designations

Direction	Land Use	General Plan Land Use Designation	Zoning Designation
North	Row Crops	Santa Barbara County Unincorporated Land	Santa Barbara County Unincorporated Land
South	Row Crops	Light Industrial (LI)	PD/M-1
East	Vacant /Under Development	HCM	PD/CM-AG
West	Crops/AG Industrial	HCM	PD/CM-AG

Project Components

The applicant, Seefried Industrial Properties, Inc., is requesting a Planned Development Permit from the City to develop a package delivery warehouse at 1680 West Stowell Road. The total development area proposed is 244,418 square feet, which includes a 169,104-square-foot single story main distribution warehouse, oriented north to south in the center of the approximated 32-acre site. The main facility building (S-1 occupancy) would include a supporting office area (B occupancy), training room (A-2 occupancy), and break room (A-3 occupancy). In addition to the main facility building, the project contains other small accessory structures as summarized in

Table 2 below. This includes an on-site fleet service center to maintain and repair delivery vans.

Table 2 On-Site Structures

Structure Type	Structure Area (square feet)
Main Warehouse and Office	169,104
Loading Awning - East	33,545
Loading Awning - West	34,325
Remote Restrooms	906
Automated Vehicle Inspection Structures	1,545
Fleet Service Center	4,993
Total	**244,418**

[2] Santa Barbara, County of. County Clerk, Recorder and Assessor. Available: https://sbcassessor.com/Assessor/details.aspx?apn=117820012. (accessed June 2025).

Planned Development

The project would be processed through a Planned Development Permit. Per Santa Maria Municipal Code (SMMC) Section 12-25.02, the intent of the Planned Development is:

> *"The PD (planned development overlay) district is designed and intended to provide for the orderly development of land in conformance with the comprehensive land use element and other elements of the General Plan of the City by permitting a flexible design approach to the development of a total community environment equal to or better than that resulting from traditional lot by lot development. The district is designed and intended to accommodate various types of development such as neighborhood and district shopping centers, professional and administrative office complexes, multiple housing developments, single-family residential developments, commercial service centers and light industrial parks or any other use or combination of uses which can be made appropriately a part of a total planned development, in accordance with City General Plan and any applicable specific plan.*
>
> *The requirements and procedures set in this chapter are designed and intended to be applied in such a manner as to provide maximum design flexibility to the property owner or developer, yet allow the City to retain control over design features and arrangements of uses within the project. The "PD" designation may combine with the various zones called out in the provisions of this title."*

Modification from the 35-foot building height limit in the West Stowell Specific Plan would be needed to permit the project's proposed building height of 45 feet. This added height is necessary to accommodate the interior height necessary for the function of building operation and to also provide sufficient building parapet screening of the roof-mounted mechanical equipment, which is a requirement of SMMC Section 12-33.202 (b) of the Commercial and Industrial Performance Standards. Per the West Stowell Specific Plan 'No lot or parcel of land in the CM/AG district shall have a building or structure in excess of thirty-five (35) feet in height unless allowed with a use or planned development permit.' The applicant has submitted a Planned Development Permit application which includes the request for additional building height. Per SMMC Section 12-35.202, a request for modified building height, may be considered on a case-by-case basis subject to the situational context of the project site to allow flexibility for development, and in order to achieve superior design and community benefit. The Planned Development Permit with requested building height modification will be presented to the Planning Commission for consideration.

Utilities

The City of Santa Maria would provide essential utility services to the project site encompassing water, wastewater, and solid waste management. Electricity would be provided by Pacific Gas & Electric and no natural gas pipes would be installed. Xfinity is the local internet/telecommunication provider.

City capital improvement plans are to enlarge a sewer main that runs below the project site from 30 inches to 48 inches to accommodate planned future demand once warranted. To limit future disruption at the facility, the existing undersized sewer main would be replaced with the larger 48-inch size main during project construction. The project would also establish a public utility easement for the sewer main alignment.

The project would add 890,901 square feet of impervious surfaces. The project would implement a Stormwater Management Plan to ensure the effective flow of water through the project site. Stormwater control measures include installation of a roof drain disconnect, on-site retention-based infiltration, and minimizing impervious areas via permeable pavers and bioretention basins.

Abandoned Oil Well

As identified in the California Geologic Energy Management Division (CalGEM) Well Finder database, an oil and gas well is located in the southwestern corner of the project site and was abandoned in the 1950s

(Hope Well# 1, API# 0408302417). The use of this portion of the site would be set aside for parking where access and clearance parameters can be maintained. The applicant would, in coordination with CalGEM, move forward with a plan to re-abandon the oil and gas well to current CalGEM standards. The anticipated work would be noted on project plans submitted to the City, and California Environmental Quality Act clearance is addressed with this Initial Study.

Lighting

Lighting would be installed across the project site to ensure visibility and safety, including in the east, north, and west parking lots, loading dock, open truck yard, beneath the east and west canopy, in the west and east van queuing areas, and on vehicular roads.

Landscaping

Landscaping improvements would include the usage of drought-tolerant and climate-adapted plants, and installation of walk-on-bark mulch in all non-low impact development planting areas and slopes. The irrigation system would measure and use evapotranspiration or soil moisture sensor data, as well as a rain sensor and pressure regulators. Irrigation controllers that do not lose programming data in the event of a power outage would be installed, and areas less than 10 feet in width would use subsurface irrigation to avoid runoff and overspray. The landscape and irrigation plans shall conform to City and State water efficient landscape requirements.

Sustainable Energy Features

The proposed project includes several sustainable energy features. Fifteen electric vehicle chargers would be installed as part of the project, exceeding the minimum requirements. The project would not install any natural gas services to the facility. In addition, solar roof arrays would be installed to offset electrical energy demand with a design capacity of 750kilowatts direct current. To manage energy supply and demand, the project would include an ‘after the meter’ Battery Energy Storage System to store energy for later use by the facility, with a design rating of 650kilowatts direct current.

Operation

Delivery warehouses are the *last mile* connection between the tenant’s customers and their fulfillment process. Delivery warehouses operate 24/7 to support delivery of packages to customer locations between 10:00 a.m. and 9:00 p.m. The main on-site facility would include delivery and distribution, office and processing uses, including shipping and receiving of packages. It is anticipated that the facility would have two shifts working days and evenings, with a potential third shift during peak season. The operations would be designed to minimize the potential for traffic impacts during peak hour periods by shifting primary trips outside of the standard peak hours. The delivery van departure window would be designed to minimize impact on rush hour periods, and the vans can reach local customers within approximately 125 square miles.

At the proposed delivery warehouse, approximately 34 line-haul trucks (semi-trailer trucks) would be expected to deliver packages to the warehouse each day. The line haul trucks would primarily arrive at the site between the hours of 10:00 p.m. and 8:00 a.m. Once unloaded, the trucks would continue to the next delivery warehouse and would not return to the site. The customer packages would be sorted by address groupings, assigned to the delivery routes, placed onto movable racks, and staged for dispatch.

The first wave of delivery drivers would arrive at the delivery warehouse around 9:20 a.m. and begin queuing for loading. Starting at 9:50 a.m. and ending at 11:10 a.m., 345 delivery vans would load and depart from the delivery warehouse at a rate of up to 72 vans per 20 minutes to facilitate a regulated traffic flow into the surrounding area. Approximately 8–10 hours after dispatch, delivery routes would be

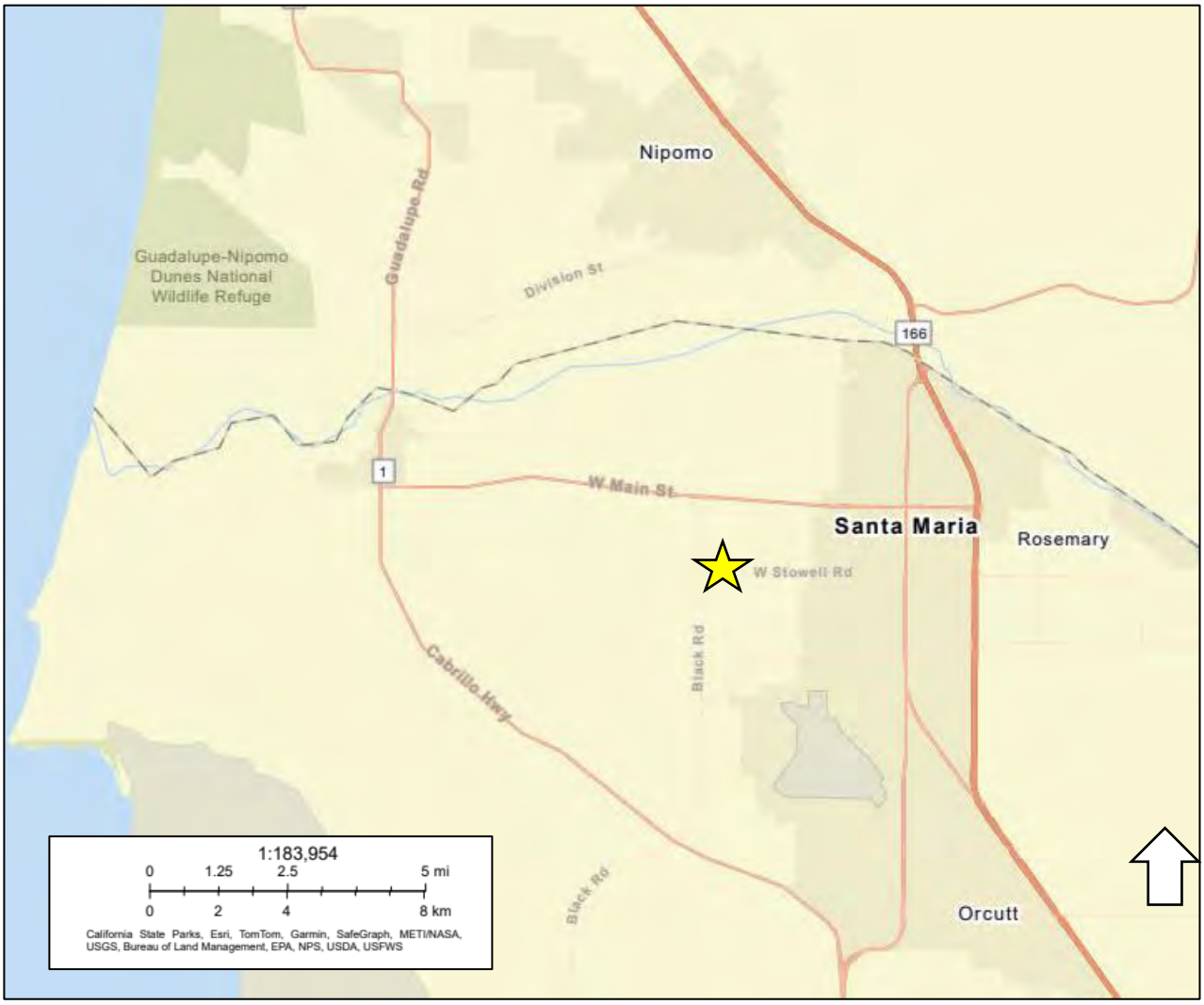
completed, and the vans would return to the station between 8:10 p.m. and 9:50 p.m. The drivers would park all delivery vans onsite and depart using a personal vehicle or other mode of transport. The delivery warehouse would also use private carriers (primarily individual passenger vehicles) to deliver packages from this location. The tenant anticipates 97 passenger vehicles would enter the facility staggered between 4:30 p.m. and 6:00 p.m. Private carrier vehicles would load and depart every 15 minutes. They would not return to the warehouse that day.

Site Circulation and Parking

Access to the site would be provided via three unsignalized driveways (see Figure 3). The westernmost driveway would provide access for all line-haul trucks with vans and employees entering the site via the central and easternmost driveways, which would provide access to parking lots to the north, west, and east of the main building. On-site improvements would involve parking lot striping. Off-site circulation improvements would include installation of parking lot striping, two east bound travel lanes, a bike lane, sidewalk, pedestrian barricade, and streetlights.

Parking for up to 990 passenger cars and vans would be available on-site. There would be 12 stalls at the loading dock to accommodate semi-trucks on the south side of the main facility. Parking for overnight fleet vehicles and drivers' personal vehicles totaling 272 spaces would be available north of the building. The proposed parking meets and exceeds City requirements as shown in Table 3 below. As shown on the project site plan shown in Figure 3, two delivery van parking lots would be located to the east and west of the main distribution building. The main entrance to the building would be to the north facing West Stowell Avenue with parking spots reserved in the north parking lot for associates, guests, or package pick-up customers. The truck loading docks would be along the southern side of the building with dock-high doors for tractor trailer access for unloading. Trucks would enter the site using the northwestern driveway on West Stowell Avenue, and drive south to the loading docks. Trucks would leave the site through the same driveway. Customers, delivery vans, and associate cars would enter and exit the site from the northeastern driveway, also on West Stowell Avenue.

Figure 1 Project Vicinity Map



Project Site



Figure 2 Project Location Map

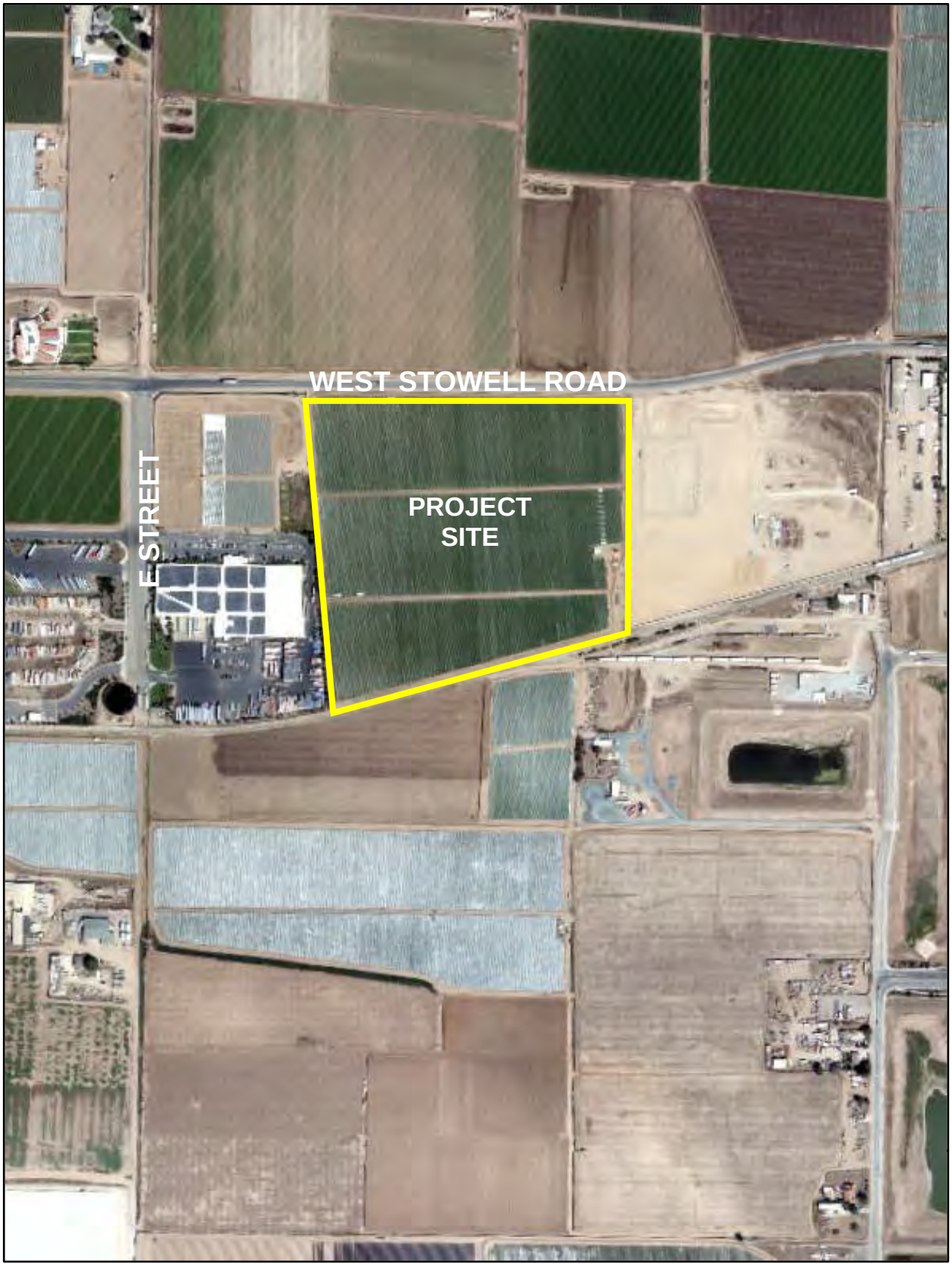


Figure 3 Project Site Plan

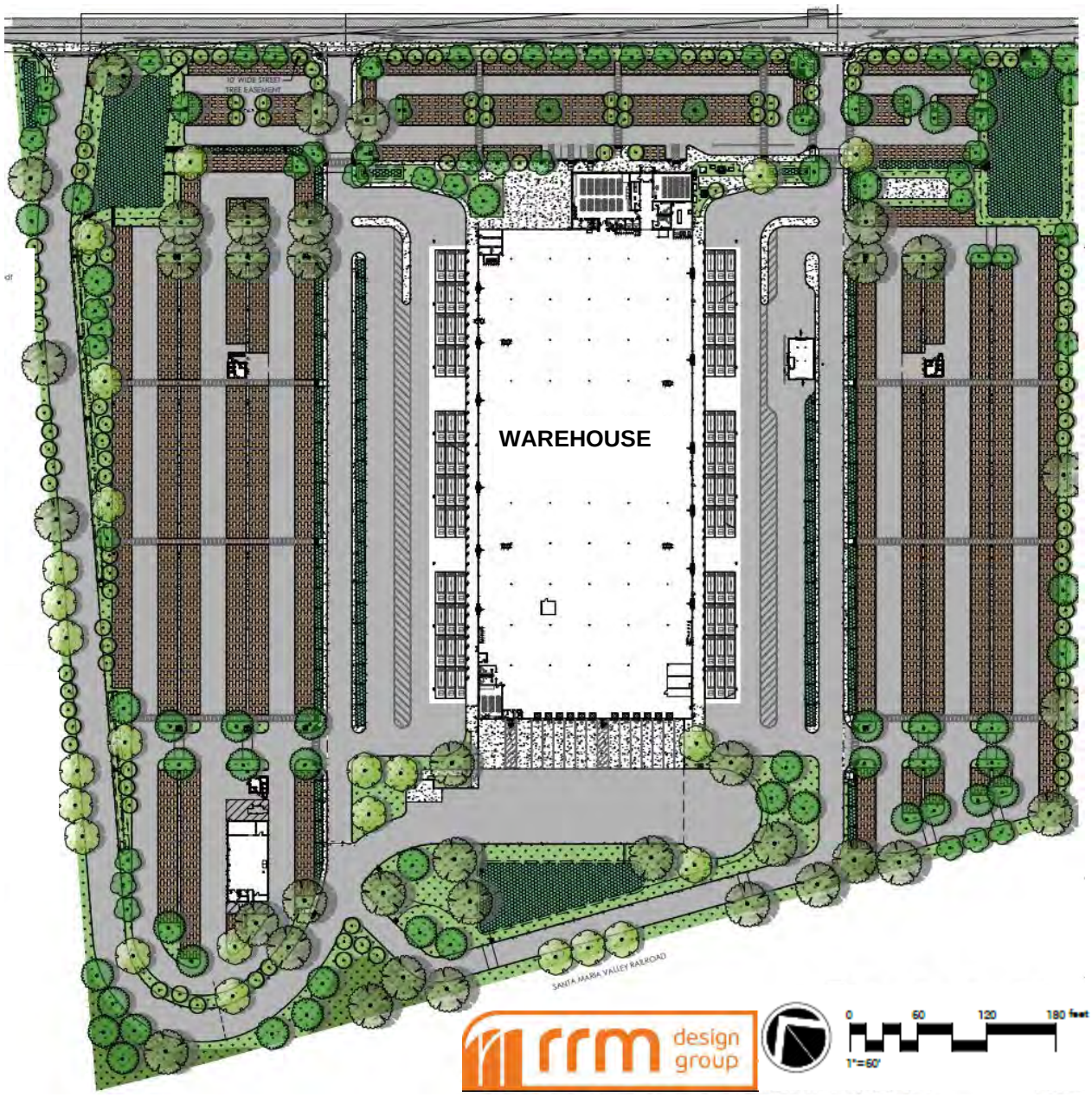


Table 3 Parking Requirements

Stall Type and Size	Parking Type	Floor Area (square feet)	City Requirements	Required Parking Stalls	Parking Stalls Proposed
Standard Vehicle (9'x19')	Warehouse	157,507	1 space per 1,040 square feet	151	
	Office	11,597	1 space per 260 square feet	45	
	Subtotal	169,104	N/A	196	210*
	Handicap		Based on 201 to 300 total stalls	7	8
	EV Capable Stalls		20% of total parking stalls	54*	54
	Standard Vehicle Total			257	272
Delivery Van (11'x27')	Delivery Van Parking				504
	EVCS Delivery Van Parking				202
Semi-Truck (53-foot)	Semi-Truck Parking				12
Total Parking				**196**	**990**

* Electronic Vehicle Charging Stations (EVCS) 25% Of Overall EV Capable Stalls = 14 stalls

Construction

Construction of the proposed project is anticipated to occur over one year, from approximately March 2026 through July 2027. Construction would take place between 7:00 a.m. to 6:00 p.m. on weekdays and 8:00 a.m. to 5:00 p.m. on weekends, which is within the allowable construction hours set by the City.[3] Construction of the structures and on-site facilities would be done in five phases: site preparation, grading, building construction, paving, and architectural coating. The warehouse would be constructed with concrete tilt-up construction. The project would use typical construction equipment, including air compressors, welders, excavators, cranes, forklifts, generators, rubber-tired dozers, tractors, loaders, backhoes, and graders. Construction equipment would feature Tier 3 or higher engines. Construction activities are further described below and in the project plans (Attachment 1).

Construction activities for the project site and frontage would include installation of curb and gutter improvements, such as accessible curb ramps, curb cuts with rock riprap energy dissipater, deepened curb, concrete cross gutter, fire hydrant and fire service backflow prevention assembly, domestic backflow prevention assembly, domestic water meter, and sewer manhole and sewer cleanout.

The site would undergo grading and excavation as estimated in Table 4 below. Overall grading depth for buildings would be up to 5 feet in depth and then backfilled approximately 1 to 3 feet above existing grade. Replacement of the sewer main would be at a depth up to 12 feet.

[3] Santa Maria, City of. 2025. Code of Ordinances Chapter 5-5 Noise Regulations, Section 5-5.06(e). Available: https://ecode360.com/43642649#43642677. Accessed March 2025.

Table 4 Grading and Excavation

Cut/Fill Evaluation	Area (square feet)	Assumed Section (feet)	Fill (+) (cubic yards)	Cut (-) (cubic yards)	Net (cubic yards)
Surface Cut/Fill	1,449,239		237,492	700	236,792
AC Road Hold down	591,231	1.5		32,846	-32,846
Concrete Flat Work	93,422	0.7		2,318	-2,318
Basin Hold Downs	72,077	4.0		10,678	-10,678
Permeable Pavers	224,592	1.5		12,477	-12,477
Building Foundation	250,205	3.0		27,801	-27,801
Total & Net			**237,492**	**86,820**	**150,672 Import**

6. Public Agencies Whose Approval Is Required

Agency	Permits/Other Approvals
City of Santa Maria	Planned Development Permit (PD2024-0003) and Lot Merger
Santa Barbara County Air Pollution Control District	Stationary source Authority to Construct (ATC), Permit to Operate (PTO) for point sources in development
California Geologic Energy Management Division (CalGEM)	CalGEM-Construction Site Well Review Program (to re-abandon on-site oil and gas well)

7. California Native American Tribes Consultation

The City has notified California Native American tribes who have formally requested notification on California Environmental Quality Act projects under Assembly Bill 52, and pursuant to Public Resources Code section 21080.3.1. This notification affords California Native American tribes the opportunity for consultation pursuant to Public Resources Code Section 21080.3.1. The City received a response from Santa Ynez Band Chumash Indians on October 23, 2024, indicating that no further consultation on the project is necessary.

1. Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?				X
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c. In non-urbanized 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 publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Setting:

The project site is located in the City of Santa Maria, in Santa Barbara County. The project would be located on two existing, flat, vacant parcels currently used as row crops for agricultural production on West Stowell Road. There are no significant visual features or scenic resources located within the project site or within the immediate vicinity of the site. The closest eligible highway is U.S. Route 101, which is approximately 2.8 miles east from the edge of the project site. State Route 166 is also a listed eligible state scenic highway east of U.S. Route 101 which is approximately 4.5 miles away from the project site.[4] Additionally, according to the California Environmental Quality Act (CEQA) Guidelines Section 21071, an "urbanized area" is defined as an incorporated city that has a population of at least 100,000 persons. The City of Santa Maria has a population of 109,987 and is thus considered an "urbanized area".[5]

Impact Discussion:

a. A scenic vista is defined as an expansive view of highly valued landscape as observable from a publicly accessible vantage point. The City's Resources Management Element of the General Plan[6] has a Conservation Open Space (COS) designation classification with associated zone district, its purpose is to preserve certain areas to protect natural resources, to provide scenic corridors along railroad rights-of-way

[4] California Department of Transportation [Caltrans]. 2025. California State Scenic Highway System Map. Available: https://www.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed March 2025.
[5] Data Commons. 2023. Santa Maria. Available: https://datacommons.org/place/geoId/0669196?utm_medium=explore&mprop=count&popt=Person&hl=en. (accessed April 2025).
[6] Santa Maria, City of. 1996. General Plan, Resources Management Element. Available: https://www.cityofsantamaria.org/home/showpublisheddocument/598/635488452761730000. Accessed March 2025.

(ROW), and utility easements. The south boundary of the project site abuts a railroad line; however, the project site is not zoned as COS[7], and therefore, does not need to preserve a scenic corridor along the railroad ROW. Additionally, the Resources Management Element does not identify any known unique or important scenic vistas surrounding the project site. No impact to scenic vistas would occur.

b. As described in the setting, the project site is not located near any officially designated state scenic highways. The project would not require the removal or damaging of trees, rock outcroppings, or historic buildings within a state scenic highway. Therefore, no impact to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway would occur.

c. The project site comprises two vacant parcels situated in the CM-AG zone district within an urbanized area. The SMMC Section 12-33.307 sets performance standards and regulations to control glare and light spillage.[8] The proposed lighting's orientation and intensity (see Attachment 1) have been reviewed by City staff and confirmed that the lights would be directed onto the project site and are appropriately intense, meeting the City's performance standards. The proposed project's architecture and landscaping are consistent with the existing industrial developments along West Stowell Road, and the development intensity on the site aligns with the land uses and zoning planned for the area. As discussed above, the site does not offer high-quality public views or scenic vistas. Future development on the site must comply with all City building standards, as well as the Landscape Standards (Chapter 12-44) in Title 12 of the SMMC. The project proposes to increase the allowable height in the West Stowell Specific Plan from 35' to 45'. The increased height would be reviewed through a Planned Development Permit, and subject to the findings of SMMC Section 12-35.203. If approved through this process, the project height would be determined consistent with City zoning. Therefore, the project would not conflict with applicable zoning and other regulations governing scenic quality, and impacts would be less than significant.

d. The project would establish new lighting that would create a new source of light or glare upon day and nighttime views. Section 12-33.307 of the SMMC regulates light and glare impacts of industrial uses on residential and other surrounding land uses, while Section 3.3 - Community Design Guidelines of the Specific Plan includes requirements for Street and Site lighting. The project site is surrounded by warehouse development and existing streets which have already introduced building, parking lot, and street lighting that already impacts day and nighttime views. Staff have concluded that the new lighting would not create adverse physical effects on the areas within the immediate vicinity of the surrounding development because the lighting would meet the City's performance standards. Specifically, the new lighting would direct illumination toward the proposed warehouse and parking lots, which reduces light spillage at the areas surrounding the project sites. These regulations would minimize glare offsite from the project for both daytime and nighttime views so there would not be a substantial adverse impact from glare. Therefore, the impacts related to the creation of a new source of substantial light or glare which would adversely affect day or nighttime views in the area would be less than significant.

Mitigation Measure(s) incorporated into the project: Implementation of the proposed project would not result in potentially significant environment impacts to aesthetics. Therefore, no mitigation measures are required.

[7] Santa Maria, City of. 2024. Zoning Map. Available: https://www.cityofsantamaria.org/home/showpublisheddocument/10037/638563088414970000. Accessed March 2025.
[8] Santa Maria, City of. 2025. Municipal Code, Title 12 Zoning Section 12-49.09. Available: https://ecode360.com/SA5007/search?query=glare&scope=all&sortOrder=relevance. Accessed March 2025.

2. Agriculture and Forest Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?			X	
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?			X	
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))?				X
d. Result in the loss of forest land or conversion of forest land to non-forest use?				X
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?			X	

Setting:

The City of Santa Maria, located in Santa Barbara County, is characterized by its rich agricultural heritage and limited forested areas. Agriculture plays a significant role in the local economy, with vast expanses of farmland dedicated to crops such as strawberries, wine grapes, and various vegetables. The region's fertile soil and favorable climate contribute to its agricultural productivity. The Santa Maria Valley provides a unique climate and soil type which is ideal for a variety of crops year-round including broccoli, cauliflower, lettuce, Asian vegetables, plus spinach, parsley, cilantro, other leafy greens and edible pod peas. Warm season crops include bell peppers, tomatoes, potatoes, sweet corn, dry and green beans and summer squashes.[9] The project site is located on two existing vacant parcels on West Stowell Road and is a flat space that primarily contains row crops for agricultural production. The project site is designated as Prime Farmland and is not listed under a Williamson Contract.[10, 11] While forested lands are not predominant within the city limits and the project site does not contain any timberland, nearby areas feature patches of woodland that provide ecological benefits and recreational opportunities.

[9] University of California Cooperative Extension. 2020. Vegetable Research and Information Center, Central Coast Overview. Available: https://vric.ucdavis.edu/virtual_tour/centralcoast.htm#:~:text=The%20Santa%20Maria%20valley%20produces,green%20beans%20and%20summer%20squashes. (accessed March 2025).
[10] California Department of Conservation. 2020. California Important Farmland Finder. Available: https://maps.conservation.ca.gov/DLRP/CIFF/ (accessed April 2025).
[11] California Department of Conservation. 2023. California Williamson Act Enrollment Finder. Available: https://maps.conservation.ca.gov/dlrp/WilliamsonAct/App/index.html. (accessed April 2025).

Impact Discussion:

a-b. The project site is designated as Prime Farmland and would result in the conversion of approximately 32 acres of Prime Farmland to non-agricultural use. However, the project site is located within the West Stowell Specific Plan, in which the CEQA compliance for that specific plan already mitigated for the loss of Prime Farmland. The City of Santa Maria Sphere of Influence Boundary Amendment and Concurrent Annexation Environmental Impact Report (EIR), certified on September 15, 1992, assessed the potential environmental impacts associated with the adoption of the West Stowell Specific Plan. Alongside the EIR, the City Council adopted a Statement of Overriding Considerations acknowledging significant and unavoidable impacts, including the loss of Prime Farmland.

The Heavy Commercial Manufacturing (HCM) Land Use designation of the West Stowell Specific Plan permits activities which manufacture and retail on the same site, as well as other heavy commercial uses which may be land extensive or require transport of materials by heavy truck. It is the intent of the West Stowell Specific Plan to use this designation along with an agricultural overlay as a means of safeguarding and encouraging agriculturally-related industrial activity adjacent to existing agricultural uses.[12] Additionally, the West Stowell Specific Plan designates the zoning of the project site as Planned Development/Commercial Manufacturing/Agricultural Overlay (PD/CM-AG), which is the zoning that corresponds to the Specific Plan's HCM Land Use. The project is not a use permitted by right in the Commercial/Manufacturing/Agricultural Overlay Zoning District (PD/CM-AG) , however, under the West Stowell Specific Plan similar uses are permitted subject to obtaining a conditional use permit according to the procedures set forth in Chapter 35 of the Santa Maria Zoning Ordinance. A use may be found to be similar if the Planning Commission finds that the project: (i) falls within the intent and purpose of the Commercial/Manufacturing/Agricultural Overlay Zoning District (PD/CM-AG); (ii) will not be obnoxious or detrimental to the public welfare; and (iii) is compatible with adjoining land uses. The project is consistent with existing land use and zoning designations and would also be similar in use and intensity to nearby commercial and manufacturing areas (e.g., Driscoll's, Central Coast Truck Center, California Giant Cold Storage Facility, and CIM Industrial Contractor). The proposed project would not be obnoxious or detrimental to the public welfare and would not introduce land use conflicts (e.g., noise, dust, or access issues) that might pressure adjacent parcels to convert to non-agricultural uses. Therefore, it is unlikely to induce further farmland conversion in the area. The site is not under a Williamson Act contract.

Further, the Planning Commission has the authority provided in the West Stowell Specific Plan to make a finding that a use is similar enough to the manufacturing uses allowed in the zone and to determine that the proposed use would not have any other adverse impacts on the neighboring agricultural uses. As explained in Section 11 *Land Use and Planning*, Planning Commission findings can be made to find the project consistent with the West Stowell Specific Plan policies and ordinances; should this finding be made, the project would not conflict with existing zoning for agricultural use.

Overall, impacts related to the conversion of Prime Farmland to non-agricultural use and conflicts with agricultural zoning or Williamson Act contract would be less than significant.

c-d. The project site contains two vacant parcels zoned for industrial use and does not contain land zoned for 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)), nor contain forested land. The proposed project would not conflict with forest land or timberland zoning, nor does it propose a zone change that would convert existing forest or timberland zoning, or contain forest or timberland. Therefore, no impact would occur.

[12] Santa Maria, City of. 1994. West Stowell Specific Plan. Available: https://www.cityofsantamaria.org/home/showpublisheddocument/6437/635530503431800000. (accessed April 2025).

e. The area surrounding the project site includes agricultural, industrial, and commercial uses and is planned for industrial uses. As discussed above, there are nearby commercial industrial properties similar to the use and intensity of the proposed project coexisting with adjacent agricultural uses. The project is an industrial use, centered on the property, and not considered incompatible with adjacent agricultural uses that produce noise or dust. Therefore, it is compatible with continued use of adjacent and nearby lands designated for agricultural production thereby not leading to the conversion of adjacent and nearby Farmland, to a non-agricultural use. Additionally, there is no timberland on or adjacent to the project site. Therefore, impacts that 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 would be less than significant.

Mitigation Measure(s) incorporated into the project: Implementation of the proposed project would not result in potentially significant environment impacts related to agriculture and forest resources. Therefore, no mitigation measures are required.

3. Air Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?			X	
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?		X		
c. Expose sensitive receptors to substantial pollutant concentrations?			X	
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

Setting:

The following air quality analysis is supported by an Air Quality and Greenhouse Gas Technical Report produced by NV5 on May 22, 2025. The technical report was peer-reviewed by Rincon Consultants as a part of the preparation of this IS. The complete Air Quality and Greenhouse Gas Technical Report can be found in Attachment 2.

The City uses the Santa Barbara Air Pollution Control District (SBCAPCD) thresholds of significance for evaluating air quality. In accordance with the SBCAPCD's *Environmental Review Guidelines* and *Scope and Content of Air Quality Sections in Environmental Documents*, SBCAPCD does not consider a proposed project to have a significant impact on air quality, either individually or cumulatively, if operation of the project will:

- Emit (from all project sources, both stationary and mobile) less than 240 pounds per day for reactive organic gases (ROG) and oxides of nitrogen (NOX), and 80 pounds per day for respirable particulate matter with an aerodynamic diameter of 10 micrometers or less (PM_{10});
- Emit less than 25 pounds per day of ROG or NOX from motor vehicle trips only;
- Not cause or contribute to a violation of any California Ambient Air Quality Standards or National Ambient Air Quality Standards (except ozone);
- Not exceed the SBCAPCD health risks public notification thresholds adopted by the SBCAPCD Board (10 excess cancer cases in a million for cancer risk and a Hazard Index of more than 1.0 for non-cancer risk); and/or
- Be consistent with the latest adopted federal and state air quality plans applicable to Santa Barbara County.

SBCAPCD does not have construction thresholds specific to land development projects; however, under SBCAPCD Rule 202 D.16, if the combined emissions from all construction equipment used to construct a stationary source which requires an Authority to Construct permit, have the potential to exceed 25 tons of any pollutant, except carbon monoxide, in a 12-month period, the owner of the stationary source shall provide offsets under the provisions of Rule 804 and shall demonstrate that no ambient air quality standard will be

violated. While this rule is intended for permitting of stationary sources, the 25-ton-per-year threshold for pollutants (excluding carbon monoxide) is sometimes used as a conservative benchmark to evaluate construction emissions in the absence of project-specific thresholds. Therefore, this IS-MND uses a 25-ton-per-year screening level for criteria pollutants other than carbon monoxide as a point of reference for assessing construction-related impacts.

Additionally, SBCAPCD requires standard dust control measures to be implemented for any discretionary project involving earth-moving activities. Some projects have the potential for construction-related dust to cause a nuisance. Since Santa Barbara County violates the state standard for PM10, dust mitigation measures are required for all discretionary construction activities regardless of the significance of the fugitive dust impacts based on the policies in the 1979 Air Quality Attainment Plan.

The proposed project's line-haul truck emissions would occur within other air districts including the San Joaquin Valley Air Pollution Control District (SJVAPCD), San Luis Obispo Air Pollution Control District (SLOAPCD), and Ventura County Air Pollution Control District (VCAPCD). The line-haul truck emissions occurring outside SBCAPCD jurisdiction will be compared to each of these air district's significance thresholds as shown in Table 5.

SBCAPCD 2022 Ozone Plan

SBCAPCD adopted the 2022 Ozone Plan in December 2022.[13] The 2022 Ozone Plan was prepared to develop SBCAPCD's strategies for reducing ozone precursor emissions, ROG and NOX, to meet the state ozone standards. The 2022 Ozone Plan includes control measures for stationary sources and on-road transportation and builds upon measures previously adopted in prior plans.

Stationary Sources

Air districts must demonstrate a five percent reduction in emissions per year or adopt every measure feasibly available to SBCAPCD. Historically, SBCAPCD has not achieved the annual five percent reduction and has relied on adopting feasible reduction measures and has adopted 30 measures to date. For the 2022 Ozone Plan, SBCAPCD evaluated additional stationary source control measures, but no measures were identified for adoption. Instead, SBCAPCD developed contingency measures if the California Air Resources Board (CARB) determines that SBCAPCD is not making adequate progress towards attainment. Contingency measures included revising the ROG contents of solvents used during general solvent operations (i.e., cleaning manufacture products or maintaining production equipment) and revising the ROG content of surface coatings for wood products.

The following analysis is based on the Air Quality and Greenhouse Gas Technical Report NV5 prepared on May 22, 2025.

[13] SBCAPCD. 2022b. 2022 Ozone Plan. December. Available at: https://www.ourair.org/wp-content/uploads/2022-Ozone-Plan.pdf. Accessed: April 14, 2025.

Table 5 Air Quality Significance Thresholds for Other Air Districts District

	ROG	NO_X	CO	SO_X	Total PM_{10}[a]	Total $PM_{2.5}$[a]
SJVAPCD Annual Threshold (tons per year)[a]	10	10	100	27	15	15
VCAPCD Daily Threshold (lb per day)	25	25		N/A		

Air District	ROG + NO_X (combined)	CO	DPM (Exhaust PM_{10})	Fugitive PM_{10}
SLOAPCD Daily Threshold (lb per day)	25	550	1.25	25
SLOAPCD Annual Threshold (tons per year)	25	N/A	N/A	25

Source: NV5 2025 (Attachment 2)

Notes:

SJVAPCD = San Joaquin Valley Air Pollution Control District

SLOAPCD = San Luis Obispo County Air Pollution Control District

VCAPCD = Ventura County Air Pollution Control District

N/A = No threshold established for this pollutant

[a] Value includes emissions from exhaust and fugitive dust.

Impact Discussion:

a. A stationary source is any fixed emitter of air pollutants, such as engines or industrial equipment, that remains at a single location for an extended period. The proposed project would install one stationary source, an emergency fire pump that would require a permit from SBCAPCD. The emergency fire pump would comply with permit conditions established by SBCAPCD and would meet Tier 4 Final engine standards. As it is an emergency fire pump, its usage would be limited to emergency use during grid power outages to supply water for the fire suppression system, and periodic non-emergency operations for maintenance and testing. The emergency fire pump would not be a significant source of emissions, as shown in Table 7. Overall, the proposed project would not install large stationary sources and would not conflict with SBCAPCD's stationary source control measures.

Transportation Measures

SBCAPCD and Santa Barbara County Association of Governments (SBCAG) collaborate to develop transportation elements for air quality plans. SBCAG assists SBCAPCD with development of transportation elements for SBCAPCD's state and federal air quality plans, including estimates for the on-road mobile sources emissions and transportation control measures (TCM) for the 2022 Ozone Plan. The TCMs are the primary mechanism for reducing vehicle miles travelled (VMT) and are programs or activities that can be implemented to encourage the traveling public to rely less on vehicles or use them more efficiently.

The 2022 Ozone Plan highlights TCM-14: Activity Centers and T-18: Alternative Fuels. A portion of TCM-14 relates to SBCAG's Connected 2050 Regional Transportation Plan/Sustainable Communities Strategy (2050 Regional Transportation Plan/Sustainable Communities Strategy [RTP/SCS]). The RTP is a long-range planning document that defines how the region plans to invest in the transportation system over 20 plus years based on regional goals, multi-modal transportation needs for people and goods, and estimates of available funding. The SCS sets forth a forecasted development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, will reduce greenhouse gas (GHG) emissions from passenger vehicles and light trucks to achieve the GHG reduction targets set by CARB. The SCS emphasizes the implementation of transit-oriented development and infill approaches to land use and housing complemented by transportation and transit systems to efficiently move people and goods. A portion of T-18 relates to alternative fuel and infrastructure planning efforts for on-road vehicles. SBCAPCD has collaborated with local coalitions, such as the Electric Drive 805 coalition, to secure grants for planning efforts and installation of electric vehicle charging stations and hydrogen fueling infrastructure in the Central Coast region.

The proposed project supports these efforts by incorporating sustainability features including a solar-ready roof, and installing Level 2 and Level 3 (DC Fast-Charging) chargers, which would have the capability to charge electric-powered employee vehicles and delivery vans. These design features promote and encourage the use of electric vehicles, which would reduce on-road criteria pollutant and GHG emissions. Additionally, the proposed project would create job opportunities in the City, which would attract a local workforce and increase the City's employment and jobs-to-housing ratio. The proposed project would install bike racks at the project site, which would encourage employees to use alternative modes of transportation when commuting to the project site. The proposed project would not conflict with transportation control measures.

Overall, the proposed project would not conflict with control measures in the 2022 Ozone Plan for meeting the state ozone standard. Therefore, the proposed project would be considered consistent with the 2022 Ozone Plan, and impacts would be less than significant.

b.

Construction

The proposed project would generate emissions of ROG, NOX, CO, sulfur oxides (SOX), PM_{10}, and $PM_{2.5}$ during construction activities. Criteria pollutants would be generated from various construction sources including off-road equipment; mobile sources including worker vehicles, vendor trucks, and haul trucks; fugitive dust emissions during site grading and earth movement activities; and ROG off gassing emissions from paving and application of architectural coatings. Annual construction emissions for the proposed project are summarized in Table 6. As shown therein, annual construction emissions would be below SBCAPCD significance thresholds. Therefore, construction emissions would not result in a cumulatively considerable net increase of criteria pollutants for which the project region is nonattainment under an applicable federal or state ambient air quality standard, and impacts would be less than significant.

Table 6 Project Annual Construction Emissions Summary

	Annual Emissions (tons/year)					
Construction Year	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10}[a]**	**$PM_{2.5}$[a]**
2026	<1	2	8	<0.1	<1	<1
2027	2	<1	2	<0.1	<0.1	<0.1
Maximum Annual Emissions	2	2	8	<0.1	<1	<1
SBCAPCD Significance Threshold	25	25	N/A	25	25	25
Exceeds Threshold?	No	No	No	No	No	No

Source: NV5 2025 (Attachment 2)

Notes:

N/A = No Threshold established for this pollutant

[a] Value includes emissions from exhaust and fugitive dust.

SBCAPCD does not consider a proposed project to have a significant impact on air quality, either individually or cumulatively, if operation of the project meets the significance criteria listed in the Santa Barbara Air Pollution Control District Air Quality Impact Guidelines listed in the *Setting* section at the beginning of this *Air Quality* section of the IS-MND. Because the proposed project's construction emissions would not exceed the applicable SBCAPCD construction significance thresholds, the proposed project's emissions would not be cumulatively considerable, and impacts would be less than significant.

Operation

Operation of the proposed project would generate criteria pollutant emissions from area sources including landscaping equipment, consumer products, and architectural coatings; mobile sources, including employee vehicles, delivery vehicles (vans and private carrier vehicles), and line-haul trucks; and operation of an emergency fire pump for maintenance and testing purposes. Table 7 summarizes the proposed project's unmitigated daily operational emissions occurring within SBCAPCD. As shown therein, the proposed project would exceed SBCAPCD's mobile source threshold for NOX. All other pollutants would be below SBCAPCD significance thresholds. Based on the NOX exceedance, the proposed project's operational emissions would be potentially significant, and mitigation measures are required.

Requiring the use of post-2014 engines would reduce emissions to less than significant thresholds. This is because post-2014 engines must comply with Tier 4 Final off-road diesel engine standards for emissions which reduce PM emissions by 90 percent or more compared to Tier 3 engines and reduce NOx emissions by up to 50 percent.[14]

Table 7 Unmitigated Project Operational Daily Emissions in SBCAPCD

	Daily Emissions (lb/day)[a]					
Source Category	**ROG**	**NO_X**	**CO**	**Sox**	**PM_{10}[b]**	**$PM_{2.5}$[b]**
Area	6	<0.1	8	<0.1	<0.1	<0.1
Mobile-Employee Vehicles (Onsite)	1	<1	5	<0.1	5	1
Mobile-Employee Vehicles (Offsite)	3	2	20	<0.1	5	1
Mobile-Delivery Vans (Onsite)	1	<1	4	<0.1	<1	<0.1
Mobile-Delivery Vans (Offsite)	3	6	55	<0.1	32	8
Mobile-Private Carrier Vehicles (Onsite)	<1	<1	1	<0.1	<0.1	<0.1
Mobile-Private Carrier Vehicles (Offsite)	<1	<1	9	<0.1	4	1
Mobile-Line-Haul Trucks (Onsite)	<0.1	<1	<1	<0.1	<1	<0.1
Mobile-Line-Haul Trucks (Offsite)	<1	15	2	<0.1	22	6
Stationary (Fire Pump)	<1	<1	3	<0.1	<0.1	<0.1
Project Emissions Total	**16**	**26**	**106**	**<0.1**	**64**	**16**
SBCAPCD Thresholds (All Sources)	240	240	N/A	N/A	80	N/A
Exceeds Threshold?	No	No	N/A	N/A	No	N/A
Project Mobile Emissions Total	**10**	**26**	**96**	**<0.1**	**64**	**16**
SBCAPCD Mobile Source Threshold	25	25		N/A		
Exceeds Threshold?	No	**Yes**				

Source: NV5 2025 (Attachment 2)

Notes:

N/A = No threshold established for these pollutants

[a] Totals may vary due to rounding.

[b] Value includes emissions from exhaust and fugitive dust.

Table 8, Table 9, and Table 10 summarize the proposed project's emissions from line-haul truck travel occurring outside the SBCAPCD region in other air districts, such as SJVAPCD, VCAPCD, and SLOAPCD. The proposed project's total line-haul emissions occurring outside the SBCAPCD region were compared to thresholds from SJVAPCD, VCAPCD, and SLOAPCD. As shown in these tables, line-haul truck emissions would be below the significance thresholds for these air districts. Therefore, haul truck emissions in SJVAPCD, VCAPCD, and SLOAPCD would not result in a cumulatively considerable net increase of

[14] California Exhaust Emission Standards and Test Procedures for New 2011 and Later Tier 4 Off-Road Compression-Ignition Engines, California Air Resources Board, 10/25/2012

criteria pollutants for which the project region is nonattainment under an applicable federal or state ambient air quality standard, and impacts would be less than significant.

Table 8 Unmitigated Project Line-Haul Truck Emissions in SJVAPCD

	Annual Emissions (tons/year)					
Source	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10}[b]**	**$PM_{2.5}$[b]**
Mobile-Line-Haul Trucks (Offsite)	<0.1	2	<1	<0.1	3	<1
SJVAPCD Threshold	10	10	100	27	15	15
Exceeds Threshold?	No	No	No	No	No	No

Source: NV5 2025 (Attachment 2)

Notes:

[a] SJVAPCD Air Quality Thresholds of Significance-Criteria Pollutants, March 2015

[b] Value includes emissions from exhaust and fugitive dust.

Table 9 Unmitigated Project Line-Haul Truck Emissions in VCAPCD

	Daily Emissions (lb/day)					
Source Category	**ROG**	**NOx**	**CO**	**SOx**	**PM_{10}[b]**	**$PM_{2.5}$[b]**
Mobile-Line-Haul Trucks (Offsite)	<0.1	10	<1	<0.1	16	4
VCAPCD Thresholds[a]	25	25		N/A		
Exceeds Threshold?	No	No				

Source: NV5 2025 (Attachment 2)

Notes:

N/A = No threshold established for these pollutants

[a] Ventura County Air Quality Assessment Guidelines, October 2003

[b] Value includes emissions from exhaust and fugitive dust.

Table 10 Unmitigated Project Line-Haul Truck Emissions in SLOAPCD

Source Category				
	Daily Emissions (lb/day)			
	ROG + NO_X (Combined)	**CO**	**DPM (Exhaust PM_{10})**	**Fugitive PM_{10}**
Mobile-Line Haul Trucks (Offsite)	10	<1	<1	16
SLOAPCD Daily Threshold (lb per day)[a]	25	550	1.25	25
Exceeds Threshold?	No	No	No	No
	Annual Emissions (tons/year)			
	ROG + No_X (Combined)	**Source Category**	**ROG + No_X (Combined)**	**Source Category**
Mobile-Line Haul Trucks (Offsite)	2	<1	<0.1	3
SLOAPCD Annual Threshold (tons per year)[a]	25	N/A	N/A	25
Exceeds Threshold?	No	N/A	N/A	N/A

Source: NV5 2025 (Attachment 2)

Notes:

N/A = No threshold established for these pollutants

[a] San Luis Obispo County Air Pollution Control District, CEQA Air Quality Handbook, 2023

c. The proposed project would also generate diesel particulate matter (DPM) during construction from off-road equipment and heavy-duty trucks, and during operations from diesel-powered line-haul trucks and fire pump usage during maintenance and testing. DPM is considered a toxic air contaminant by the CARB and SBCAPCD. The nearest sensitive receptor is the residence located approximately 1,400 feet south of the project site. The Air Quality and Greenhouse Gas Technical Report used a conservative 400 feet distance because there appeared to be residential land use form ariel photos. However, it has since been confirmed that these buildings are owned by Santa Maria Valley Railroad and are not used as residential dwellings. CARB conducted health risk modeling for siting new sensitive land uses near various source categories (e.g., freeways/high-traffic roads and distribution centers). For freeways and high-traffic roads, CARB's analysis included a study for Southern California freeways that showed measured concentrations of vehicle-related pollutants decreased dramatically, approximately 70 percent, within approximately 300 feet of the freeways analyzed. Furthermore, CARB's study estimated an 80 percent drop-off in pollutant concentrations at approximately 1,000 feet from a distribution center (CARB 2005). Based on the health risk evaluation results of CARB's study, CARB recommends avoiding siting new sensitive land uses 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.[15] The proposed project's line-haul trucks would not operate TRUs at the project site as all goods would be dry goods and would not require cold storage. Additionally, CARB's data for distribution centers indicate that pollutant concentrations would be expected to have an approximately 60 percent drop-off at 400 feet.

Construction

Construction activities would be short-term and DPM and criteria pollutant emissions would cease upon construction completion. Based on this fact, combined with CARB observations that pollutant concentrations decrease significantly with distance from a source, such as a 400-foot distance between the project site and sensitive receptors as indicated in the CARB report identified above, the proposed project would not expose sensitive receptors to substantial concentrations of criteria pollutants during construction, nor would it expose sensitive receptors to DPM concentrations that would be expected to result in health risks exceeding SBCAPCD's health risk thresholds for cancer risk and noncancer risk. Overall, the proposed project's construction emissions would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

Operation

Operational activities would require up to 34 daily line-haul truck roundtrips, and occasional maintenance and testing of the diesel-powered emergency fire pump. Based on the low volume of daily truck trips compared to the CARB study's 100 trucks per day, and sporadic use of the emergency fire pump, combined with CARB observations that pollutant concentrations decrease significantly with distance from a source, such as a 400-foot distance between the project site and sensitive receptors, the proposed project would not expose sensitive receptors to substantial concentrations of criteria pollutants during operations, nor would it expose sensitive receptors to DPM concentrations that would be expected to result in health risks exceeding SBCAPCD's health risk thresholds for cancer risk and noncancer risk. Overall, the proposed project's operational emissions would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

[15] CARB. 2005. Air Quality and Land Use Handbook: A Community Health Perspective. April. Available at: https://www.aqmd.gov/docs/defaultsource/ceqa/handbook/california-air-resources-board-air-quality-and-land-use-handbook-acommunity-health-perspective.pdf. Accessed: April 14, 2025.

d.

Construction

During construction of the proposed project, exhaust from equipment, activities associated with the application of architectural coatings and other interior and exterior finishes, and paving activities may produce discernible odors typical of most construction sites. Construction-generated emissions would occur intermittently throughout the workday and would dissipate rapidly with increasing distance from the source. Such odors would be, at worst, a temporary source of nuisance to adjacent uses, and would not affect a substantial number of people. The proposed project would be required to comply with SBCAPCD Rule 303—Nuisance, which prohibits the discharge of air contaminants or other material that would cause injury, detriment, nuisance, or annoyance to any considerable number of persons. The proposed project would also use architectural coatings compliant with SBCAPCD Rule 323.1. Overall, these odors would not affect a substantial number of people because construction would be temporary and intermittent, and construction-generated emissions dissipate rapidly with increasing distance from the source. Therefore, odors associated with construction would not create a significant level of objectionable odors affecting a substantial number of people, and impacts would be less than significant.

Operation

According to the Air Quality and Greenhouse Gas Technical Report produced by NV5, SBCAPCD considers fast food restaurants, bakeries, and coffee roasting facilities to be land uses that may cause significant odor impacts. The proposed project is not associated with any of the aforementioned land uses. The project site would include various trash receptacles, which would be covered and properly maintained to prevent adverse odors. Overall, the proposed project's operations would not create a significant level of objectionable odors affecting a substantial number of people, and impacts would be less than significant.

Mitigation Measure(s) incorporated into the project: The following mitigation measure is required.

AQ-1 Line-Haul Trucks Requirement. The proposed project owner or operators shall require the use of line-haul trucks with model years 2014 or newer that meet Tier 4 Standards for off-road diesel engines.

Effectiveness of Mitigation Measure: The EPA's Heavy-Duty Vehicle GHG Emissions and Fuel Efficiency Standards (adopted in 2011) established the first fuel efficiency and emissions standards for medium- and heavy-duty trucks starting with model year 2014. These standards require significant reductions in nitrogen oxides (NO_x), reactive organic gases (ROG), and DPM, and are designed to lower lifecycle emissions from heavy-duty truck fleets. By restricting line-haul vehicles to model year 2014 or newer, the project reduces a substantial portion of its potential emissions, particularly from haul and delivery trips that account for the bulk of mobile-source impacts. With implementation of Mitigation Measure AQ-1, the proposed project's construction and operations would not exceed the SBCAPCD's current significance thresholds for criteria pollutants. Because the proposed project would not exceed SBCAPCD's significance thresholds for ozone precursors, ROG and NOX, the proposed project would not cause or contribute to a violation of any California Ambient Air Quality Standards CAAQS or National Ambient Air Quality Standards. Mitigated Project Line-Haul Truck Emissions in SBCAPCD are found in Table 11. Therefore, impacts would be less than significant with mitigation.

Table 11 Mitigated Project Line-Haul Truck Emissions in SBCAPCD

Source Category	Daily Emissions (lb/day)[a]					
	ROG	NO_X	CO	SOx	PM_{10}[b]	$PM_{2.5}$[b]
Area	6	<0.1	8	<0.1	<0.1	<0.1
Mobile-Employee Vehicles (Onsite)	1	<1	5	<0.1	<0.1	<0.1
Mobile-Employee Vehicles (Offsite)	3	2	20	<0.1	5	1
Mobile-Delivery Vans (Onsite)	1	<1	4	<0.1	<1	<0.1
Mobile-Delivery Vans (Offsite)	3	6	55	<0.1	32	8
Mobile-Private Carrier Vehicles (Onsite)	<1	<1	1	<0.1	<0.1	<0.1
Mobile-Private Carrier Vehicles (Offsite)	<1	<1	9	<0.1	4	1
Mobile-Line-Haul Trucks (Onsite)	<0.1	<1	<1	<0.1	<1	<0.1
Mobile-Line-Haul Trucks (Offsite)	<1	13	2	<0.1	22	6
Stationary (Fire Pump)	<1	<1	3	<0.1	<0.1	<0.1
Project Emissions Total	**16**	**24**	**106**	**<1**	**64**	**16**
SBCAPCD Thresholds (All Sources)	240	240	N/A	N/A	80	N/A
Exceeds Threshold?	No	No	N/A	N/A	No	N/A
Project Mobile Emissions Total	**10**	**24**	**96**	**<1**	**64**	**16**
SBCAPCD Mobile Source Threshold	25	25			N/A	
Exceeds Threshold?	No	No				

Source: NV5 2025 (Attachment 2)

Notes:

N/A = No threshold established for these pollutants

[a] Totals may vary due to rounding.

[b] Value includes emissions from exhaust and fugitive dust.

4. Biological Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 or U.S. Fish and Wildlife Service?		X		
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 California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				X
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?				X
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?			X	
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
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?				X

Setting:

The following biological resources analysis is supported by a Biological Resources Assessment (BRA) produced by Kevin Merk Associates (KMA) on July 9, 2024. The BRA was peer-reviewed by Rincon Consultants as a part of the preparation of this Initial Study. The updated report, dated May 6, 2025, clarifies methodologies and findings, however, the conclusions of the original BRA remain unchanged. The complete BRA can be found in Attachment 3.

KMA conducted a comprehensive BRA by first performing a desktop review of natural resource databases, maps, literature, and online sources to identify special-status species potentially present in the project site. Aerial and street-view imagery, parcel data, and various mapping tools were used to evaluate site history and land use. On May 24, 2024, KMA conducted a field survey to assess habitat suitability for specifically special-status plants, documenting all observed species. No specific survey was conducted for animals, but animal

species observed during the plant survey were recorded. Habitat types were mapped using ESRI imagery and classified according to established ecological references. Additional data sources, including the National Wetlands Inventory, United States Geological Survey (USGS) topographic maps, and NRCS soil surveys, were used to assess hydrology and soil conditions. A detailed query of the California Natural Diversity Database (CNDDB) and other inventories identified species occurrences within a five-mile radius and broader regional context. Species were evaluated for potential presence based on habitat suitability, elevation, and known distributions, and categorized as "Present," "Potential," "Unlikely," or "Not Expected." Additional special-status biological resources were included based on KMA knowledge of the local area and other sources of species occurrence records including Calflora and The Cornell Lab of Ornithology.[16,17]

Existing Soils, Hydrologic Features, and Habitat Types

The project site is located within the western limits of the City of Santa Maria, Santa Barbara County, in the California Central Coast region. The area experiences a Mediterranean climate, characterized by cool, rainy winters and dry summers, with average annual precipitation of approximately 13 inches and temperatures typically ranging from 40°F to 73°F[18,19]. The 33-acre property is actively farmed and was planted with strawberries at the time of the May 2024 biological survey. Historical aerial imagery confirms that the project site and surrounding areas have been in agricultural use for over 50 years.[20]

The project site is underlain by Corralitos loamy sand with 0–2% slopes, a deep, somewhat excessively drained soil formed in recent sandy alluvium. These soils are not classified as hydric and were observed to be loose and disturbed due to ongoing agricultural activities.[21]

No natural drainage features, wetlands, or riparian habitats were identified on the property. The National Wetlands Inventory and field observations confirmed the absence of such features, and no hydrologic connection exists between the project site and the Santa Maria River or other natural drainage systems in the region.[22] Although artificial water features such as irrigation ponds and stormwater basins exist nearby, they are constructed in upland areas and are not jurisdictional under the Clean Water Act.

Land use on the project site is dominated by active agriculture, with no native habitats present. The field had been recently tilled and planted, with irrigation infrastructure in place. Vegetation was minimal, limited to scattered weedy species along the fenceline, such as ripgut brome (*Bromus diandrus*), Bermuda grass (*Cynodon dactylon*), and summer mustard (*Hirschfeldia incana*). Areas outside the planting footprint, including an old well and a lone fan palm (*Washingtonia* sp.), were classified as ruderal, indicating disturbed, non-native conditions.[23]

[16] Calflora. 2024. Information on Wild California Plants for Conservation, Education, and Appreciation. Berkeley, California. http://www.calflora.org/ (accessed June 2024).
[17] The Cornell Lab of Ornithology. 2024. eBird. https://ebird.org (accessed September 2023).
[18] Weather Spark. 2024. The Weather Year Round Anywhere on Earth. https://weatherspark.com/ (accessed June 2024).
[19] Western Regional Climate Center. 2024. Cooperative Climatological Data Summaries. National Oceanic and Atmospheric Administration. https://wrcc.dri.edu/Climate/west_coop_summaries.php (accessed June 2024).
[20] Google Earth. 2024. Google Earth Pro Version 7.3.6.9345. 12/1985 to 6/2024.
[21] Natural Resources Conservation Service (NRCS). 2024. Web Soil Survey. National Cooperative Soil Survey, U.S. Department of Agriculture. http://websoilsurvey.nrcs.usda.gov/ (accessed June 2024).
[22] United States Fish and Wildlife Service (USFWS). 2024. National Wetlands Inventory. U.S. Department of the Interior, Washington, D.C. http://www.fws.gov/wetlands/ (accessed June 2024).
[23] California Department of Fish and Wildlife (CDFW). 2024. California Wildlife Habitat Relationships (CWHR) System. https://www.wildlife.ca.gov/data/cwhr (accessed June 2024).

Existing Special Status Plants and Animals

A review of the California Natural Diversity Database (CNDDB) and other sources identified numerous special-status species and sensitive habitats within a five-mile radius of the project site.[24,25] However, due to the project site's long history of agricultural use and lack of native vegetation or natural features, the potential for these resources to occur onsite is limited. A Special-status Species Summary Table and map, found in Appendix C of the BRA, show the locations of special-status plants and animals recorded in the CNDDB within five miles of the project site[26]. The species that were determined to have potential to occur in the project site are described below.

Special-status plants, including La Graciosa thistle (*Cirsium scariosum var. loncholepis*) and several California Rare Plant Rank (CRPR) 1B species, were evaluated. None were observed during the May 2024 survey, and the project site lacks suitable habitat due to regular tilling and planting[27,28]. As such, no special-status plants are expected to occur onsite, and no impacts to botanical resources are anticipated.

No special-status animal species were observed incidentally during the survey, and very little wildlife activity was observed onsite or in the general area. KMA determined that there is no potential for fish to occur on the project site because there is no aquatic habitat on the project site. The CNDDB identified 11 special status wildlife species within five miles of the project site,[29] and the background review, combined with KMA's knowledge of the area, was used to evaluate the potential for additional special status wildlife to occur onsite. KMA determined that there is no potential for fish to occur on the project site because there is no aquatic habitat on the project site. KMA determined that the following species have potential to occur on the project site:

- **California tiger salamander (*Ambystoma californiense*)** is a federal endangered and state rare species that is known to occur in the general area. It was considered unlikely to because there are no known breeding ponds in proximity.
- **California red-legged frog (*Rana draytonii)*** is a federally Threatened species and a CDFW Species of Special Concern which may disperse through the project site during the winter rainy season, although no aquatic habitat is present[30],[31].
- **Monarch butterfly - California overwintering population 1 (*Danaus plexippus plexippus*)** is a Candidate for federal listing by the United States Fish and Wildlife Service (USFWS) under the Endangered Species Act. The project site does not support any suitable woodland habitat nor were milkweed plants observed during the field survey to be used for overwintering or autumnal congregation, and is located too far from the coast to be used by monarch butterflies in the winter. Still, individuals could fly over the project site and potentially forage on agricultural weeds that may be present.
- A diverse group of special-status birds are known to occur in the project area, and several were determined to have potential to occur on the project site, primarily on a periodic basis while moving through the area during migration and foraging. A variety of common species that are protected under

[24] California Department of Fish and Wildlife (CDFW). 2024. California Natural Diversity Database (CNDDB). Commercial version (accessed May 2024).
[25] United States Fish and Wildlife Service (USFWS). 2024. Threatened and Endangered Species Active Critical Habitat Report. ECOS Environmental Conservation Online System. https://ecos.fws.gov/ecp/report/table/critical-habitat.html (accessed May 2024).
[26] BRA found in Attachment 3 of this Initial Study
[27] California Department of Fish and Wildlife (CDFW). 2024. Special Vascular Plants, Bryophytes, and Lichens List. California Natural Diversity Database, Sacramento, California.
[28] California Native Plant Society (CNPS). 2024. Rare Plant Inventory. Online edition V9.5. Rare Plant Program. http://www.rareplants.cnps.org (accessed June 2024).
[29] Figure 5 CNDDB Map of the BRA found in Attachment 3 of this Initial Study
[30] United States Fish and Wildlife Service (USFWS). 2005 (August 15). Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog.
[31] Bulger, J.B., N.J. Scott, and R.B. Seymour. 2003. Terrestrial activity and conservation of adult California red-legged frogs Rana aurora draytonii in coastal forests and grasslands. Biological Conservation 110:85-95.

the Migratory Bird Treaty Act and/or California Fish and Game Code could utilize the palm tree and the offsite hedgerow for nesting. The following species could potentially stopover or forage onsite:

- **American peregrine falcon (*Falco peregrinus anatum*)**
- **California gull (*Larus californicus*)**
- **California horned lark (*Eremophila alpestris actia*)**
- **Ferruginous hawk (*Buteo regalis*)**
- **Prairie falcon (*Falco mexicanus*)**
- **Sharp-shinned hawk (*Accipiter striatus*)**

- Special-status bat species could forage over the project site but are unlikely to use the old palm tree for roosting.
  - **Pallid bat (*Antrozous pallidus*)** is a CDFW Species of Special Concern
  - **Silver-haired bat (*Lasionycteris noctivagans*)** is Sensitive
  - **Townsend's big-eared bat (*Corynorhinus townsendii*)** is a CDFW Species of Special Concern
  - **Western red bat (*Lasiurus frantzii*)** is a CDFW Species of Special Concern

The project site is not located within any designated critical habitat, although units for California red-legged frog, California tiger salamander, and La Graciosa thistle are mapped within five miles of the project site.[32] No adverse effects to these critical habitats are expected.

Migratory birds and raptors protected under the Migratory Bird Treaty Act may use the lone onsite palm tree or nearby vegetation for nesting. However, the project site lacks large trees or dense vegetation typically used by nesting raptors, and regular agricultural disturbance reduces nesting suitability[33],[34].

Only one sensitive natural community, Southern Vernal Pool, is mapped within five miles of the project site.[35] However, no vernal pools or other sensitive communities were observed onsite, and the project site's soils and topography do not support such features.[36]

Impact Discussion:

a. The project would result in the loss of approximately 33 acres of agricultural lands that are highly disturbed and do not support any native habitat. No special status plants are expected to occur based on the lack of suitable habitat, but several special status wildlife species could occur onsite seasonally. Project effects to important biological resources may occur during the construction phase of the project but are unlikely to result in significant effects to larger populations given the disturbed nature of the project site, lack of native habitat, or stands of trees and shrubs.

   A suite of special-status plant and animal species that are known to occur in the project site's vicinity were evaluated to determine their potential to occur at the project site. Not all species with potential to occur

[32] United States Fish and Wildlife Service (USFWS). 2024. Threatened and Endangered Species Active Critical Habitat Report. ECOS Environmental Conservation Online System. https://ecos.fws.gov/ecp/report/table/critical-habitat.html (accessed May 2024).
[33] California Department of Fish and Wildlife (CDFW). 2024. California Wildlife Habitat Relationships (CWHR) System. https://www.wildlife.ca.gov/data/cwhr (accessed June 2024).
[34] United States Fish and Wildlife Service (USFWS). 2021. Birds of Conservation Concern 2021. Migratory Bird Program.
[35] California Department of Fish and Wildlife (CDFW). 2024. Vegetation Classification and Mapping Program (VegCAMP). https://www.wildlife.ca.gov/Data/VegCAMP (accessed April and June 2024).
[36] Keeler-Wolf, T., D.R. Elam, K. Lewis, and S.A. Flint. 1998 (May). California Vernal Pool Assessment Preliminary Report. California Department of Fish and Game.

onsite would be directly or indirectly affected by the project. Evaluating the significance level of effects under CEQA involves an assessment of how each species would use the project site relative to its life history, what features may be used, and when they would occur relative to when project activities take place.

Construction

Individuals of several special-status animal species have potential to occur in the project impact area on a periodic basis. Most of these species would not be present in the work area, would be able to move away from construction activities, and would not be adversely affected by the project. Since the project site has numerous recorded occurrences of the CRLF, and no significant barriers to movement are present between suitable habitat areas, the project could impact frogs moving during the winter rain season. Should initial project activities commence in the winter when the ground is wet, individual CRLF could be directly affected by construction activities. Frogs may be injured or killed during grading and trenching/excavation, and therefore mitigation in the form of avoidance and protection measures are required. Mitigation Measures BIO-1 through BIO-4 aim to reduce such potentially significant impacts.

Special-status and common birds could utilize the one palm tree for nesting and be affected if the project's initial clearing and ground disturbance occurs during the nesting bird season (February 1 to August 31). Because the project site has no large trees and is within an actively farmed area with substantial on-going human disturbance, raptors are not expected to nest in the palm tree or immediately surrounding the project site. However, construction activities could directly impact nesting of special-status avian species as well as birds protected under the Migratory Bird Treaty Act and California Fish and Game Code. The effects of construction activities on nesting birds would be limited to the seasonal time period that birds nest in this area; if the nesting season is avoided, no adverse effects are expected. This is a potentially significant but mitigable impact. Mitigation measures BIO-5 and BIO-6 would be required to decrease project effects on nesting birds within the project site.

Operation

No rare plant species were found during the seasonally timed, focused botanical survey. The project site is composed of bare sandy soils and is actively farmed. Tilling and site preparation activities have removed all vegetation and the potential to support rare plants is low. The surveys occurred during the blooming period of the plant species on the target list, and rainfall conditions were normal and above normal during the last two years. If special status plants were present onsite, they would have been in identifiable condition. Therefore, the survey effort is considered to be conclusive that no special status plants are present onsite, and no additional surveys are recommended. Impacts to rare plants would be less than significant, and no mitigation is needed.

Other species that were determined to have potential to occur in the project site are mobile species that could use the project site for foraging or on a transitory basis, and would not be significantly affected by the project. Although their behavior could be disrupted, which is a type of effect, the level of effect would be less than significant under CEQA given the large expanses of open space in the region. The nocturnal foraging by special-status bat species would also not be affected, and no roosting habitat is present in the impact area. Therefore, impacts to mobile special-status species would be less than significant, and no mitigation is required.

The loss of approximately 33 acres of agricultural and ruderal habitats would be a less than significant effect on habitat loss for wildlife because no significant resources for wildlife are present in the small impact area and the site is surrounded by urban and agricultural development. Additionally, there is no designated critical habitat for federally listed species within or near the project site. The wildlife species that use the project site would be tolerant of human activities (such as common birds). In summary, the project would not substantially reduce species diversity or abundance; reduce the quality and quantity of nesting areas; limit reproductive capacity through loss of individuals or habitat; or interfere with natural processes that maintain the native habitats in nearby areas. Therefore, the operational effect, either directly or through

habitat modifications, on any species identified as a candidate, sensitive, or special status species would be less than significant.

b. No riparian habitat or sensitive natural communities are present on the project site. No drainage features or wetland habitats are present onsite or in close proximity that could be indirectly affected by stormwater runoff. Thereby, there would be no impact to riparian habitat or other sensitive natural community.

c. No wetlands with hydrophytic vegetation or vernal pools are present onsite. The sandy soils on the project site lack an underlying impervious sandstone or clay layer characteristic of other vernal pools in the region.[37] The project would not affect any naturally-occurring or potentially jurisdictional wetlands. No impact would occur.

d. The proposed project would not affect the movement of native fish because all work would be conducted in upland areas outside of stream channels that could support fish. The project site would be fenced which would be a barrier to the movement of medium- to large-sized mammals. The fenced area would be adjacent to other developed or agricultural areas and there are currently no habitat resources on immediately adjacent sites that terrestrial wildlife could move to. As a result, the project would not substantially fragment, eliminate, or otherwise disrupt foraging areas and/or access to food sources. Additionally, the project would not substantially limit or fragment the geographic range of species, their movement, or dispersal corridors. Project impacts on the movement of native fish or wildlife, wildlife corridors or wildlife nursery sites would be less than significant.

e. The City of Santa Maria oversees land use planning through implementation of the City's General Plan. Biological resources are specifically addressed in the General Plan Resources Management Element (RME)**.**[38] The project would not conflict with the policies related to the protection of biological resources described therein. RME Goal 3, Biological Resources, describes Objective 3.1a to ensure that all development near sensitive habitats avoids significant impacts to these areas. Sensitive habitats known to occur within the City include Central Coast Riparian Scrub and the Coastal and Valley Freshwater Marsh; however, neither of these habitats are found within the project site. The element describes the vernal pool complex to the southwest of the Airport as a significant wildlife habitat area. This habitat is outside of the project site and there would be no direct effects on protected habitats or trees. The RME also describes Objectives 3.1.b and 3.1.c(2) to expand the area of the Urban Forest by increasing the City's tree canopy and to improve private landscaping by requiring commercial and industrial developments to maintain their property in accordance with City Landscaping Standards. The project would convert sparse agricultural land into a parcel with additional tree coverage and landscaped areas would comply with City Landscaping Standards. Thus, the project would be consistent with both RME objectives. Therefore, the project would not conflict with any local policies or ordinances related to biological resources and impacts would be less than significant.

f. No local, regional, or state conservation plans have been prepared for the project site or immediate area. The project site is not located in any Natural Community Conservation Plan area. Therefore, there would be no conflicts and no impact would occur.

Mitigation Measure(s) incorporated into the project: The following mitigation measures are required.

BIO-1 Initial Ground Disturbance Avoidance During Winter and Preconstruction Survey for Winter Months. Initial site disturbance and grading for construction shall be planned to occur outside the winter rain season in which CRLF move through upland habitats. Initial site grading shall occur between May 1st and October 31st to avoid impacts to frogs using upland habitat during the rainy season. In addition, Mitigation Measures BIO-2 through BIO-4 shall be implemented to avoid or minimize project impacts on other wildlife species in addition to CRLF. If construction must occur during winter months (from November 1 through April 30), a qualified biologist shall survey all areas proposed for temporary and permanent disturbance within 48 hours prior to initial ground disturbance to ensure no CRLF are present. If any CRLF

[37] Keeler-Wolf, T., D.R. Elam, K. Lewis, and S.A. Flint. 1998 (May). California Vernal Pool Assessment Preliminary Report. California Department of Fish and Game

[38] City of Santa Maria. 2001. General Plan Resource Management Element. https://www.cityofsantamaria.org/services/departments/community-development/planning-division/planning-policies-and-regulations/general-plan.

are found in the work area, the animal shall be allowed to leave the work area under its own volition. If the frog does not leave the work area, work shall be delayed or halted in that location plus a 50-foot buffer until the frog can be captured and relocated to suitable habitat away from project impacts pursuant to authorization required by the USFWS. A report describing the methods and results of the survey shall be prepared by the biologist and submitted to the City within two weeks of the start of ground disturbance.

BIO-2 Prepare and Present a Worker Environmental Awareness Program. Prior to initiation of construction activities (including staging and mobilization), a qualified biologist shall conduct a Worker's Environmental Awareness Program (WEAP) training for all construction personnel. The training shall aid workers in recognizing special-status species, native birds, protected trees, ESHA, or other biological resources that may occur in the construction area. The specifics of this program shall include identification and habitats of special-status species with potential to occur in the project site, description of the regulatory status and general ecological characteristics of sensitive resources, review of the limits of construction, and an explanation of measures required to protect biological resources, with a special focus on CRLF. A fact sheet conveying this information shall be prepared for distribution to all contractors, their employers, and other personnel involved with construction. All employees shall sign a form provided by the trainer indicating they have attended the WEAP training and understand the information presented to them. The crew foreman shall be responsible for ensuring crew members adhere to the guidelines and restrictions designed to avoid impacts to biological resources. If new construction personnel are added to the project, the crew foreman shall ensure the new personnel receive the WEAP training before starting work..

BIO-3 High Visibility Construction Fencing. A high-visibility construction fence (i.e., orange protection fence) together with a silt fence, or an approved wildlife exclusion fence (i.e., ERTEC Triple-function E-fence), shall be erected along the southern, eastern, and western perimeter of the site. To prevent animals from getting under the fence, the bottom edge of the fence shall be trenched into the ground to a depth of at least six (6) inches, and the soil recompacted along either side. The fence shall remain in place throughout all construction and checked weekly by construction personnel for needed maintenance. The fence shall be inspected by construction personnel prior to the start of work each day in which at least one-quarter inch of precipitation has fallen within the prior 24 hours for CRLF that may have entered the work area or are disoriented on the outside of the fence. If any CRLF are found within the work area, the project biologist shall be contacted to inspect the site. If the animal(s) do not leave the site on their own volition, work shall be halted within 50 feet of the frog until the frog can be captured and relocated to suitable habitat away from project impacts pursuant to any authorization required by USFWS.

BIO-4 Prevent Entrapment of CRLF in Open Excavations and Trenches. During the period in which there are open trenches or excavations more than six (6) inches deep, such as during the excavation for building foundations or utility lines, escape ramps shall be installed so that CRLF and other wildlife that may have become entrapped have the ability to escape. Escape ramps shall consist of a 2:1 sloped soil area leading from the bottom to ground level. Alternatively, as a second option, a qualified biologist shall inspect open trenches each day prior to the start of work for entrapped animals. Alternatively, as a third option, all trenches/excavations can be completely covered with plywood, steel plates or similar material during overnight periods. If a CRLF individual is located in a trench by construction personnel, the qualified biologist shall be contacted immediately to assist with relocation upon authorization from USFWS. For common wildlife, the biologist shall capture and relocate the individual out of harm's way. Work shall be halted until the entrapped animal has been relocated.

BIO-5 Vegetation Removal and Grading Avoidance During Nesting Season. All initial site disturbance shall be limited to the time period between September 1 to October 31, if feasible, to avoid construction during the nesting season (February 1 to August 31) and to avoid the seasonal work restriction associated with the CRLF (November 1 to April 30, see Mitigation Measure BIO-1). Tree removal shall occur between September 1 and January 31 to avoid the nesting period. If vegetation removal and grading cannot feasibly be conducted during this time period, then Mitigation Measure BIO-6 shall be followed.

BIO-6 Nesting Bird Preconstruction Survey. For any initial construction (vegetation removal and grading) scheduled to start between February 1 and August 31, a qualified biologist shall conduct a preconstruction survey for nesting birds within a 250-foot buffer of project impact areas. The survey shall

be conducted within seven days before the initiation of construction activities occurring during this time period. During this survey, the qualified biologist shall search for birds exhibiting nesting behavior and inspect all potential nest substrates in the impact and buffer areas. Any nests identified shall be monitored to determine if they are active. If no active nests are found, construction may proceed. If an active nest is found within 50 feet of the construction area, the biologist, in consultation with the City and CDFW as appropriate, shall determine the extent of a buffer to be established around the nest. The buffer shall be delineated with flagging, and no work shall take place within the buffer area until the young have left the nest, as determined by the qualified biologist. The applicant shall submit to the City a report from the qualified biologist documenting the methods and results of the survey.

Effectiveness of Mitigation Measures: Implementation of Mitigation Measure BIO-1 through BIO-6 during construction of the project would reduce potential impacts to special status biological resources including CRLF and nesting birds. Therefore, with implementation of these mitigation measures, impacts would be less than significant.

5. Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?		X		
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		X		
c. Disturb any human remains, including those interred outside of formal cemeteries?			X	

Setting:

This section provides an analysis of the project's impacts on cultural resources. The term cultural resources includes historical and archaeological resources, as well as human remains. CEQA requires a lead agency determine whether a project may have a significant effect on historical resources (Public Resources Code [PRC], Section 21084.1). A historical resource is a resource listed in, or determined to be eligible for listing, in the California Register of Historical Resources (CRHR), a resource included in a local register of historical resources, or an object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (State CEQA Guidelines, Section 15064.5[a][1-3]).

A resource shall be considered historically significant if it:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. 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
4. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, if it can be demonstrated that a project would cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit one or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a], [b]).

PRC Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it:

a. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
b. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or

c. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

The following cultural resources analysis is supported by a Phase I Cultural Resources Inventory (Phase 1) produced by Albion Environmental, Inc. (Albion) in May 2025. This study included: (1) archival and background research; (2) a search of records at the California Historical Resources Information System (CHRIS), Central Coast Information Center (CCoIC) at the Santa Barbara Museum of Natural History; (3) a Sacred Lands File search at the Native American Heritage Commission (NAHC); (4) pedestrian survey of the project site; and (5) a report of findings and recommendations. The Phase 1 was peer-reviewed by Rincon Consultants as a part of the preparation of this IS and updated in July 2025. The Phase 1 can be found in Attachment 4.

The project site is located within the City's Archaeological Sensitivity Area 3, which is categorized as having a negligible sensitivity to contain archaeological resources. There are no known precolonial archaeological sites located within 1/2-mile radius of the project site, and the results of a pedestrian survey were negative for precolonial resources. The project site is more than 200 meters from a water course and is mapped as a Pleistocene to Holocene aged landform with marine and nonmarine sedimentary rocks. Given this data, it is our assessment that the overall sensitivity of the project site to contain precolonial sites is low. No cultural resource studies have been conducted within the project site and two cultural resource studies have been previously conducted within a 1 /2-mile radius of the project site. Two isolated artifacts consisting of a historic-era glass bottle base (Isolate 1) and a historic-era ceramic sherd (Isolate 2) (Photographs 3 and 4; of the Phase 1) were identified during the survey. The two artifacts were located within a heavily plowed agricultural field, and therefore likely not representative of, or an indicator that there is, an intact historic-era archaeological deposit within the project site. The two isolated artifacts were documented, left in place, and do not require further consideration under CEQA.

Tribal cultural resources are discussed in Section 18, *Tribal Cultural Resources*.

Impact Discussion:

a-b. A search of records at the CCoIC indicated that no cultural resource studies have previously been conducted within the project site and two cultural resource studies had been previously conducted within a 1/2-mile radius of the project site. The records search identified no previously recorded cultural resources within the project site and no previously recorded resources within a 1/2-mile radius of the project site. Archival research and an aerial imagery review revealed no evidence of historic-era structures within the project site. The results of the NAHC Sacred Lands File were negative. After reviewing the record search results, Albion conducted an intensive pedestrian survey of the project on April 11, 2025. Throughout the project site, ground surface visibility was poor to fair, as much of the project was covered by vegetation. Visual inspection of the project site yielded two isolated historic-era artifacts consisting of one piece glass and one ceramic sherd. The pedestrian survey did not identify any precolonial cultural resources within the project site.

The project site is located within the City's Archaeological Sensitivity Area 3, which is categorized as having a negligible sensitivity to contain archaeological resources. There are no known precolonial archaeological sites located within 1/2-mile results of the project, and the results of pedestrian survey were negative for precolonial resources. The project is more than 656 feet from a water course and is mapped as a Pleistocene to Holocene aged landform with marine and nonmarine sedimentary rocks. Given this data, the overall sensitivity of the project to contain precolonial sites is low (Attachment 4).

However, potentially significant but previously unidentified cultural materials associated with the historic era may be located within the site. The compound of small structures visible on the southwest corner of the 1954 and 1967 aerial images indicates that the project once contained 20th century architectural resources with an unknown function, likely a farming outpost or other agricultural-related purpose. By 2002, the compound was razed. KMA was not able to identify detailed records of cutting or filling in the project site post-2002. Therefore, it is not possible to determine whether buried historic-era archaeological deposits associated with 20th century land use as depicted on historic maps were preserved or destroyed

by subsequent earth moving activities (e.g., agricultural plowing). Building foundations and refuse associated with this 20th century land use may still be present and intact beneath the plow zone. Therefore, there is a moderate probability that construction could impact historic-era subsurface archaeological features therefore this impact would be potentially significant. Compliance with Mitigation Measures CR-1 and with the City's Resource Management Element Policy 4 Historical Resources Implementation Program 1 that addresses inadvertent discovery of archaeological resources would be required to reduce impacts below a level of significance. Policy 4 specifically states, "if cultural resources are discovered during construction of a project, all work in the area of the find shall cease, and a qualified archaeologist shall be retained by the project applicant to investigate the find and to make appropriate recommendations. If human remains are encountered, all work shall cease and the Coroner's Office shall be contacted."[39]

c. No human remains were discovered within the project site during the Phase 1 survey. However, the discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be of Native American origin, the Coroner will notify the NAHC, which will determine and notify a most likely descendant (MLD). The MLD has 48 hours from being granted site access to make recommendations for the disposition of the remains. If the MLD does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from subsequent disturbance. With adherence to existing regulations, the project would have a less than significant impact to human remains.

Mitigation Measure(s) incorporated into the project: The following mitigation measure is required.

CR-1 Extended Phase I Assessment. Prior to issuance of a grading permit and/or excavation activities an Extended Phase I (XPI) archaeological testing program shall be performed to determine the presence or absence of archaeological deposits at the project site. The XPI may include mechanical backhoe trenching; use of a backhoe will allow for an efficient examination of the soil profile and an assessment of the potential for buried archaeological deposits to be present. This study shall be conducted under the direction of a qualified archaeologist. XPI testing shall be observed by a Native American monitor. An XPI conducted prior to project construction could reduce potential delays caused by unanticipated finds during construction by informing the applicant of the types of resources that may exist on the property. Should a subsurface archaeological resource be found during the XPI, impacts to the resource shall be avoided and preserved in place through project redesign. Avoidance and preservation in place may include capping the resources with fill soil. If project redesign is not feasible and impacts to the resource cannot be avoided, a Phase II significance evaluation shall be performed to determine if the resource is eligible for the CRHR and/or the NRHP. A qualified archaeologist shall prepare a Phase II work plan for review and approval. The Phase II work plan shall address the archaeological excavation, analysis of recovered materials, and report preparation necessary to evaluate the significance of the resource. If the Phase II significance evaluation determines the resource is eligible for the CRHR and/or the NRHP and is considered a significant resource, and impacts to the resource cannot be avoided, then a Phase III data recovery excavation shall be conducted to mitigate impacts to the resource. A qualified archaeologist shall prepare a Phase III work plan/research design for review and approval. The Phase III work plan/research design shall address the archaeological excavation, analysis of recovered materials to answer specific research

[39] City of Santa Maria. 2001. General Plan Resource Management Element. https://www.cityofsantamaria.org/home/showpublisheddocument/598/635488452761730000 (accessed July 2025).

questions, and technical report preparation necessary to recover, analyze, and interpret the archaeological data associated with the portion(s) of the resources impacted by the project.

Effectiveness of Mitigation Measure: Implementation of Mitigation Measure CR-1 would verify the presence or absence of historic-era resources and develop a data recovery plan for any identified resources. Therefore, with implementation of this mitigation measure, impacts to cultural resources would be less than significant.

6. Energy

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

Setting:

The City of Santa Maria relies on a diverse energy mix for its electricity supply, with natural gas (47%), solar (28%), nuclear (11%), hydroelectric (8%), and wind (7%) as the primary sources. Santa Maria relies primarily on electricity and natural gas for household energy, and petroleum (gasoline and diesel) for most modes of transportation. The average monthly electricity usage for Santa Maria residents is 806 kWh, resulting in an average monthly bill of $249 and carbon emissions of 319 pounds of CO2. Energy conservation has become a prominent local, national and global issue. The City has been actively promoting renewable energy adoption, with solar power gaining traction among homeowners.[40] The proposed project would be required to comply with the California Building Standards Code (Title 24, California Code of Regulations) including Part 6 (Energy Code) and Part 11 (Green Building Standards or CALGreen).[41] To comply with such code, the proposed project would implement a host of energy related measures including installing electric vehicle (EV) chargers, behind the meter solar and Battery Energy Storage System to meet or exceed City requirements. The property would also be an all-electric facility (no natural gas to be used).

Impact Discussion:

a.

Construction

During construction, energy would be used to power construction equipment as well as heat, cool, and light up on-site work spaces. The temporary impacts of energy consumption during construction are currently unregulated within the state. However, the proposed project would utilize construction equipment with Tier 3 or higher engines, which typically improve fuel efficiency and reduce energy consumption during construction.[42] There are no unique project characteristics that would require the use of less energy-efficient construction equipment or methods. Therefore, impacts resulting from wasteful, inefficient, or unnecessary consumption of energy resources during the project's construction would be less than significant.

[40] WattBuy. 2024. The State of Electricity in Santa Maria. Available: https://wattbuy.com/en/electricity-rates/california/santa-maria/. Accessed March 2025.
[41] CARB. 2025. Building Standards Code. Available: https://ww2.arb.ca.gov/our-work/programs/building-decarbonization/building-standards-code. (accessed April 2025).
[42] The Driller. 2007. What Tier 3 EPA Regulations Mean to Contractors. Available: https://www.thedriller.com/articles/87099-what-tier-3-epa-regulations-mean-to-contractors. (accessed April 2025).

Operation

During operation, energy would be used to power heating, cooling (refrigeration), lighting, appliances, loading equipment, and EV chargers. The warehouse would be required to meet Title 24 of the California Building Standards Code, with lighting and appliances conforming to the 2022 California Energy Code. Fixtures and appliances would comply with CALGreen Non-residential Mandatory Measures Sections 5.303.3. Compliance with such requirements would result in the individual project elements (e.g., building design, HVAC equipment) being consistent with State energy reduction policies and strategies. Additionally, the proposed project would implement sustainability and green building features including installation of EV chargers, solar panels, and a behind the meter Battery Energy Storage System to reduce consumption of non-renewable energy associated with facility operations. Fourteen EV chargers would be installed as part of the project, exceeding the City minimum requirements, with infrastructure (electrical conduit) installed to have an additional 40 EV ready stalls. There would also be 202 EV van stalls installed for charging electrical delivery vans. The building would include solar to offset electrical energy demand with a design capacity of 750 kilowatts direct current. To manage energy supply and demand, the project would include a behind the meter Battery Energy Storage System to store the on-site solar generated energy for later use with a design rating of 650 kilowatts direct current. The project would also exceed City requirements by not installing any natural gas infrastructure, effectively building an all-electric facility. All energy use would be essential to business operations, and energy would be conserved whenever possible. Therefore, impacts resulting from wasteful, inefficient, or unnecessary consumption of energy resources during the project's operation would be less than significant.

b. As previously mentioned, the project would comply with the current Title 24 California Green Building Standards including the California Energy Code and CALGreen Non-residential Mandatory Measures. These standards promote sustainable and environmentally friendly building practices, including the conservation of natural resources and the use of energy-efficient materials and equipment. Compliance with state and local laws and standards regarding energy efficiency and renewable energy would ensure the project would have a less than significant impact on state or local plans for renewable energy or energy efficiency. As mentioned above, the proposed project would implement sustainable building features that go above and beyond current code for energy efficiency. Therefore, the proposed project would have a less than significant impact on obstruction of a state or local plan for renewable energy or energy efficiency during operations.

Mitigation Measure(s) incorporated into the project: Implementation of the proposed project would not result in potentially significant environment impacts to energy. Therefore, no mitigation measures are required.

7. Geology and Soils

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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? Refer to Division of Mines and Geology Special Publication 42.			X	
ii. Strong seismic ground shaking?			X	
iii. Seismic-related ground failure, including liquefaction?			X	
iv. Landslides?				X
b. Result in substantial soil erosion or the loss of topsoil?			X	
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?			X	
d. Be located on expansive soil, as defined in Table 18-1-B of the most recent Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

Setting

This section includes the setting and impact analysis related to seismic activity, soils, erosion, and paleontological resources associated with the project. The proposed project would be located within the Santa Maria Valley, an east-west trending alluvial valley bounded to the north by the San Rafael Range and to the south by the Casmalia Range and the Solomon Hills.

Seismic Setting

Similar to much of California, the site is located in a seismically active region. The USGS defines active faults as those that have had surface displacement within the Holocene period (about the last 11,000 years). Surface displacement can be recognized by the existence of cliffs in alluvium, terraces, offset stream courses, fault troughs and saddles, the alignment of depressions, sag ponds, and the existence of steep mountain fronts. Potentially active faults are those that have had surface displacement during the last 1.6 million years, and inactive faults have not had surface displacement within that period. Several faults are within and near the site, including the San Andreas Fault, the Santa Maria Fault, and the Casmalia Fault. Located approximately 2.45 miles east of the project site, the Santa Maria Fault is the closest major fault to the project site, and is potentially active (California Department of Conservation 2024). As a result of its location and geologic setting, the City of Santa Maria is subject to a variety of seismic and geologic hazards, including fault rupture, strong ground shaking, liquefaction, and landslides.

Ground Shaking

Seismically induced ground shaking covers a wide area and is greatly influenced by the distance of the site to the seismic source, soil conditions, and depth to groundwater. The U.S. Geological Hazards Science Center, a division of the U.S. Geological Survey, has mapped out the intensity of ground-shaking throughout the Santa Barbara region under various earthquake scenarios. The most intense scenario mapped near Santa Maria assumes a 7.49 magnitude earthquake on the San Luis Range, northeast of the project site[43].

Liquefaction and Seismically Induced Settlement

Liquefaction is defined as the sudden loss of soil strength due to a rapid increase in soil pore water pressure resulting from seismic ground shaking. Liquefaction potential is dependent on such factors as soil type, depth to ground water, degree of seismic shaking, and the relative density of the soil. When liquefaction of the soil occurs, buildings and other objects on the ground surface may tilt or sink, and lightweight buried structures (such as pipelines) may float toward the ground surface. Liquefied soil may be unable to support its own weight or that of structures, which could result in loss of foundation bearing or differential settlement. Liquefaction may also result in cracks in the ground surface followed by the emergence of a sand-water mixture. The City of Santa Maria Safety Element notes that the liquefaction potential from ground shaking is generally low due to relatively deep groundwater levels that are ordinarily over 70 feet below the ground surface[44].

Landslides

Landslides result when the driving forces that act on a slope (i.e., the weight of the slope material, and the weight of objects placed on it) are greater than the slope's natural resisting forces (i.e., the shear strength of the slope material). Slope instability may result from natural processes, such as the erosion of the toe of a slope by a stream, or by ground shaking caused by an earthquake. Slopes can also be modified artificially by grading, or by the addition of water or structures to a slope. Development that occurs on a slope can substantially increase the frequency and extent of potential slope stability hazards.

Areas susceptible to landslides are typically characterized by steep, unstable slopes in weak soil/bedrock units which have a record of previous slope failure. There are numerous factors that affect the stability of the slope, including: slope height and steepness, type of materials, material strength, structural geologic relationships, ground water level, and level of seismic shaking. The project site is in a generally flat area. Therefore, the project site is not susceptible to landslides.

[43] USGS Earthquake Scenario Map (BSSC 2014)
[44] City of Santa Maria Safety Element 1995

Expansive Soils

Expansive soils can change dramatically in volume depending on moisture content. When wet, these soils can expand; conversely, when dry, they can contract or shrink. Sources of moistures that can trigger this shrink-swell phenomenon include seasonal rainfall, landscape irrigation, utility leakage, and/or perched groundwater. Expansive soil can develop wide cracks in the dry season, and changes in soil volume have the potential to damage concrete slabs, foundations, and pavement. Special building/structure design or soil treatment are often needed in areas with expansive soils. The Natural Resource Conservation Service (NRCS) Web Soil Survey identified the project site to contain Corralitos loamy sand, which is not rated as hydric soil[45].

Erosion

Erosion is the wearing away of the soil mantle by running water, wind or geologic forces. It is a naturally occurring phenomenon and ordinarily is not hazardous. However, excessive erosion can contribute to landslides, siltation of streams, undermining of foundations, and ultimately the loss of structures. Removal of vegetation tends to heighten erosion hazards. The City of Santa Maria enforces grading and erosion control ordinances to reduce these hazards. The site is relatively level and the proposed project incorporates stormwater control measures to reduce the potential for soil erosion on the site.

Impact Discussion:

a.

i. The project site is located approximately 2.45 miles southeast of the Santa Maria Fault, a potentially active fault per the California Department of Conservation Fault Activity Map of California[46]. The City of Santa Maria is not located near an Alquist-Priolo Earthquake Hazard Zone according to the ArcGIS Alquist-Priolo Earthquake Fault Zones mapping. The nearest fault zone to the City of Santa Maria is the San Andreas Fault, approximately 50 miles from the project site. While the Santa Maria Fault is considered potentially active, it does not qualify as an Earthquake Fault Zone, as identified by the State Geologist under the Alquist Priolo Earthquake Fault Zones Act.[47] Impacts to the project site as a result of a rupture of a known earthquake fault would be less than significant.

ii. The project site is located within Zone A of the Geologic Hazards Map, as identified in the Safety Element of the City's General Plan. Zone A is defined as all areas underlain by Holocene age alluvium and is considered the more hazardous of the two zones identified on the Geologic Hazards Map. The faults in the area are capable of generating earthquakes that could produce violent seismic ground shaking at the project site. The USGS Working Group on California Earthquake Probabilities estimate that each region of California will experience a magnitude 6.7 or larger earthquake in the next 30 years; however, the City of Santa Maria is located in a region of California with infrequent earthquakes that can cause strong shaking[48]. Additionally, compliance with current CBC requirements would ensure that the proposed structure would be able to: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage, but with some non-structural damage; and (3) resist major earthquakes without collapse, but with some structural as well as non-structural damage. The construction of the project would meet the standard construction and seismic requirements per the California Building Code to ensure all new buildings would withstand the magnitude of earthquakes that could occur within the area. Additionally, a building permit and soils report would be required to be submitted to the City for review and approval prior to construction. Therefore, impacts from strong seismic ground shaking would be less than significant.

[45] Natural Resource Conservation Service Web Soil Survey, 2025
[46] California Department of Conservation Fault Activity Map, 2015
[47] California Department of Conservation Alquist-Priolo Earthquake Fault Zones, 2018
[48] USGS Working Group on California Earthquake Probabilities, 2021

iii. The project site is located in an area which contains Corralitos loamy sand, a soil which is not considered a hydric soil and is found on flat ground with little slope aspect, according to the NCRS Web Soil Survey. Additionally, based on the Alquist-Priolo Earthquake Fault Zone Maps and related information available from the from the California Department of Conservation's website, the City of Santa Maria is not located with a liquefaction hazard area due to relatively deep groundwater levels in the area. Therefore, impacts due to seismic-related ground failure, including liquefaction, would be less than significant.

iv. The project site and surroundings are generally flat. There are no steep slopes located on or near the site. Therefore, there is no potential for landslides at the site. No impact would occur.

b. Construction of the project would require earthwork activities to prepare the site for the construction of the industrial structures. The applicant would be required to adhere to conditions under the National Pollution Discharge Elimination System Permit issued by the Regional Water Quality Board and prepare and submit a SWPPP to be administered throughout project construction. The SWPPP would establish BMPs which would ensure that potential water quality impacts during construction from soil erosion would be reduced to less than significant. Additionally, the project would include bioretention basins, which would manage onsite stormwater runoff. Appropriate erosion control and permanent site surface drainage elements per the latest California Building Code would also be implemented, which would reduce soil erosion upon completion and operation of the project. Therefore, impacts related to soil erosion or the loss of topsoil would be less than significant.

c-d The Geologic Hazards Map of the City's General Plan Safety Element identifies the project site as containing expansive soils. Expansive soils can undergo significant volume change with changes in moisture content. They shrink and harden when dried and expand and soften when wet. Expansion and shrinkage of soils could damage the proposed project, as well as associated utilities on the project site. The project would be required to include a foundation that complies with the Uniform Building Code Section 1808.6.1, which requires the foundation to be designed to prevent uplift of the supported structure or resist forces exerted on the foundation due to soil volume changes, or the project would be required to remove expansive soil to the depth of constant moisture. Compliance with state regulations would reduce impacts related to unstable geological units or expansive soils, including potential direct or indirect risks to life or property, to less than significant.

e. No septic tanks or alternative wastewater disposal systems are proposed for the project. The City of Santa Maria requires sewer connections to the City's wastewater treatment system, by ordinance, per Title 8 of the Municipal Code. Therefore, soils on the project site would not be required to adequately support the use of septic tanks or alternative wastewater systems. No impact would occur.

f. The City's General Plan Safety Element identifies that the Santa Maria basin is located in an age sequence of sedimentary rocks. According to the City's General Plan Resource Conservation Element, the Santa Maria Valley is not considered to be a major archaeological or paleontological resource area as only a few sites have been recorded or discovered. Project-related ground disturbance would involve cut and fill activities for the proposed building foundations. Given the nature of the proposed project and existing site conditions, project-related ground disturbance (i.e., excavations) would extend to 12 feet in depth due to the replacement of the sewer main, which may impact fossiliferous deposits. Although project implementation is not expected to uncover paleontological resources, as geologic units with potential to yield fossils are generally deeper than proposed construction and excavation, a remote possibility for such resources to be uncovered exists. Therefore, impacts would be potentially significant and mitigation would be required.

Mitigation Measure(s) incorporated into the project: The following mitigation measure is required.

GEO-1 Unanticipated Discovery of Paleontological Resources

Paleontological Worker Environmental Awareness Program. Prior to the start of construction, a Qualified Professional Paleontologist, as defined by the Society of Vertebrate Paleontology (SVP; 2010), or their designee shall conduct a paleontological WEAP training for construction personnel regarding the

appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction personnel. The WEAP shall discuss the potential to discover paleontological resources in the project site, legal obligations to protect paleontological resources, examples of paleontological resources that may be found in the project site, procedures in case a paleontological resource is discovered, and contact information for the Qualified Professional Paleontologist.

Unanticipated Discovery of Paleontological Resources. If a potential fossil is discovered during project construction, construction activity within 50 feet of the find shall cease until the discovery is examined by a Qualified Professional Paleontologist. If the find is determined to be significant, the Qualified Professional Paleontologist shall direct all mitigation measures related to paleontological resources consistent with the SVP (2010) standards, which may include, but would not be limited to: paleontological monitoring; fossil salvage, preparation, and curation; and reporting to summarize the paleontological mitigation efforts.

Effectiveness of Mitigation Measure: Implementation of Mitigation Measure GEO-1 would increase supervision during construction to ensure that, in the case of unanticipated fossil discoveries, the discovery of paleontological resources, and potential impacts to the discovered resources, are reported on and such discoveries are properly salvaged. This measure would apply to all phases of project construction and would reduce the potential for impacts to unanticipated fossils present on site by providing for the recovery, identification, and curation of paleontological resources. Impacts would be less than significant with mitigation.

8. Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Setting:

The following GHG emissions analysis is supported by an Air Quality and Greenhouse Gas Technical Report produced by NV5 on May 22, 2025. The technical report was peer-reviewed by Rincon Consultants as a part of the preparation of this IS. The complete Air Quality and Greenhouse Gas Technical Report can be found in Attachment 2.

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. Climate change is the result of numerous, cumulative sources of GHGs. GHGs contribute to the "greenhouse effect," which is a natural occurrence that helps regulate the temperature of the planet. The majority of radiation from the Sun hits the Earth's surface and warms it. The surface in turn radiates heat back towards the atmosphere, known as infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping back into space and re-radiate it in all directions. This process is essential to support life on Earth because it warms the planet by approximately 60° Fahrenheit. Emissions from human activities since the beginning of the industrial revolution (approximately 250 years ago) are adding to the natural greenhouse effect by increasing the gases in the atmosphere that trap heat, thereby contributing to an average increase in the Earth's temperature.

Greenhouse gases occur naturally and from human activities. Human activities that produce GHGs include the burning of fossil fuels (coal, oil and natural gas for heating and electricity, gasoline and diesel for transportation); methane from landfill wastes and raising livestock, deforestation activities; and some agricultural practices. GHGs produced by human activities include carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Emissions of GHGs affect the atmosphere directly by changing its chemical composition while changes to the land surface indirectly affect the atmosphere by changing the way in which the Earth absorbs gases from the atmosphere. Potential impacts of climate change in California may include loss in snowpack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years[49].

The following analysis is based on the Air Quality and Greenhouse Gas Technical Report NV5 prepared on May 22, 2025.

[49] State of California. 2018. Indicators of Climate Change in California. https://oehha.ca.gov/sites/default/files/media/downloads/climate-change/report/2018caindicatorsreportmay2018.pdf

Impact Discussion:

a.

Construction

Construction of the proposed project would result in temporary GHG emissions from off-road equipment and mobile sources, including worker vehicles, vendor trucks, and haul trucks. According to NV5's Air Quality and Greenhouse Gas Technical Report, Construction GHG emissions would be amortized over a project lifetime of 25 years and added to the annual operational GHG emissions. Because construction emission sources would cease once construction is complete, construction emissions are considered short term. Proposed project construction emissions are summarized in Table 12.

Table 12 Project Construction Greenhouse Gas Emissions

Construction Year	GHG Emissions ($MTCO_2e$) [a]
2026	1,856
2027	272
Total Emissions	**2,128**
Amortized Construction Emissions (25 Years)	85

Source: NV5 2025 (Attachment 2)

Operation

Project operation would generate long-term GHG emissions from direct and indirect sources. Direct sources consist of mobile sources and area sources related to landscaping equipment, and emergency fire pump usage during maintenance and testing activities. Indirect sources include electricity generation at offsite power plants associated with building electricity consumption and electricity consumption related to water and wastewater conveyance, and waste decomposition at landfills from solid waste generation. Table 13 summarizes the proposed project's unmitigated annual operational GHG emissions.

Table 13 Unmitigated Project Annual GHG Operational Emissions

Source Category	GHG Emissions ($MTCO_2e$)
Area	3
Mobile-Employee Vehicles (Onsite)	76
Mobile-Employee Vehicles (Offsite)	783
Mobile-Delivery Vans (Onsite)	66
Mobile-Delivery Vans (Offsite)	3,768
Mobile-Private Carrier Vehicles (Onsite)	18
Mobile-Private Carrier Vehicles (Offsite)	531
Mobile-Line-Haul Trucks (Onsite)	36
Mobile-Line-Haul Trucks (Offsite)[b]	4,344
Electricity Consumption-Buildings	15
Water	25
Waste	58
Refrigerants	224
Stationary (Fire Pump)	6
Construction (amortized)	85
Project Total	**10,038**

Source: NV5 2025 (Attachment 2)

[b] Offsite line-haul truck emissions include the total GHG emissions from haul truck travel within and outside Santa Barbara County

The proposed project would also incorporate sustainability features including a solar-ready roof and installation of Level 2 and Level 3 charging stations. These design features would promote and encourage the use of electric vehicles, which could lead to potential reductions in VMT and GHG emissions compared to the use of fossil-fueled vehicles. The proposed project would also install bike racks at the project site to encourage commuting to the project site via bicycles rather than vehicles.

In the absence of quantitative GHG thresholds and/or a qualified GHG reduction plan for use by a project to tier or streamline its environmental analysis, CEQA provides that a lead agency can rely on regulatory compliance to show a less –than significant GHG impact if the project complies with or exceeds those programs adopted by CARB or other state agencies. The most applicable regulatory plans and policies for reducing GHG emissions from the proposed project include:

- The 2022 CARB Scoping Plan, which outlines a path to carbon neutrality by 2045, with interim targets for 2030, and includes strategies for decarbonizing buildings, improving vehicle efficiency, reducing VMT, and transitioning to clean electricity;
- The 2023 SBCAG RTP/SCS, which identifies land use strategies to reduce GHG emissions from transportation sources in line with CARB-mandated regional targets.

Although the proposed project would generate GHG emissions from construction and operations, it includes design features and land use efficiencies that support the goals of these plans. Specifically, the proposed project would be located near transit corridors and services consistent with the SCS, helping reduce dependence on single-occupancy vehicle trips; would incorporate energy-efficient systems and appliances, consistent with Title 24 and CALGreen standards and the CARB Scoping Plan; and would not result in excessive energy or fuel consumption relative to its scale or location.

Furthermore, the proposed project would not conflict with or impede implementation of the state's GHG reduction targets under AB 32, SB 32, or Executive Order B-55-18 (carbon neutrality by 2045). As such, and in consideration of the measures and policies discussed above, the proposed project's GHG emissions would not result in a significant impact on the environment. Therefore, impacts would be less than significant. While not required to reduce GHG emission, incorporation of Mitigation Measure AQ-1 would further reduce GHG emissions as shown in Table 14.

Table 14 Mitigated Project Annual GHG Operational Emissions

Source Category	GHG Emissions ($MTCO_2e$)
Area	3
Mobile-Employee Vehicles (Onsite)	76
Mobile-Employee Vehicles (Offsite)	783
Mobile-Delivery Vans (Onsite)	66
Mobile-Delivery Vans (Offsite)	3,768
Mobile-Private Carrier Vehicles (Onsite)	18
Mobile-Private Carrier Vehicles (Offsite)	531
Mobile-Line-Haul Trucks (Onsite)[b]	36
Mobile-Line-Haul Trucks (Offsite)[a, b]	4,334
Electricity Consumption-Buildings	15
Water	25
Waste	58
Refrigerants	224
Stationary (Fire Pump)	6
Construction (amortized)	85
Project Total	**10,028**

Source: NV5 2025 (Attachment 2)

Notes:

[a] Offsite line-haul truck emissions include the total GHG emissions from haul truck travel within and outside Santa Barbara County

[b] Line-haul truck emissions decrease slightly due to Mitigation Measure-AQ-1

b.

Consistency with State and Local Plans

State Plans

AB 32, SB 32, and AB 1279 outline the state's GHG emissions reduction targets for 2020, 2030, and 2045, respectively. In 2008 and 2014, CARB adopted the 2008 Scoping Plan and the First Update to the Climate Change Scoping Plan, respectively, as a framework for achieving the emissions reduction targets in AB 32 [50,51]. These plans outline a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions. CARB adopted California's 2017 Climate Change Scoping Plan52 in November 2017 as a framework to achieve the 2030 GHG reduction goal described in SB 32, which is to reduce statewide GHG emissions to 1990 levels by 2020 and to 40 percent below 1990 levels by 2030. Most recently, the 2022 Scoping Plan was adopted in September 2022 and outlines how the state will achieve carbon neutrality and reduce statewide GHG emissions 85 percent below 1990 levels by 2045.

[50] CARB. 2008. Climate Change Scoping Plan. December 11. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/document/adopted_scoping _plan.pdf. Accessed: April 14, 2025.
[51] CARB. 2014. First Update to the Climate Change Scoping Plan: Building on the Framework. Pursuant to AB 32, the California Global Warming Solutions Act of 2006. May. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf. Accessed: April 14, 2025.
52 CARB. 2017. California's 2017 Climate Change Scoping Plan. January 20. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf. Accessed: April 14, 2025.

The 2022 Scoping Plan focuses on key sectors which will need to transition to alternative clean technology and fuels to support decarbonization. Relevant sectors for the proposed project include Transportation Sustainability, Clean Electricity Grid, and Sustainable Manufacturing and Buildings.

The Transportation Sustainability section focuses on transitioning to zero-emission vehicles and reducing VMT by promoting electric and hydrogen fuel cell vehicles, improving public transit, and encouraging active transportation. It also emphasizes developing infrastructure for renewable fuels and hydrogen, and implementing urban planning and incentives to reduce VMT. The proposed project would support transition goals of this key sector by installing Level 2 and Level 3 (DC Fast-Charging) chargers, which would have the capability to charge electric-powered employee vehicles and delivery vans. Additionally, the proposed project would include a 4,993 square-foot fleet service center. The onsite fleet service center would be used to maintain the proposed project's delivery vans, which would substantially reduce the need for delivery vans to be serviced at offsite vendors, thus reducing ancillary VMT and associated GHG emissions. Furthermore, MM-AQ-1 would also lead to reductions in GHG emissions through newer and more efficient line-haul trucks.

The Clean Electricity Grid section aims to transition to 100% renewable and zero-carbon electricity by increasing solar and wind capacity, developing energy storage solutions, and enhancing grid reliability. The proposed project would support transition goals of this key sector by having a solar-ready roof, which would allow for future installation of a solar photovoltaic system that would generate electricity.

The Sustainable Manufacturing and Buildings section focuses on decarbonizing industrial processes and building operations by implementing energy efficiency measures and transitioning to renewable energy sources. It promotes electrification of industrial equipment, use of low-carbon materials, energy-efficient building designs, retrofits, and transitioning to electric appliances. The proposed project would support transition goals of this key sector by using electric appliances for building heat, and would not install a natural gas connection to the project site. The proposed project would not utilize any onsite combustion equipment such as forklifts. Any onsite equipment would be electric.

Overall, the proposed project would support the 2022 Scoping Plan strategies for reducing GHG emissions from transportation, electricity grid, and buildings, and would not conflict with the 2022 Scoping Plan's goals for reducing GHG emissions.

Local Plans

While the City has not adopted a qualified greenhouse gas reduction plan pursuant to CEQA Guidelines Section 15183.5(b)(1), SBCAG's 2050 RTP/SCS was designed to help the county achieve its GHG emissions reduction target. The 2050 RTP/SCS, particularly the SCS, involves land use assumptions that identify general locations, residential densities, and building intensities in the region. Although local jurisdictions retain land use authority under SB 375, Connected 2050 must make land use assumptions and allocate future growth accordingly. These assumptions were developed with local planning staff, and aimed to 1) intensify residential and commercial uses near transit and multi-modal options to reduce VMT and 2) address the jobs/housing imbalance by providing more housing in the jobs-rich South Coast and more jobs in North County, which includes the City of Santa Maria. The City of Santa Maria is the largest city in Santa Barbara County, is forecasted to have the highest population increase over the 2017-2050 period, and is expected to have an increase of 10,900 jobs over this period as well. The proposed project would be consistent with the 2050 RTP/SCS by creating job opportunities in North County.

The 2050 RTP/SCS developed goals to implement the Connected 2050 plan. The proposed project's consistency with relevant goals, objectives, and policies of the 2050 RTP/SCS is discussed in Table 15. As shown therein, the proposed project would be consistent with goals and policies to support implementation of the 2050 RTP/SCS.

Table 15 Consistency of Proposed Project with SBCAG 2050 RTP/SCS

Connected 2050 RTPSCS Goals and Policies	Project Consistency
Goal Area 1: Environment	
Policy 1.1 Land Use	
Policy 1.1.2: Promote better balance of jobs and housing to reduce long-distance commuting by means of traditional land use zoning, infill development, and other, unconventional land use tools, such as employer-sponsored housing programs, economic development programs, commercial growth management ordinances, average unit size ordinances and parking pricing policies.	The proposed project would be consistent with this policy as it would be an infill project. It would create job opportunities in the City, and support reducing long-distance commuting as the project site it near residential neighborhoods.
Policy 1.1.5: Identify, minimize and mitigate adverse environmental impacts and, in particular, require mitigation of traffic impacts of new land development through on-site and related off-site improvements for all models of transportation, including incentives to encourage the use of alternative transportation modes.	The proposed project would be consistent with this policy as it would install onsite Level 2 and Level 3 charging stations which would support the use of electric vehicles. Additionally, the project site would install bike racks to encourage the use of bicycling to the project site. The proposed project would also include an onsite fleet service center to maintain delivery vans, thus reducing the need to send delivery vans for maintenance at offsite vendors.
Policy 1.2 Air Quality	
Policy 1.2.1: Lead to reductions in greenhouse gas and criteria pollutant emissions, consistent with the air quality goals of the region, including targets for greenhouse gas emissions from passenger vehicles in 2020 and 2035 as required by Senate Bill 375 (SB 375).	The proposed project would be consistent with this policy as it would include a solar-ready roof, which would allow for future installation of photovoltaic systems. Additionally, the proposed project would support efforts to reduce GHG emissions from passenger vehicles by installing Level 2 and Level 3 charging stations.
Policy 1.3 Alternative Fuels and Energy	
Policy 1.3.1: Encourage the use of alternative fuels, and the application of advanced transportation and energy technologies to reduce vehicular emission production and energy consumption.	The proposed project would be consistent with this policy as it would install onsite Level 2 and Level 3 charging stations, which would support the use of electric vehicles.
Policy 1.3.2: Promote renewable energy and energy conservation, consistent with applicable federal, State, and local energy programs, goals, and objectives.	The proposed project would be consistent with the policy as it would a solar-ready roof, which would allow for future installation of photovoltaic systems.
Goal Area 2: Mobility and System Reliability	
Policy 2.3 Alternative Transportation Modes	
Policy 2.3.1: Encourage alternatives to single-occupancy vehicle trips and the use alternative transportation modes to reduce vehicle miles traveled and increase bike, walk and transit mode share.	The proposed project would be consistent with this policy as it would install onsite Level 2 and Level 3 charging stations, which would support the use of electric vehicles, Additionally, the project site would install bike racks to encourage the use of bicycling to the project site.

Source: Source: NV5 2025 (Attachment 2)

Overall, the proposed project would not conflict with the 2022 Scoping Plan or SBCAG 2050 RTP/SCS policies for reducing GHG emissions. Therefore, the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions, and this impact would be less than significant.

Mitigation Measure(s) incorporated into the project: Implementation of the proposed project would not result in potentially significant environmental impacts to GHG emissions. Therefore, no mitigation measures are required.

9. Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
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?			X	
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
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?		X		
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?				X
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X	

Setting:

The project site is relatively flat, vacant land (formerly used for agricultural production). Some farming operations use hazardous materials such as pesticides. An oil and gas well is located in the southwestern portion of the project site and was plugged abandoned in the 1950s (Hope Well #1, AP I#0408302417). In addition, hazardous materials are used by numerous businesses surrounding the project site. Typical uses that utilize hazardous materials in their operations include, but are not limited to, hospitals, dry cleaners, automotive repair facilities, exterminators, medical labs, photographic studios, manufacturing facilities, and gasoline stations.

Hazardous Material Release Case Listings

The following databases, compiled pursuant to Government Code Section 65962.5, were reviewed in March 2025 for known hazardous materials contamination at the project site:

- The State Water Resources Control Board's (SWRCB) GeoTracker database[53]
- SWRCB's list of solid waste disposal sites with waste constituents above hazardous waste levels outside the waste management unit[54]
- The California Department of Toxic Substances Control's (DTSC) EnviroStor database[55]
- The Superfund Enterprise Management System (SEMS) database[58]
- CalEPA Active Cease and Desist Orders and Cleanup Abatement Orders[56]
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code[57]

According to the SWRCB online GeoTracker database and DTSC online EnviroStor database, the project site is not associated with hazardous material release cases.[53] [55] The project site is not listed in any other Cortese List data resources available via CalEPA or in the USEPA Superfund Enterprise Management System (SEMS)/Envirofacts database.[57,58] There are no Brownfields, SEMS, or Toxics Release Inventory hazardous materials/wastes sites within 1,000 feet of the project site.[57]

The following known release sites are within 1,000 feet of the project site:[55]

- Unocal Former Orcutt Oil Refinery (1550 West Stowell Road): This site is located adjacent to the eastern boundary of the project site and is associated with an open Cleanup Program case for a former oil refinery as of May 2012. The listed potential contaminants of concern are petroleum hydrocarbons, and the listed potential media of concern are soil and groundwater. Depth to groundwater at this site has been reported between 35 and 145 feet below ground surface (feet bgs) and, as of 2016 has a westerly flow direction. Soil impacted with total petroleum hydrocarbons (TPH) in the diesel range (TPHd) and motor oil range (TPHo) remains below seven feet bgs as near as approximately 10 feet east of the project site and the site currently has a land use covenant [53] (Case No. SL0608331151). Soil remediation occurred in 2014, 2018 and 2023. In 2023, additional remediation at the Former Orcutt Refinery site removed over 7,300 tons of petroleum-impacted soil during redevelopment activities. Post-excavation sampling confirmed that residual contamination was generally below commercial/industrial screening levels, and no further action was deemed necessary by the Santa Barbara County Environmental Health Services.[59]

[53] California State Water Resources Control Board (SWRCB). 2025. GeoTracker. https://geotracker.waterboards.ca.gov/map/. (accessed March 2025).
[54] SWRCB. 2025. List of solid waste disposal sites identified by Water Board with waste constituents above hazardous waste levels outside the waste management unit. https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/SiteCleanup-CorteseList-CurrentList.pdf. (accessed March 2025).
[55] California Department of Toxic Substances Control (DTSC). 2025. EnviroStor. . (accessed March 2025).
[56] California Environmental Protection Agency (CalEPA). 2025. List of "active" CDO and CAO from Water Board. https://calepa.ca.gov/sitecleanup/corteselist/. (accessed March 2025).
[57] CalEPA. 2025. List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC. https://calepa.ca.gov/sitecleanup/corteselist/section-65962-5a/. (accessed March 2025).
[58] United Stated Environmental Protection Agency. 2025. Superfund Enterprise Management System (SEMS). . (accessed March 2025).
[59] Santa Barbara County Public Health Department, 2023. Former Orcutt Refinery. https://documents.geotracker.waterboards.ca.gov/regulators/deliverable_documents/2892499625/20167%2011_23.pdf (accessed June 2025).

- Unocal 37 Line (E Street at West Stowell Road): This site is located approximately 730 feet west of the western boundary of the project site and is associated with a closed Cleanup Program case for a former oil pipeline along E Street as of February 2013. The listed potential contaminants of concern are petroleum hydrocarbons, benzene, toluene, and xylenes, and the listed potential medium of concern is soil[53] (Case No. T10000004583). Soil remediation occurred in 2006 where 1,875 cubic yards of contaminated soil and sludge from pipeline excavated and disposed of at Santa Maria Landfill NHIS Program.[60]

Potential Regional Hazards

The project site is located within the Santa Maria Valley Oil Field. As previously stated, there is one plugged oil and gas well located in the southwestern portion of the project site. Additionally, there are 12 plugged oil and gas wells located within 1,000 feet of the project site.[61]

There are no hazardous liquid pipelines located within 1,000 feet of the project site.[62] There are no landfills located within 1,000 feet of the project site.[63] There are no current landfill, airport, chrome plating, publicly owned treatment works, Department of Defense, or bulk fuel storage terminal/refinery sites with per- and polyfluoroalkyl substances (PFAS) orders located within 1,000 feet of the project site.[64]

Historical Resource Review

A review of historical aerial photographs and topographic maps available online indicates that the project site has been developed for agricultural purposes (including row crops), with at least one associated structure, since approximately 1957. Railroad tracks have been present adjacent to the south of the project site since at least 1957, and may have previously traversed the southeastern corner of the project site onto the eastern adjacent property.[65]

Existing Conditions Field Survey Approach

Rincon performed a reconnaissance of the project site on May 1, 2025. The purpose of the reconnaissance was to observe existing project site conditions and to obtain information about existing environmental conditions in connection with the project site. As part of this field survey, Rincon attempted to identify if there were any obvious indicators of prior or current existence of hazardous materials and to evaluate the likelihood of the use, store, generate, transport, or disposal of hazardous materials and hazardous waste at the project site and adjacent properties.

The site reconnaissance was conducted according to the following methodology:

- Observing the project site from public thoroughfares;
- Observing the adjacent properties from public thoroughfares;
- Walking the project site, and;

[60] State Water Resources Control Board. 2025. GeoTracker. UNOCAL 37 LINE (T10000004583). https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000004583 (accessed June 2025).
[61] California Geologic Energy Management Division. 2025. "Well Finder." Available at: https://maps.conservation.ca.gov/doggr/wellfinder/. (accessed March 2025).
[62] United States Department of Transportation (USDOT). 2025. "National Pipeline Mapping System (NPMS) Public Map Viewer." Pipeline and Hazardous Materials Safety Administration (PHMSA). Available at: https://www.npms.phmsa.dot.gov/PublicViewer/. (accessed March 2025).
[63] California Department of Resources, Recycling and Recovery (CalRecycle). 2025. "Solid Waste Information System (SWIS) Facility/Site Search." Available at: https://www2.calrecycle.ca.gov/SolidWaste/Site/Search. (accessed March 2025).
[64] SWRCB. 2025. "GeoTracker PFAS Map." Available at: https://geotracker.waterboards.ca.gov/map/pfas_map. (accessed March 2025).
[65] Nationwide Environmental Title Research, LLC. 2025. "Historic Aerials by NETR Online." Last modified: 2023. Available at: https://www.historicaerials.com/viewer. (accessed March 2025).

- Observing the project site from paved and unpaved roads.

The field survey identified the presence of an agricultural water well and asphalt and concrete debris from a former on-site structure in the southeastern corner of the project site. Railroad tracks were observed adjacent to the south of the project site.

Impact Discussion:

a.

Construction

Construction of the proposed project would temporarily increase the regional routine transport, use, and disposal of construction-related hazardous materials and petroleum products (e.g., diesel fuel, lubricants, paints and solvents, and cement products containing strong basic or acidic chemicals). These materials are commonly used at construction sites. The construction of the project would utilize equipment such as lifts, backhoes, mixers, compactors, compressors, dozers, dumpers, excavators, forklifts, generators, graders, loaders, tractors, pavers, rollers, scrapers, trenchers, and welders. Construction activities that involve hazardous materials would be governed by several agencies and regulations, including CalEPA, the California Department of Transportation, Cal/ Occupational Safety and Health Act (OSHA), and DTSC. Some notable legislation regulating the transport, use, or disposal of hazardous materials during project construction includes the OSHA Standard 1917.156,[66] the Hazardous Materials Transportation Act,[67] and the Hazardous Waste Control Law.[68] Best Management Practices would be in place to ensure the lawful and proper storage and use of these materials, as well as the disposal of excess hazardous materials and hazardous construction waste. The construction activities must comply with State and federal regulations for the proper transport, use, storage, and disposal of excess hazardous materials and construction waste. Additionally, regulatory measures would require adherence to waste discharge permit requirements to prevent potential water quality impacts from spills or runoff of hazardous materials used during construction. Pursuant to compliance with these existing regulations, project construction would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. This impact would be less than significant.

Operation

Maintenance and upkeep of the proposed buildings, landscaping, and operational equipment would occasionally require the use of various solvents, cleaners, paints, oils/fuels, and pesticides/herbicides. In addition, potential hazardous materials, such as fuel, paint products, lubricants, solvents, and cleaning products, could be used and/or stored on-site. Trucks accessing the facilities on-site may contain oil and gasoline to power their engines, which could have the potential to result in minor releases of such substances through drips or leaks from truck loading areas.

Like many industrial enterprises, the proposed on-site fleet service center for the maintenance and repair of delivery vans includes a small, controlled storage room that is marked as a hazardous waste area. This area would be restricted as to the quantity and type of materials stored here subject to all applicable requirements as set by governing authorities. Certified Unified Program Agencies, along with the Santa

[66] OSHA. 1970. OSHA Act of 1970. Available at: https://www.osha.gov/laws-regs/oshact/completeoshact. (accessed March 2025).
[67] United States Department of Transportation. 2025. How to Comply with Federal Hazardous Materials Regulations. Available at: https://www.fmcsa.dot.gov/regulations/hazardous-materials/how-comply-federal-hazardous-materials-regulations. (accessed March 2025).
[68] DTSC. 2025. Defining Hazardous Waste. Available at: https://dtsc.ca.gov/defining-hazardous-waste/ (accessed March 2025).

Barbara County Environmental Health Department, regulates businesses that handle hazardous materials, and establishes programs for managing waste.

As described above, the project's daily uses and operations are not anticipated to be associated with major hazardous materials, and would not create unusually high quantities of hazardous waste. In addition, potential hazardous materials, such as fuel, paint products, lubricants, solvents, and cleaning products, could be used and/or stored on-site. However, due to the limited quantities of these materials anticipated to be used by the project, they would not be hazardous to the public or environment.

The Pipeline and Hazardous Materials Safety Administration governs the transportation of hazardous materials in all modes of transportation in the Code of Federal Regulations and develops regulations and standards for the classifying, handling and packaging of over 1 million daily shipments of hazardous materials within the United States to ensure safe and secure movement of hazardous materials to industry and consumers by all modes of transportation.[69] Further, Chapter 6.95 of the California Health and Safety Code requires businesses to prepare a Hazardous Materials Business Plan (HMBP) if the business uses, handles, or stores hazardous material and/or waste, or extremely hazardous materials in quantities greater than or equal to 55 gallons for a liquid, 500 pounds for a solid, 200 cubic feet of any compressed gas, or the threshold planning quantities of an extremely hazardous substance. [70] HMBPs include facility information, a Hazardous Materials Inventory Statement, an Emergency Response Plan, and an Emergency Response Training Plan.

If the proposed project would require the storage of hazardous materials at quantities greater than the threshold provided in Chapter 6.95 of the California Health and Safety Code, the proposed project would include implementation of an HBMP to minimize the potential for operation of the proposed project to result in upset or accidental conditions involving the release of hazardous materials into the environment.

Pursuant to compliance with these existing regulations, project operation would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. This impact would be less than significant.

b.

Construction

As identified in the CalGEM Well Finder database, an oil and gas well is located in the southwestern portion of the project site and was abandoned and plugged in the 1950s (Hope Well #1, API #0408302417).[71] In conjunction with the project, the applicant proposes to re-abandon the oil and gas well in coordination with CalGEM and in accordance with current CalGEM standards. However, there could be potential release of petroleum hydrocarbons into the soil and air through re-abandonment work, which could 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.

However, prior to soil disturbance at the project site, the applicant would notify CalGEM of planned subsurface work. Per City standards, the applicant is required to provide a 10-foot radius no-build easement surrounding the well head. In addition, the abandoned oil well present on-site would be evaluated by CalGEM to determine if the abandoned oil well requires additional safety features and if proposed improvements allow un-impeded access to the well. Section 1723 of the CCR, Plugging and Abandonment-General Requirements, CalGEM Construction Site Well Review Program per PRC Section

[69] USDOT. 2025. Hazardous Materials Regulations. Available: https://www.phmsa.dot.gov/standards-rulemaking/hazmat/hazardous-materials-regulations (accessed March 2025).
[70] California Health and Safety Code Division 20, Chapter 6.95, Article 1, Section 25501(c)(5). Available: https://calepa.ca.gov/hazardous-materials-business-plan-program/#:~:text=California%20State%20Law:%20California%20Health%20and%20Safety%20Code (accessed March 2025).
[71] California Department of Conservation. 2025. Geologic Energy Management Division (CalGEM) well finder. Available: https://maps.conservation.ca.gov/doggr/wellfinder/ (accessed March 2025).

3208.1,[72] and the local permitting agencies would also be consulted to evaluate whether any specific preconstruction requirements would apply to oil wells located within the project construction footprint.

If required by CalGEM (oil well abandonment work, including sealing off oil and gas bearing units, pressure grouting, etc.) actions must be performed by a State-licensed contractor under the regulatory oversight and approval of CalGEM. This re-abandonment work would be conducted prior to conducting subsurface activities that disturb soil, and documentation of the work completed would be provided to the applicant. Undocumented oil wells if observed within the project site would also be subject to this requirement.

Pursuant to compliance with these existing regulations, project construction 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. This impact would be less than significant.

Operation

Operation of the proposed project, including a proposed 4,993 square foot, 3-bay fleet service center for maintenance of the van fleet, would include the brief storage and transport of traditional consumer products that could contain minimal amounts of hazardous substances such as petroleum products, pesticides, fertilizer, paints, solvents, and cleaning products. These products and substances could create a potential for explosion or accidental release of hazardous materials into the environment. The project is a last-mile logistics facility and would accept and sort packages and then send them out for delivery, resulting in short storage times for these products at the facility. The potential for release of hazardous materials is considered to be negligible given that all materials would be prepackaged in limited quantities for retail consumption and use, and any release would be small and likely to be easily contained.

Transportation, storage, and disposal/recycling of hazardous products are extensively regulated at the local, State, and federal levels. Santa Barbara County maintains a Hazardous Materials Business Plan, which requires businesses handling, using, or storing reportable amounts of hazardous materials to submit inventories, site maps, and other documentation relating to those materials to the Certified Unified Program Agencies (Santa Barbara County), and to develop appropriate employee training and emergency procedures. The proposed project would be reviewed by Santa Barbara County for hazardous material use, safe handling, and storage of materials.

As with any commercial operation, hazardous wastes produced on-site would be subject to requirements associated with accumulation time limits, proper storage locations and containers, and proper labeling. Additionally, for removal of hazardous waste from the site, hazardous waste generators are required to use a certified hazardous waste transportation company, which must ship hazardous waste to a permitted facility for treatment, storage, recycling, or disposal. Any hazardous materials on-site would be handled in accordance with all applicable regulations, including containment, reporting, and remediation requirements, in the event of a spill or accidental release. Compliance with applicable regulations would ensure that potential hazardous material impacts associated with the operation of the proposed project would be less than significant. No mitigation is required.

c. There are five schools in a 1.5 mile radius and one planned school 0.5 mile from the project site, however, there are no schools within 0.25 mile. Thus, the proposed 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. No impact would occur.

d. As described above, based on a review of the listed databases compiled pursuant to Government Code Section 65962.5, the project site is not listed with regulatory agencies as associated with hazardous materials release cases; therefore, the project is not included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5. However, the project site may contain hazardous materials associated with the project site's former agricultural use. Soils at the project site may contain

[72] CalGEM. 2025. "Construction Site Well Review Program." Available at: https://www.conservation.ca.gov/calgem/for_operators/Pages/construction_site_review.aspx (Accessed March 2025).

contaminants such as pesticides and metals. Additionally, there is one plugged oil and gas well located in the southwestern portion of the project site. Soils surrounding the plugged oil and gas well may contain petroleum hydrocarbons. Railroad tracks are also present adjacent to the south of the project site and may have previously traversed the southeastern corner of the project site. Soils along the southern boundary and in the southeastern corner of the project site may contain contaminants associated with railroad use such as petroleum hydrocarbons, pesticides, and metals.

Two known release sites are located within 1,000 feet of the project site. Based on the information available for the closed Unocal 37 Line case (localized soil impacts only) and distance to the project site (approximately 700 feet away), this known hazardous materials site is not anticipated to pose an environmental concern to the project site. **[53]** The former Orcutt Oil Refinery located at 1550 West Stowell Road (adjacent property to the east), has a Cleanup Program Site case designated 'Open – Site Assessment' and has a land use covenant.**[53]** Based on the information reviewed for this case, TPHd-, TPHo-, and dioxin-impacted soil remains at the site approximately 10 feet east of the project site. According to the quarterly groundwater monitoring report from April 2016, petroleum hydrocarbons and benzene were detected in groundwater above the Santa Barbara County Environmental Health Department Site Mitigation Unit Investigation Levels.[73] Depth to groundwater at the former Orcutt Refinery site ranges from approximately 35 to 145 feet bgs.**[53]** Given the westerly flow direction of the groundwater, the presence of petroleum hydrocarbons and benzene in groundwater may pose an environmental concern for the project site. Based on the Project Description, the maximum planned depth of excavation during project construction activities (12 feet), groundwater is not expected to be encountered during construction activities at the project site. With the potential presence of impacted soil at the project site, there is a potential for grading and construction workers to be exposed to contaminants (e.g., total petroleum hydrocarbons, volatile organic compounds, and metals) via impacted dust and/or soil. Therefore, construction activities could create a significant hazard to the public or the environment. This impact would be potentially significant and mitigation is required.

The risk of hazardous materials creating a significant hazard to the public or the environment would primarily occur during construction of the project if on-site contamination is disturbed. Once the project is operational, the contaminated media would mostly be covered and would no longer pose a risk. Therefore, operational impacts would be less than significant.

e. The project site is located within two miles of the Santa Maria Public Airport. Based on the Santa Barbara County Association of Government's Airport Land Use Compatibility Plan, the project site is located outside of the Santa Maria Public Airport's six safety zones. A review of the Plan determined that the project site is not within any noise contour area that would expose workers to unacceptable noise levels or any identified safety area that could pose a hazard to workers.[74] The project site is not located in the Airport Approach zone and would not need to implement any regulations to protect the safety of people working in the project area.[75] Therefore, no impact to a safety hazard or excessive noise for people residing or working in the project area associated with an airport would occur.

f. The proposed project does not include any characteristics or features that would interfere with an adopted emergency response plan or emergency evacuation plan. The project would not result in the closure of any roads during construction or operation. All access and circulation routes to and from the project site would be developed in compliance with local and state safety regulations and all improvements would be required to comply with applicable California Fire and Building Code requirements pertaining to emergency access. The proposed project would also be required to comply with the Santa Barbara County Multi-Jurisdictional Hazards Mitigation Plan.[76] Therefore, impacts that would impair the implementation of or

[73] Padre Associates, Inc. 2016. First Quarter 2016 Groundwater Monitoring Event, Former Orcutt Refinery, 1550 West Stowell Road, Santa Maria, Santa Barbara County, California (SMU-2 No. 20167). April 2016.
[74] Santa Barbara County Association of Governments. 2023. SBCAG Airport Land Use Compatibility Plan. Available at: https://storymaps.arcgis.com/stories/30eeb151f7f84ab39a6e4bfe6901799f. (Accessed April 2025).
[75] Santa Maria, City of. 2024. Zoning Map. Available at: https://www.cityofsantamaria.org/home/showpublisheddocument/10037/638563088414970000. (accessed March 2025)
[76] Santa Barbara, County of. 2023. Multi-Jurisdictional Hazards Mitigation Plan. Available at: https://content.civicplus.com/api/assets/ebc26205-512c-48d7-bca7-cfa0a18faa24 (accessed March 2025).

physically interfere with an adopted emergency response plan or emergency evacuation plan would be less than significant.

g. The project site is primarily surrounded by urban development or intensive agriculture on all sides, and is not located adjacent to a wildland area. The project site is not located in a moderate, high, or very high Fire Hazard Severity Zone in a Local or a State Responsibility Area.[77] According to the Safety Element in the City's General Plan, the Santa Maria Valley is not generally susceptible to high wildland fire risks; however, an abundance of weeds along roadsides and vacant lots make urban locations potentially hazardous to wildland fire. The Safety Element calls for an enforceable weed abatement program to reduce risks wherever structures are present along with enforcement of fire code and building setbacks.[78] The proposed project would be fully developed with landscape maintenance for all landscaped areas and would comply with fire code and building setbacks. Therefore, impacts from the exposure of people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires would be less than significant.

Mitigation Measure(s) incorporated into the project: The following mitigation measures are required.

HAZ-1 Soil Management Plan. Prior to commencement of construction and grading activities at the project site, the project applicant shall retain a qualified environmental consultant (Professional Geologist or Professional Engineer) to prepare a Soil Management Plan (SMP) for the project site. The SMP shall address:

1. On-site handling and management of impacted soils or other impacted wastes (e.g., stained soil, and soil with solvent or chemical odors) if such soils or impacted wastes are encountered, and

2. Specific actions to reduce hazards to construction workers and off-site receptors during the construction phase.

The plan must establish engineering controls and soil management practices to protect construction worker safety, protect the health of future workers and visitors, and prevent the off-site migration of contaminants from the project. These measures and practices shall include, but are not limited to:

- Stockpile management, including stormwater pollution prevention and the installation of best management practices.

- Proper disposal procedures of contaminated materials.

- Investigation procedures for encountering known and unexpected odorous or visually stained soils, other indications of hydrocarbon piping or equipment, and/or debris during ground-disturbing activities.

- Monitoring and reporting.

- An environmental health and safety plan for contractors working at the project site that addresses the safety and health hazards of each phase of site construction activities with the requirements and procedures for employee protection.

- The environmental health and safety plan shall outline proper soil handling procedures and health and safety requirements to minimize worker and public exposure to hazardous materials during construction.

[77] California Department of Forestry and Fire Protection. 2024. Fire Hazard and Severity Zone Viewer. Available at: https://experience.arcgis.com/experience/6a9cb66bb1824cd98756812af41292a0 (accessed March 2025).
[78] Santa Maria, City of. 1995. General Plan Safety Element. Available at: https://www.cityofsantamaria.org/home/showpublisheddocument/612/636100759000270000 (accessed March 2025).

The City shall review the SMP and have the authority to propose and include modifications prior to finalization of the SMP. The City shall review the final SMP prior to issuance of grading permits. The project applicant shall implement the SMP during demolition, grading, and construction at the project site.

Effectiveness of Mitigation Measures: Implementation of Mitigation Measure HAZ-1 during grading and construction of the project would reduce potential hazardous material impacts at the project site below applicable thresholds of significance by ensuring proper use, handling, and transportation of impacted materials and/or site management practices in accordance with regulatory standards, thereby reducing potential impacts to construction worker safety and the health of future workers, occupants, and visitors. Therefore, with implementation of this mitigation measure, impacts would be less than significant.

10. Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
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:			X	
i. result in a substantial erosion or siltation on- or off-site;			X	
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			X	
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	
iv. impede or redirect flood flows?			X	
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

Setting:

The project site is located within the Santa Maria Watershed, one of the largest coastal drainage basins in California, and includes all areas tributary to the Cuyama, Sisquoc, and Santa Maria Rivers. The Santa Maria Watershed overlies the Santa Maria River Valley Groundwater Basin (SMRVGB), covering more than 280 square miles in the southwestern corner of San Luis Obispo County and the northwestern corner of Santa Barbara County. The project site is within the SMRVGB; the SMRVGB is adjudicated, which specifies that monitoring shall be sufficient to determine groundwater conditions, land and water uses, sources of water supply, and the disposition of all water supplies in the SMRVGB.

Impact Discussion:

a.

Construction

As stormwater flows over a construction site, it can pick up sediment, debris, and chemicals and transport them to receiving water bodies. Additionally, soil disturbance during project construction would increase the potential for erosion and sedimentation. Construction of the project would involve activities such as clearing, grading, utility installation or removal, construction of buildings, and the installation of landscaping, which would result in the generation of potential pollutants such as silt, debris, chemicals, paints, and other solvents with the potential to adversely affect water quality. As such, short-term water quality impacts have the potential to occur during construction activities in the absence of any measures to minimize water quality.

As part of the Clean Water Act §402, the U.S. Environmental Protection Agency (USEPA) established regulations under the National Pollution Discharge Elimination System (NPDES) program to control direct storm water discharges from construction activities disturbing one acre or more of land. In California, SWRCB administers the NPDES permitting program and is responsible for developing NPDES permitting requirements. Because project construction would disturb more than one acre of land, construction activities would be required to obtain coverage under the statewide NPDES Construction Stormwater General Permit (Order No. 2022-0057-DWQ). Obtaining coverage under the Construction Stormwater General Permit requires the creation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) that would include Best Management Practices (BMPs) to prevent polluted stormwater runoff during construction and decommissioning. Construction BMPs would include, but are not limited to, erosion and sediment control BMPs designed to minimize erosion and retain sediment on-site, as well as good housekeeping BMPs that would prevent spills, leaks, and off-site discharge of construction debris and waste. In addition, Section 8-12A.08 of the City's Municipal Code requires implementation of BMPs to reduce stormwater pollutants during construction.

With required regulatory compliance, project construction would not violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface or groundwater quality. Impacts from project construction would be less than significant.

Operation

Substantial water quality impacts would not occur from project operation because the proposed project would not result in further ground disturbance and use of bio-retention basins to convey and infiltrate stormwater from a 95th percentile storm event and use permeable pavers to reduce site runoff would capture and treat on-site pollutants. The project would also be required to comply with Section 8-12A.04 that incorporates the Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region (Central Coast Regional Water Quality Control Board, Resolution No. R3-2013-0032). These standards are implemented with the post-construction requirements for the NPDES and Waste Discharge Requirements General Permit for Discharges from Municipal Separate Storm Sewer Systems (Phase I MS4). The proposed project would fulfil the post-construction stormwater pollutant treatment requirements of the Phase I MS4 permit through the implementation of the proposed stormwater basin.

With installation of the proposed stormwater basin and compliance with applicable regulations, operation of the proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. This impact would be less than significant.

b. According to the City's Urban Water Management Plan, the City's water supply is available to meet projected demand and is expected to reliably meet the projected demands through 2040.[79] As such, the proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

The City of Santa Maria derives water from multiple supply sources including local groundwater, purchased water from the State Water Project, associated return flows recaptured from the Santa Maria Groundwater Basin, assigned rights to water from the Santa Maria Groundwater Basin, and assigned rights to augmented yield from Twitchell Reservoir. The Santa Maria Groundwater Basin has a total storage capacity of greater than 14,900,000 acre-feet (AF).80 According to the 2023 Annual Hydrologic Report, the municipal groundwater pumpage in 2022 for the City was 10,919 AFY and 7,648 AFY for 2023.81 The Santa Maria River Valley Groundwater Basin was adjudicated in 2008, and as part of the adjudication agreement, the City is entitled 14,300 acre-feet per year of groundwater from the Santa Maria River Valley Groundwater Basin. Even with these management restrictions, the City anticipates having sufficient supply to reliably meet projected water demands in Santa Maria through 204582. The proposed Project's water use is estimated to be approximately 25 acre-feet per year (AFY), based on Santa Barbara County's average water demand factors for industrial AFY/1,000 square feet and including water use for landscaping. This equates to 0.17 percent of the City's yearly groundwater entitlement. Current water use for row crops is estimated at 61 AFY based on a typical row crop average water use of 1.86 acre-feet annually per acre (33 acres x 1.86 = 61 AFY)83. This equates to a 36 AFY reduction in water use annually.

The project would receive groundwater in accordance with the City's groundwater pumping restrictions and use nearly a quarter of the current water usage. The project includes two stormwater basins to capture project surface runoff on site for percolation back into the aquifer. The greatly reduced water usage combined with proposed percolation of on-site stormwater would ensure the project would not substantially decrease groundwater supplies, interfere with groundwater recharge, or otherwise impede groundwater management of the Santa Maria Groundwater Basin. Therefore, 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. This impact would be less than significant.

c. i-iv.

Construction

The project site is generally flat, with minimal elevation change across the site, and does not contain any streams, rivers, or other drainage features that may cause flooding. Alteration of the project site would occur during construction. The project would require 86,820 cubic yards of cut and 237,492 cubic yards of import fill during grading. Approximately 150,672 net cubic yards of soil would be required for the project.

Given the project site's relatively flat topography, erosion during construction is unlikely to be substantial and with implementation of the BMPs required for the SWPPP, discussed in section a. above, would control erosion and siltation during construction. The implementation of BMPs required for the SWPPP would prevent or control on- and off-site run-off or flooding during construction. The construction and operation of the proposed stormwater basin would also prevent flooding on- and off-site during construction by

[79] Santa Maria, City of. 2015 2015 Urban Water Management Plan. Available: https://www.cityofsantamaria.org/home/showpublisheddocument/15109/636008185115470000 (accessed March 2025)
[80] Central Coast Hydrologic Region Santa Maria River Valley Groundwater Basin. 2004. Available: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/3_012_SantaMariaRiverValley.pdf (accessed March 2025)
[81] 2022 Annual Report of Hydrogeologic Conditions, Water Requirements, Supplies and Disposition. 2023. Available: file:///C:/Users/mlara/Downloads/2022_SMVMA_Annual_Report_FINALupdated_20230519.pdf (accessed March 2025)
[82] 2022 Annual Report of Hydrogeologic Conditions, Water Requirements, Supplies and Disposition. 2023. Available: file:///C:/Users/mlara/Downloads/2022_SMVMA_Annual_Report_FINALupdated_20230519.pdf (accessed March 2025)
[83] Water Resources of Santa Barbara County 2000

capturing project runoff to prevent flooding or impact flood flows. Implementation of the BMPs required for the previously discussed SWPPP and construction of the stormwater basin would reduce pollutants in stormwater and not contribute runoff water in exceedance of existing or planned capacities on or off the project site or impede or redirect flood flows during construction. Impacts would be less than significant.

Operation

Consistent with the City Municipal Code Chapter 8-12A and the Central Coast Regional Water Quality Control Board's stormwater regulatory requirements, the project would construct bio-retention basins to convey and infiltrate stormwater from a 95th percentile storm event and use permeable pavers to reduce site runoff. The proposed stormwater basin would control erosion during operation by capturing stormwater runoff, subsequently capturing sediment in the basin if erosion did occur on-site. The stormwater basin would be engineered to accommodate stormwater flow on the project site, designed to control the flow rate of on-site runoff so that it would not exceed pre-development conditions and comply with mandatory requirements for the NPDES for siltation and sediment control. Additionally, a Stormwater Control Plan would be prepared. Implementation of these requirements would minimize potential impacts related to on-site erosion, siltation, flooding, and runoff; therefore, impacts would be less than significant.

d. According to the Federal Emergency Management Agency (FEMA), the project site is located outside of a flood hazard area.[84] Therefore, the proposed project would not impede or redirect flood flows. No impact would occur. The project site is located approximately 10 miles east of the Pacific Ocean and therefore is not subject to flood or tsunami related events. No large bodies of water exist in proximity to the project site which could subject the project site to a seiche. The closest body of water to the project site is the Santa Maria River, located approximately 3.5 miles northeast of the project site. Because the proposed project is located outside of flood hazard, tsunami, and seiche zones, the project would not risk release of pollutants due to project inundation. No impact would occur.

e. The Basin Plan, published and managed by the Central Coast Regional Water Quality Control Board (RWQCB), is the water quality control plan applicable to the project area. The Basin Plan designates beneficial uses and water quality objectives for waters of the state, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives.[85] The project would be required to comply with the Central Coast RWQCB's stormwater regulatory requirements and other water control plans intended to manage water quality and groundwater supply. As stated in Threshold 10(a), project construction would involve soil-disturbing activities that would effectively be controlled through implementation of erosion control measures and BMPs as part of the required SWPPP. Impacts to water quality during operation would effectively be controlled through the implementation of the proposed stormwater basin. Because the proposed project would not conflict with or obstruct implementation of the Basin Plan, impacts would be less than significant.

Mitigation Measure(s) incorporated into the project: Implementation of the proposed project would not result in potentially significant environment impacts hydrology or water quality. Therefore, no mitigation measures are required.

[84] Federal Emergency Management Agency (FEMA). 2025. FIRM Flood Map. https://msc.fema.gov/portal/search?AddressQuery=santa%20maria (accessed March 2025)
[85] Regional Water Quality Control Board. (RWQCB) 2025. Central Coast Regional Water Quality Control Board Available: https://www.waterboards.ca.gov/centralcoast/ (accessed March 2025)

11. Land Use and Planning

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Physically divide an established community?				X
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?			X	

Setting:

The project site is located within the West Stowell Specific Plan area. It is zoned Planned Development/Commercial Manufacturing / Agricultural Overlay Zoning District (PD/CM-AG) and a land use designation of HCM. The project site is bordered on the north by West Stowell Road. The land north of West Stowell Road is in unincorporated Santa Barbara County. There is an operating freight rail track abutting the south boundary of the site. Neighboring land uses include agricultural, industrial, and commercial uses, including a Driscoll's packaging facility, a vacant parcel currently being developed as an agriculture box warehouse, an animal shelter, trucking facility, and various farms.

Impact Discussion:

a. The proposed project would be compatible with surrounding development, including an existing Driscoll's packaging facility and a new warehouse currently under construction adjacent to the site. These facilities are comparable in type and scale to the proposed project. The project would be confined to a single 33.3-acre project development site and would not obstruct access or bisect any established neighborhoods. Therefore, it would not physically divide an established community. There would be no impact.

b.. The project would be consistent with the existing land use designation of HCM. According to the City of Santa Maria West Stowell Specific Plan, the Heavy Commercial Manufacturing (HCM) Land Use designation of the Specific Plan permits activities which manufacture and retail on the same site, as well as other heavy commercial uses which may be land extensive or require transport of materials by heavy truck. It is the intent of the West Stowell Specific Plan to use this designation along with an agricultural overlay as a means of safeguarding and encouraging agriculturally-related industrial activity adjacent to existing agricultural uses.[86] Additionally, the West Stowell Specific Plan designates the zoning of the project site as Planned Development/Commercial Manufacturing/Agricultural Overlay (PD/CM-AG), which is the zoning that corresponds to the Specific Plan's HCM Land Use. The project is not a use permitted by right in the Commercial/Manufacturing/Agricultural Overlay Zoning District (PD/CM-AG) , however, under the West Stowell Specific Plan similar uses are permitted subject to obtaining a conditional use permit according to the procedures set forth in Chapter 35 of the Santa Maria Zoning Ordinance. A use may be found to be similar if the Planning Commission finds that the project: (i) falls within the intent and purpose of the Commercial/Manufacturing/Agricultural Overlay Zoning District (PD/CM-AG); (ii) will not be obnoxious or detrimental to the public welfare; and (iii) is compatible with adjoining land uses.

[86] Santa Maria, City of. 1994. West Stowell Specific Plan. Available: https://www.cityofsantamaria.org/home/showpublisheddocument/6437/635530503431800000. (accessed April 2025).

The project is consistent with the Planned Development/Commercial Manufacturing/Agricultural Overlay Zoning District (PD/CM-AG) as it would not impact or displace any existing nearby agricultural facilities or operations as discussed in Section 2 Agriculture and Forestry Resources. As such, the project will not be obnoxious or detrimental to the public welfare. The proposed project would be compatible with surrounding agricultural operations and would not introduce land use conflicts (such as noise, dust, or access issues) that might negatively impact adjacent parcels. The proposed facility would be comparable in size and massing to both the adjacent Driscoll's packaging facility and the new warehouse currently under construction. Its scale and form are consistent with existing and planned development in the immediate vicinity. If the Planning Commission determines a conditional use permit is appropriate and makes the findings discussed above, the project would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect and the impact would be less than significant. Based on this analysis, the impact upon any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environment impact would be less than significant with the Planning Commission making that finding.

Mitigation Measure(s) incorporated into the project: Implementation of the proposed project would not result in potentially significant environment impacts to land use and planning. Therefore, no mitigation measures are required.

12. Mineral Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				X
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?				X

Setting:

Within the City, the primary resources suitable for mining and conservation are sand, rock, and oil. The Santa Maria River channel is considered to be a valuable mineral resource. The river contains the largest resources of Portland cement concrete-grade aggregate and almost 90 percent of the available alluvial sand and gravel resources in the Santa Barbara-San Luis Obispo County region. Mining has occurred along the Santa Maria and Sisquoc Rivers since the early 1900s.[87]

The project site is not located near areas suitable for mining mineral resources. While the site contains a plugged and abandoned oil well, indicating historical resource extraction, current conditions do not support ongoing mining or drilling. The nearest mineral resource zone, the Santa Maria River, is classified as a Mineral Resource Zone #2 (MRZ-2), indicating the presence or high likelihood of significant mineral deposits. The river is approximately seven miles northwest of the project site. Since the site is not within an MRZ and is in a developed area, it is not practical for mineral extraction or mining.

Impact Discussion:

a-b. The project site is located within the Santa Maria Valley Oil Field. There is one plugged oil and gas well located in the southwest portion of the project site and no identified active oil wells within the project site.[88] Additionally, there are 12 plugged oil and gas wells located within 1,000 feet of the project site.

Construction of the proposed project would occur on a site designated for industrial development where no mineral extraction activities currently take place. While the site is within a designated Mineral Resource Zone (MRZ-2), there are no known mineral resources of regional or state value, nor any locally important mineral resource recovery sites on or near the project site. Given these conditions, the project would not result in the loss of availability of any known mineral resources. Therefore, construction of the project would have no impact related to mineral resources.

Operation of the project would not interfere with existing or future mineral resource extraction, as the site is not planned or designated for such uses. The project would introduce a warehouse facility, which is consistent with the area's zoning and general plan designation. Additionally, the operation of the facility would not preclude mineral extraction nearby. Since the site is not an active or planned mineral resource

[87] City of Santa Maria. 2001. City of Santa Maria General Plan Resources Management Element. Available at: https://www.cityofsantamaria.org/home/showpublisheddocument/598/635488452761730000
[88] California Geologic Energy Management Division. 2025. "Well Finder." Available: https://maps.conservation.ca.gov/doggr/wellfinder/. (Accessed March 2025).

recovery location and would not preclude extraction nearby, project operation would not result in the loss of availability of a known or locally important mineral resource. Therefore, there would be no impact.

Mitigation Measure(s) incorporated into the project: Implementation of the proposed project would not result in potentially significant environment impacts to mineral resources. Therefore, no mitigation measures are required.

13. Noise

Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generation of a substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b. Generation of excessive groundborne vibration or groundborne noise levels?			X	
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 to excessive noise levels?			X	

Setting:

The following noise analysis is supported by the Noise Impact Report prepared by NV5 Engineers & Consultants (NV5) on June 18, 2024. The Noise Impact Report was peer-reviewed by Rincon Consultants as part of the preparation of this Initial Study and updated on May 28, 2025. The report analyzes the potential noise impacts related to both temporary construction activity and long-term operation of the proposed project. The complete Noise Impact Report can be found in Attachment 5.

The major sources of noise in Santa Maria include vehicular traffic on U.S. Highway 101 (US 101) and major city streets, aircraft operations from the Santa Maria Public Airport, train movements along the Santa Maria Valley Railroad, construction projects, commercial activity, and industrial plant activity. The primary sources of noise near the project site include vehicular traffic on Stowell Road, idling trucks at nearby warehouse loading docks, loading and unloading activities at adjacent facilities, and passing trains on the Santa Maria Valley Railroad. Ambient noise levels are typically the highest during the daytime and rush hours. Community noise levels are typically measured in terms of A-weighted decibels (dBA). A-weighting is a frequency correction that correlates overall sound pressure levels with the frequency response of the human ear. Equivalent noise level (Leq) is the average noise level on an energy basis for a specific period. The duration of noise and the time of day at which it occurs are important factors in determining the impact of noise on communities. The Community Noise Equivalent Level (CNEL) and Day-Night Average Level (Ldn) account for the time of day and duration of noise generation. These indices are time-weighted average values equal to the amount of acoustic energy equivalent to a time-varying sound over a 24-hour period.[89] SMMC Chapter 5.5 establishes certain policies to control unnecessary, excessive, and annoying noise in the city in the interest of public health and welfare. According to SMMC Section 5-5.05, construction activities are permitted only between 7:00 a.m. and 6:00 p.m. on weekdays, and between 8:00 a.m. and 5:00 p.m. on weekends. Additional regulations are outlined in Section 5-5.06(e), which defines permitted construction hours, and Section 5-5.09, which details the requirements for obtaining construction noise permits. The City of Santa Maria has adopted specific noise standards for construction-related activities, as outlined in Sections 5-5.03 and 5-5.05. Section 5-5.05 also establishes

[89] City of Santa Maria General Plan Noise Element. 2009. Available: https://www.cityofsantamaria.org/home/showpublisheddocument/596/635488452758600000. (accessed March 2025)

ambient base noise levels by zone and time duration. For residential zones, the daytime noise threshold is 55 dBA Leq for an 8-hour period and 45 dBA Leq during nighttime.

Based on the City's Land Use Element, the project is not located within a major noise impact area or within an Airport Safety Zone.[90] The City's Noise Element includes noise compatibility standards for noise exposure by land use. In addition, SMMC Title 5 Chapter 5-5, the noise standards for industrial and residential uses are 70 exterior dB CNEL and 60 exterior dB CNEL respectively, or 55/45 dBA Leq for residential (daytime/nighttime) or 75/70 dBA Leq for industrial (daytime/nighttime). According to the City's Noise Element, noise-sensitive land uses include residential uses (single and multi-family dwelling, mobile home parks, dormitories and similar uses); hospitals, nursing homes, convalescent hospitals, and other facilities for long-term medical care; and public or private education facilities, libraries, and churches.[91] Sensitive receptors on the project site vicinity include single-family residences located to the southeast of the project with the nearest single-family residence approximately 1,400 feet south of the project site boundary.

Based on the Santa Maria West Stowell Specific Plan, the project site has a land use designation of HCM.[92] This designation is intended to provide space for areas where the possibilities of heavy noise generation exist. The project is surrounded by similar uses, with the nearest existing sensitive receptors located approximately 1,400 feet southeast from the project site in a low-density residential development across the train tracks.

Noise Impact Analysis

NV5 took ambient noise level measurements at locations near the proposed facility. Short-term 15-minute measurements were made during the daytime, evening, and nighttime hours on May 23, 2024. The results of the noise level measurements are summarized in Table 16.

Table 16 Summary of Short-Term Noise Measurements (dBA)

Sample Location	ID	Sample Date	Sample Time	Description	Leq (dBA)	L90 (dBA)	LSmax (dBA)
1501 S. Fulton Ct., Santa Maria, CA 93458	1	5/23/2024	4:05pm-4:20pm	Noise was primarily coming from the vehicles driving on A Street and La Brea Avenue	65.8	46.5	83.7
	2		8:22pm-8.37pm	Noise sources were vehicles driving by and pedestrians	56.8	51.1	73.7
	3		11:07pm-11.22pm	During 15-minute sample, only one car drove by. Wind created noise interference and fence rattling	54.2	40.3	75.3

dBA = A-weighted decibels

Leq – Equivalent continuous level over a period of 15 minutes

LS max = The maximum Sound Level with Slow Time weighting during the measurement period

L90 = A-weighted sound level of all sound associated with a given environment, excelled 90 percent of the time. L90 refers to ambient noise level in this report.

[90] City of Santa Maria General Plan Land Use Element. 2011. Available: https://www.cityofsantamaria.org/home/showpublisheddocument/610/635488452782530000. (accessed March 2025)
[91] City of Santa Maria General Plan Noise Element. 2009. Available: https://www.cityofsantamaria.org/home/showpublisheddocument/596/635488452758600000 (accessed March 2025)
[92] City of Santa Maria General Plan West Stowell Specific Plan 1994. Available: https://www.cityofsantamaria.org/home/showpublisheddocument/6437/635530503431800000. (accessed June 2025).

Impact Discussion:

a.

Construction

Construction noise levels were modeled for all major phases of the proposed project including site preparation, grading, building, paving, and coating; and were found to remain below the Federal Transit Administration's (FTA) 80 dBA Leq threshold at the nearest sensitive receptor, located approximately 1,400 feet away. In addition, all construction activities are expected to occur within the City's permitted hours, further minimizing potential noise impacts.

Construction-related noise impacts were assessed using the Federal Highway Administration's (FHWA) Roadway Construction Noise Model (RCNM), which estimates typical noise levels generated by various types of equipment. This analysis applied the reasonable criteria provided by the FTA for assessing construction noise impacts, as outlined in its Transit Noise and Vibration Impact Assessment Manual.[93] Based on this methodology, the Noise Impact Analysis concluded that proposed project construction activities would generate noise levels below the FTA's threshold of 80 dBA Leq during daytime at residential uses. Therefore, the temporary increase in noise levels during construction of the proposed project is not expected to exceed local standards.

The project would be constructed in five primary phases: site preparation, grading, building construction, paving, and architectural coating. Each phase would involve the use of standard construction equipment, as described below. Table 17 provides a summary of the equipment anticipated for use during each phase of construction.

Noise generated by project construction would be temporary and not exceed local thresholds. Project operation noise would be similar to or less than that of the railway traffic along the Santa Maria Valley Railroad. Therefore, off-site traffic noise impacts would also be less than significant.

Table 17 Construction Equipment Maximum Noise Levels

Type of Equipment	Estimated Usage	Lmax at 50 feet (dBA)
Air Compressors	40%	77.7
Excavators	40%	80.7
Cranes	16%	80.6
Forklifts	40%	85.0
Generators	50%	80.6
Rubber Tired Dozers	40%	81.7
Tractors/Loaders/Backhoes	40%	77.6
Graders	40%	85.0
Welders	40%	74.0

Source: Attachment 5

[93] Federal Transit Administration. 2018. Transit Noise and Vibration Impact Assessment Manual. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. (accessed June 2025).

The nearest sensitive receptor considered in this analysis is a single-family residence located at 1501 S. Fulton Court, approximately 1,400 feet from the nearest boundary of the project site. As shown in Table 18, predicted noise levels from construction activities are estimated to range between 44.7 dBA and 55.3 dBA. These levels are well below the FTA construction noise threshold of 80 dBA. Therefore, short-term construction-related noise impacts would be less than significant.

Table 18 Predicted Construction Noise Levels at Nearest Sensitive Receptors

Phase	Expected Equipment	Daytime Ambient Noise Levels (Leq; dBA)[1]	Predicted Noise Levels (Leq; dBA) Sensitive Receptor 1 (1,400 ft)
Site Preparation	Rubber Tired Dozer, Backhoes, Other Equipment >5HP	55.0	54.9
Grading	Rubber Tired Dozer, Backhoes, Excavator, Graders	55.0	55.1
Building Construction	Cranes, Generators, Backhoes, Welders, Other Equipment >5HP	55.0	55.3
Paving	Paver, Roller	55.0	47.7
Architectural Coating	Air compressors	55.0	44.7

[1] Source: City of Santa Maria Municipal Code, Section 5-5.05, Ambient Base Noise Levels.

Source: Attachment 5

Operation

The project would introduce new operational noise sources, including increased on-site traffic from trucks and employee vehicles; stationary equipment such as HVAC units and other mechanical systems; an on-site fleet service station; and intermittent noise from backup alarms from haul trucks during loading and unloading activities. According to SMMC Section 5-5.05, the allowable noise threshold for industrial zones is 75 dBA Leq over an 8-hour daytime period and 70 dBA Leq at night. Additionally, the City's long-term noise standard for industrial land uses such as manufacturing, warehousing, and agricultural operations is 70 dBA CNEL. Noise generation from trucks and vans entering and leaving the facility from Stowell Road would likely be the largest contributor to elevated CNELs. The resulting CNEL levels are anticipated to remain below the 70 dBA threshold established for industrial areas. Table 19 and Table 20 below provide detailed projections of noise levels at the nearest sensitive receptor.

Table 19 Receptor Predicted Noise Levels

No.	Receptor Name	Ambient Noise Levels dBA[1]				Predicted Noise Levels dBA			Predicted Noise Level Exceeded Ambient Noise Levels?		
		Floor	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
1	1501 S Fulton Ct, Santa Maria, CA 93458	GF	65.8	56.8	54.2	40	40.4	39.3	No	No	No
1	1501 S Fulton Ct, Santa Maria, CA 93458	1	65.8	56.8	54.2	40	40.1	39.2	No	No	No
2	1689 W Stowell Rd, Santa Maria, CA 93458	GF	65.8	56.8	54.2	46.5	38.9	38.7	No	No	No
3	1677 W Stowell Rd, Santa Maria, CA 93458	GF	65.8	56.8	54.2	42.1	40.7	40.2	No	No	No
4	1753 A S. Santa Maria, CA 93458	GF	65.8	56.8	54.2	36.9	37	36.9	No	No	No

[1] Ambient Noise Levels are based on the noise measurements taken by NV5 on May 23, 2024. The measurements were 15-min Leq measurements. Ambient Noise Levels were used as they are greater than Ambient Base Noise Levels provided by the City in Table 16.

Table 20 Receptor Predicted Noise Levels CNEL

No.	Receptor Name	Floor	Exterior CNEL Threshold (dBA)	Predicted CNEL (dBA)	Threshold Exceeded?
1	1501 S Fulton Ct, Santa Maria, CA 93458	GF	60	45.9	No
1	1501 S Fulton Ct, Santa Maria, CA 93458	1	60	45.8	No
2	1689 W Stowell Rd, Santa Maria, CA 93458	GF	60	47.1	No
3	1677 W Stowell Rd, Santa Maria, CA 93458	GF	60	46.9	No
4	1753 A St, Santa Maria, CA 93458	GF	60	43.3	No

As discussed above, the project site is located approximately 1,400 feet north of the nearest sensitive receptor, a single-family residence situated across the Santa Maria Valley Railway. This residence is already subject to comparable or higher ambient noise levels due to ongoing railway operations. Noise modeling conducted for the project indicates that all estimated operational noise levels would remain below the applicable ambient base noise level thresholds established by the SMMC. This compliance with regulatory standards is the primary basis for concluding that long-term operational noise impacts would be less than significant. Additionally, the residential neighborhood is shielded by an eight-foot-tall masonry sound wall, which provides further noise attenuation. Given these conditions, the project is not expected to result in a permanent increase in ambient noise levels or expose nearby residents to long-term noise levels exceeding applicable standards. Therefore, long-term operational noise impacts would be less than significant.

b. Construction activities known to generate excessive groundborne vibration, such as pile driving and blasting, would not be required for proposed project construction. Therefore, the greatest source of construction vibration is anticipated to be grading and site preparation activities. Project construction would utilize loaded trucks, front-end loaders, and excavators. The proposed project would not include significant stationary sources of vibration, such as pile drivers, vibratory hammers, or large-scale industrial machinery. Typical operational equipment associated with the proposed project would be limited to light-duty mechanical systems that do not generate perceptible groundborne vibration at nearby receptors. As shown in Table 21 below, groundborne vibration levels would not exceed the applicable vibration thresholds for human annoyance and structural damage at the nearest building. Construction-related vibration impacts

would be less than significant, and since the proposed project does not include any substantial operational sources of vibration, operational vibration impacts would also be less than significant.

Table 21 Vibration Levels at Nearest Buildings

Equipment	Nearest Receptor Type	Nearest Receptor Type (sf)	PPV_{ref}	PPVx	Threshold
Large Bulldozer	Residential	1400	0.089	0.001	0.04
Loaded Truck		1400	0.076	0.001	0.04
Large Bulldozer	Structural	80	0.089	0.02	0.50
Loaded Truck		80	0.076	0.02	0.50

c. The closest public or public use airport to the project site is Santa Maria Airport, located approximately two miles southeast of the project site. According to Exhibit 4-5 of the Santa Maria Airport Land Use Compatibility Plan, the project site is within Review Area 2, which pertains to overflight and airspace protection but not to areas of elevated noise or safety concerns. Since the project site is outside of the airport's primary noise contours and safety zones (Review Area 1), users and workers at the site would not be exposed to excessive aviation-related noise. Therefore, aviation noise impacts would be less than significant.

Mitigation Measure(s) incorporated into the project: Implementation of the proposed project would not result in potentially significant environmental impacts to noise. Therefore, no mitigation measures are required.

14. Population and Housing

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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)?			X	
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

Setting:

Santa Maria has consistently been the fastest growing city in Santa Barbara County over the last two decades. According to the California Department of Finance, over 60 percent of the county's population growth occurred in the City of Santa Maria from 2010 to 2020.[94] It is anticipated that this trend will continue throughout the current decade as Santa Maria continues to be the hub for northern Santa Barbara County. The proposed project would develop a warehouse in an area of the City zoned for PD-CM AG (Planned Development-Commercial Manufacturing - Agricultural) zone district uses.

Impact Discussion:

a. The proposed project would not directly induce substantial unplanned population growth, as it does not include residential development. The project also would not induce population growth through the creation of jobs during either construction or operation. While the construction phase would generate temporary employment opportunities, these jobs would likely be filled by the existing regional workforce and would not require an influx of new residents. The operational phase of the project would create approximately 588 new jobs. However, given the project's location within an urbanized portion of the city with an existing employment base, these jobs are expected to be filled by local workers as the City's available worker base is 41,620.[95] The project would result in a 1.41 percent increase in jobs in the City of Santa Maria, which would not substantially induce population growth indirectly.

   The proposed project does not include the extension of roads to currently inaccessible areas, and utility connections would be limited to connections to existing infrastructure adjacent to the project site. As such, the project would not induce growth indirectly. Impacts would be less than significant.

b. The project site is undeveloped. As such, project construction would not displace existing people or housing, nor necessitate the construction of replacement housing elsewhere. No impact would occur.

Mitigation Measure(s) incorporated into the project: Implementation of the proposed project would not result in potentially significant environment impacts to population and housing. Therefore, no mitigation measures are required.

[94] California Department of Finance. 2021. Population Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Benchmark. Available at: https://dof.ca.gov/Forecasting/Demographics/Estimates/e-4-population-estimates-for-cities-counties-and-the-state-2011-2020-with-2010-census-benchmark-new/

[95] SBCAG. 2019. Regional Growth Forecast 2050 Santa Barbara County. Available at: https://www.sbcag.org/wp-content/uploads/2023/08/regional_growth_forecast_2050.pdf

15. Public Services

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for 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:				
i. Fire protection?			X	
ii. Police protection?			X	
iii. Schools?			X	
iv. Parks?			X	
v. Other public facilities?			X	

Setting:

Fire protection is provided to the project site by the Santa Maria Fire Department (SMFD). SMFD provides all risk emergency services, as well as public education programs, fire prevention, and life safety measures to the City's residents. The project site is approximately 2.9 miles to the southwest of SMFD Station #1 located at 300 West Cook Street. The project site would be served by the City of Santa Maria Police Department Station located at 1111 West Betteravia Road, which would be approximately 4.3 miles southeast of the project site. The Santa Maria Bonita School District serves the City's elementary and junior high schools with high schools served by the Santa Maria Joint Union High School District. Minami Park is the nearest park to the project site and is about 2.5 miles east of the project site. Minami Park provides 29 acres of recreational spaces including soccer fields, tennis courts, barbecue pits, and picnic areas.

Impact Discussion:

a. i-v.

The proposed delivery warehouse project would be located within an already developed area of the City of Santa Maria, where existing public services have been established to accommodate urban development. The project would not directly or indirectly induce population growth and, therefore, would not increase demand for public facilities such as fire and police protection, schools, parks, or other public facilities. Additionally, the project would not introduce features requiring additional or unusual fire or police protection that would necessitate the construction of new public facilities, which could result in environmental impacts.

Once operational, the delivery warehouse would function as a logistics facility with 24/7 operations. The facility would include fire suppression systems and comply with all relevant fire safety regulations, ensuring that it does not create a substantial additional burden on fire services. The nature of the facility's operations, which primarily involve package sorting and distribution, does not inherently increase demand for police

services beyond standard enforcement levels. Since the project does not include residential development and would not induce population growth, it would not generate a significant increase in school-aged children or impact local school enrollment. Additionally, because the project does not introduce new residents, there would be no increase in demand for parks or recreational facilities. The project would not introduce any features requiring additional or unusual fire or police protection that would necessitate the construction of new public facilities, which could result in environmental impacts. Therefore, impacts on fire protection, police services, schools, parks, and other public facilities during operation of the facility would be less than significant.

Mitigation Measure(s) incorporated into the project: Implementation of the proposed project would not result in potentially significant environment impacts to public services. Therefore, no mitigation measures are required.

16. Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?			X	
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?			X	

Setting:

The Santa Maria Recreation and Parks Department operates 234 acres of developed parkland in 31 neighborhood and community parks, part of the 1,774-acre Los Flores Ranch Park property, Abel Maldonado Community Youth Center, Hagerman Softball Complex, Paul Nelson Aquatics Center, Elwin Mussell Senior Center, Veterans' Memorial Center and other community centers. The department also provides programs in aquatics, youth and adult sports, therapeutics and senior services, Special Olympics, community classes and events, youth and teen programs, and the Mayor's Task Force on Youth Safety[96].Minami Park is located approximately 2.5 miles east of the project site and provides amenities such as a playground, basketball courts, a sand volleyball court, softball field, lighted tennis courts, bocce ball, and a large open grass area. A future 19-acre sports complex is planned to be developed within the Blosser Southeast Area 5B Specific Plan located approximately 1.6 miles to the east of the project site.

Impact Discussion:

a-b. The proposed project would primarily employ individuals from the existing workforce in Santa Maria and would not induce substantial population growth, directly or indirectly, nor include or necessitate the development or expansion of recreational facilities. As a result, the project would not induce substantial demand for neighborhood and regional parks or other recreational facilities. Any potential increase in use would be minor and would not lead to substantial physical deterioration or accelerated wear of these facilities. Therefore, impacts would be less than significant.

Mitigation Measure(s) incorporated into the project: Implementation of the proposed project would not result in potentially significant environment impacts to public services. Therefore, no mitigation measures are required.

[96] City of Santa Maria. Santa Maria Recreation and Parks Department. https://www.cityofsantamaria.org/services/departments/recreation-and-parks-5013 (accessed April 2025).

17. Transportation

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	X			
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	X			
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d. Result in inadequate emergency access?			X	

Setting:

The following traffic analysis is supported by the Traffic Impact Study and VMT Analysis prepared by NV5 on August 22, 2024, and December 5, 2024, respectively. The Traffic Reports were peer-reviewed by Rincon Consultants as part of the preparation of this Initial Study and updated on May 28 and 29. The report analyzes the potential VMT impacts related to the proposed project. The complete reports can be found in Attachment 6.

US 101 is located approximately 2.80 miles east of the project site. The project site is also approximately 1.08 north of State Route 166 (SR 166) and 4 miles southwest of State Route 1 (SR 1). Local access to the project site is provided by West Stowell Road with regional access provided by US 101, SR 166, and SR 1. The primary north-south streets in the City of Santa Maria are South Broadway, South Blosser Road/Skyway Drive, and Miller Street. The main east-west streets include Donovan Road, Alvin Avenue, Main Street, Stowell Road, Battles Road, McCoy Lane, and Betteravia Road.

The project site is also served by a variety of public transit options, with several Santa Maria Regional Transit (SMRT) Public Transit bus stops along Betteravia Road. The City also provides regional bus services including the Breeze Bus, Clean Air Express, Guadalupe Flyer, and the San Luis Obispo Regional Transit Authority (RTA) which connects the City of Santa Maria with the City of San Luis Obispo. The city also provides other forms of transportation. The City's Rail System includes passenger and freight service. Trails and paths, as well as bike lanes, serve as the primary form of pedestrian transportation. Additionally, commercial and general aviation services are available from the Santa Maria Public Airport, approximately two miles southeast of the project site.

Impact Discussion:

a. The proposed project has the potential to result in a significant impact due to inconsistencies with the City of Santa Maria's transportation-related plans or policies. This includes potential conflicts with local and regional goals aimed at managing traffic congestion, improving intersection performance, and reducing VMT. These potential conflicts would result from the proposed project's potential to generate additional traffic. This potential impact will be further evaluated in the Environmental Impact Report.

b. The proposed project would generate VMT by accommodating employee commute trips, dispatching delivery vans for package distribution, and utilizing private carrier vehicles for additional deliveries, and could exceed thresholds established by the City of Santa Maria. Therefore, the proposed project has the potential to result in a significant impact related to VMT under CEQA Guidelines Section 15064.3(b). This potential impact will be further evaluated in the Environmental Impact Report.

c. The proposed project would not change the design or alignment of any adjacent roadways and does not include any road improvements or design features that would increase hazards or would introduce incompatible uses. The proposed project would adhere to the SMMC Section 12-33 (Commercial and Industrial Performance Standards), as well as Sections 12-27.02 and 12-27.03 regarding fence, walls, hedges and corner cutback requirements. The Santa Maria Public Works Department has reviewed the proposed project and confirmed that it would not create hazardous roadway conditions. Therefore, the project would result in less than significant impacts related to hazardous design features.

d. All public road improvements would be required to adhere to the SMMC Title 7 Traffic Regulations. Emergency access to the project site would be provided by West Stowell Road via three unprotected driveway accesses. The westernmost driveway would provide access for all line-haul trucks and the central and easternmost driveways would provide access for all vans and employees. The proposed project has been reviewed by the Santa Maria Fire Department (SMFD) and would follow the Santa Maria Fire Department's requirements to make all three access roads minimum width to allow fire apparatus access to the proposed facility. Access and circulation would be designed to comply with all safety and street improvement standards per the SMFD and the City's Municipal Code Title 7 Traffic Regulations. Therefore, the proposed project would result in less than significant impacts related to emergency access.

Mitigation Measure(s) incorporated into the project: Mitigation measures may be identified in the Environmental Impact Report and incorporated into the project at that time.

18. Tribal Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. 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:				
i. 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			**X**	
ii. 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, the lead agency shall consider the significance of the resource to a California Native American tribe.			**x**	

Setting:

The project site includes two vacant parcels within the 1600 block of West Stowell Road, and the site is currently occupied by row crops for agricultural production. The Santa Maria Valley is not a highly sensitive area for archaeological or tribal resources. The project site is located within the City's Archaeological Sensitivity Area 3, which is categorized as having a negligible sensitivity to contain archaeological resources.[97]

California Assembly Bill 52 of 2014 (AB 52) expanded CEQA by defining a new resource category of "tribal cultural resources." AB 52 establishes 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" (PRC Section 21084.2). It further states the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3). PRC Section 21074 (a)(1) (A-B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and is:

1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or
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 PRC Section 5024.1(c). In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

[97] Cultural Resource Desktop Review, Albion Environmental Inc., Attachment 4

AB 52 establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. Under AB 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project," specifically with those Native American tribes that have requested notice of projects proposed within the jurisdiction of the lead agency. Consultation begins with a written notification that must include a brief description of the proposed project, the project's location, the lead CEQA agency contact information, and notification that the California Native American Tribe has thirty (30) days to request consultation. Upon receipt of a written response from a California Native American Tribe requesting consultation, the lead CEQA agency and the California Native American Tribe requesting consultation shall begin the AB 52 process.

The Santa Ynez Tribal Elders Council, as well as other Tribes, identified on the Native American Heritage Commission Tribal Consultation List for Santa Barbara County are routinely contacted to determine if AB 52 tribal consultation is required for projects subject to CEQA review. The following tribes were notified for consultation regarding the project:

- Chumash Council of Bakersfield
- Coastal Band of the Chumash Nation
- Northern Chumash Tribal Council
- Santa Ynez Band of Chumash Indians
- yak tityu tityu yak tiłhini – Northern Chumash Tribe

The City received a response from Santa Ynez Band Chumash Indians on October 23, 2024, indicating that no further consultation on the project is necessary. However, the letter requested that the tribe be notified if supplementary literature reveals additional information, the scope of the work changes, or if the project would warrant the presence of a Native American monitor in place during ground disturbance.

Impact Analysis:

a. i-ii

The City of Santa Maria notified the tribes who formally requested notification on CEQA projects under AB 52. Santa Ynez Band Chumash Indians were the only tribe to respond and requested no further consultation at this time. None of the other California Native American tribes responded to the City's notification requesting consultation or further information regarding the proposed development. Therefore, no further consultation has taken place for this project.

To assist the City with AB 52 Consultation, Albion coordinated to obtain a list of Native American Stakeholders from the Native American Heritage Commission (NAHC) and conducted an NAHC Sacred Lands Search (SLF) for the project. The results of the SLF were negative, and there are no Tribal Cultural Resources on file at the NAHC that are located within the project site. The NAHC identified seven individuals representing four Tribes that are traditionally and culturally affiliated with the geographic area of the project who were all contacted during AB 52 outreach. The lack of request for tribal consultation and identified tribal cultural resources within the project site results in a less than significant impact on tribal cultural resources.

Mitigation Measure(s) incorporated into the project: Implementation of the proposed project would not result in potentially significant environment impacts to tribal cultural resources. Therefore, no mitigation measures are required.

19. Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
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?			X	
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?			X	
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

Setting:

The primary utility services the City provides are related to water, wastewater and solid waste. The City of Santa Maria derives water from multiple supply sources including local groundwater, purchased water from the State Water Project, associated return flows recaptured from the Santa Maria Groundwater Basin, assigned rights to water from the Santa Maria Groundwater Basin, and assigned rights to augmented yield from Twitchell Reservoir. The city owned and operated Wastewater Treatment Plant is located on the west side of Santa Maria on Black Road. The City of Santa Maria owns and operates a non-hazardous Class III Regional Landfill located on the east side of Santa Maria. The City operates a fleet of solid waste collection vehicles that collect a majority of solid waste generated in the City and brought to the Santa Maria Regional Landfill. Curbside recycling is also collected by the city fleet.

Impact Discussion:

a-b. A significant impact would occur if a project increased water consumption to such a degree that the capacity of facilities currently serving the project site would be exceeded or that new water sources would need to be identified.

The proposed project's water use is estimated to be approximately 2.55 acre-feet per year (AFY), based on average water demand for industrial warehouse uses (3.4 gallons per square foot per year), which

includes anticipated water use for landscaping.[98]. As stated in the City's 2020 Urban Water Management Plan (UWMP), the City of Santa Maria derives water from multiple supply sources including local groundwater, purchased water from the State Water Project, associated return flows recaptured from the Santa Maria Groundwater Basin, assigned rights to water from the Santa Maria Groundwater Basin, and assigned rights to augmented yield from Twitchell Reservoir (City of Santa Maria 2021). The City's groundwater supplies are derived from seven active groundwater wells within the Santa Maria Groundwater Basin, which have a capacity of 23,426 AFY. According to the 2020 Annual Hydrologic Report for the Santa Maria Valley Management Area, the municipal groundwater pumpage in 2020 for the City was 7,492 AFY. Assessment of hydrogeologic conditions in 2020 showed that groundwater levels were similar to those in 2019, with one localized low in the Twitchell Recharge Area. Therefore, the proposed project would not require new, relocated, or expanded facilities to supply water to the project.

The City's Wastewater Treatment Plant on Black Road would provide sewer service to the property. The project must comply with Chapter 8-12 of the City Code (Wastewater Collection, Treatment and Disposal) and any wastewater discharged to the City system must not interfere with the functioning of the City wastewater treatment plant or compliance with its discharge requirements. The City's Sewer System Management Plan established capacity enhancement measures to address ongoing upgrades associated with growth of the city as development occurs. The proposed project would increase existing wastewater generation on-site through the development of the proposed facilities, including restrooms. However, the project is consistent with the General Plan's land use designation for the site and would not generate growth beyond that anticipated in the General Plan and for which wastewater facilities have been planned. The project would replace an existing undersized (30-inch diameter) sewer main that runs below the project site, upgrading to a 48-inch diameter per City capital improvement plans to accommodate planned future demand once warranted. This proposed upgrade is intended to prevent future disruption, when the upgrade is required after the project is constructed. This size increase would not increase capacity as the upstream and downstream pipes would remain at 30 inches in size. Project-generated wastewater does not necessitate this proposed upgrade. Rather, the existing sewer main is undersized for planned development, and would be replaced as part of the project to minimize future disruptions. Therefore, the wastewater treatment requirements of the City's Wastewater Treatment Plant on Black Road would not be exceeded, and potential impacts would be less than significant.

The project would implement a Stormwater Management Plan to ensure the effective flow of water through the project site. Planned stormwater control measures include installation of a roof drain disconnect, on-site retention-based infiltration, and minimizing impervious areas via permeable pavers and bioretention basins. The drainage system would be designed to control the flow rate of on-site runoff to not exceed predevelopment conditions. Additionally, the drainage patterns of the area would remain unaltered. All on-site stormwater management design features would be consistent with the City of Santa Maria standards and specifications and would be approved by the City Engineer. The City is covered by the State Water Resources Control Board (SWRCB) Order No. 2013-0001-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004. The City Municipal Code includes Chapter 8-12A (Stormwater Runoff Pollution Prevention) as part of meeting the state requirements. Section 8-12A.04 prohibits stormwater discharges unless they are in conformance with the statewide General Permit and the specific requirements of the RWQCB Resolution No. R3-2013-0032 Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region. No offsite drainage improvements or modifications would be necessary.

The project would not necessitate the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities. Pacific Gas & Electric power lines and Xfinity internet/telecommunication lines are located on West Stowell Road at the project site and can adequately provide service with no need to expand facilities. The project is not installing any natural gas appliances or heating, so there are no natural gas connections proposed.

Overall, the project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. In addition, sufficient

[98] U.S. Energy Information Administration

water supplies would be available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. Therefore, impacts would be less than significant.

c. Wastewater generated by the project would be treated at the City-owned Wastewater Treatment Plant. The plant's current capacity is 13.5 million gallons per day, allowing the City to serve a population of up to 120,000 people (City of Santa Maria 2024). The City's UWMP includes population projections through 2045 and estimates a service population of 135,411 in 2045.[99] Santa Maria has a current population of approximately 109,477, as the project does not include residential development, it is not anticipated to increase the City's population. Based on the projected population in Santa Maria, the City's Public Works Department, consistent with the findings from the City's 2012 Utility Capacity Study, has determined that the existing wastewater treatment plant would continue to be adequate for future wastewater demands, including those of the project and future commitments through 2035.[100] Therefore, the project would not require expansion of the City's existing treatment capacity due to the project, in addition to the provider's existing commitments, and this impact would be less than significant.

d-e. The City currently disposes of solid waste at the Santa Maria Regional Landfill, located on East Main Street in Santa Maria. The Santa Maria Regional Landfill has a remaining capacity of approximately 2.8 million cubic yards of waste and an estimated closure date of 2034.[101] The City has also initiated processing of a new landfill, the Santa Maria Integrated Waste Management Facility (IWMF; Facility No. 42-AA-0076), located within Los Flores Ranch, just east of U.S. 101 in an unincorporated portion of Santa Barbara County. The new facility would have a design capacity of approximately 130.9 million cubic yards of waste with an estimate closure date of 2105.[102]

As the project site is currently undeveloped, demolition is unnecessary and would reduce the amount of potential construction debris. The project would be required to comply with local and state regulations regarding solid waste, including CalGreen Code Section 5.408.1, which requires developers to recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste. Waste generated during construction would be short term and not anticipated to exceed capacity of the Santa Maria Regional Landfill.

Operation of the warehouse would produce an estimated 3,378 pounds of trash per day, or 617 tons per year plus total of 11 tons for the service center, based on CalRecycle Commercial Sector Generation Rate of 1.42 lb./100 square foot/day for warehousing and 0.9 lb./100 square foot/day for a service station. This adds up to 628 tons per year.[103] This equates to approximately 2,466 cubic yards per year, which represents approximately 0.09% of the remaining capacity of the Santa Maria Regional Landfill. The project-generated waste would be sufficiently served by the existing capacity of the Santa Maria Regional Landfill until the Los Flores IWMF becomes operational. Furthermore, solid waste would be diverted from landfills during operation in accordance with applicable regulations such as SB 1383, which requires mandatory organic waste collection for composting. Therefore, the project would have a less-than-significant impact related to solid waste.

Mitigation Measure(s) incorporated into the project: Implementation of the proposed project would not result in potentially significant environment impacts to utilities. Therefore, no mitigation measures are required.

[99] City of Santa Maria 2021
[100] 2012 Utilities Capacity Study
[101] CalRecycle] 2025a
[102] CalRecycle 2025b
[103] CalRecycle 2025c

20. Wildfire

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas 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?				X
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?				X
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?				X
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?				X

Setting:

The potential for wildfire risks in the project area is characterized by limited grassland and brush fires due to the absence of extensive tracts of mountainous and brush covered terrain. The most significant wildfire hazards near the site are associated with the coastal sage scrub and grass covered slopes to the south of the City. The oak savannah hillsides to the east of U.S. 101 and north of Clark Avenue represent another wildfire hazard area.

The project site is generally flat and is comprised of row crops, which does not pose significant potential wildfire risks. The site is in an urbanizing area of Santa Maria, adjacent to existing and under construction industrial development. According to the California FHSZ Viewer, the project site is not located within a Very High Fire Hazard Severity Zone (FHSZ) or State Responsibility Area, the nearest Very High FHSZs are more than four miles southwest and northwest from the site.[104]

Impact Discussion:

a-d. The project site is not located within or near a Very High FHSZ or State Responsibility Area. As such, project implementation would not interfere with existing emergency evacuation plans or emergency response plans within a FHSZ or State Responsibility Area; exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; require the installation or maintenance of associated infrastructure within a FHSZ or state responsibility area; or

[104] CAL FIRE 2025

expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. No impact would occur.

Mitigation Measure(s) incorporated into the project: Implementation of the proposed project would not result in potentially significant environment impacts to wildfire. Therefore, no mitigation measures are required.

21. Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
2. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	X			
3. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

1. As discussed in Section 4, *Biological Resources*, the project site is highly disturbed and currently used for agricultural production. The BRA (KMA 2024, updated 2025) determined that the site does not support native habitat or special-status plant species. While several special-status wildlife species may occur on a transitory basis, the proposed project would not result in significant impacts to these species with implementation of Mitigation Measures BIO-1 through BIO-6. These measures include seasonal timing restrictions, pre-construction surveys, and protective buffers for CRLF and nesting birds.

   As discussed in Section 5, *Cultural Resources*, the project site is located in an area of low archaeological sensitivity. A Phase I (Albion 2025) pedestrian survey identified two isolated artifacts on-site, however, these were not determined to constitute a significant cultural resource under CEQA. Nonetheless, mitigation measures have been included to address the potential for encountering previously unidentified resources during construction. Additionally, due to the presence of historic-era structures in aerial imagery and the potential for buried resources, Mitigation Measure CR-1 and the City's Resource Management Element Policy 4 Historical Resources Implementation Program 1 require an Extended Phase I Assessment and procedures for inadvertent discovery. These measures would ensure that any previously unknown cultural resources are appropriately identified and treated.

   Therefore, with implementation of mitigation measures identified in Environmental Checklist Sections 4 and 5, the proposed project would not substantially degrade the quality of the environment, reduce habitat for sensitive species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of California history or prehistory. Impacts would be less than significant with mitigation.

2. According to Section 21083 of the CEQA Guidelines, "'cumulatively considerable' means that the incremental effects of an individual project are considerable when viewed in connection with the effects of

past projects, the effects of other current projects, and the effects of probable future projects." The geographic scope for cumulative impacts is generally the City of Santa Maria as development within the jurisdiction is regulated by the City's General Plan and the SMMC. Resource areas with an alternate geographic scope (like air quality) are discussed in more detail below. Sections 1 through 21 of this Initial Study consider potential cumulative impacts to environmental resources. As discussed in these sections, the proposed project would have potentially significant project-level impacts related to air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, and transportation. Only these impacts have been identified as having the potential to cumulatively contribute to impacts on the environment. For all other issue areas, the proposed project would have either direct or indirect impacts that have been determined to be less than significant, or less than significant with design elements, standard conditions of approval, or compliance with existing regulations. The assessment of these impacts did not identify residual impacts or a contribution to a cumulative impact.

Cumulative Impacts

Air Quality: Potential cumulative air quality impacts would result when the pollutant emissions of the proposed project combine with those of other projects' pollutant emissions to degrade air quality conditions below acceptable levels. This could occur on a local level (e.g., increased vehicle emissions at congested intersections or concurrent construction activities at sensitive receptor locations) or a regional level (e.g., potential O_3 impacts from multiple past, present, and reasonably foreseeable projects within the City and Santa Barbara County). Santa Barbara County is currently in nonattainment status for the State ozone and PM_{10} standards. Consequently, cumulative development in Santa Barbara County as a whole could violate an air quality standard or contribute to an existing or projected air quality violation. Therefore, cumulative impacts would be potentially significant. However, SBCAPCD does not consider a proposed project to have a significant impact on air quality, either individually or cumulatively, if operation of the project complies with the significance criteria listed in the SBCAPCD Air Quality Impact Guidelines listed in the *Setting* section at the beginning of the *Air Quality* section of this IS-MND. Thus, the project would not result in a cumulatively considerable contribution to significant cumulative effects on air quality as the project complies with the SBCAPCD significance criteria.

Biological Resources: The City is comprised of approximately 12,700 acres of land, of which 32 percent (or 4,064 acres) is currently undeveloped and could be used as potential habitat.[105] The majority of critical habitat for federally listed species is located at the southwest boundary of the City. Cumulative development could have a potentially significant impact on biological resources if located on or near this critical habitat. However, the proposed project would result in the loss of approximately 33 acres of agricultural and disturbed lands (0.8 percent of undeveloped land in the City) planned for development located approximately three miles north of any recorded critical habitat. Other development projects in this general area (i.e., Driscoll's to the west and Maxco Box Facility to the east) are agriculturally focused commercial facilities that have been designed to preserve the area's designated agriculture and industrial character. No intact stands of important biological resources remain in this area; however, some wildlife such as the California red-legged frog has been able to persist amongst the farm fields and in nearby stormwater management basins. The project would require focused wildlife preconstruction surveys to confirm that no special-status wildlife occur onsite, as well as measures to avoid or mitigate project effects if species are found on site. Because the project's relatively small size, distance from critical habitat, and required mitigation of all biological project effects under CEQA, the project would not result in a cumulatively considerable contribution to significant cumulative effects on biological resources.

Cultural Resources: This project is required to comply with mitigation CR-1 to reduce impacts to unidentified cultural resources to less than significant. Cumulative development in the region would continue to disturb areas with the potential to contain cultural and tribal cultural resources. These projects would be required to undergo CEQA review, which would determine the extent of potential cultural

[105] Santa Maria, City of. Notice of Preparation of an EIR and Scoping Meeting for the Santa Maria General Plan Update. Available: https://files.ceqanet.lci.ca.gov/312620-1/attachment/1cSMy8TkSzAB_BwGChqhWWJPDXEO89gPltfhLCXzDG429ZY9dgaBeJeeQ-__G2K4cFK-np53DeLrfDXs0 (accessed August 2025)

resources impacts and mitigate those impacts appropriately. Cumulative projects would also be required to comply with the City's Resource Management Element Policy 4 Historical Resources Implementation Program 1 that addresses inadvertent discovery of archaeological resources and human remains and would ensure that cultural resources would be properly documented and protected, if discovered. Thus, cumulative impacts to cultural resources would be less than significant since all future development would be required to comply with this General Plan policy. The project would therefore not result in a cumulatively considerable contribution to significant cumulative effects on cultural resources.

Transportation: Potential cumulative transportation impacts would result from the project's generation of VMT and consequential conflicts with Santa Maria's transportation-related plans or policies. Therefore, the potential for cumulative impacts related to transportation will be further analyzed in an EIR.

3. Adverse effects on human beings are typically associated with air quality, hazards and hazardous materials, noise, and wildfire. These impacts are addressed in Environmental Checklist Section 3, Air Quality, Section 9, Hazards and Hazardous Materials, Section 13, Noise, and Section 20, Wildfire. As described therein, the proposed project would result in less than significant impacts related to air quality and hazards and hazardous materials with implementation of mitigation, less than significant impacts related to noise without mitigation, and no impacts related to wildfire. Therefore, the proposed project would not result in environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. The project's impacts on human beings would be less than significant with implementation of Mitigation Measures AQ-1 and HAZ-1.

8. Attachments

Attachment 1 Plan Set

Attachment 2 Air Quality/GHG Study

Attachment 3 Biological Resources Assessment

Attachment 4 Cultural Resources Desktop Review

Attachment 5 Noise Impact Analysis

Attachment 6 Traffic Impact Study and VMT Analysis

9. Determination

On the basis of the Initial Study, the staff of the Community Development Department:

_____ Finds that the proposed project is a Class ___ **CATEGORICAL EXEMPTION** and no further environmental review is required.

_____ Finds that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

_____ Finds that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

_____ Finds that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

X Finds that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to acceptable standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on the attached sheets. An **ENVIRONMENTAL IMPACT REPORT (EIR)/SUBSEQUENT EIR/SUPPLEMENTAL EIR/ ADDENDUM** is required, but it must analyze the effects that remain to be addressed.

_____ Finds that although the proposed project could have a significant effect on the environment, because all significant effects (a) have been analyzed adequately in an earlier **EIR** or **NEGATIVE DECLARATION** pursuant to acceptable standards, and (b) have been avoided or mitigated pursuant to that earlier **EIR** or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Cody Graybehl
Environmental Analyst

8-13-25
Date

Chenin Dow
Environmental Officer

8-12-25
Date

City of Santa Maria
Community Development Department
110 South Pine Street, #101
Santa Maria, CA 93458
805-925-0951

Attachment 1

Plan Set



PROJECT TEAM

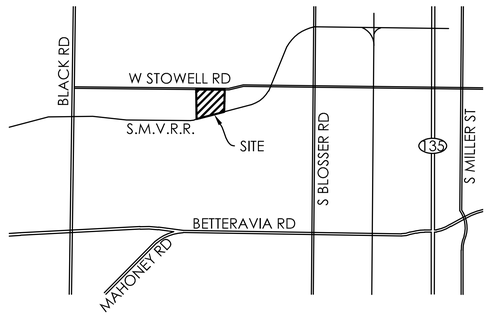
OWNER:
SEEFRIED DEVELOPMENT MANAGEMENT, INC.
3333 RIVERWOOD PARKWAY, SUITE 200
ATLANTA, GA 30339
(310) 536-7900
CONTACT: BEN OCHOA
bochoa@seefriedproperties.com

ARCHITECT:
AO ARCHITECTS
141 N. ORANGE STREET
ORANGE, CA 92866
(714) 639-9860
CONTACT: ALAN SANDOVAL

LANDSCAPE ARCHITECT:
RRM DESIGN GROUP
10 EAST FIGUEROA ST, SUITE 200
SANTA BARBARA, CA 93101
(805) 543-1794
CONTACT: CHRIS DUFOUR

CIVIL:
RRM DESIGN GROUP
10 EAST FIGUEROA ST, SUITE 200
SANTA BARBARA, CA 93101
CONTACT: ROBERT CAMACHO

STRUCTURAL:
HSA & ASSOCIATES, INC
301 N. LAKE AVE, SUITE 500
PASADENA, CA 91101
CONTACT: RAFIK GERGES



VICINITY MAP

SEEFRIED INDUSTRIAL PROPERTIES

DISTRIBUTION CENTER
Santa Maria, CA

COVER SHEET

SHEET INDEX

GENERAL
G1 COVER SHEET

ARCHITECTURAL
A1 SITE PLAN, NOTES, AND PROJECT TABULATIONS
A1a SITE DETAILS
A2 DELIVERY STATION FLOOR PLAN
A3 DELIVERY STATION ELEVATIONS
A4 AVI TUNNEL FLOOR PLAN
A5 AVI TUNNEL ELEVATIONS
A6 FLEET SERVICE CENTER FLOOR PLAN
A7 FLEET SERVICE CENTER ELEVATIONS
A8 EXTERNAL AMENITIES FLOOR PLAN
A9 EXTERNAL AMENITIES ELEVATIONS

CIVIL
C1 SITE IMPROVEMENTS
C2 FRONTAGE IMPROVEMENTS
C3 GRADING AND DRAINAGE
C4 STORMWATER CONTROL PLAN

LANDSCAPE
L1 LANDSCAPE PLAN
L2 LANDSCAPE MATERIALS

ELECTRICAL
E1 ELECTRICAL SITE LIGHTING PLAN
E2 PHOTOMETRICS PLAN

LEGAL DESCRIPTION

PER FIDELITY NATIONAL TITLE COMPANY PRELIMINARY REPORT ORDER NUMBER 991-30111921-KD9 DATED MAY 1, 2024, AMENDED MAY 8, 2024, AMENDMENT NO. A

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF SANTA MARIA IN THE COUNTY OF SANTA BARBARA, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCELS 3 AND 4 OR PARCEL MAP 13058, IN THE CITY OF SANTA MARIA, COUNTY OF SANTA BARBARA, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 31 AT PAGE 60 AND 61 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

SITE INFO

ASSESSOR'S PARCEL NUMBER:
117-820-012
117-820-013

SITE ANALYSIS

TOTAL LAND AREA	1,449,993 SF (GROSS)	1,395,195 SF (NET)
	33.3 ACRES (GROSS)	32.00 ACRES (NET)

STRUCTURES

MAIN WAREHOUSE AND OFFICE	169,104	SF
LOADING CARPORTS	67,870	SF
REMOTE RESTROOMS	906	SF
AVI STRUCTURES	1,545	SF
FSC	4,993	SF

LOT COVERAGE

GROUND LEVEL BUILDING AREA	244,418	SF
PROPOSED LOT COVERAGE	16.8%	

OCCUPANCY

PRIMARY	S-1
ACCESSORY	B, A-2, A-3

TYPE OF CONSTRUCTION
III-B

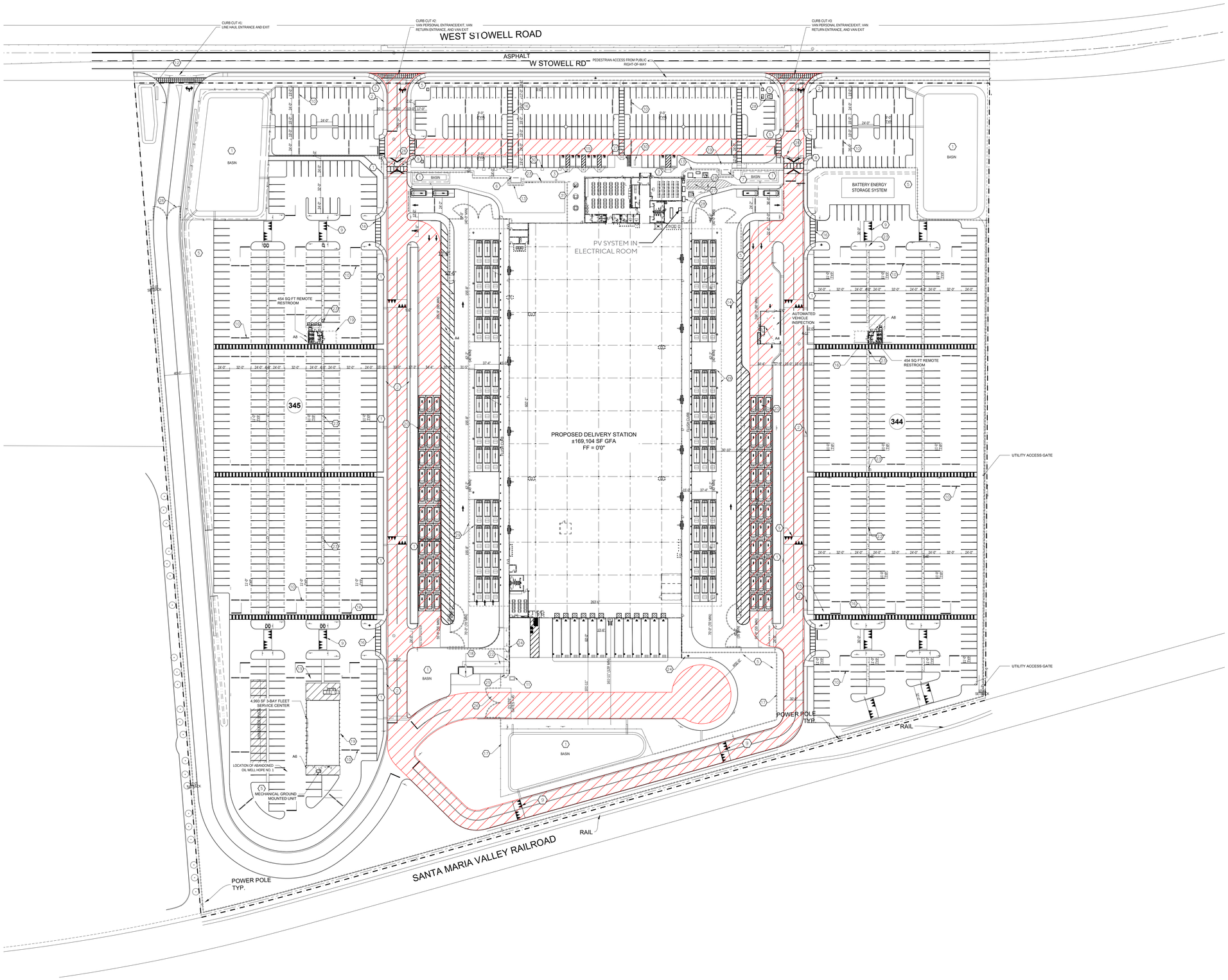
EXISTING ZONING
PLANNED DEVELOPMENT / COMMERCIAL MANUFACTURING AG

FRONT SETBACK (INDUSTRIAL COMMERCIAL COLLECTOR ROAD)	BUILDING:	20 FT
	YARD BUFFER:	10 FT

Architecture. Design. Relationships.

G1

Scale N.T.S.
Job No. 2024-0141
Date 2025-04-07



KEYNOTES

1. STORMWATER MANAGEMENT AS REQUIRED BY CODE
2. CONCRETE SIDEWALK
3. ACCESSIBLE CURB RAMP
4. RIDE SHARE DROP-OFF
5. LANDSCAPE
6. PREFABRICATED SMOKING SHELTER
7. RIDE-SHARE SHELTER
8. WHEEL STOP
9. SPEED HUMP / PEDESTRIAN TABLE
10. SPEED BUMP
11. 4'x6' TRUCK YARD SPILL KIT SHED (BY TENANT) ON 6'X8' CONCRETE PAD
12. SIGNAGE PER SIGNAGE AND STRIPING PLAN
13. PEDESTRIAN BARRIER FENCE PER SITE DETAILS
14. STRIPED TRAFFIC SEPARATION WITH JERSEY BARRIERS (OR EQUAL)
15. ACCESSIBLE PARKING STALL
16. STRIPED PEDESTRIAN ACCESS
17. YARD PERIMETER SECURITY FENCE
18. TRASH ENCLOSURE
19. BOLLARDS PER SITE PLAN ENLARGEMENTS AND SITE DETAILS
20. EMPLOYEE MUSTER AREA SIGNAGE PER SIGNAGE AND STRIPING PLAN
21. BIKE RACKS
22. 8' WIDE CONCRETE SIDEWALK (5% MAX SLOPE) WITH GUARDRAILS AND LANDINGS AS REQUIRED
23. TRASH CAN ON CONCRETE PAD
24. RETAINING WALL WITH GUARD RAIL, AS REQUIRED, PER STRUCTURAL PLANS
25. 5' WIDE MAIN GATE WITH LOCKING HARDWARE
26. PAIR OF 8'-0"H GALVANIZED MANUAL SWING GATES WITH DROP ROD AND LOCKING HARDWARE. IS REQUIRED, PROVIDE GATE WITH RUBBER ROLLERS OR TIRED. IN-GROUND TRACK SYSTEMS ARE NOT ALLOWED
27. EMERGENCY MOBILE GENERATOR PARKING
28. ELECTRICAL EQUIPMENT WITH BOLLARD PROTECTION PER ELECTRICAL PLANS
29. BUILDING CANOPY AND COLUMNS PER ARCHITECTURAL PLAN
30. BENCH
31. OUTDOOR BREAK AREA
32. LOADING ZONE SECURITY FENCE
33. 42" HIGH CABLE RAILING FENCE
34. 8' HIGH BLACK TUBULAR FENCE

LEGEND:

- 42" HIGH CABLE RAILING FENCE
- 8' HIGH BLACK TUBULAR FENCE
- PROPERTY LINE
- 30'-0" (TYPICAL) WIDE FIRE LANE (HATCHED), 24'-0" AT NORTH ELEVATION, EXTENT OF FIRE LANE CONTINUOUS CURB PAINTED RED & MARKED WITH "FIRE LANE NO PARKING" PER THE FIRE DEPARTMENT HAVING JURISDICTION

REQUIRED PARKING

WAREHOUSE	157,507 SF	1 PER 1,040 SF	151	STALLS
OFFICE	11,597 SF	1 PER 260 SF	45	STALLS
TOTALS	169,104 SF		196	STALLS REQUIRED

PROPOSED PARKING

STANDARD STALLS (9' x 19')	210	STALLS
EV CAPABLE STALLS*	54	STALLS
HANDICAP STALLS	8	STALLS
TOTAL PARKING PROVIDED	272	STALLS

*ELECTRONIC VEHICLE CHARGING STATIONS (EVCS) 25% OF OVERALL EV CAPABLE STALLS 14 STALLS

DELIVERY VAN PARKING

VAN STALLS (11' x 27')	504 STALLS
EVCS VAN STALLS (11' X 27')	202 STALLS
TOTAL DELIVERY VAN PARKING	706 STALLS

SEMI TRUCK PARKING

DOCK POSITIONS (53') 12 STALLS

HEIGHT LIMIT

MAXIMUM: 40'-0" PER SANTA MARIA ZONING
PROPOSED: *MAXIMUM HEIGHT OF ±45'-0"

*REQUEST FOR A MODIFICATION TO THE MAX BUILDING HEIGHT.

SEEFRIED INDUSTRIAL PROPERTIES

DISTRIBUTION CENTER

Santa Maria, CA

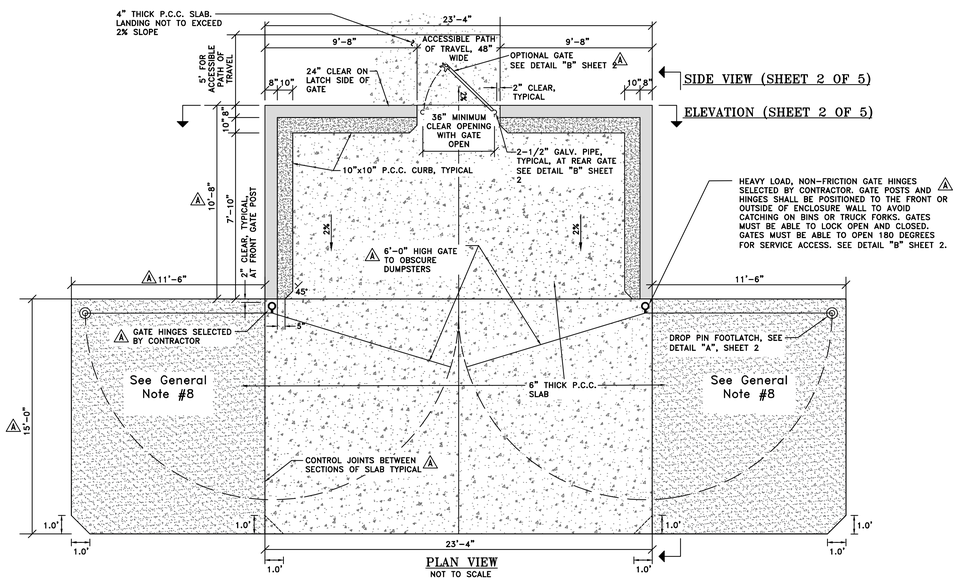
SITE PLAN

0 60' 120'

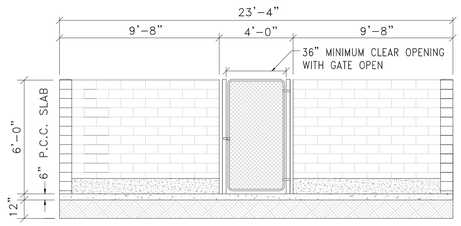
Architecture. Design. Relationships.

A1

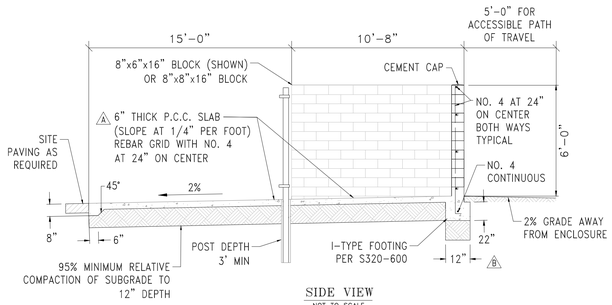
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Job No. 2024-0141
Date 2025-04-16



PLAN VIEW
NOT TO SCALE

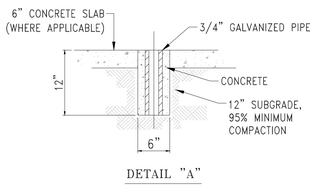


ELEVATION
NOT TO SCALE

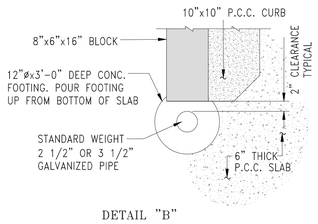


SIDE VIEW
NOT TO SCALE

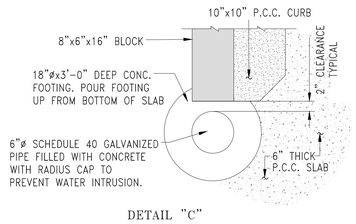
A NOTE: OPENING IS REQUIRED, BUT GATE IS OPTIONAL. OPENING SHALL BE CENTERED AT BACK OF ENCLOSURE.



DETAIL "A"



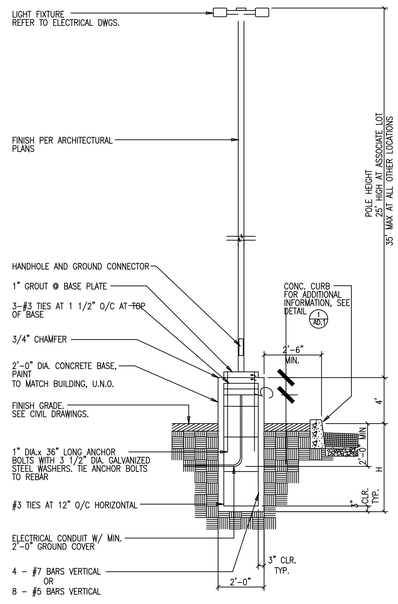
DETAIL "B"



DETAIL "C"

TRASH ENCLOSURE (PER CITY STANDARD MS-16B)

NOT TO SCALE

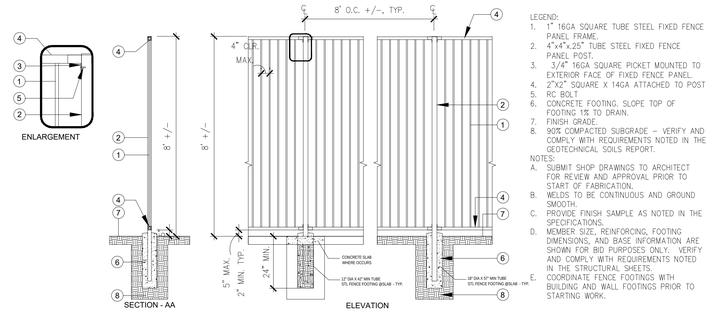


HEIGHT OF POLE ABOVE BASE	"H" WHERE CONCRETE PAVING OCCURS AT BASE	"H" WHERE A.C. PAVING OR PLANTING OCCURS AT BASE
25' – 27.5'	5'-0"	6'-0"
20' – 24'	4'-6"	5'-6"
16' – 19'	4'-0"	5'-6"
14' – 15'	4'-0"	5'-0"
10' – 13'	4'-0"	5'-0"

NOTES:
1. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. SEE SITE PLAN FOR LIGHT POLE LOCATIONS.
3. PROVIDE PYRAMID BASE @ PARKING LOT POLES AS ALTERNATE.
4. UNDER SEPARATE PERMIT.

LIGHT POLE AND BASE (SEE POLE LOCATIONS ON SHEET E1)

SCALE: 3/8" = 1'-0"



TUBULAR STEEL FENCE

SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. MASONRY BLOCK SIZE AND TYPE, (E.G. PRECISION, SPLITFACE, SLUMP, ETC.) PROPOSED FOR CONSTRUCTION SHALL BE APPROVED BY COMMUNITY DEVELOPMENT DEPARTMENT PRIOR TO ISSUANCE OF BUILDING PERMIT.
2. LOCATION OF ENCLOSURE(S) ON SITE SHALL BE APPROVED BY DIRECTOR OF UTILITIES PRIOR TO ISSUANCE OF BUILDING PERMIT.
3. GROUT ALL CELLS SOLID.
4. PROVIDE CLEAN-OUT OPENINGS AT THE BOTTOM OF ALL CELLS. OPENINGS ALLOWED ON INTERIOR FACES OF TRASH ENCLOSURES ONLY.
5. TOP LIFT OF GROUT SHALL BE PLACED APPROXIMATELY ONE INCH (1") BELOW TOP OF THE WALL TO PROVIDE FOR CEMENT MORTAR CAP.
6. ANY PROPOSED DEVIATIONS FROM THESE STANDARDS WILL BE CONSIDERED AT TIME OF BUILDING PLAN CHECK. COMMENTS WILL BE NOTED ON THE PLANS AND LISTED ON COMMENTS SHEET.
7. TWO GATES ARE REQUIRED, THEY ARE TO OPEN FROM THE MIDDLE AND BE ABLE TO LOCK IN EXTENDED POSITION.
8. IF DIRECT FORK-IN ACCESS IS NOT AVAILABLE, ADDITIONAL CONCRETE PAD(S) REQUIRED.
9. REBAR FOR CONCRETE SLAB SHALL BE INSTALLED AS A GRID WITH BARS ORIENTED AT 90 DEGREES. BARS SHALL BE WIRED TOGETHER AND SUSPENDED ON BLOCKS TO KEEP GRID AT A UNIFORM DEPTH AT MIDDLE OF SLAB. A

MATERIALS

1. CONCRETE BLOCK SHALL CONFORM TO GRADE N HOLLOW LOAD-BEARING LIGHT WEIGHT UNITS, ASTM C90
2. REINFORCING STEEL SHALL CONFIRM TO ASTM A615, GRADE 40.
3. WATER SHALL BE CLEAN AND FREE FROM DELETERIOUS AMOUNTS OF ACIDS, ALKALIS OR ORGANIC MATERIALS.
4. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150,TYPE II, LOW ALKALI MILL TESTED.
5. HYDRATED LIME SHALL CONFIRM TO ASTM C201, TYPE S.
6. AGGREGATE FOR MASONRY MORTAR SHALL CONFORM TO ASTM C144.
7. AGGREGATE FOR GROUT SHALL CONFORM TO ASTM C404.
8. CONCRETE FOR FOOTINGS, CURBS, AND FLATWORK SHALL BE CLASS "A" 6 SACK PER CITY STANDARD SPECIFICATION FOR STRUCTURAL CONCRETE.

PROPORTIONS

1. MORTAR SHALL CONFORM TO TYPE S OF THE UNIFORM BUILDING CODE AND SHALL BE COMPOSED OF ONE PART PORTLAND CEMENT TO 3 1/2 PARTS SAND, NOT LESS THAN 1/4 NOR MORE THAN 1/2 PART HYDRATED LIME; ALL PARTS BY VOLUME OF PORTLAND CEMENT USED.
2. MINIMUM MORTAR STRENGTH SHALL BE 1,800 PSI AT 28 DAYS.
3. GROUT SHALL BE COMPOSED OF ONE PART PORTLAND CEMENT, THREE PARTS CONCRETE SAND, AND TWO PARTS 3/8" PEA GRAVEL. GROUT SHALL TEST TO 2,000 PSI AT 28 DAYS.

SEEFRIED INDUSTRIAL PROPERTIES

DISTRIBUTION CENTER

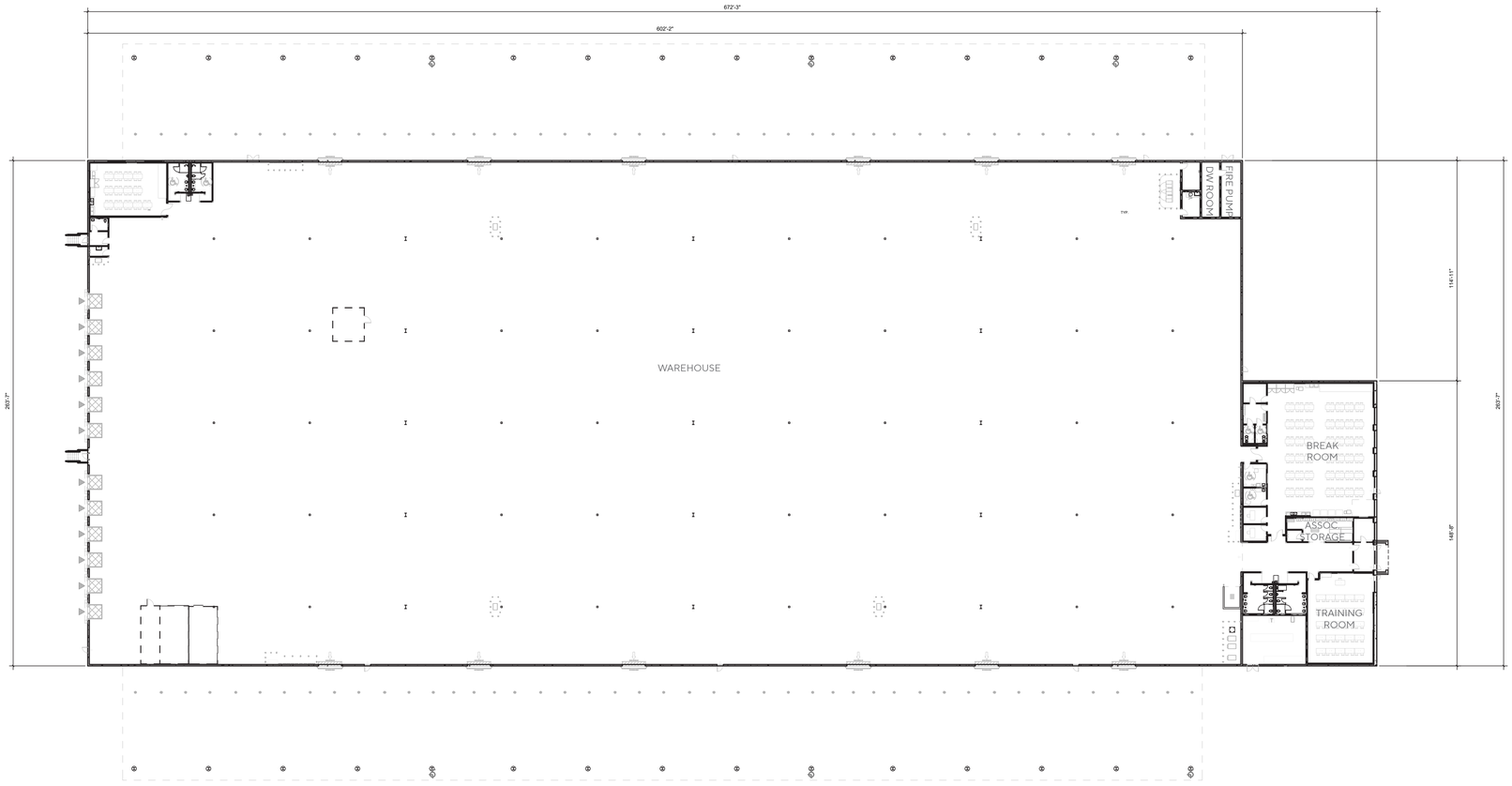
Santa Maria, CA

SITE DETAILS

Architecture. Design. Relationships.

A1a

Scale
Job No. 2024-0141
Date 2025-04-07



GENERAL NOTES

1. THIS BUILDING IS DESIGNED FOR HIGH—PILE STORAGE. A SEPARATE PERMIT WILL BE REQUIRED FOR ANY RACKING/CONVEYOR SYSTEMS.
2. ALL DIMENSIONS ARE TO FACE OF CONCRETE PANEL WALL, GRID-LINE, OR FACE OF FINISHED WALL (U.N.O.).
3. WAREHOUSE INTERIOR WALLS TO BE PAINTED WHITE; COLUMNS TO BE PRIMED.
4. SLOPE POUR STRIP 1/2" TO EXTERIOR AT ALL PERSONAL EXITS. SEE "S" DRAWINGS FOR POUR STRIP LOCATION.
5. STEEL GIRDERS, TRUSSES AND LEDGERS SHALL BE PRIMED LIGHT GRAY.
6. PROVIDE SIGN ON INSIDE OF EXTERIOR DOORS STATING, "EXIT CONTAINS A STAIR" AT ALL REQUIRED AND NON—REQUIRED EXITS THAT ARE NOT ACCESSIBLE BY A RAMP. EXIT ONLY DOORS WHICH ARE NOT ACCESSIBLE TO THE DISABLED SHALL NOT HAVE ENTRY HARDWARE.
7. PROVIDE A "NO SMOKING \WITHIN 25 FEET OF BUILDING" SIGN AT 8UILDING ENTRIES, OUTDOOR AIR INTAKES AN0 0PERABLE WINDOWS (EXCEPT EMERGENCY EXIT ONLY AND ELECTRICAL/UTILITY ROOMS).
8. ADEQUATE NUMBER OF PLUMBING FIXTURES SHALL BE PROVIDED TO COMPLY WITH THE CALIFORNIA PLUMBING CODE TABLE 422.1 PRIOR TO CERTIFICATE OF OCCUPANCY OF THE BUILDING OR THE RESPECTIVE TENANT SPACE.
9. BUILDING SIGNAGE UNDER SEPARATE PERMIT.
10. FIRE EXTINGUISHERS SHALL BE PROVIDED PER 2013 CFC.
11. FIRE HOSE LOCATIONS SHALL BE APPROVED PER FIRE DEPARTMENT.
12. REFER TO PLUMBING DRAWINGS FOR FLOOR DRAIN WHERE OCCURS.
13. EXIT SIGNS SHALL BE READILY VISIBLE FROM ANY DIRECTION OF EGRESS TRAVEL. EXIT SIGNS SHALL BE LOCATED AS NECESSARY TO CLEARLY INDICATE THE DIRECTION OF EGRESS TRAVEL
14. EXIT SIGNS SHALL BE INTERNALLY OR EXTERNALLY ILLUMINATED W/ SECONDARY PO\PER SOURCE.
15. ANY TIME A BUILDING OR A PORTION OF A BUILDING IS OCCUPIED, THE MEANS OF EGRESS SERVING THE OCCUPIED PORTION SHALL BE ILLUMINATED AT AN INTENSITY OF NOT LESS THAN 1—FOOT—CANDLE (11 LUX) AT THE WALKING SURFACE LEVEL.
16. THE POWER SUPPLY FOR MEANS OF EGRESS ILLUMINATION SHALL BE PROVIDED BY THE PREMISES' ELECTRICAL SUPPLY. IN THE EVENT OF POWER SUPPLY FAILURE, ILLUMINATION SHALL BE AUTOMATICALLY PROVIDED FROM AN EMERGENCY SYSTEM FOR THE FOLLOWING AREAS:

A. AISLES AND UNENCLOSED EGRESS STAIR\DAYS IN ROOMS AND SPACES THAT REQUIRE TWO OR MORE MEANS OF EGRESS
B. EXTERIOR LANDINGS, AS REQUIRED BY SECTION 10081.6, FOR EXIT DISCHARGE DOORWAYS IN BUILDINGS REQUIRED TO HAVE TW0 0R MORE EXITS

27. EMERGENCY LIGHTING FACILITIES SHALL BE ARRANGED TO PROVIDE INITIAL ILLUMINATION THAT IS AT LEAST AN AVERAGE OF 1—F00T—CANDLE (11 LUX) AND A MINIMUM AT ANY POINT OF 0.1—FOOT—CANDLE (1 LUX) MEASURED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. A MAXIMUM—TO—MINIMUM ILLUMINATION UNIFORMITY RATIO OF 40 TO 1 SHALL NOT BE EXCEEDED.

SEEFRIED INDUSTRIAL PROPERTIES

DISTRIBUTION CENTER

Santa Maria, CA

FLOOR PLAN

Delivery Station

0 30' 60'

Architecture. Design. Relationships.

A2

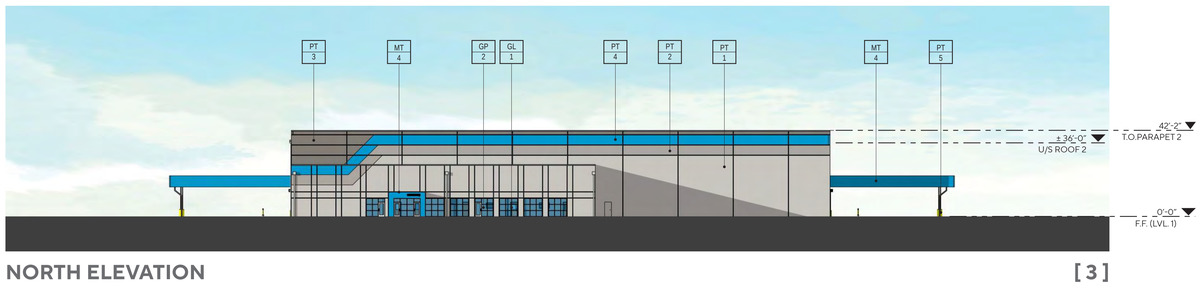
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Job No.	2024-0141
Date	2025-04-07



WEST ELEVATION [1]



EAST ELEVATION [2]



NORTH ELEVATION [3]



SOUTH ELEVATION [4]

PT-1
APPLIED TO CONCRETE
TILT PANELS
COLOR TO MATH
RAL 9018
PAPYRUS WHITE

PT-2
APPLIED TO CONCRETE
TILT PANELS
COLOR TO MATCH
RAL 7038
AGATE GREY

PT-3
APPLIED TO CONCRETE
TILT PANELS
COLOR TO MATCH
RAL 7023
CONCRETE GREY

PT-4
APPLIED TO CONCRETE
TILT PANELS
PANTONE
2995 C
PRIME BLUE

MT-4
PAC-CLAD
PRECISION SERIES
PRE-FINISHED METAL
PANEL TO MATCH
PRIME BLUE PANTONE

PT-5
APPLIED TO
CONCRETE BASE
COLOR TO MATCH:
YELLOW/BLACK
DIAGONAL STRIPES
OSHA CAUTION

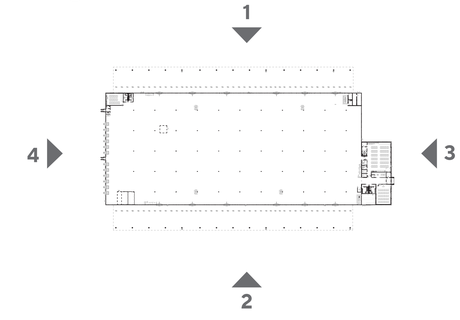
GL-1
GLASS
COLOR TO MATCH:
BLUE

GP-2
ANODIZED ALUMINUM FRAMES
COLOR TO MATCH:
RAL 7016
ANTHRACITE GREY

GENERAL NOTES

1. MECHANICAL ROOF EQUIPMENT TO BE SCREENED FROM VIEW.
2. ALL PAINT COLOR CHANGES TO OCCUR AT INSIDE CORNERS AND REVEAL LINES UNLESS NOTED OTHERWISE. REVEAL COLOR TO MATCH THE ADJACENT FIELD COLOR.
3. PROVIDE 8'–0" WIDE COLOR SAMPLE ON BUILDING, FULL HEIGHT FROM BASE TO PARAPET FOR APPROVAL BY ARCHITECT AND OWNER PRIOR TO PAINTING.
4. ALL PAINT, STAIN, SANDBLAST, ETC. FINISHES AND JOINTS/REVEALS SHOWN IN ELEVATION VIEW SHALL RETURN TO THE NEAREST INSIDE CORNER OR INTO WINDOW JAMBS.
5. ALL WALL PAINT FINISHES ARE TO BE FLAT, METAL PAINT TO BE SEMI–GLOSS UNLESS NOTED OTHERWISE.
6. BACK SIDE OF PARAPETS TO HAVE SMOOTH FINISH AND BE PAINTED WITH ELASTOMERIC PAINT.
7. T.O.P. = TOP OF PARAPET ELEVATION
8. F.F. = FINISH FLOOR ELEVATION
9. STOREFRONT CONSTRUCTION: GLASS, METAL ATTACHMENTS, AND LINTELS SHALL BE DESIGNED TO RESIST 90 MPH EXPOSURE "C" WINDS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO INSTALLATION.

KEY MAP



SEEFRIED INDUSTRIAL PROPERTIES

DISTRIBUTION CENTER
Santa Maria, CA

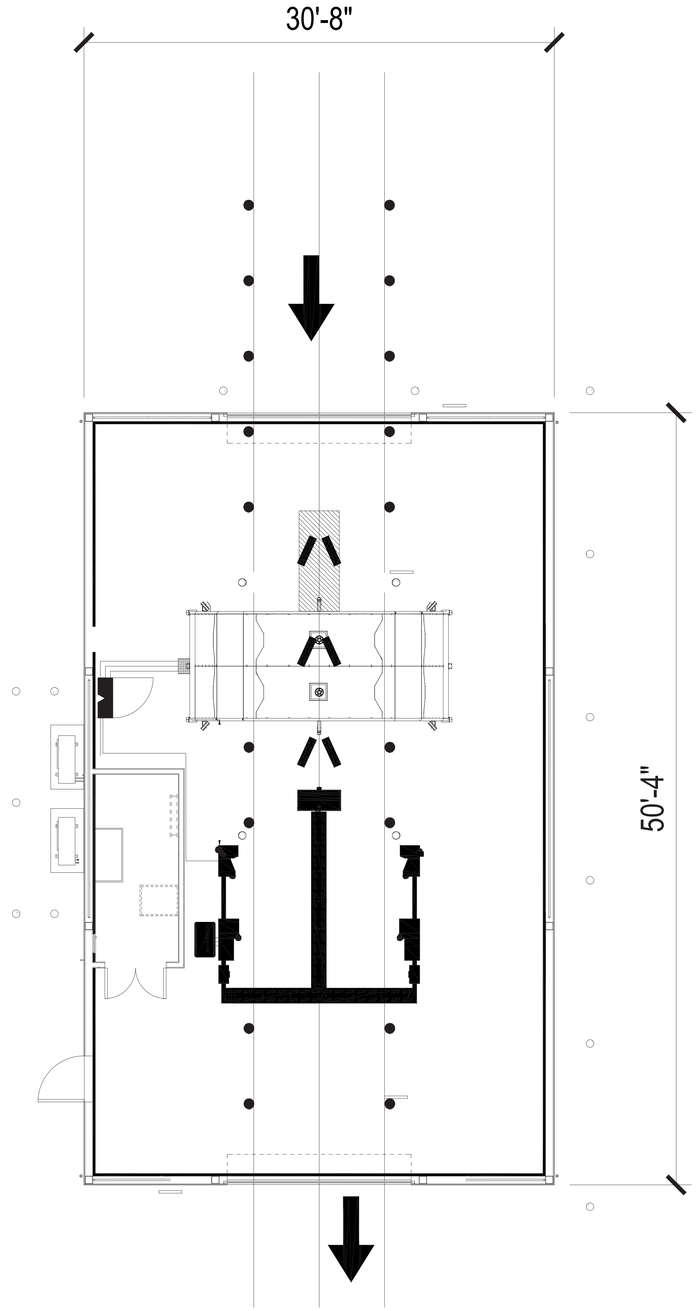
ELEVATIONS
Delivery Station

0 30' 60'

Architecture. Design. Relationships.

A3

Scale 1" = 30'-0"
Job No. 2024-0141
Date 2025-04-07



AVI TUNNEL - EAST

SEEFRIED INDUSTRIAL PROPERTIES

DISTRIBUTION CENTER

Santa Maria, CA

ENLARGED FLOOR PLAN

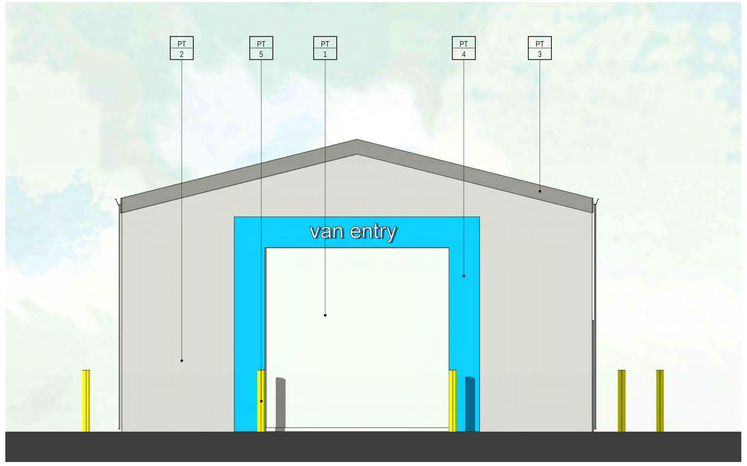
Automated Vehicle Inspection Tunnels

0 4' 8'

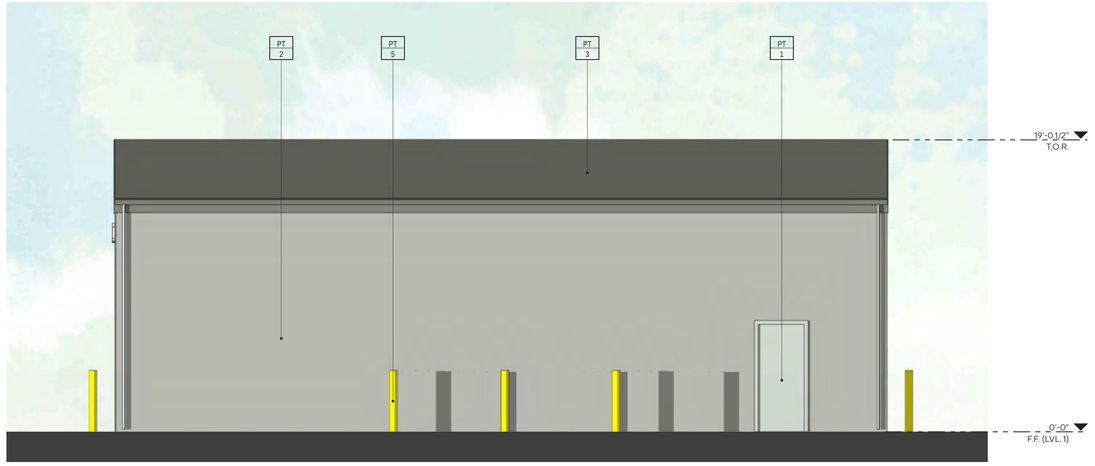
Architecture. Design. Relationships.

A4

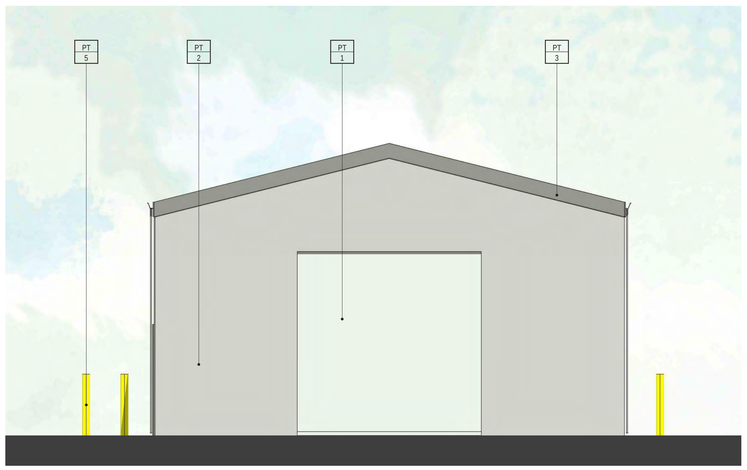
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Job No.	2024-0141
Date	2025-04-07



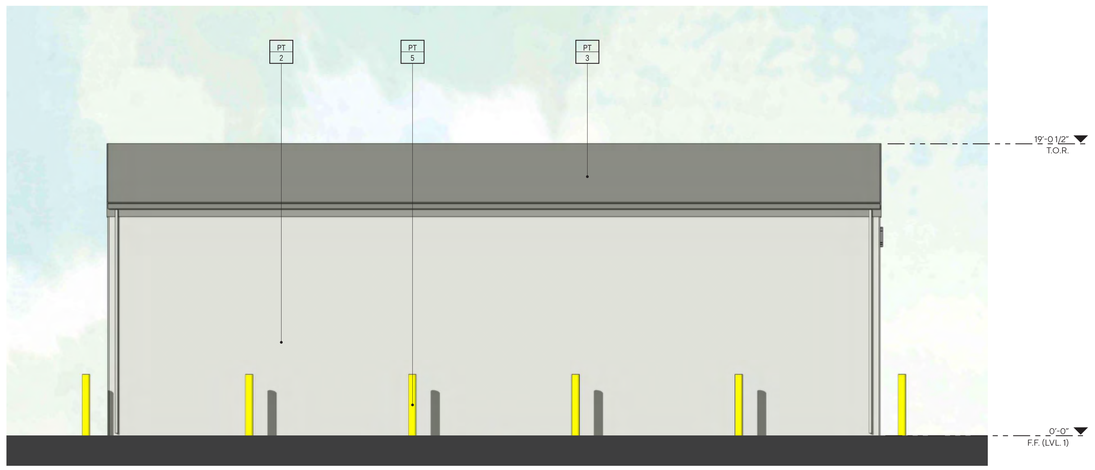
NORTH ELEVATION [1]



EAST / WEST ELEVATION [2]



SOUTH ELEVATION [3]



WEST / EAST ELEVATION [4]

GENERAL NOTES

1. MECHANICAL ROOF EQUIPMENT TO BE SCREENED FROM VIEW.
2. ALL PAINT COLOR CHANGES TO OCCUR AT INSIDE CORNERS AND REVEAL LINES UNLESS NOTED OTHERWISE. REVEAL COLOR TO MATCH THE ADJACENT FIELD COLOR.
3. PROVIDE 8'–0" WIDE COLOR SAMPLE ON BUILDING, FULL HEIGHT FROM BASE TO PARAPET FOR APPROVAL BY ARCHITECT AND OWNER PRIOR TO PAINTING.
4. ALL PAINT, STAIN, SANDBLAST, ETC. FINISHES AND JOINTS/REVEALS SHOWN IN ELEVATION VIEW SHALL RETURN TO THE NEAREST INSIDE CORNER OR INTO WINDOW JAMBS.
5. ALL WALL PAINT FINISHES ARE TO BE FLAT, METAL PAINT TO BE SEMI–GLOSS UNLESS NOTED OTHERWISE.
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8. F.F. = FINISH FLOOR ELEVATION
9. STOREFRONT CONSTRUCTION: GLASS, METAL ATTACHMENTS, AND LINTELS SHALL BE DESIGNED TO RESIST 90 MPH EXPOSURE "C" WINDS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO INSTALLATION.

PT-1
APPLIED TO INSULAED METAL PANELS
COLOR TO MATH
RAL 9018
PAPYRUS WHITE

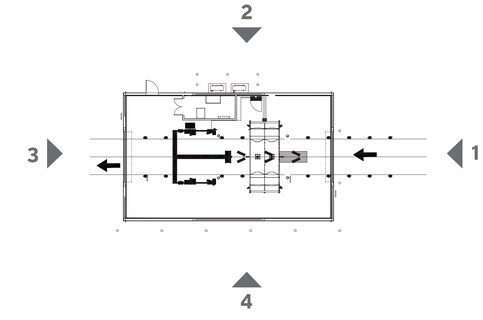
PT-2
APPLIED TO INSULAED METAL PANELS
COLOR TO MATCH
RAL 7038
AGATE GREY

PT-3
APPLIED TO INSULAED METAL PANELS
COLOR TO MATCH
RAL 7023
CONCRETE GREY

PT-4
APPLIED TO INSULAED METAL PANELS
PANTONE
2995 C
PRIME BLUE

PT-5
APPLIED TO CONCRETE BASE
COLOR TO MATCH:
SAFETY YELLOW

KEY MAP



SEEFRIED INDUSTRIAL PROPERTIES

DISTRIBUTION CENTER
Santa Maria, CA

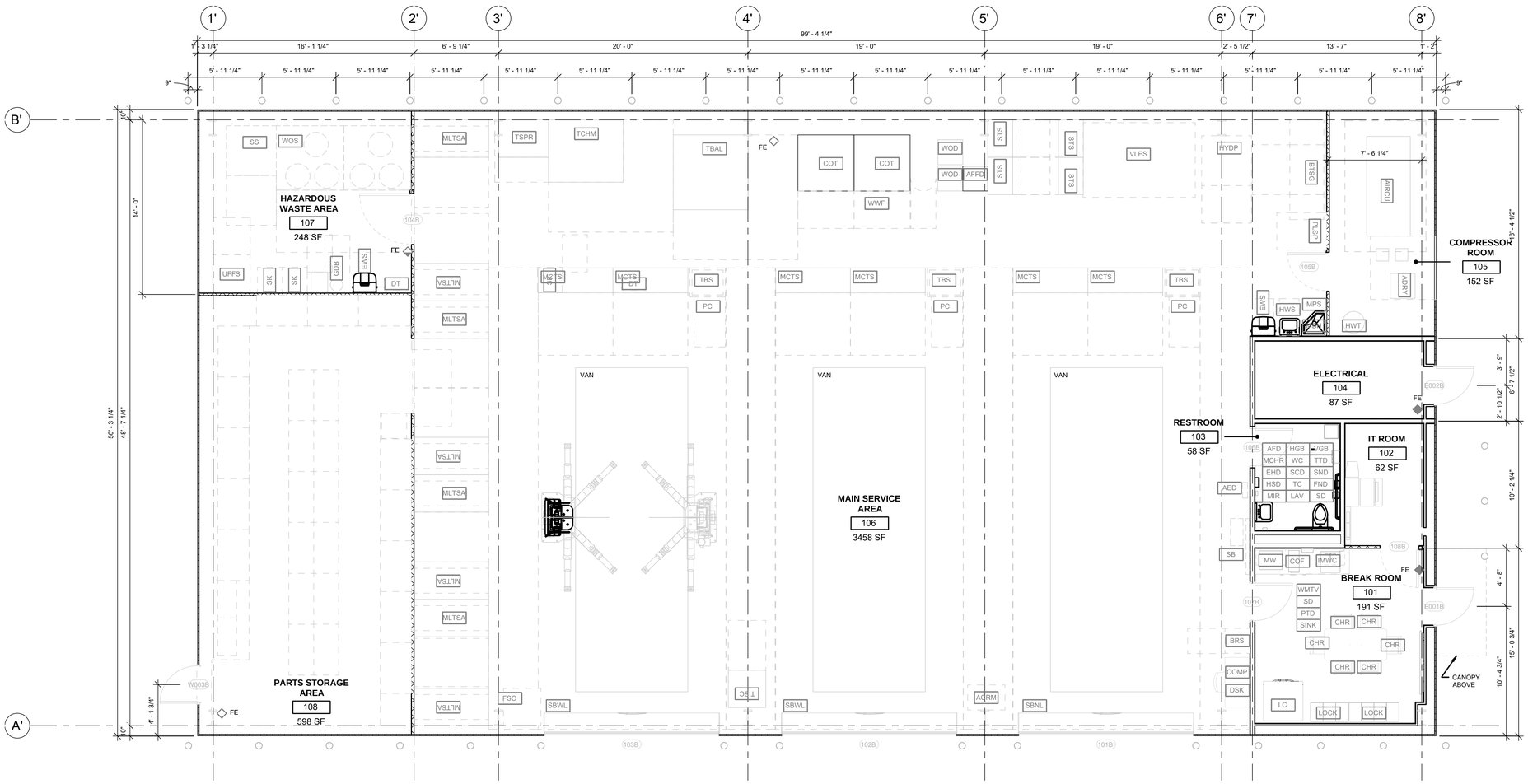
ELEVATIONS
Automated Vehicle Inspection Tunnels

0 4' 8'

Architecture. Design. Relationships.

A5

Scale 1/4" = 1'-0"
Job No. 2024-0141
Date 2025-04-07



SEEFRIED INDUSTRIAL PROPERTIES

DISTRIBUTION CENTER

Santa Maria, CA

ENLARGED FLOOR PLAN

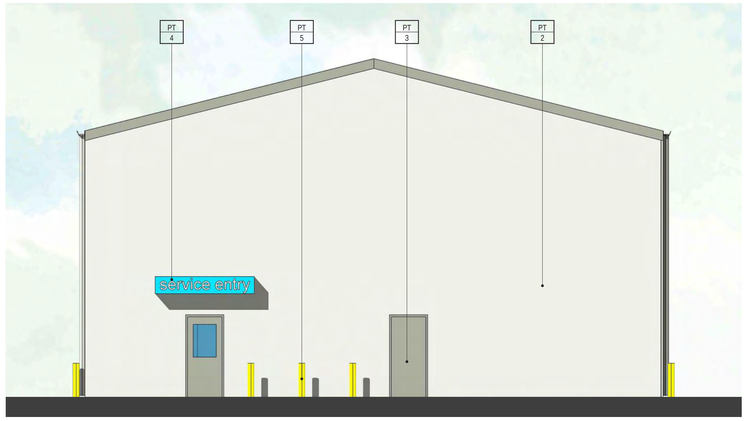
Fleet Service Center - 3-Bay

0 4' 8'

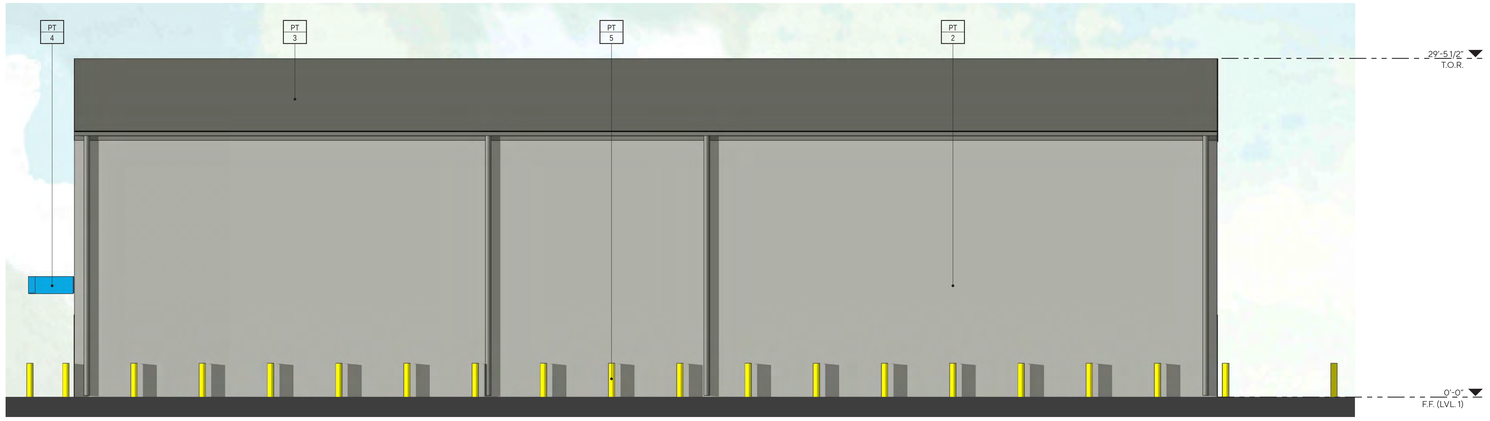
Architecture. Design. Relationships.

A6

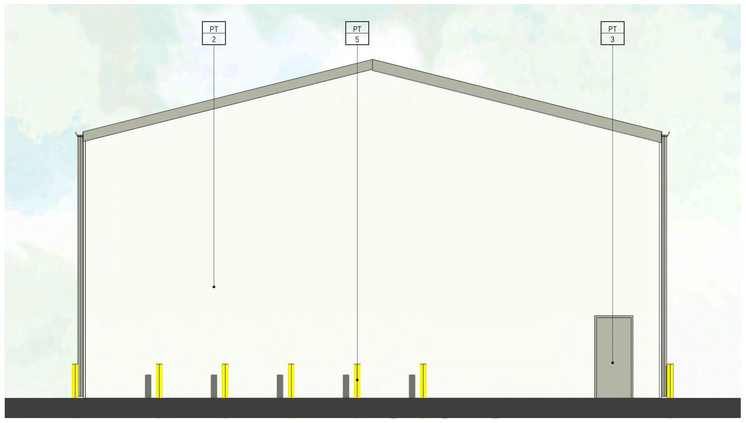
Scale	1/4" = 1'-0"
Job No.	2024-0141
Date	2025-04-07



SOUTH ELEVATION [1]



EAST ELEVATION [2]



NORTH ELEVATION [3]



WEST ELEVATION [4]

PT-1

APPLIED TO INSULAED
METAL PANELS
COLOR TO MATH
RAL 9018
PAPYRUS WHITE

PT-2

APPLIED TO INSULAED
METAL PANELS
COLOR TO MATCH
RAL 7038
AGATE GREY

PT-3

APPLIED TO INSULAED
METAL PANELS
COLOR TO MATCH
RAL 7023
CONCRETE GREY

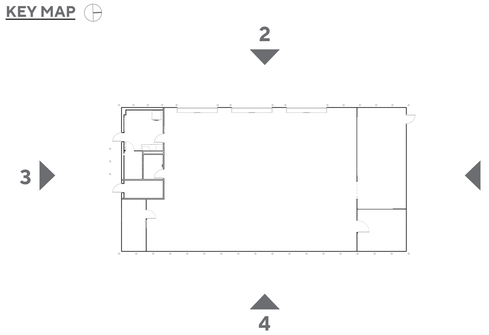
PT-4

APPLIED TO INSULAED
METAL PANELS
PANTONE
2995 C
PRIME BLUE

PT-5

APPLIED TO
CONCRETE BASE
COLOR TO MATCH:
SAFETY YELLOW

KEY MAP



SEEFRIED INDUSTRIAL PROPERTIES

DISTRIBUTION CENTER

Santa Maria, CA

ELEVATIONS

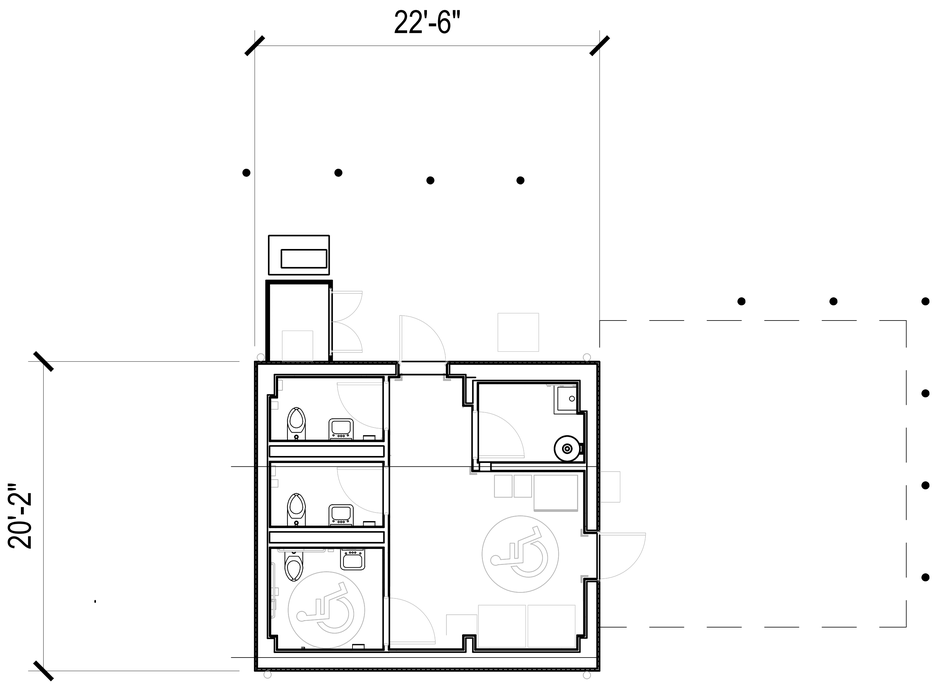
Fleet Service Center - 3-Bay

0 10' 20'

Architecture.
Design.
Relationships.

A7

Scale 3/16" = 1'-0"
Job No. 2024-0141
Date 2025-04-07



SEEFRIED INDUSTRIAL PROPERTIES

DISTRIBUTION CENTER

Santa Maria, CA

ENLARGED FLOOR PLAN

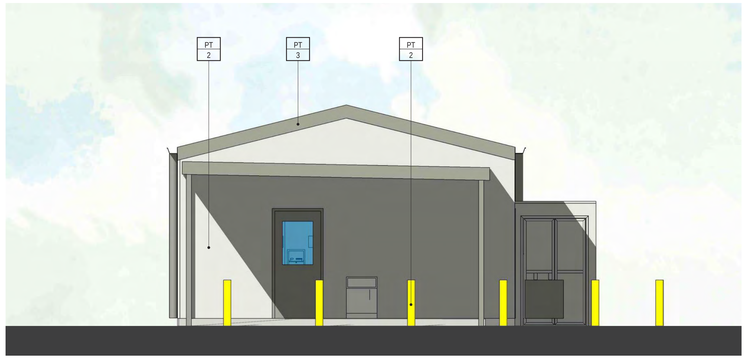
External Amenities

0 10' 20'

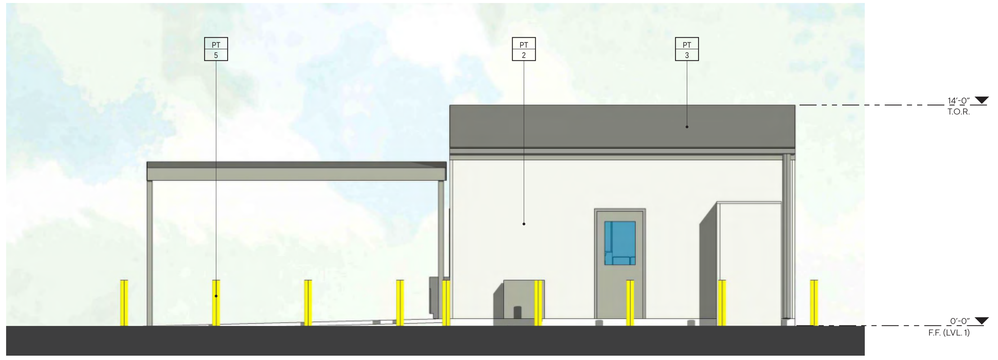
Architecture. Design. Relationships.

A8

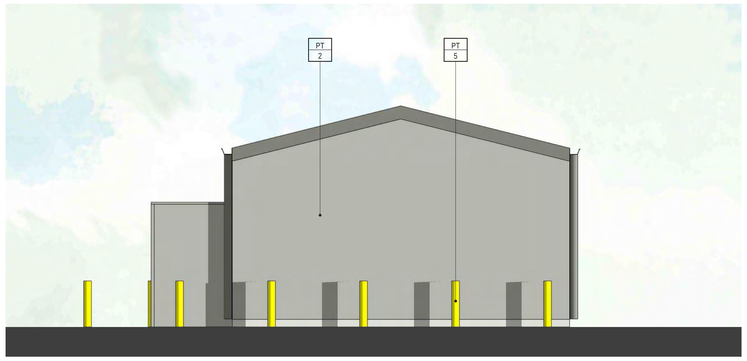
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Job No. 2024-0141
Date 2025-04-07



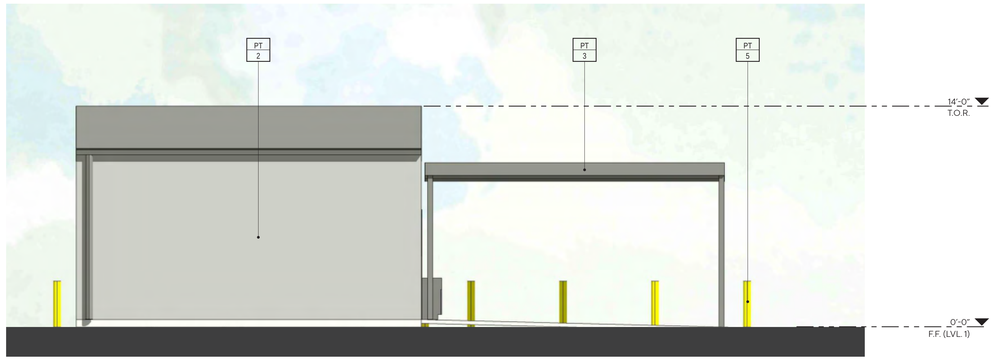
EAST ELEVATION [1]



NORTH ELEVATION [2]



WEST ELEVATION [3]



SOUTH ELEVATION [4]

GENERAL NOTES

1. MECHANICAL ROOF EQUIPMENT TO BE SCREENED FROM VIEW.
2. ALL PAINT COLOR CHANGES TO OCCUR AT INSIDE CORNERS AND REVEAL LINES UNLESS NOTED OTHERWISE. REVEAL COLOR TO MATCH THE ADJACENT FIELD COLOR.
3. PROVIDE 8'—0" WIDE COLOR SAMPLE ON BUILDING, FULL HEIGHT FROM BASE TO PARAPET FOR APPROVAL BY ARCHITECT AND OWNER PRIOR TO PAINTING.
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6. BACK SIDE OF PARAPETS TO HAVE SMOOTH FINISH AND BE PAINTED WITH ELASTOMERIC PAINT.
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8. F.F. = FINISH FLOOR ELEVATION
9. STOREFRONT CONSTRUCTION: GLASS, METAL ATTACHMENTS, AND LINTELS SHALL BE DESIGNED TO RESIST 90 MPH EXPOSURE "C" WINDS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO INSTALLATION.

PT-1
APPLIED TO INSULAED METAL PANELS
COLOR TO MATH
RAL 9018
PAPYRUS WHITE

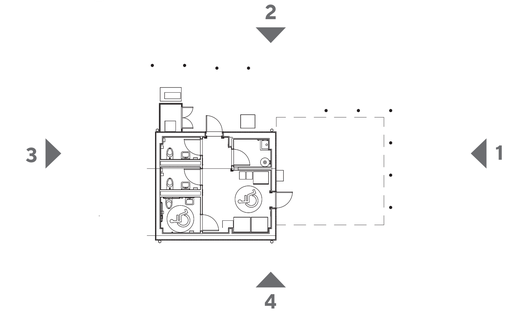
PT-2
APPLIED TO INSULAED METAL PANELS
COLOR TO MATCH
RAL 7038
AGATE GREY

PT-3
APPLIED TO INSULAED METAL PANELS
COLOR TO MATCH
RAL 7023
CONCRETE GREY

PT-4
APPLIED TO INSULAED METAL PANELS
PANTONE
2995 C
PRIME BLUE

PT-5
APPLIED TO CONCRETE BASE
COLOR TO MATCH:
SAFETY YELLOW

KEY MAP



SEEFRIED INDUSTRIAL PROPERTIES

DISTRIBUTION CENTER
Santa Maria, CA

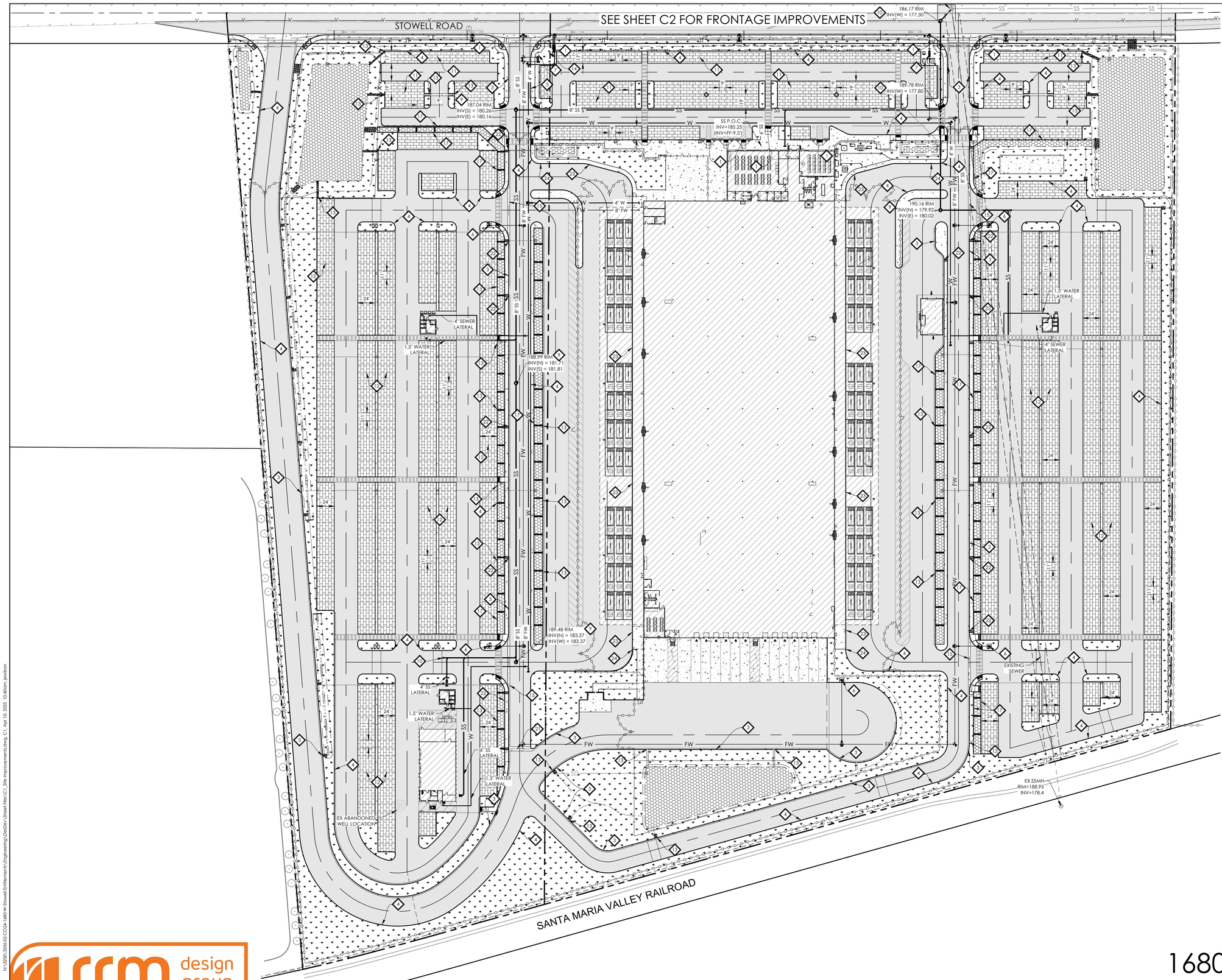
ELEVATIONS
External Amenities

0 8' 16'

Architecture. Design. Relationships.

A9

Scale 1/8" = 1'-0"
Job No. 2024-0141
Date 2025-04-07



PRELIMINARY KEY NOTES

1. ACCESSIBLE CURB RAMP PER CALTRANS STANDARD A88A.
2. CONCRETE CROSS GUTTER AND SPANDREL PER CITY STANDARD RD-18A.
3. 6" CURB AND GUTTER PER CITY STANDARD RD-11.
4. 6" CURB PER CITY STANDARD RD-11.
5. COMBINATION CURB, GUTTER, AND SIDEWALK PER CITY STANDARD RD-11.
6. FIRE HYDRANT ASSEMBLY PER CITY STANDARD WA-31.
7. 6" FIRE SERVICE BACKFLOW PREVENTION ASSEMBLY PER CITY STANDARD WA-27F.
8. DOMESTIC WATER METER PER CITY STANDARD
9. 48" SEWER MANHOLE PER CITY STANDARD SS-10D.
10. SEWER CLEANOUT PER CITY STANDARD SS-12B.
11. ASSOCIATE PARKING LOT STRIPING 9' WIDE BY 19' DEEP UNLESS NOTED OTHERWISE.
12. VAN PARKING STALL STRIPING 11' WIDE BY 24' DEEP.
13. 2' WIDE CURB CUT WITH ROCK ENERGY DISSIPATER.
14. 4" DOMESTIC BACKFLOW PREVENTION ASSEMBLY.
15. 3' WIDE VALLEY GUTTER.
16. FRONTAGE IMPROVEMENTS TO INCLUDE (2) EAST BOUND 12' TRAVEL LANES, 6' BIKE LANE, 6' SIDEWALK, AND 10' PUE WITHIN THE EXISTING 84' ROW PER SECONDARY ARTERIAL SECTION ON CITY STANDARD RD-23
17. INSTALL DEEPENED CURB ALONG BIO RETENTION FACILITIES AND WEIRS THAT SUPPORT THE DEEPENED CURBS EVERY 50 ' (TYP).
18. CONNECT PROPOSED UTILITIES TO EXISTING SERVICES WITHIN STOWELL ROAD.
19. INSTALL PEDESTRIAN BARRICADE PER CITY STANDARD RD-34A
20. INSTALL STREET LIGHT PER CITY STANDARD SL-11A IN ACCORDANCE WITH SPECIFICATION S-106.
21. 6' WIDE VALLEY GUTTER.
22. REVERSE SIDEWALK UNDERDRAIN TO OUTLET TO BIO RETENTION FACILITIES
23. INSTALL FLUSH CURB.
24. 3.0' TRANSITION FROM FLUSH CURB TO 6" CURB.

LEGEND

- PROPOSED AC
- PROPOSED CONCRETE
- PROPOSED PERVIOUS PAVER AREA
- PROPOSED TREATMENT AREA
- PROPOSED LANDSCAPE AREA
- PROPOSED BUILDING/ROOF AREA
- W — PROPOSED PRIVATE 4" DOMESTIC WATER
- FW — PROPOSED PRIVATE 8" FIRE WATER
- SS — PROPOSED 8" PVC SEWER MAIN LINE. (S = 0.0025 FT/FT MIN.)
- E — PROPOSED ELECTRICAL LINE
- PROPOSED CITY STANDARD FIRE HYDRANT AND FIRE HYDRANT ASSEMBLY
- CITY STANDARD CLEANOUT
- 48" CITY STANDARD MANHOLE
- SD — PROPOSED PRIVATE STORM DRAIN (SEE GRADING AND DRAINAGE PLANS)
- SS — EXISTING SANITARY SEWER
- W — EXISTING WATER

0 60 120 180 feet
1"=60'

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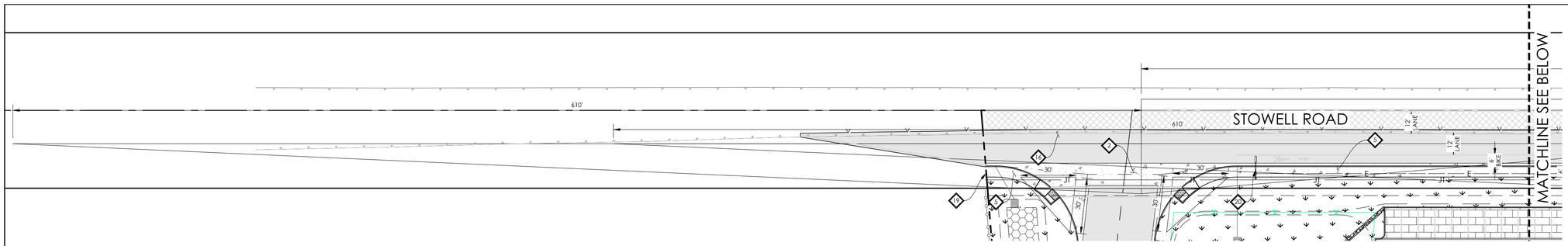
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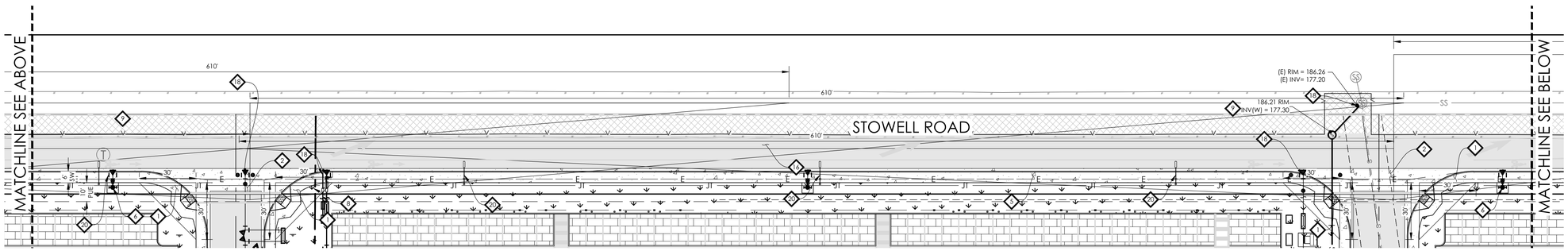
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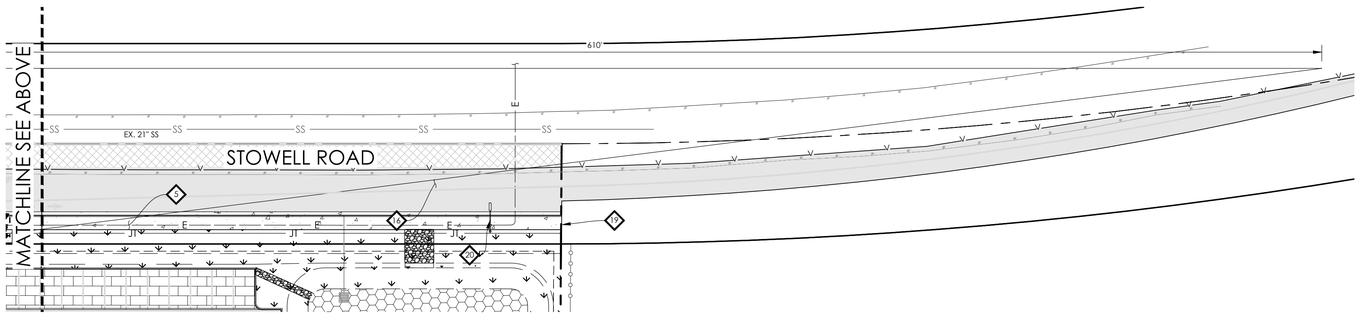
1680 STOWELL ROAD

SITE IMPROVEMENTS AND UTILITIES

C1







PRELIMINARY KEY NOTES

1. ACCESSIBLE CURB RAMP PER CALTRANS STANDARD A88A.
2. CONCRETE CROSS GUTTER AND SPANDREL PER CITY STANDARD RD-18A.
3. 6" CURB AND GUTTER PER CITY STANDARD RD-11.
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5. COMBINATION CURB, GUTTER, AND SIDEWALK PER CITY STANDARD RD-11.
6. FIRE HYDRANT ASSEMBLY PER CITY STANDARD WA-31.
7. 6" FIRE SERVICE BACKFLOW PREVENTION ASSEMBLY PER CITY STANDARD WA-27F.
8. DOMESTIC WATER METER PER CITY STANDARD
9. 48" SEWER MANHOLE PER CITY STANDARD SS-10D.
10. SEWER CLEANOUT PER CITY STANDARD SS-12B.
11. PARKING LOT STRIPING 9' WIDE BY 18' DEEP UNLESS NOTED OTHERWISE.
12. PARKING STALL STRIPING 11' WIDE BY 24' DEEP.
13. 2' WIDE CURB CUT WITH ROCK ENERGY DISSIPATER.
14. 4" DOMESTIC BACKFLOW PREVENTION ASSEMBLY.
15. 3' WIDE VALLEY GUTTER.
16. FRONTAGE IMPROVEMENTS TO INCLUDE (2) EAST BOUND 12' TRAVEL LANES, 6' BIKE LANE, 6' SIDEWALK, AND 10' PUE WITHIN THE EXISTING 84' ROW PER SECONDARY ARTERIAL SECTION ON CITY STANDARD RD-23
17. INSTALL DEEPENED CURB ALONG BIO FILTRATION FACILITIES AND WEIRS THAT SUPPORT THE DEEPENED CURBS EVERY 50 ' (TYP).
18. CONNECT PROPOSED UTILITIES TO EXISTING SERVICES WITHIN STOWELL ROAD.
19. INSTALL PEDESTRIAN BARRICADE PER CITY STANDARD RD-34A
20. INSTALL STREET LIGHT PER CITY STANDARD SL-11A IN ACCORDANCE WITH SPECIFICATION S-106.

LEGEND

- PROPOSED AC
- PROPOSED CONCRETE
- PROPOSED PERVIOUS PAVER AREA
- PROPOSED TREATMENT AREA
- PROPOSED LANDSCAPE AREA
- PROPOSED BUILDING/ROOF AREA
- STOPPING SIGHT TRIANGLE
- CORNER CUTBACK SIGHT TRIANGLE
- W — PROPOSED PRIVATE 4" DOMESTIC WATER
- FW — PROPOSED PRIVATE 8" FIRE WATER
- SS — PROPOSED 8" PVC SEWER MAIN LINE. (S = 0.0025 FT/FT MIN.)
- E — PROPOSED ELECTRICAL LINE
- PROPOSED CITY STANDARD FIRE HYDRANT AND FIRE HYDRANT ASSEMBLY
- CITY STANDARD CLEANOUT
- 48" CITY STANDARD MANHOLE
- SD — PROPOSED PRIVATE STORM DRAIN (SEE GRADING AND DRAINAGE PLANS)
- SS — EXISTING SANITARY SEWER
- W — EXISTING WATER

0 30 60 90 feet
1"=30'

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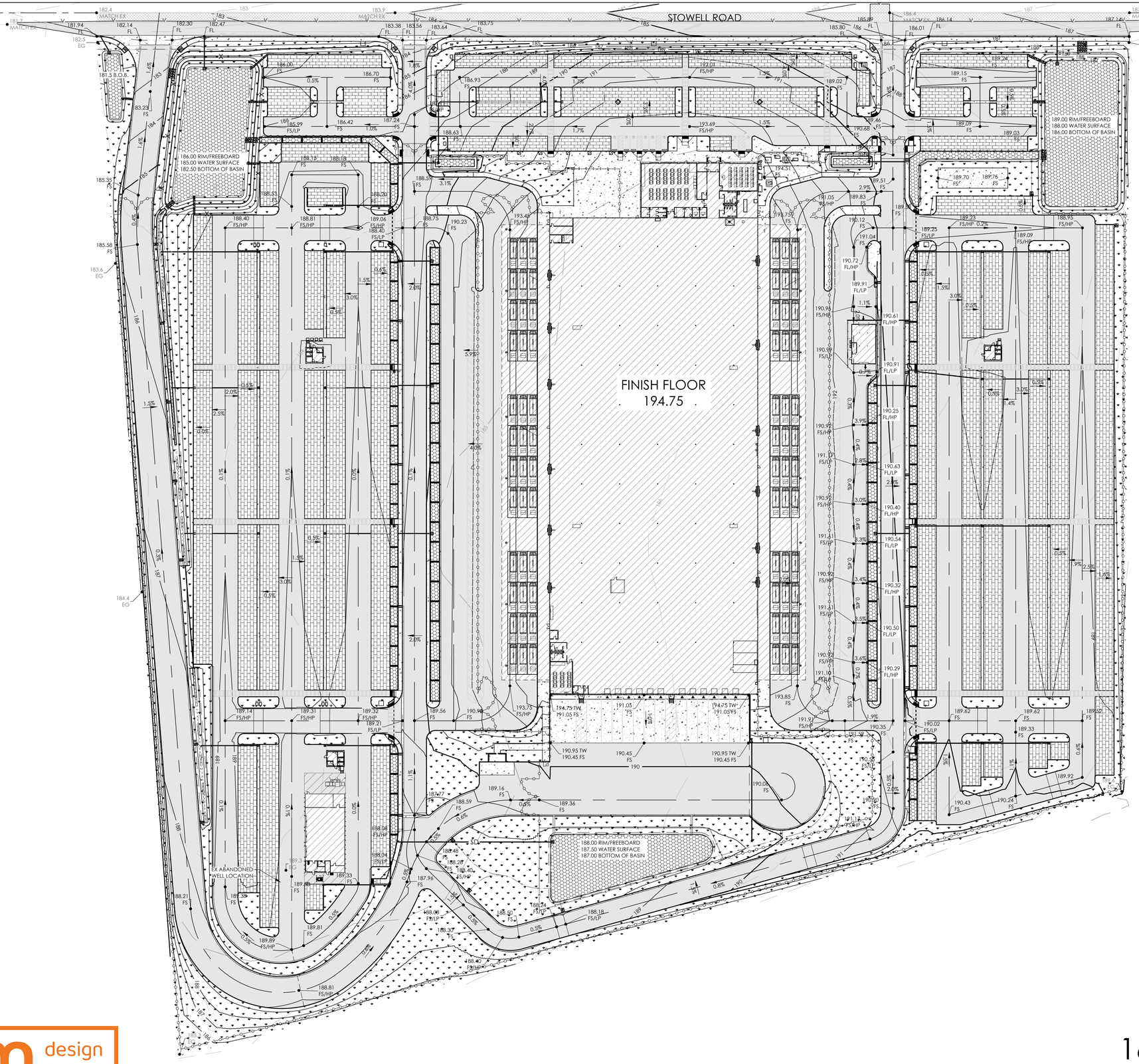
rrm design group

APRIL 10, 2025

1680 STOWELL ROAD

FRONTAGE IMPROVEMENTS

C2



LEGEND

- PROPOSED AC
- PROPOSED CONCRETE
- PROPOSED PERVIOUS PAVER AREA
- PROPOSED TREATMENT AREA
- PROPOSED TREATMENT AREA
- PROPOSED BUILDING/ROOF AREA
- SD — PROPOSED PRIVATE HDPE STORM DRAIN
- 24" SQUARE MID-STATE CATCH BASIN

ABBREVIATIONS

FF	FINISHED FLOOR
FS	FINISHED SURFACE
FL	FLOWLINE
TC	TOP OF CURB
EG	EXISTING GRADE
FG	FINISHED GRADE
INV	INVERT
TG	TOP OF GRATE
HP	HIGH POINT
LP	LOW PONT
B.O.B.	BOTTOM OF BASIN

APPROXIMATE EARTHWORK QUANTITIES

THE APPROXIMATE RAW EARTHWORK QUANTITIES SHOWN HEREON REPRESENT THE ESTIMATED VOLUMETRIC DIFFERENCE CALCULATED BETWEEN THE PROPOSED SUBGRADE AND EXISTING GRADE SURFACE, AND ARE SUBJECT TO CHANGE. THESE ESTIMATES DO NOT INCLUDE CONSIDERATIONS FOR LOSSES OR BULKING DUE TO: SOIL AMENDMENTS, STABILIZATION, CONSTRUCTION TECHNIQUE, FOOTING & TRENCHING SPOILS, ETC. THESE CONSIDERATIONS, IN ADDITION TO ACTUAL FIELD CONDITIONS AND THE FINAL RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER, MAY SIGNIFICANTLY EFFECT THE FINAL IMPORT/EXPORT QUANTITIES. APPROXIMATE QUANTITIES SHOWN ON THESE PLANS ARE FOR PERMITTING PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CALCULATE ACTUAL QUANTITIES FOR THE PURPOSE OF CONSTRUCTION AND COST ESTIMATES. CONTRACTOR IS ALSO RESPONSIBLE FOR ADJUSTMENTS TO SLOPE HINGE POINTS IN ORDER TO PROVIDE GRADED PAD AREA ADJACENT TO PATHS, WALKWAYS, AND ROADS FOR UTILITY BOXES, TRANSFORMERS, AND ABOVE GROUND UTILITY INFRASTRUCTURE.

Cut/Fill Evaluation	SF	Ft	Cu. Yd.		
	Area	Assumed Seciton	Fill (+)	Cut (-)	Net
Surface Cut/Fill	1,449,239	-	237,492	700	236,792
A C Road Hold down	591,231	1.5	-	32,846	(32,846)
Concrete Flat Work	93,422	0.7	-	2,318	(2,318)
Basin Hold Downs	72,077	4.0	-	10,678	(10,678)
Permeable Pavers	224,592	1.5	-	12,477	(12,477)
Building Foundation	250,205	3.0	-	27,801	(27,801)
TOTAL & NET	-	-	237,492	86,820	150,672 Import

NOTES

1. LID FACILITEIS SHALL BE PROTECTED DURING CONSTRUCTION FROM SEDIMENT AND EROSION. HEAVY MACHINERY WILL NOT COMPACT SOILS IN AREAS OF INFILTRATION. IF ANY SEDIMENT DISCHARGES INTO LID FACILITY, CONTRACTOR SHALL RESTORE TO PERFORMANCE DESIGN SPECIFICATIONS AS VERIFED BY CIVIL ENGINEER. CONTRACTOR SHALL RESTORE TO PERFORMANCE DESIGN SPECIFICATIONS AS VERIFIED BY CIVIL ENGINEER. CONTRACTOR SHALL NOTIFY GRADING OR BUILDING INSPECTOR 24-HOURS PRIOR TO INSTALLATION OF GRAVEL AND BIORETENTION SOIL TO VERIFY MATERIAL QUALITY.

0 60 120 180 feet
1"=60'

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rrm design group

APRIL 10, 2025

1680 STOWELL ROAD

PRELIMINARY GRADING AND DRAINAGE PLAN

C3

STOWELL ROAD

LEGEND

- DMA 1 (9,892 SF)
- DMA 2 (3,897 SF)
- DMA 3 (16,063 SF) SELF-RETAINING
- DMA 4 (41,934 SF) SELF-RETAINING
- DMA 5 (31,426 SF) SELF-RETAINING
- DMA 6 (15,274 SF) SELF-RETAINING
- DMA 7 (72,921 SF)
- DMA 8 (224,641 SF) SELF-RETAINING
- DMA 9 (81,224 SF)
- DMA 10 (18,498 SF)
- DMA 11 (10,776 SF)
- DMA 12 (79,665 SF)
- DMA 13 (197,487 SF) SELF-RETAINING
- DMA 14 (61,775 SF)
- DMA 15 (114,270 SF)
- DMA 16 (114,357 SF)
- DMA 17 (34,161 SF)
- DMA 18 (127,814 SF)
- DMA 19 (5,609 SF)
- DMA 20 (30,760 SF) SELF-TREATING
- DMA 21 (7,739 SF) SELF-TREATING
- DMA 22 (3,490 SF) SELF-TREATING
- DMA 23 (21,644 SF) SELF-TREATING
- DMA 24 (34,813 SF) SELF-TREATING
- DMA 25 (34,473 SF) SELF-TREATING

PROJECT STATISTICS

(A) EXISTING CONDITION

IMPERVIOUS AREA: 625 SF

PERVIOUS AREA: 1,393,981 SF

(B) PROPOSED IMPROVEMENTS

TOTAL IMPERVIOUS AREA: 890,901 SF

PERMEABLE PAVER AREA: 224,592 SF

LANDSCAPE AREA: 279,113 SF

TOTAL PERVIOUS AREA: 503,705 SF

REQUIRED STORMWATER CONTROL MEASURES

TIER 1- RUNOFF REDUCTION
- ROOF DRAIN DISCONNECT
- MINIMIZE IMPERVIOUS AREAS

TIER 2 - WATER QUALITY (85th PERCENTILE = 0.9")
- ON-SITE RETENTION-BASED INFILTRATION

TIER 3 - RETAIN 95TH PERCENTILE STORM EVENT (1.5")
- PERMEABLE PAVERS AND BIORETENTION BASINS WILL RETAIN AND INFILTRATE AN APPROXIMATE VOLUME OF 248,520 CF

TIER 4 - PEAK MANAGEMENT
- ONSITE BASINS ARE SIZED TO MITIGATE REQUIRED PEAK FLOWS DISCHARGED FROM THE PROJECT. THE SITE DISCHARGE SHALL NOT EXCEED PRE-PROJECT PEAK FLOWS FOR THE 2-YEAR THROUGH 100-YEAR STORM EVENTS.

SANTA BARBARA FLOOD CONTROL

BOTH THE EAST AND WEST DETENTION BASIN WILL RESTRICT THE OUTFLOW DISCHARGE FLOW RATE AND FREE DRAIN TO THE STREET THROUGH A SIDEWALK UNDERDRAIN. THE WEST BASIN WILL DETAIN 42,471 CF AND THE EAST BASIN WILL DETAIN 33,292 CF. SEE THE STORM WATER CONTROL REPORT FOR SIZING INFORMATION.

0 60 120 180 feet
1"=60'

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APRIL 10, 2025

1680 STOWELL ROAD
PRELIMINARY STORMWATER MANAGEMENT PLAN

C4

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COMPLIANCE WITH MWELO

1. PROJECT INFORMATION - SEE COVER PAGE OF THIS DRAWING SET FOR ALL INFORMATION INCLUDING, DATE, PROJECT APPLICANT AND OWNER, AND ADDRESS.

   TOTAL LANDSCAPE AREA - PHASE 1: ONSITE: 279,113 SF
   SHRUBS GROUNDCOVER AND TREES - ONSITE: 279,113 SF

   TURF - 0 SF
2. PROJECT TYPE - NEW CONSTRUCTION
3. WATER SUPPLY - POTABLE
4. CHECKLIST OF ALL DOCUMENTS IN LANDSCAPE DOCUMENT PACKAGE:
   X LANDSCAPE DESIGN PLAN - INCLUDED IN THESE LANDSCAPE DRAWINGS
   X IRRIGATION DESIGN PLAN - INCLUDED IN THESE LANDSCAPE DRAWINGS
   X GRADING DESIGN PLAN - PER CIVIL SHEETS
5. WATER BUDGET CALCULATIONS (MAWA) AND (ETWU). SEE BELOW.
6. I AGREE TO COMPLY WITH THE REQUIREMENTS OF MWELO.

LANDSCAPE ARCHITECT | CA LICENSE NUMBER #_4993_

CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING ITEMS:
http://www.water.ca.gov/wateruseefficiency/docs/MWELO09-10-09.pdf

1. COMPOSTING
   Incorporate compost at a rate of at least four cubic yards per 1,000 square feet to a depth of six inches into landscape area - unless contra-indicated by a soils report.
2. PLANT MATERIAL
   For residential areas, install climate adapted plants that require occasional, little or no summer water (average WUCOLs plant factor 0.3) for 75% of the plant area excluding edibles and areas using recycled water.
3. IRRIGATION SYSTEM
   Shall comply with the following:
   Automatic irrigaiton controllers are required and must use evapotranspiration or soil moisture sensor data and utilize a rain sensor.
   Irrigation controllers shall be a type which does not lose programming data in the event the primary power source is interrupted.
   Pressure regulators shall be installed on the irrigation system o ensure the dynamic pressure of the system is within the manufactures recommended pressure range.
   All irrigaiton emiision dvices must meet the requirements set in the ANSI standard, ASABE/ICC 802-2014 "Landscape Irrigation Sprinkler and Emitter Standard," All sprinkler heads installed in the landscape must document a distribution uniformity low quarter of 0.65 or higher using the protocol defined in ASABE/ICC 802-2014.
   Areas less than ten (10) feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no runoff or overspray.
4. FINAL INSPECTION
   At the time of final inspection, the CONTRACTOR must provide the owner of the property with a certificate of completion, certificate of installation, irrigation schedule and a schedule of landscape and irrigation maintenance.

WATER USE CALCS

Appendix B - Sample Water Efficient Landscape Worksheet

WATER EFFICIENT LANDSCAPE WORKSHEET

This worksheet is filled out by the project applicant and it is a required element of the Landscape Document Package

Reference Evapotranspiration (Eto) 52.1

Hydrozone # /Planting Description*	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency (IE)	ETAF (PF/IE)	Landscape Area (Sq. ft)	ETAF x Area	Estimated Total Water Use (ETWU)
Regular Landscape Areas							
1 - DT Shrubs	0.25	Drip	0.91	0.27	203852	56003.30	1,809,018
2 - DT Trees	0.25	Bubbler	0.8	0.31	1625	507.81	16,403
3 - Mod Shrubs	0.5	Drip	0.91	0.55	69611	38247.80	1,235,481
4 - Mod Trees	0.5	Bubbler	0.8	0.63	4025	2515.63	81,260
				Totals	279113	97274.54	3,142,162
Special Landscape Areas							
Play Field				1	0		0
Edibles				1	0		0
Other				1	0		0
				Totals	0		0
						ETWU Total	3,142,162
						Maximum Allowed Water Allowance (MAWA)	4,057,159

Hydrozone #/Planting Description
E.G.
1.1 front lawn
2.1 low water use plantings
3.1 medium water use planting

Irrigation Method
overhead spray or drip

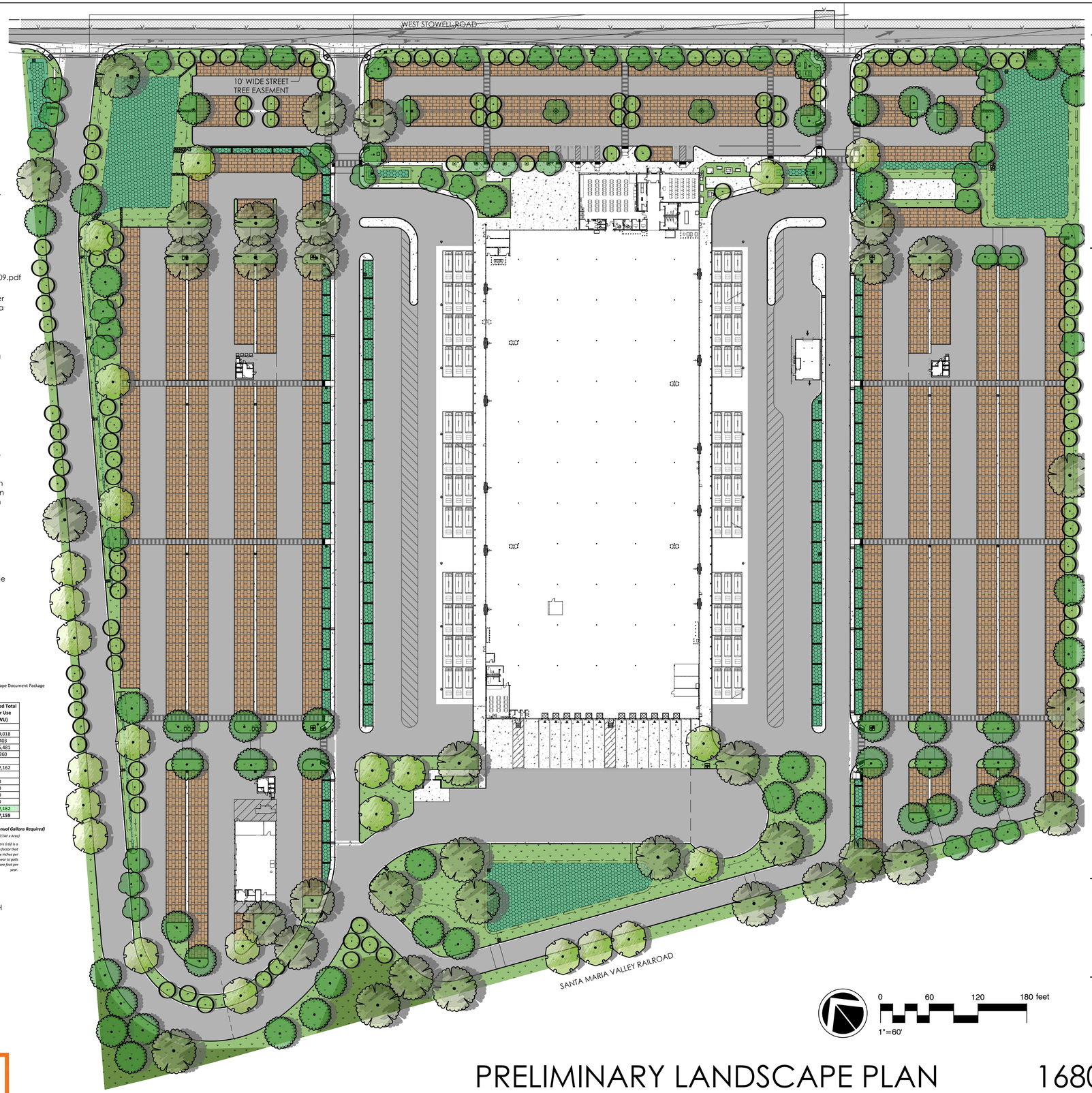
Irrigation Efficiency
0.75 for spray head
0.81 for drip

ETWU (Annual Gallons Required)
Eto x 0.62 x ((ETAF x Area)
where 0.62 is a conversion factor that converts acre inches per acre per year to gallo per square foot per year.

*MAWA (Annual Gallons Allowed) = (Eto) (0.62) [(ETAF x LA)]+[(1-ETAF) x SLA)]

TOTAL LANDSCAPE AREA

THE TOTAL LANDSCAPE AREA FOR THIS PROJECT IS 279,113 SQFT WHICH AT 20% OF SITE COVERAGE, EXCEEDS THE CITY'S MINIMUM REQUIREMENT OF 15% MINIMUM LANDSCAPE COVERAGE.



PLANTING NOTES

1. PLANT LIST IS FOR CONVENIENCE OF CONTRACTOR ONLY. IN CASE OF DISCREPANCIES BETWEEN THE PLANS AND THE LIST, PLANS SHALL PREVAIL.
2. PLANT LOCATIONS SHOWN ON THE PLANS ARE DIAGRAMATIC. CONTRACTOR SHALL LOCATE ALL PLANT MATERIAL UNDER THE DIRECTION OF THE AUTHORIZED REPRESENTATIVE PRIOR TO PLANTING HOLE EXCAVATION.
3. THE AUTHORIZED REPRESENTATIVE RESERVES THE RIGHT TO MAKE SUBSTITUTIONS, ADDITIONS, AND DELETIONS TO THE PLANTING LAYOUT AS WORK PROGRESSES.
4. ALL GROUNDCOVER SHALL BE TRIANGULARLY SPACED UNLESS OTHERWISE NOTED.
5. CONTRACTOR SHALL INSTALL A 3" LAYER OF 'WALK ON BARK' MULCH IN ALL NON LID PLANTING AREAS AND SLOPES. REFER TO CIVIL PLANS FOR SURFACE TREATMENT ON LID AREAS.
6. CONTRACTOR SHALL PROVIDE CONCRETE MOW CURB PER PLANS AND SPECIFICATIONS BETWEEN ALL TURF AND SHRUB/GROUNDCOVER AREAS UNLESS OTHERWISE NOTED.

PLANT SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	CONT	WUCOLS
TREES				
	MELALEUCA QUINQUENERVIA	PAPERBARK TREE	15 GAL	LOW
	PLATANUS MEXICANA	MEXICAN SYCAMORE	24"BOX	MODERATE
	QUERCUS AGRIFOLIA	COAST LIVE OAK	15 GAL	VERY LOW
	TIPUANA TIPU	TIPU TREE	15 GAL	LOW
	ZELKOVA SERRATA	JAPANESE ZELKOVA	15 GAL	LOW

SMALL TO MEDIUM SHRUBS — 181,079 SQ FT
- ACHILLEA X 'MOONSHINE'
- AGAVE X 'BLUE GLOW'
- DIETES BICOLOR
- FESTUCA IDAHOENSIS 'SISKIYOU BLUE'
- HESPERALOE PARVIFLORA 'PERPA'
- LEYMUS CONDENSATUS 'CANYON PRINCE'
- SALVIA GREGGII 'ALBA'
- SEDUM X 'AUTUMN JOY'

MEDIUM TO LARGE SHRUBS — 33,046 SQ FT
- AGAVE AMERICANA 'MARGINATA'
- AGAVE ATTENUATA
- CEANOTHUS GRISEUS HORIZONTALIS 'YANKEE POINT
- FRANGULA CALIFORNICA 'LEATHERLEAF'
- HETEROMELES ARBUTIFOLIA
- PHLOMIS FRUTICOSA
- PHORMIUM TENAX
- PHYSOCARPUS OPULIFOLIUS 'MONLO'

BIOSWALE PLANTS — 69,966 SQ FT
- ELYMUS MOLLIS
- FESTUCA RUBRA
- JUNCUS PATENS
- MUHLENBERGIA RIGENS
- SESLERIA X 'GREENLEE'

PARKING AREA TREES

PROPOSED EMPLOYEE PARKING SPOTS	257
REQUIRED TREE COUNT IN EMPLOYEE PARKING AREAS (1 TREE PER 6 STALLS)	43
PROPOSED TREE COUNT IN EMPLOYEE PARKING AREAS	64

PARKING LANDSCAPE AREA

TOTAL EMPLOYEE PARKING SPOTS: $\frac{257}{20}$ x 200 = REQUIREMENT OF 2570 SQ FT

PROPOSED CENTRAL PARKING ISLAND LANDSCAPE AREA 2800 SQ FT

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PRELIMINARY LANDSCAPE PLAN

APRIL 10, 2025

1680 STOWELL ROAD L-1

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TREES



BETULA NIGRA 'BNMTF'
DURA HEAT RIVER BIRCH



CERCIS OCCIDENTALIS
WESTERN REDBUD (MULTI-TRUNK)



OLEA EUROPAEA 'WILSONII'
WILSON OLIVE



PLATANUS MEXICANA
MEXICAN SYCAMORE



PRUNUS CERASIFERA
PURPLE-LEAF PLUM

PAVERS



PERMEABLE PAVERS
AIR VOL BLOCK, ROMAN CLASSIC

NOTES:

SEE SHEET A1 FOR FENCE TYPES AND LOCATIONS

SHRUBS



ACHILLEA X 'MOONSHINE'
MOONSHINE YARROW



AGAVE AMERICANA 'MARGINATA'
VARIEGATED CENTURY PLANT



AGAVE ATTENUATA
FOXTAIL AGAVE



AGAVE X 'BLUE GLOW'
BLUE GLOW AGAVE



CEANOTHUS GRISEUS HORIZONTALIS 'YANKEE POINT'
YANKEE POINT CARMEL CREEPER



DIETES BICOLOR
FORTNIGHT LILY



ELYMUS MOLLIS
AMERICAN DUNEGRASS



FESTUCA IDAHOENSIS 'SISKIYOU BLUE'
SISKIYOU BLUE FESCUE



FESTUCA RUBRA
RED FESCUE



FRANGULA CALIFORNICA 'LEATHERLEAF'
LEATHERLEAF COFFEEBERRY



HESPERALOE PARVIFLORA 'PERPA'
BRAKELIGHTS RED YUCCA



HETEROMELES ARBUTIFOLIA
TOYON



JUNCUS PATENS
CALIFORNIA GRAY RUSH



LEYMUS CONDENSATUS 'CANYON PRINCE'
CANYON PRINCE GIANT WILD RYE



MUHLENBERGIA RIGENS
DEER GRASS



PHLOMIS FRUTICOSA
JERUSALEM SAGE



PHORMIUM TENAX
NEW ZEALAND FLAX



PHYSOCARPUS OPULIFOLIUS 'MONLO'
DIABLO NINEBARK



SALVIA GREGGII 'ALBA'
WHITE TEXAS SAGE



SEDUM X 'AUTUMN JOY'
AUTUMN JOY SEDUM



SESLERIA X 'GREENLEE'
GREENLEE MOOR GRASS

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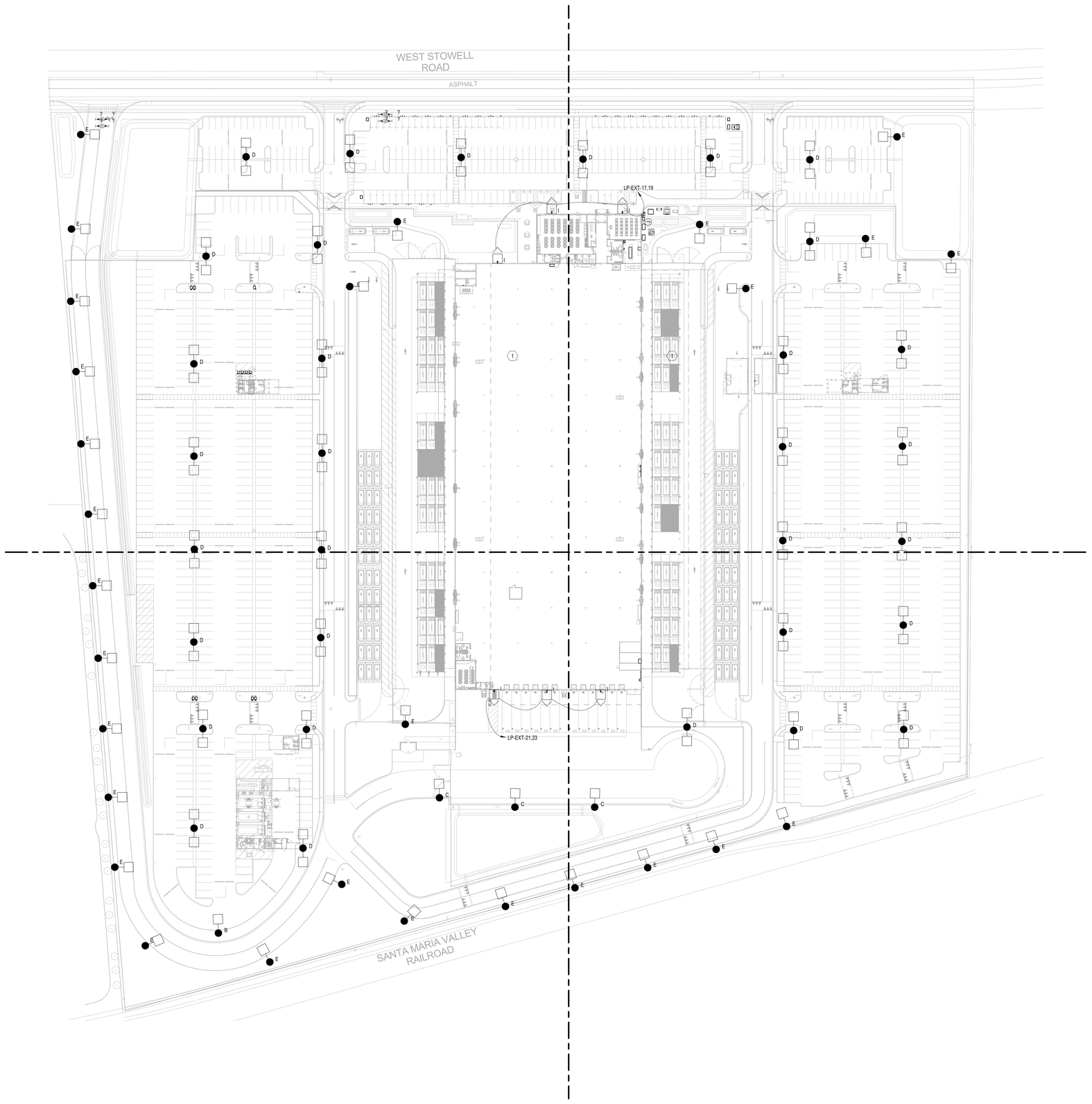
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LANDSCAPE MATERIALS

1680 STOWELL ROAD L-2

APRIL 10, 2025

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SITE GENERAL NOTES

1. ALL UNDERGROUND CONDUITS SHALL BE MINIMUM 1" SCHEDULE 40 PVC AND SHALL INCLUDE A GROUND WIRE FOR THE CIRCUIT, UNLESS NOTED OTHERWISE.
2. ALL CONDUCTORS SHALL BE #10 AWG CU, UNLESS NOTED OTHERWISE
3. GROUND AND BOND ALL EQUIPMENT IN ACCORDANCE WITH CEC
4. REFER TO ONE-LINE DIAGRAM FOR ELECTRIC SERVICE SIZE
5. FURNISH AND INSTALL PROTECTIVE BOLLARDS AS REQUIRED. COORDINATE WITH CIVIL FOR REQUIREMENTS.
6. COORDINATE CONDUIT ROUTING WITH ALL OTHER UNDERGROUND UTILITIES
7. PROVIDE METER BASE, CURRENT TRANSFORMER ENCLOSURE, AND/OR MAIN SERVICE DISCONNECT AT AND EXTERIOR LOCATION ADJACENT TO THE UTILITY TRANSFORMER, COORDINATE WITH CIVIL FOR SPACE REQUIRED.
8. SITE LIGHTING POLE AND BASES SHALL BE MOUNTED A MINIMUM OF 24" FROM ANY UNDERGROUND EV CONDUIT STUB-UP OR PULL-BOX. EV CONDUIT STUB-UP LOCAITONS SHALL HAVE HIERARCHY OVER SITE LIGHTING POLE LOCATIONS.
9. ALL POLE LOCATIONS SHALL BE COORDINATED WITH LANDSCAPE ARCHITECT AND CIVIL ENGINEER PRIOR TO BEGINNING OF WORK.
10. ALL CIRCUITS SHALL BE ROUTED THROUGH LIGHTING RELAY PLANS AND CONTROLLED VIA PHOTOSENSOR AND TIMECLOCK. PROVIDE ROOF MOUNTED PHOTOSENSOR, FACE SENSOR TOWARDS TRUE NORTH.
11. COORDINATE WITH CIVIL DRAWINGS FOR FINAL LOCATION OF PYLON AND MONUMENT ELECTRICAL LIGHTING.

KEYNOTES

1. REFER TO SHEET E1.10 FOR EXACT LOCATIONS OF TYPE H1 FIXTURE. FIXTURE TO BE MOUNTED AT 16' TYP.

1 OVERALL SITE PLAN - LIGHTING
Scale: 1" = 60'-0"

Architecture.
Design.
Relationships.

REGISTERED PROFESSIONAL ENGINEER
MARK N. BIGBIE
E 16307
ELECTRICAL
STATE OF CALIFORNIA
4/10/25

CONSULTANT

Jordan & Skala
Engineers
6301 W. Plano Pkwy ● Suite 250
Plano, TX, 75093
P: 469.385.1616 ● F: 469.385.1615
Texas Registered Engineering Firm F-4990
Project Number:24030185
Drawn By:SS Checked By:SD

SEEFRIED
INDUSTRIAL PROPERTIES

DIZ1 - DISTRIBUTION CENTER
1680 WEST STOWELL ROAD
SANTA MARIA, CA

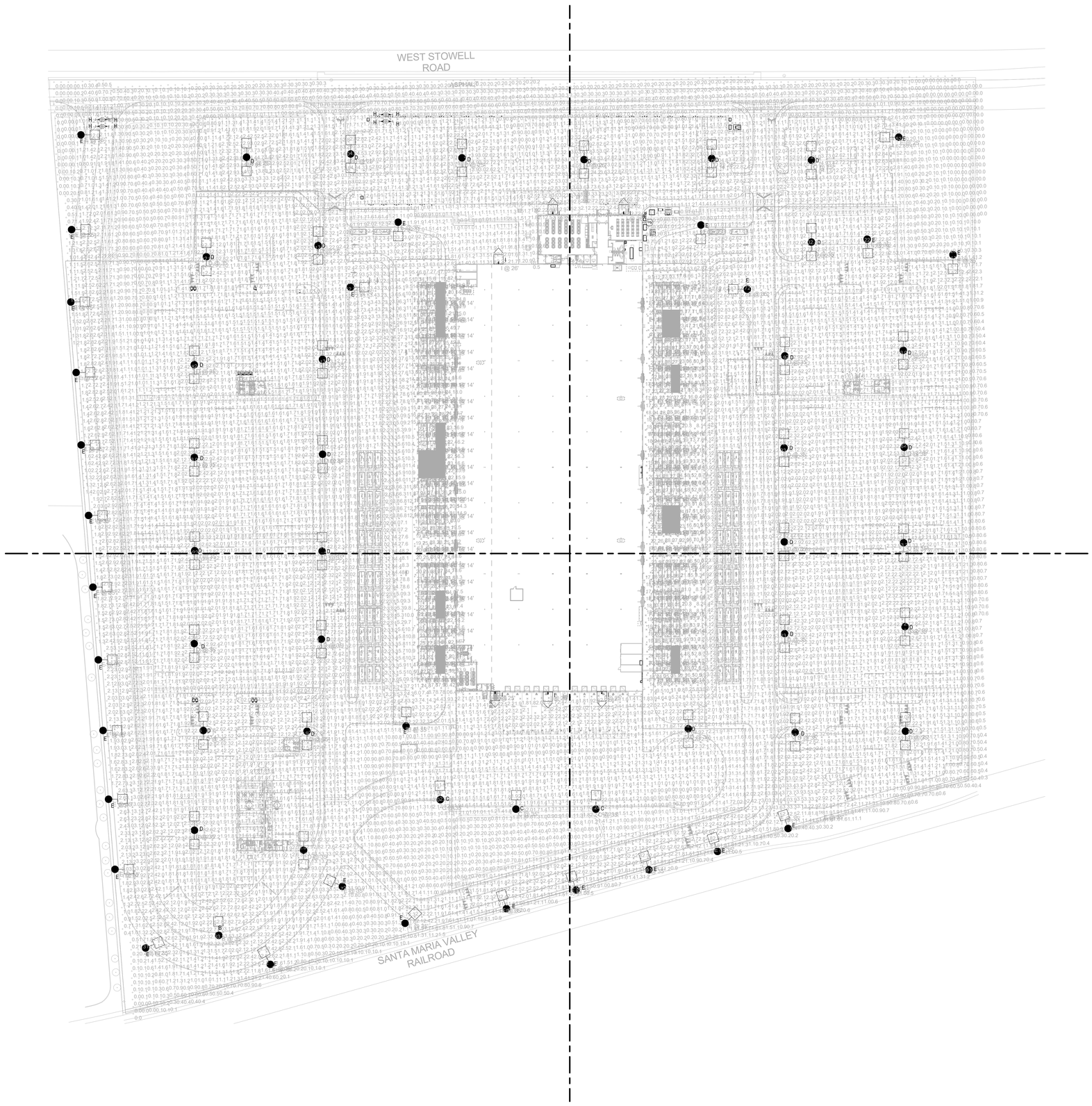
OVERALL SITE PLAN - LIGHTING

Project Number: 2024-0141
Plan Check Number:
11/11/2024 PERMIT SET

SHEET
E1.01

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Drawing File Name:

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Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
EAST PARKING LOT	+	1.7 fc	3.4 fc	.4 fc	8.5:1	4.25:1
LOADING DOCK	+	2.1 fc	4. fc	1.3 fc	3.08:1	1.61:1
NORTH PARKING LOT	+	1.8 fc	5.6 fc	.5 fc	11.2:1	3.6:1
OPEN TRUCK YARD	+	1.6 fc	2.9 fc	.9 fc	3.22:1	1.78:1
UNDER CANOPY EAST	+	20.7 fc	26.1 fc	10.1 fc	2.58:1	2.05:1
UNDER CANOPY WEST	+	20.6 fc	26.1 fc	9.9 fc	2.64:1	2.08:1
VAN QUEING AREA WEST	+	3.7 fc	15.2 fc	1.6 fc	9.5:1	2.31:1
VAN QUEING EAST	+	3.8 fc	15.3 fc	1.7 fc	9:1	2.24:1
VEHICULAR ROADS	+	2.1 fc	5.1 fc	.3 fc	17:1	7:1
WEST PARKING LOT	+	1.9 fc	5.7 fc	.7 fc	8.14:1	2.71:1

1 OVERALL SITE PLAN - PHOTOMETRIC
Scale: 1" = 60'-0"

Architects Orange, LLP dba AO
Architecture.
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SEAL

CONSULTANT

Jordan & Skala
Engineers
6301 W. Plano Pkwy ● Suite 250
Plano, TX, 75093
P: 469.385.1616 ● F: 469.385.1615
Texas Registered Engineering Firm F-4990
Project Number:24030185
Drawn By:SS Checked By:SD

SEEFRIED
INDUSTRIAL PROPERTIES

DIZ1 - DISTRIBUTION CENTER
1680 WEST STOWELL ROAD
SANTA MARIA, CA

OVERALL SITE PLAN - PHOTOMETRIC

Project Number: 2024-0141
Plan Check Number:
11/11/2024 PERMIT SET

04/14/2025 1 DELTA 1

SHEET
E1.02

Sheet Plotted: 4/10/2025 2:03:53 PM
Drawing File Name:

Attachment 2

Air Quality/GHG Study

Air Quality and Greenhouse Gas Technical Report
West Stowell Delivery Station

May 22, 2025

Prepared For:

Seefried Industrial Properties
Ben Ochoa, Development Manager
2321 Rosecrans Avenue, Suite 2220
El Segundo, CA 90245

NV5

3777 Long Beach Blvd., Annex Bldg.
Long Beach, CA 90807

1310724-3124023.00

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APPENDICES

Appendix A: Air Quality and Greenhouse Gas Emissions Calculation Files

DRAFT

ABBREVIATIONS AND ACRONYMNS

Abbreviation/Acronym	Description
AB	Assembly Bill
AP-42	EPA Compilation of Air Pollutant Emission Factors
ATC	Authority to Construct
CAIRP	CA International Registration Plan
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CH_4	methane
City	City of Santa Maria
CM/AG	Commercial Manufacturing/Agriculture Overlay
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
County	Santa Barbara County
EMFAC2021	EMission FACtor model Version 2021
EPA	United States Environmental Protection Agency
EVSE	electric vehicle supply equipment
g/L	grams per liter
GHG	greenhouse gas
GWP	global warming potential
H_2S	hydrogen sulfide
HP	horsepower
kW DC	kilowatt direct current
lb	pound
LDA	light-duty auto
LDT1	light-duty truck 1
LDT2	light-duty truck 2
MDV	medium-duty vehicle
MM	mitigation measure
mph	miles per hour
MT	metric ton
$MTCO_2e$	metric tons of carbon dioxide equivalents
MWh	Megawatt-hour
N_2O	nitrous oxide
NAAQS	national ambient air quality standards
NNOOS	Non-Neighboring Out-of-State

DRAFT

Abbreviation/Acronym	Description
NO_2	nitrogen dioxide
NOOS	Neighboring Out-of-State Class
NO_X	oxides of nitrogen
O_3	ozone
Pb	lead
PG&E	Pacific Gas & Electric Company
PM	particulate matter
PM_{10}	respirable particulate matter with an aerodynamic diameter of 10 micrometers or less
$PM_{2.5}$	fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less
ppm	parts per million
PV	photovoltaic
RME	Resource Management Element
ROG	reactive organic gases
ROW	right-of-way
RTP	regional transportation plan
SB	Senate Bill
SBCAG	Santa Barbara County Association of Governments
SBCAPCD	Santa Barbara County Air Pollution Control District
SCAQMD	South Coast Air Quality Management District
SCS	sustainable community strategy
SF	square feet or square foot
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLOAPCD	San Luis Obispo County Air Pollution Control District
SO_2	sulfur dioxide
SO_X	sulfur oxides
VCAPCD	Ventura Air Pollution Control District
VMT	vehicle miles traveled
VOC	volatile organic compounds

DRAFT

1.0 INTRODUCTION

This report is provided to support the City of Santa Maria's (City) environmental review process and supply information regarding potential effects of air quality and greenhouse gas (GHG) emissions associated with the proposed West Stowell Delivery Station Project (proposed project) located within the West Stowell Specific Plan area within the City. The analysis in this report evaluates the potential for short- and long-term air quality and GHG impacts associated with construction and operation of the proposed project.

1.1 PROJECT DESCRIPTION

The proposed project would develop a new 169,104 square foot e-commerce delivery station, including 12,766 square feet (SF) of office space and 156,338 SF of warehouse space, as well as a 1,545-SF vehicle inspection area, a 4,993-SF fleet service center, and 906 SF of remote restrooms. The proposed project will be developed on an undeveloped parcel located at 1680 West Stowell Road in the City. The proposed project is located on an approximately 32-acre site currently used for agricultural purposes as shown in **Figure 1**. The project site is designated for Planned Development in the West Stowell Specific Plan and zoned Commercial Manufacturing/Agriculture Overlay (CM/AG).

The proposed project site will include a delivery station, a delivery van queueing area, and surface parking lots. The proposed project will also include sustainability features such as a solar-ready roof and electric vehicle charging stations. **Figure 2** provides details of the project site concept plan.

The proposed project includes line-haul truck loading docks south of the facility building, van loading and queuing to the east and west, and van parking bordering the roads to the west and east of the facility. Employee parking areas are located to the north of the facility. There are a total 706 van parking spaces and 272 employee parking spaces. The facility will have a total of 12 line-haul truck loading docks. The site will be accessed via three entrances that will be built on the northwestern, northern, and northeastern parts of the facility bordering West Stowell Road. The northwestern entrance/exit will be for the line-haul trucks, while the northern and northeastern entrances will be for the vans and employee cars. The proposed project would also incorporate sustainability features including a solar-ready roof and installation of electric vehicle charging stations, which could include up to 200-Level 2 chargers and 2-Level 3 (DC Fast-Charging) chargers. Level 2 chargers operate at 208 to 240 volts, and Level 3 chargers, also known as DC Fast-Charging, can operate at 400 to 1,000-volts DC (USDOT, 2025).

Line-haul trucks delivering goods from fulfillment/sorting centers will enter the project site using the northwestern driveway on West Stowell Road, and travel south to the loading docks. Line-haul trucks will leave the site through the same driveway. Delivery vans and employee cars will enter and exit the site from the northern and northeastern driveway, also on West Stowell Road, and either park in the van parking lot, or drive towards the van staging and loading areas. Two van parking lots will be located to the east and west of the building. To the north of the building there will be parking spots reserved for employees. The line-haul truck loading docks will be located along the southern side of the warehouse building.

1.2 NEARBY LAND USES AND SENSITIVE RECEPTORS

Lands east of the project site are zoned General Manufacturing (M-2) and Small Lot Single Family Residential Zone (RSL-1) directly south of the M-2 zone. Agriculture use zones are located to the north and south of the project site. Lands south and west of the project site are zoned Commercial Manufacturing (CM) and Light Manufacturing (M-1). Directly south of the project site is the Santa

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Maria Valley Railroad track, and less than 9,000 feet south of the facility is the Santa Maria Public Airport. The proposed project will not use the Santa Maria Valley Railroad track for goods transport. The nearest streets to the property are West Stowell Road to the north, Stowell Road to the south, A Street to the east, and E Street to the west.

Sensitive individuals refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality) (CARB, 2005). Land uses where sensitive individuals are most likely to spend extended periods of time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities.

The closest sensitive receptors and their distance from the project site boundary include the following:

- One single-family home located on industrial zoned property approximately 400 feet (0.08 miles) south of the project site (R5). This single-family home appears to be unoccupied; however, it is conservatively assumed to be occupied for the air quality analysis.
- Single-family homes located approximately 1,400 feet (0.27 miles) southeast of the project site (R1)
- Single-family home located approximately 1,450 feet (0.27 miles) northwest of the project site (R2)
- Single-family home located approximately 1,500 feet (0.28 miles) north of the project site (R3)
- Single-family home located approximately 1,840 feet (0.35 miles) southeast of the project site (R4)
- A household daycare located approximately 3,950 feet (0.75 miles) southeast of the project site
- Liberty Elementary School located approximately 4,400 feet (0.83 miles) southeast of the project site
- Dignity Health - Marian Regional Medical Center located approximately 3.2 miles northeast of the project site.

The nearest sensitive receptor is the residence located approximately 400 feet (0.08 miles) south of the project site. **Figure 1** shows the residential receptors near the project site. There are no schools, daycares, or hospitals within 2,000 feet of the site.

1.3 PURPOSE

This technical report examines the environmental impacts of the proposed project as it relates to air quality and greenhouse gas emissions impacts. It describes the regulatory setting, methodology for impact evaluation, and potential impacts from construction and operation of the proposed project. The proposed project is located within the jurisdiction of the Santa Barbara County Air Pollution Control District (SBCAPCD), which is the responsible air district for Santa Barbara County. This report was conducted in accordance with SBCAPCD's *Environmental Review Guidelines* and *Scope and Content of Air Quality Sections in Environmental Documents* (SBCAPCD, 2015a, 2022).

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Figure 1. Project Site Location Map and Sensitive Receptors

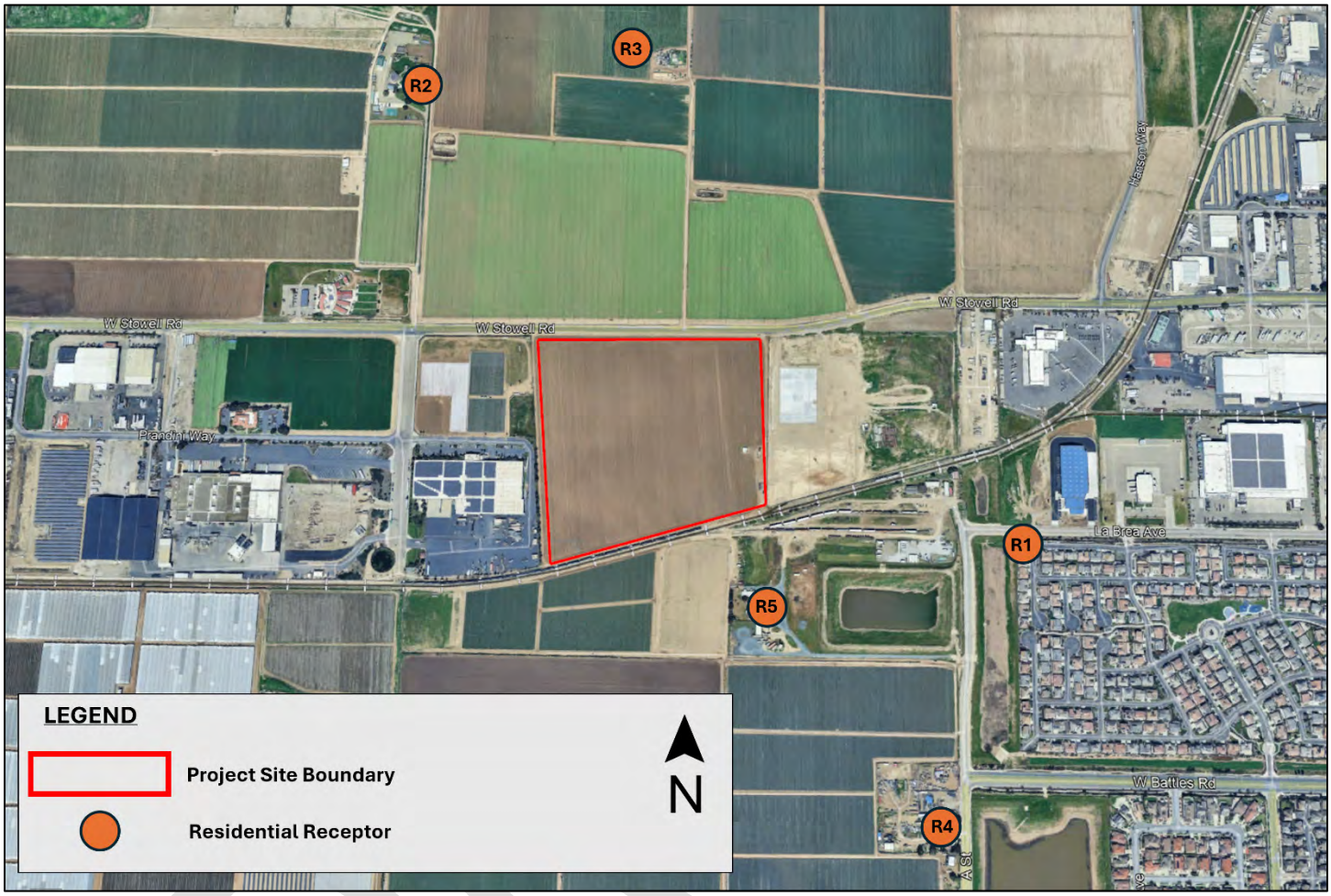
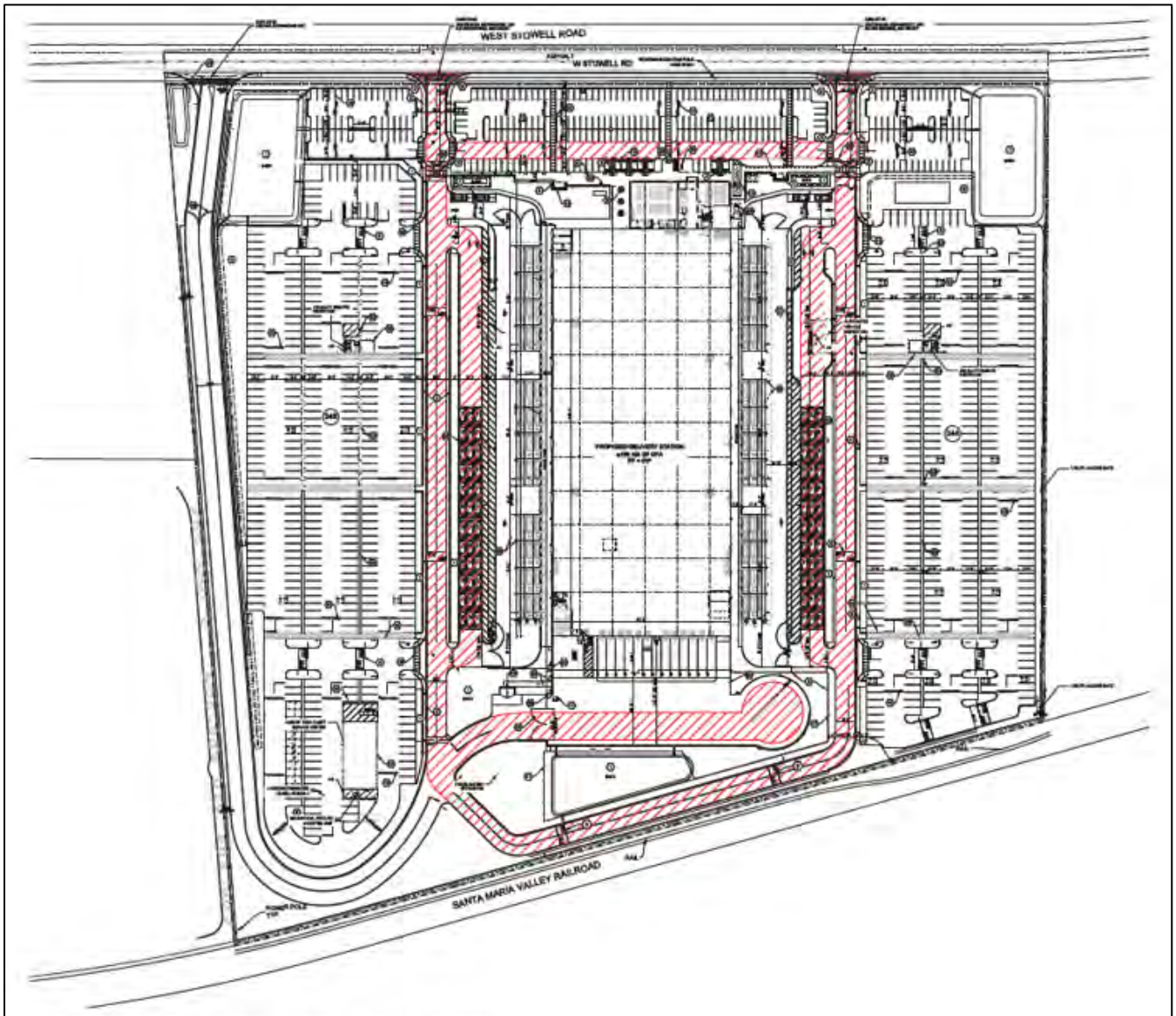


Figure 2. Site Concept Plan



Source: Seefried Industrial Properties, 2025

2.0 REGULATORY

2.1 AIR QUALITY

2.1.1 Federal

2.1.1.1 Clean Air Act

The Federal Clean Air Act (CAA) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare based on the latest science and requires states to adopt enforceable plans to achieve the standards. An air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without any harmful effects on people or the environment, thus, it is used as a threshold metric to define clean air (CARB, 2024a). Congress designed the law to minimize pollution increases from growing numbers of motor vehicles, and from new or expanded stationary sources (i.e., power plants, industrial plants, and other facilities that are not mobile). EPA administers national programs to monitor concentrations of certain air pollutants and control emissions from major sources. Through the CAA, EPA regulates emission sources that are under the exclusive authority of the federal government, such certain types of locomotives, as well as mandating various emission standards, including those for on-road vehicles (EPA, 2013). The CAA also contains specific provisions to address the following:

- "Hazardous" or "toxic" air pollutants that pose health risks, such as cancer or environmental threats such as bioaccumulation of heavy metals
- Acid rain that damages aquatic life and ecosystems, acidifies forest soils, damages property, and forms from pollution that degrades visibility and harms public health
- Chemical emissions that deplete the stratospheric ozone layer
- Regional haze that impairs visibility in national parks and other recreational areas

In addition, the CAA was drafted with general authorities that can be used to address pollution problems that emerge over time, such as greenhouse gas (GHG) emissions that contribute to global climate change.

EPA also regulates emission sources that are under the exclusive authority of the federal government, such as aircrafts, ships, and certain types of locomotives. EPA has jurisdiction over emission sources outside state waters (e.g., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in states other than California (EPA, 2013).

Criteria Air Pollutants and National Ambient Air Quality Standards

The CAA requires EPA to set and revise NAAQS for certain common and widespread pollutants, known as "criteria pollutants," and provides authority for the agency to add additional pollutants. Standards are in effect today for six pollutants: ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter (regulated as subsets of particles with diameter less than 10 microns and less than 2.5 microns denoted as PM_{10} and $PM_{2.5}$, respectively), and lead (Pb). NAAQS are selected by the EPA administrator at the conclusion of a public process that takes about five years for completion. The process starts with a comprehensive review of the relevant scientific

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literature, which is then synthesized to inform a risk and exposure assessment conducted by the EPA staff. The CAA requires EPA to review and, if necessary, revise each of the NAAQS at 5-year intervals. The current NAAQS are presented in **Table 1** along with the corresponding averaging times. Also shown in **Table 1** are the California Ambient Air Quality Standards (CAAQS), which are generally more stringent than the federal standards and are discussed in greater detail in Section 2.1.2.2. In February 2024, the federal $PM_{2.5}$ annual standard was revised from 12 micrograms per cubic meter (µg/m^3) to 9 µg/m^3, making the federal standard more stringent than the state standard of 12 µg/m^3. The principal health effects and typical sources of each criteria pollutant are detailed in **Table 2**.

2.1.1.2 State Implementation Plan

Federal law requires that all states attain the NAAQS. Areas of the State that are designated as “Nonattainment" for one or more of the NAAQS are required under the federal CAA to develop plans meeting specific requirements depending on the severity of the pollution problem. The severity of the pollution problem for “Nonattainment” areas is based on the measured ambient air quality data and the interim design values set for the region. “Nonattainment” areas can be described as “Marginal,” “Moderate,” “Serious,” “Severe-15,” “Severe-17,” and “Extreme” based on the concentrations measured over recent years. An area must demonstrate continual achievement of the interim design value concentrations in order to be redesignated to a lower “nonattainment” tier. The type of nonattainment designation is based on the amount of reductions in pollutant concentrations that must occur for the NAAQS to be achieved.

As part of its enforcement responsibilities, EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. Nonattainment areas that demonstrate extended periods of time with concentrations measured below the air quality standards can be redesignated to “Maintenance” following a request to EPA. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP. Failure of a state to reach attainment of the NAAQS by the target date can trigger penalties, including withholding of federal funds.

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Table 1. Federal and California Ambient Air Quality Standards

Pollutant	Averaging Time	NAAQS	CAAQS
Ozone (O_3)	1-Hour	—	0.09 ppm (180 µg/m³)
	8-Hour	0.07 ppm (137 µg/m³)	0.070 ppm (137 µg/m³)
Carbon Monoxide (CO)	1-Hour	35 ppm (40 mg/m³)	20 ppm (23 mg/ m³)
	8-Hour	9 ppm (10 mg/m³)	9.0 ppm (10 mg/m³)
Nitrogen Dioxide (NO_2)	1-Hour	0.100 ppm (188 µg/m³)	0.18 ppm (339 µg/m³)
	Annual Average	0.053 ppm (100 µg/m³)	0.030 ppm (57 µg/m³)
Sulfur Dioxide (SO_2)	1-Hour	0.075 ppm (196 µg/m³)	0.25 ppm (655 µg/m³)
	24-Hour	0.14 ppm (180 µg/m³)	0.04 ppm (105 µg/m³)
Respirable Particulate Matter (PM_{10})	24-Hour	150 µg/m³	50 µg/m³
	Annual Average	—	20 µg/m³
Fine Particulate Matter ($PM_{2.5}$)	24-Hour	35 µg/m³	—
	Annual Average	9.0 µg/m³	12 µg/m³
Lead	30-Day Average	—	1.5 µg/m³
	Rolling 3-Month Average	0.15 µg/m³	—
Visibility-Reducing Particles	8-Hour	—	Extinction of 0.23 per kilometer
Sulfates	24-Hour	—	25 µg/m³
Hydrogen Sulfide	1-Hour	—	0.03 ppm (42 µg/m³)
Vinyl Chloride	24-Hour	—	0.010 ppm (26 µg/m³)

Source: CARB, 2024a
Notes:
— = no standard
µg/m³ = micrometers per cubic meter
CAAQS = California Ambient Air Quality Standard
mg/m³ = micrograms per cubic meter
NAAQS = National Ambient Air Quality Standard
ppm = parts per million

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Table 2. Criteria Air Pollutant Effects and Sources

Pollutant	Principal Health and Atmospheric Effects	Typical Sources
Ozone (O_3)	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic VOC may also contribute.	Low-altitude ozone is almost entirely formed from ROG or VOC and NO_X in the presence of sunlight and heat. Common precursor emitters include motor vehicles and other internal combustion engines, solvent evaporation, boilers, furnaces, and industrial processes.
Nitrogen Dioxide (NO_2)	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain and nitrate contamination of stormwater. Part of the "NO_X" group of ozone precursors.	Motor vehicles and other mobile or portable engines, especially diesel; refineries; industrial operations.
Carbon Monoxide (CO)	CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. CO also is a minor precursor for photochemical ozone. Colorless, odorless.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.
Sulfur Dioxide (SO_2)	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources like active volcanoes. Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.
Respirable Particulate Matter (PM_{10})	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many toxic and other aerosol and solid compounds are part of PM_{10}.	Dust- and fume-producing industrial and agricultural operations; combustion smoke & vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources.
Fine Particulate Matter ($PM_{2.5}$)	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – a toxic air contaminant – is in the $PM_{2.5}$ size range. Many toxic and other aerosol and solid compounds are part of $PM_{2.5}$.	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical and photochemical reactions involving other pollutants including NO_X, SO_X, ammonia, and ROG.
Lead (Pb)	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Lead is also a toxic air contaminant and water pollutant.	Lead-based industrial processes like battery production and smelters. Lead paint, leaded gasoline. Aerially deposited lead from older gasoline use may exist in soils along major roads.

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Pollutant	Principal Health and Atmospheric Effects	Typical Sources
Sulfates	Premature mortality and respiratory effects. Contributes to acid rain. Some toxic air contaminants attach to sulfate aerosol particles.	Industrial processes, refineries and oil fields, mines, natural sources like volcanic areas, salt-covered dry lakes, and large sulfide rock areas.
Hydrogen Sulfide (H_2S)	Colorless, flammable, poisonous. Respiratory irritant. Neurological damage and premature death. Headache, nausea. Strong odor.	Industrial processes such as: refineries and oil fields, asphalt plants, livestock operations, sewage treatment plants, and mines. Some natural sources like volcanic areas and hot springs.
Vinyl Chloride	Neurological effects, liver damage, cancer.	Industrial processes.
Visibility-Reducing Particles (VRP)	Reduces visibility. Produces haze. Note: not directly related to the Regional Haze program under the Federal Clean Air Act, which is oriented primarily toward visibility issues in National Parks and other "Class I" areas. However, some issues and measurement methods are similar.	See particulate matter above. May be related more to aerosols than to solid particles.
Source: Caltrans, 2020		

2.1.2 State

2.1.2.1 California Clean Air Act

In addition to being subject to the requirements of the CAA, air quality in California is also governed by more stringent regulations under the California Clean Air Act (CCAA). In California, the CCAA is administered by California Air Resources Board (CARB) at the State level and by air quality management districts and air pollution control districts at the regional and local levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for meeting the State requirements of the CAA, administering the CCAA, and establishing the CAAQS. The CCAA, which was amended in 1992, requires all air districts in the State to endeavor to achieve and maintain the CAAQS. In this capacity, CARB conducts research, compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. CARB also establishes emissions standards for motor vehicles sold in California, consumer products (i.e., hair spray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

2.1.2.2 California Ambient Air Quality Standards

Prior to the development of federal standards in 1971, California's first CAAQS were established by the State Department of Public Health in 1962. In 1969, CARB was created and formally adopted the CAAQS developed by the Department of Health. The CCAA requires all areas of the State to achieve and maintain the CAAQS by the earliest practicable date and must show incremental progress toward attainment, whereas federal standards establish a specified date for when standards must be met. The CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. In February 2024, the federal $PM_{2.5}$ annual standard was revised from

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12 µg/m³ to 9 µg/m³, making the federal standard more stringent than the state standard of 12 µg/m³.

Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment. Although California law continues to mandate CAAQS, meeting the federal standards has precedence over attainment of the CAAQS because failure to meet federal standard deadlines may result in federal penalties. The state standards are summarized with the federal standards in **Table 1.**

Table 3 summarizes the attainment status for Santa Barbara County with respect to the NAAQS and CAAQS. The CAAQS and NAAQS represent concentration limits of criteria air pollutants needed to adequately protect human health and the environment. Existing violations of the O_3 and PM_{10} ambient air quality standards indicate that certain individuals exposed to this pollutant may experience certain health effects, including increased incidence of acute and chronic cardiovascular and respiratory ailments.

Table 3. Federal and State Attainment Status for Santa Barbara County

Pollutant	Federal Attainment Status	State Attainment Status
O_3	Attainment/Unclassifiable	Nonattainment-Transitional
NO_2	Attainment/Unclassifiable	Attainment
CO	Attainment/Unclassifiable	Attainment
SO_2	Attainment/Unclassifiable	Attainment
PM_{10}	Unclassifiable	Nonattainment
$PM_{2.5}$	Attainment/Unclassifiable	Attainment
Pb	Attainment/Unclassifiable	Attainment
Sulfates	No standard	Attainment
Hydrogen sulfide (H_2S)	No standard	Attainment
Vinyl Chloride	No standard	No standard
Visibility Reducing Particulates	No standard	Unclassified
Source: CARB, 2023		

2.1.2.3 In-Use Off-Road Diesel Vehicle Regulation

On July 26, 2007, CARB adopted a regulation to reduce DPM and NOX emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. The regulation applies to all self-propelled off-road diesel vehicles 25 horsepower or greater used in California and most two-engine vehicles (except on-road two-engine sweepers). This includes vehicles that are rented or leased (rental or leased fleets). Examples include loaders, crawler tractors, skid steers, backhoes, forklifts, airport ground support equipment, water well drilling rigs, and two-engine cranes. Such vehicles are used in construction, mining, and industrial operations. The regulation does not apply to stationary equipment or portable equipment such as generators. The off-road vehicle regulation establishes emissions performance requirements, establishes reporting, disclosure, and labeling requirements for off-road vehicles, and limits unnecessary idling. In November 2022, CARB amended the regulation to require fleets to phase-out use of the oldest and highest polluting off-road diesel vehicles in California; prohibit the addition of high-emitting vehicles to a fleet; and require the use of

R99 or R100 renewable diesel in off-road diesel vehicles. Beginning January 1, 2024, all fleets are required to procure and use renewable diesel in all vehicles owned or operated in California that are subject to the Off-Road Regulation, with some limited exceptions, including for lack of availability.

2.1.2.4 Truck and Bus Regulation

In December 2008, CARB adopted the Statewide Truck and Bus Regulation that requires installation of PM retrofits on all on-road heavy duty trucks and buses beginning January 1, 2012 and replacement of older trucks starting January 1, 2015. By January 1, 2023, all vehicles need to have 2010 model year engines or equivalent.

2.1.2.5 Toxic Air Contaminant Identification and Control Act

CARB's statewide comprehensive air toxics program was established in the early 1980s. According to Section 39655 of the California Health and Safety Code, a toxic air contaminant (TAC) is "an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose or present a potential hazard to human health." The Toxic Air Contaminant Identification and Control Act created California's program to reduce exposure to air toxics, and under this Act, CARB is required to prioritize the identification and control of air toxics emissions. In selecting substances for review, CARB must consider criteria relating to the risk of harm to public health, such as the amount or potential amount of emissions, manner of and exposure to usage of the substance in California, persistence in the atmosphere, and ambient concentrations in the community.

CARB classified diesel particulate matter (DPM) emissions from diesel-fueled engines as TACs in August 1998. Following the identification process, CARB was required by law to determine if there was a need for further control, which led to the risk management phase of the program. For the risk management phase, CARB formed the Diesel Advisory Committee, and with the assistance of the Advisory Committee and its subcommittees, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (CARB, 2000) and the Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines (CARB, 2015).

The Diesel Advisory Committee approved these two documents on September 28, 2000, paving the way for the next step in the regulatory process: the control measure phase. During the control measure phase, specific statewide regulations designed to further reduce DPM emissions from diesel-fueled engines and vehicles have and continue to be evaluated and developed. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards to reduce DPM emissions.

2.1.2.6 Assembly Bill 1346

Assembly Bill 1346 (AB 1346) was signed into law on October 9, 2021, and mandates CARB to adopt regulations prohibiting the sale of new gas-powered small off-road engines (SOREs), such as those used in lawn equipment and generators, by January 1, 2024, or as soon as feasible. The law aims to reduce air pollution from SOREs, which contribute significantly to smog and greenhouse gas emissions. It supports the transition to zero-emission alternatives by providing $30 million in funding for rebate programs to assist small businesses and individuals in purchasing compliant electric-powered equipment. While the law targets new sales, existing equipment can continue to be used, ensuring a phased and economically feasible transition to cleaner technologies.

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2.1.3 Regional

2.1.3.1 Santa Barbara County Air Pollution Control District

The Santa Barbara County Air Pollution Control District (SBCAPCD) is the local air quality district responsible for protecting air quality and public health in Santa Barbara County. SBCAPCD focuses on reducing air pollution through various programs, regulations, and initiatives. To minimize potential impacts from project emissions, the SBCAPCD implements rules and regulations that detail pollution reduction measures that must be implemented during construction and operation of projects. The applicable rules and regulations would include, but not be limited to, the following:

- Rule 201 (Permits Required) — The applicability of this rule is for any person who builds, erects, alters, replaces, operates or uses any article, machine, equipment, or other contrivance which may cause the issuance of air contaminants (SBCAPCD, 2008).

- Rule 329 (Cutback and Emulsified Asphalt Paving Materials) — The applicability of this rule is for the application and sale of cutback and emulsified asphalt materials for the paving, construction and maintenance of streets, highways, parking lots and driveways (SBCAPCD, 1992).

- Rule 323.1 (Architectural Coatings) — The applicability of this rule provides VOC content limits for architectural coatings. In the case of the proposed site, the use of low VOC paint in non-residential interior of 50 g/L, low VOC paint in non-residential exterior of 100 g/L, and the use of low VOC paint in parking of 100 g/L (SBCAPCD, 2015b).
- Rule 345 (Control of Fugitive Dust from Construction and Demolition Activities) — The applicability of this rule is for fugitive dust control when engaging in construction or demolition activities that cause 20% opacity or greater of visible dust beyond property line for periods aggregating more than 3 minutes in any 60 min period (SBCAPCD, 2010).

2.1.3.2 Santa Barbara County Association of Governments

Federal law (23 United States Code [U.S.C.] Section 134 et seq.) requires that any urbanized area with population of 50,000 or more be guided and maintained by a regional entity known as a Metropolitan Planning Organization (MPO). The MPO for Santa Barbara County is the Santa Barbara County Association of Governments (SBCAG), which also serves as the Regional Transportation Planning Agency. SBCAG adopted the Connected 2050 Regional Transportation Plan and Sustainable Communities Strategy (2050 RTP/SCS) in August 2021. This long-range plan outlines how investments will be distributed to balance transportation and housing needs with social, economic, and environmental goals.

The 2050 RTP/SCS contains goals for reducing emissions from passenger vehicles and light-duty trucks by integrating land use and transportation measures, such as promoting infill development near transit hubs and supporting teleworking; as well as enhancing connectivity between communities through improved transportation networks and sustainable development patterns. The 2050 RTP/SCS is also required to comply with the State's Senate Bill 375, which focuses on reducing GHG emissions from passenger vehicles and light-duty trucks. SBCAG was assigned a regional GHG reduction target of 17 percent compared to 2005 baseline levels. The 2050 RTP/SCS preferred scenario would result in a reduction in per capita vehicle greenhouse gas emissions of 9.4 percent in 2020 and 17.8 percent in 2035, compared to the 2005 base year, thus meeting the GHG

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reduction target (SBCAG, 2021). In addition to GHG reductions, the 2050 RTP/SCS preferred scenario would reduce reactive organic gas (ROG) by 8 percent in 2020 and 13 percent in 2035, and reduce NO_X emissions by 7 percent in 2020 and 12 percent by 2035, compared to the 2050 baseline scenario (SBCAG, 2021).

2.1.4 Local

2.1.4.1 City of Santa Maria

The City of Santa Maria General Plan Resources Management Element (RME) is a comprehensive planning document that addresses goals, policies, objectives, and programs for the conservation and preservation of resources that are valuable to the City within its planning area. Adopted in 1996, the plan lists several air quality policies that supplement those of SBCAPCD. Policy 2 objectives will be maintained throughout the construction and operation of the proposed site. Policy 2 states:

- Policy 2: Improve and maintain the quality of air to ensure the health of all residents in the Santa Maria Valley by reducing mobile and stationary source air pollutant emissions through the use of efficient land use patterns, the implementation and promotion of alternative transportation modes and other transportation system management programs.

2.2 GREENHOUSE GASES

The subject of GHG emissions and climate change resiliency adaptation has garnered substantial regulatory attention in recent years. Climate change refers to variations in average long-term meteorological conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation, and frequency and severity of extreme weather events. Historical records indicate that global climate fluctuations have occurred in the past due to natural phenomena; however, recent data increasingly suggests that the current global conditions are distinct from previous patterns and are influenced by anthropogenic (human-caused) GHG emissions. GHGs are a class of pollutants that are generally understood to play a critical role in controlling atmospheric temperature near the Earth's surface by allowing high frequency shortwave solar radiation to enter the planet's atmosphere and then subsequently trapping low frequency infrared radiative energy that would otherwise emanate back out into space. The greenhouse effect compares the Earth and the atmosphere surrounding it to a greenhouse with glass panes; the glass panes in a greenhouse let heat from sunlight in and reduce the amount of heat that escapes. The levels of GHGs in the atmosphere affect how much heat energy can be absorbed.

Radiative forcing is an expression of the net difference in energy entering the Earth's atmosphere versus leaving it. Each GHG possesses its own degree of climate-forcing ability to absorb low frequency infrared energy, meaning that some GHGs are more effective in trapping heat in the atmosphere than others. Water vapor is the most environmentally prevalent GHG; however, definitive methods are not established to regulate emissions and concentrations of water vapor in the atmosphere. After water vapor, carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) are the most ubiquitous GHGs. CO_2 is commonly used as the standard reference for characterizing the relative global warming potential (GWP) of other GHGs. The GWP value describes the relative magnitude of climate-forcing effects of GHGs and is used to convert emissions into carbon dioxide equivalents (CO_2e). **Table 4** presents the GWP values and atmospheric lifetimes of CO_2, CH_4, and N_2O, as well as other regulated GHGs emitted by human activities. For example, CH_4 is 25 times more potent than CO_2 over a 100-year period.

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Table 4. Greenhouse Gas Global Warming Potentials

GHG	Lifetime (Years)[a]	Global Warming Potential (20-year)	Global Warming Potential (100-Year)[b]
Carbon Dioxide (CO_2)	—	1	1
Methane (CH_4)	12	21	25
Nitrous Oxide (N_2O)	114	310	298
Nitrogen Trifluoride (NF_3)	740	Unknown	17,200
Sulfur Hexafluoride (SF_6)	3,200	23,900	22,800
Perfluorocarbons (PFCs)	2,600-50,000	6,500-9,200	7,390-12,200
Hydrofluorocarbons (HFCs)	1-270	140-11,700	124-14,800

Source: CARB, 2025

Notes:

[a] Lifetime refers to the approximate amount of time it would take for the anthropogenic increment of an atmospheric pollutant concentration to return to its natural level as a result of either being converted to another chemical compound or being taken out of the atmosphere via a sink.

[b] The 20-year global warming potentials (GWPs) are based on the Intergovernmental Panel on Climate Change (IPCC) Second Assessment Report (SAR) (IPCC, 1995) and the 100-year GWPs are based on the IPCC Assessment Report 4 (AR4) (IPCC, 2007). The California Air Resources Board (CARB) uses AR4 GWPs for their GHG emissions inventories.

2.2.1 Federal

2.2.1.1 Clean Air Act

In Massachusetts v. Environmental Protection Agency (2007) 549 U.S. 497, the United States (U.S.) Supreme Court held in April 2007 that the U.S. Environmental Protection Agency (EPA) has statutory authority under Section 202 of the federal Clean Air Act (CAA) to regulate GHG emissions. The court did not hold that the EPA was required to regulate GHG emissions; however, it indicated that the agency must decide whether GHG emissions cause or contribute to air pollution that is reasonably anticipated to endanger public health or welfare. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHG emissions under Section 202(a) of the CAA (42 United States Code [U.S.C.] Section 7521). These findings included that GHG emissions threaten the public health and welfare of future generations and motor vehicle engines contribute to air pollution, which poses an ongoing threat to public health and welfare.

2.2.1.2 Energy Independence and Security Act

The Energy Independence and Security Act (EISA) of 2007 includes several key provisions that will increase energy efficiency and the availability of renewable energy, which will reduce GHG emissions as a result. The Act facilitates the reduction of GHG emissions by increasing the supply of alternative fuel sources, revising standards affecting regional efficiency for heating and cooling products, phasing out old incandescent light bulbs, and improving fuel efficiency standards. Additional provisions of EISA promote energy savings in government and public institutions, research for alternative energy, additional research in carbon capture, international energy programs, and the creation of green jobs.

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2.2.1.3 Heavy-Duty Vehicle Program

The EPA's Heavy-Duty Vehicle Program was adopted on August 9, 2011 to establish the first fuel efficiency requirements for medium- and heavy-duty vehicles beginning with the model year 2014.

2.2.1.4 Federal Transit Administration Climate Change Adaptation Initiative

The Federal Transit Administration has implemented a Climate Change Adaptation Initiative program to investigate potential strategies for reducing climate impacts from transit. The program was established in 2014 and providing funding to conduct seven climate adaptation pilot studies to increase knowledge of how transit agencies can adapt to climate change, advance the state of the practice in adapting transit assets and operations to the impacts of climate change, and build strategic partnerships between transit agencies and climate adaptation experts. The approach of the pilot projects involved identification of climate hazards and potential climatic events, characterization of risks on transit projects and operations, development of initial adaptation strategies and linking strategies to organizational structures.

2.2.1.5 Federal Highway Administration Carbon Reduction Program

Established by the passage of the 2021 Bipartisan Infrastructure Law, the Federal Highway Administration's (FHWA) Carbon Reduction Program (CRP) provides funds for projects designed to reduce transportation emissions, defined as CO2 emissions from on-road highway sources. The CRP requires each state to develop a carbon reduction strategy no later than 2 years after enactment and update the strategy at least every 4 years. The state-level carbon reduction strategy shall support efforts—and identify projects and strategies—to support the reduction of transportation-related GHG emissions and quantify the total carbon emissions from production, transport, and use of materials used in the construction of transportation facilities in the state. Under the CRP, the FHWA is tasked with reviewing the states' process for developing its carbon reduction strategy and certify that the strategy meets statutory requirements.

2.2.2 State

2.2.2.1 California Greenhouse Gas Reduction Targets

Executive Order S-3-05

On June 1, 2005, Executive Order (EO) S-3-05 set the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels. EO S-3-05 calls for the Secretary of the California Environmental Protection Agency (CalEPA) to be responsible for coordination of state agencies and progress reporting.

In response to EO S-3-05, the Secretary of CalEPA created the Climate Action Team (CAT). The original mandate for the CAT was to develop proposed measures to meet the emission reduction targets set forth in EO S-3-05. The CAT is responsible for preparing reports that summarize the state's progress in reducing GHG emissions. The most recent Climate Action Team Report was published in December 2010. The report discusses mitigation and adaptation strategies, state research programs, policy development, and future efforts (CalEPA, 2006).

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Assembly Bill 32

In 2006, the California State Legislature adopted Assembly Bill (AB) 32—codified in the California Health and Safety Code [HSC], Division 25.5 – California Global Warming Solutions Act of 2006—which focused on reducing GHG emissions in California to 1990 levels by 2020. AB 32 defines regulated GHGs as CO_2, CH_4, N_2O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6) and represents the first enforceable statewide program to limit emissions of these GHGs from all major industries with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. Under AB 32, the California Air Resources Board (CARB) has the primary responsibility for reducing GHG emissions. AB 32 required CARB to adopt rules and regulations directing state actions that would achieve GHG emissions reductions equivalent to 1990 statewide levels by 2020.

A specific requirement of AB 32 was to prepare a climate change scoping plan for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (HSC Section 38561(h)). CARB developed an AB 32 Climate Change Scoping Plan (2008 Scoping Plan) that contained strategies to achieve the 2020 emissions cap (CARB, 2008a). The 2008 Scoping Plan was approved in 2008 and contains a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the state's long-range climate objectives.

As required by AB 32, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was originally set at 427 million metric tons of carbon dioxide equivalents (MMTCO2e) using the GWP values from the IPCC SAR (IPCC, 1995). CARB also projected the state's 2020 GHG emissions under No-Action-Taken conditions – that is, emissions that would occur without any plans, policies, or regulations to reduce GHG emissions. CARB originally used an average of the state's GHG emissions from 2002 through 2004 and projected the 2020 levels at approximately 596 $MMTCO_2e$.

The First Update to the Climate Change Scoping Plan (First Update) was approved by CARB in May 2014 and built upon the 2008 Scoping Plan with new strategies and recommendations. In 2014, CARB revised the target using the GWP values from the IPCC AR4 and determined that the 1990 GHG emissions inventory and 2020 GHG emissions limit was 431 $MMTCO_2e$. CARB also updated the state's 2020 CAT emissions estimate to account for the effect of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that were adopted for motor vehicles and renewable energy. CARB projected statewide 2020 emissions using the GWP values from the IPCC AR4 and estimated them to be 509.4 $MMTCO_2e$.

Executive Order B-16-2012

On March 23, 2012, Governor Brown issued EO B-16-2012, which established benchmarks for reducing transportation-related GHG emissions. It requires agencies to implement the Plug-in Electric Vehicle Collaborative and California Fuel Cell Partnership by 2015 and sets forth targets specific to the transportation section, including the goal of reducing transportation-related GHG emissions to 80 percent less than 1990 levels by 2050.

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Executive Order B-30-15

On April 29, 2015, Governor Brown issued EO B-30-15, which established a medium-term goal for 2030 of reducing GHG emissions by 40 percent below 1990 levels and required CARB to update its 2014 Scoping Plan to identify measures to meet the 2030 target. The EO supports EO S-03-05, described above, but is currently only binding on state agencies. The adoption of Senate Bill (SB) 32 formally established a target for 2030.

Senate Bill 32

In 2016, the California State Legislature adopted SB 32—which adds Section 38566 to the HSC and requires a commitment to reducing statewide GHG emissions to 1990 levels by 2020 and 40 percent below 1990 levels by 2030—and its companion, AB 197, which provides additional direction for developing the 2017 Scoping Plan. Both were signed by Governor Brown to update AB 32 and include an emissions reduction goal for the year 2030. SB 32 and AB 197 amend AB 32 and establish a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and include provisions to ensure the benefits of state climate policies reach into disadvantaged communities.

In response to the 2030 GHG reduction target, CARB adopted California's 2017 Climate Change Scoping Plan (2017 Scoping Plan) at a public meeting held in December 2017 (CARB, 2017). The 2017 Scoping Plan outlined the strategies that the state would implement to achieve the 2030 GHG reduction target. The strategies included building upon the existing Cap-and-Trade Regulation , low carbon fuel standard (LCFS), improved emissions standards, and increasing renewable energy. The strategies also included reducing CH_4 emissions from agricultural and other wastes by using it to meet California's energy needs. CARB's projected statewide 2030 emissions accounted for 2020 GHG reduction policies and programs.

CARB stated that the 2017 Scoping Plan Scenario "is the best choice to achieve the state's climate and clean air goals". The majority of the reductions would result from the continuation of the Cap-and-Trade Regulation. Additional reductions are achieved by the following activities:

- Applying electricity sector standards (i.e., utility providers to supply at least 50 percent renewable electricity by 2030)
- Doubling the energy efficiency savings at end uses
- Making additional reductions from the LCFS, implementing the short-lived GHG strategy (e.g., HFCs)
- Implementing the mobile source strategy and sustainable freight action plan. (The alternatives were designed to consider various combinations of these programs, as well as consideration of a carbon tax in the event the Cap-and-Trade Regulation is not continued. However, in July 2017, the California Legislature voted to extend the Cap-and-Trade Regulation to 2030.)

Assembly Bill 1279

AB 1279 was adopted on September 16, 2022, and requires the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions. Additionally, AB 1279 requires California to reduce statewide GHG emissions by 85 percent compared to 1990 levels by 2045.

The framework for achieving these goals is outlined in the latest update to California's GHG scoping plan, the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) (CARB, 2022). The

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2022 Scoping Plan would continue to build on efforts in reducing GHG emissions from all sectors (energy, transportation, industrial, etc.) and would be the first of its kind to include "carbon neutrality as a science-based guide and touchstone for California's climate work." To support the carbon neutrality goal, the 2022 Scoping Plan analyzed natural and working lands (NWLs), such as forests, shrublands, croplands, and wetlands, and how NWLs will play an important role in reducing GHG emissions from hard-to-abate industries such as cement, internal combustion vehicles, and refrigerants. Carbon storage in NWLs on their own will not be enough to meet carbon neutrality and development of feasible technologies to pull CO_2 from smokestacks or the atmosphere, and permanently storing CO_2 will be crucial to meeting carbon neutrality and net negative emissions.

To meet the 2022 Scoping Plan goals, electrification in all sectors will continue to play an important role. Development of clean energy production and distribution are critical in having a decarbonized economy. The energy transition to achieve a decarbonized economy would require adding four times the current amount of solar and wind generation, and 1,700 times the current hydrogen supply by 2045. Developing clean energy and fuels is critical to reducing GHG emissions from the transportation sector and is necessary to support long-term GHG reductions.

Overall, the 2022 Scoping Plan has an ambitious and aggressive approach to reducing GHG emissions by 85 percent compared to 1990 levels by 2045 and reducing demand for liquid petroleum and total fossil fuel by 94 percent and 86 percent respectively, by 2045 relative to 2022 (CARB, 2022).

2.2.2.2 Renewable Energy Standards/Renewable Portfolio Standards

Senate Bill 1078 and Senate Bill 107

SB 1078 (2002) and SB 107 (2006) created the Renewable Energy Standard, which required electric utility companies to increase procurements from eligible renewable energy resources by at least 1 percent of their retail sales annually until reaching 20 percent by 2010. SB 2 (1X) (2011) requires a Renewables Portfolio Standard, functionally the same thing as the Renewable Energy Standard, of 33 percent by 2020. In 2013, the statewide average for the three largest electrical suppliers (Pacific Gas and Electric, Southern California Edison, and San Diego Gas & Electric) was 22.7 percent. As noted below, SB 350 increased the renewable requirement to 50 percent for 2030.

Senate Bill 1 and Senate Bill 1017 (Million Solar Roofs)

SB 1 and SB 1017, enacted in August 2006, set a goal to install 3,000 megawatts of new solar capacity by 2017 – moving the state toward a cleaner energy future and helping lower the cost of solar systems for consumers. The Million Solar Roofs Program is a ratepayer-financed incentive program aimed at transforming the market for rooftop solar systems by driving down costs over time. It provides up to $3.3 billion in financial incentives that decline over time. The state reached its one million solar roofs milestone in 2019.

Assembly Bill 811

AB 811, enacted on July 21, 2008, authorizes California cities and counties to designate districts within which willing property owners may enter into contractual assessments to finance the installation of renewable energy generation and energy efficiency improvements that are permanently fixed to the property.

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Senate Bill 350

SB 350, also known as the Clean Energy and Pollution Reduction Act of 2015, was approved in 2015 and includes key provisions to require the following by 2030: (1) a renewables portfolio standard of 50 percent and (2) a doubling of energy efficiency for existing buildings.

Senate Bill 100

SB 100, adopted in August 2018, established a state goal of 100 percent clean electricity by 2045 and advances the Renewables Portfolio Standard to 50 percent by 2025 and 60 percent by 2030.

Senate Bill 1020

SB 1020 was adopted on September 16, 2022 and is a revision to SB 100 that would require eligible renewable energy resources and zero-carbon resources to supply the following:

- 90 percent of all retail electricity sales to California end-use customers by December 31, 2035, 95 percent by 2040, and 100 percent by 2045
- 100 percent of electricity procured to serve all state agencies by December 31, 2035

2.2.2.3 Advanced Clean Cars

Assembly Bill 1493 (Pavley I)

AB 1493 amended the Clean Car Standards (Chapter 200, Statutes of 2002), also known as the "Pavley I" regulations which required reductions in GHG emissions in new passenger vehicles from 2009 through 2016. The Clean Car Standards required CARB to develop and adopt standards for vehicle manufacturers to reduce GHG emissions coming from passenger vehicles and light-duty trucks at a "maximum feasible and cost-effective reduction" by January 1, 2005. Fleet average emission reached 22 percent reduction by 2012 and 30 percent by 2016. In January 2012, CARB adopted the Advanced Clean Cars I program to extend AB 1493 through model years 2017 to 2025 (also known as "Pavley II"). This program promoted all types of clean fuel technologies such as plugin hybrids, battery electric vehicles, compressed natural gas vehicles, and hydrogen powered vehicles while reducing smog and saving consumers' money in fuel costs.

Most recently in 2022, CARB adopted the Advanced Clean Cars II regulations, which would impose the next level of emissions standards for passenger vehicles and light-duty trucks for model years 2026 through 2035. Additionally, these regulations would require that by 2035, all new passenger cars, trucks, and sport utility vehicles sold in California will be zero emission vehicles.

Executive Order S-1-07

On January 18, 2007, EO S-1-07 was issued requiring a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020. The LCFS was identified by CARB as a discrete early action item in the 2008 Scoping Plan developed from AB 32. The LCFS was most recently amended in 2018 to align the carbon intensity benchmarks with the 2030 GHG target enacted by SB 32.

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2.2.2.4 Land Use and Transportation Planning

Senate Bill 375

Adopted on September 30, 2008, SB 375 established mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. SB 375 required CARB to consult with the state's Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. In February 2011, CARB adopted the GHG emissions reduction targets of 8 percent by 2020 and 13 percent by 2035 relative to 2005 GHG emissions for the Southern California Association of Governments (SCAG). Beginning in October 2018, the 2035 target was revised to 19 percent below 2005 levels.

Under SB 375, the reduction target must be incorporated within that region's Regional Transportation Plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy (SCS). Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plan) are not required to be consistent with either the RTP or SCS.

Senate Bill 743

SB 743, adopted September 27, 2013, encourages land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT), which contribute to GHG emissions, as required by AB 32. Key provisions of SB 743 include reforming how the California Environmental Quality Act (CEQA) analyzes aesthetic and parking impacts of urban infill sites, and eliminating the measurement of auto delay, including Level of Service, as a metric that can be used for measuring traffic impacts in transit priority areas. SB 743 requires that the Governor's Office of Planning and Research (OPR) revise CEQA Guidelines to establish criteria for determining the significance of transportation impacts of projects within transit priority areas that promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses.

2.2.2.5 California Green Building Standards Code

The California Building Standards Commission adopted the statewide mandatory California Green Building Standards Code (CALGreen) Part 11 of Title 24, California Code of Regulations, which identifies mandatory building measures and voluntary measures that may be incorporated into the design of buildings to improve building energy savings. These measures would be applied to planning, designing, operating, constructing, and occupying newly constructed buildings or structures.

2.2.2.6 California Energy Code

The California Building Standards Commission adopted the statewide mandatory California Energy Code, Part 6 of Title 24, California Code of Regulations. Title 24 applies to all newly constructed non-residential buildings and regulates minimum energy efficiencies for cooling, heating, ventilation, water heating, and lighting. Title 24, Part 6 contains requirements for cool roofs, exterior lighting, bicycle parking, and electric vehicle charging. In addition, it requires mandatory inspections of energy systems (e.g., heat furnace, air conditioner, and mechanical equipment) for non-residential buildings larger than 10,000 square feet to ensure that all are working at their maximum capacity and according to their design efficiencies.

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2.2.2.7 Assembly Bill 1346

AB 1346 was signed into law on October 9, 2021, and mandates CARB to adopt regulations prohibiting the sale of new gas-powered small off-road engines (SOREs), such as those used in lawn equipment and generators, by January 1, 2024, or as soon as feasible. The law aims to reduce air pollution from SOREs, which contribute significantly to smog and greenhouse gas emissions. It supports the transition to zero-emission alternatives by providing $30 million in funding for rebate programs to assist small businesses and individuals in purchasing compliant electric-powered equipment. While the law targets new sales, existing equipment can continue to be used, ensuring a phased and economically feasible transition to cleaner technologies.

2.2.3 Regional

2.2.3.1 Santa Barbara County Air Pollution Control District

The Santa Barbara County Air Pollution Control District (SBCAPCD) is the local air quality district responsible for protecting air quality and public health in Santa Barbara County. SBCAPCD focuses on reducing air pollution through various programs, regulations, and initiatives. The SBCAPCD has established a quantitative screening threshold of 10,000 $MTCO_2e$ for stationary source projects (e.g., oil and gas facilities, gas stations, cement batch plants, etc.), however, this quantitative threshold is not applicable to the proposed project because it is a land use development project. The proposed project would require an SBCAPCD permit for its emergency fire pump, but this would not change the proposed project's status as a land development project.

2.2.3.2 Santa Barbara County Association of Governments

Federal law (23 United States Code [U.S.C.] Section 134 et seq.) requires that any urbanized area with population of 50,000 or more be guided and maintained by a regional entity known as a Metropolitan Planning Organization (MPO). The MPO for Santa Barbara County is the Santa Barbara County Association of Governments (SBCAG), which also serves as the Regional Transportation Planning Agency. SBCAG adopted the Connected 2050 Regional Transportation Plan and Sustainable Communities Strategy (2050 RTP/SCS) in August 2021. This long-range plan outlines how investments will be distributed to balance transportation and housing needs with social, economic, and environmental goals.

The 2050 RTP/SCS contains goals for reducing emissions from passenger vehicles and light-duty trucks by integrating land use and transportation measures, such as promoting infill development near transit hubs and supporting teleworking; as well as enhancing connectivity between communities through improved transportation networks and sustainable development patterns. The 2050 RTP/SCS is also required to comply with the State's Senate Bill 375, which focuses on reducing GHG emissions from passenger vehicles and light-duty trucks. SBCAG was assigned a regional GHG reduction target of 17 percent compared to 2005 baseline levels. The 2050 RTP/SCS preferred scenario would result in a reduction in per capita vehicle greenhouse gas emissions of 9.4 percent in 2020 and 17.8 percent in 2035, compared to the 2005 base year, thus meeting the GHG reduction target (SBCAG, 2021).

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3.0 METHODOLOGY

The proposed project would generate criteria pollutants and GHG emissions during construction and operations. Criteria pollutants include reactive organic gases (ROG), oxides of nitrogen (NO_X), CO, oxides of sulfur (SO_X), PM_{10}, and $PM_{2.5}$. GHG emissions would include CO_2, CH_4, and N_2O. The following sections describe the methods used to estimate the proposed project's criteria pollutant and GHG emissions from construction and operations.

3.1 CONSTRUCTION

Construction of the proposed project would generate criteria pollutant and GHG emissions. Criteria pollutants would be generated from various construction sources including off-road equipment; mobile sources including worker vehicles, vendor trucks, and haul trucks; fugitive dust emissions during site grading and earth movement activities; and ROG off-gassing emissions from paving and application of architectural coatings. GHG emissions would be generated by off-road equipment and mobile source exhaust emissions.

Construction emissions were estimated using the California Emissions Estimator Model (CalEEMod) (CAPCOA, 2022a), version 2022.1.1.29. CalEEMod incorporates methodologies and data from the California Air Resources Board's (CARB) EMission FACtors model (EMFAC2021) and the U.S. Environmental Protection Agency's (EPA's) Compilation of Air Pollutant Emission Factors (AP-42) (CARB, 2021a; EPA, 2021). CalEEMod is a model developed by the California Air Pollution Control Officers Association (CAPCOA) which quantifies ozone precursors, criteria pollutants, and GHG emissions from construction and operation of new land use development and linear projects in California; EMFAC2021 is a model developed and used by CARB to assess emissions from on-road vehicles including cars, trucks, and buses in California; and AP-42, while not a model, contains methodologies for emissions factors and process information for more than 200 air pollution source categories.

Project construction is expected to commence in the second quarter of 2026 and be completed by the third quarter of 2027. Construction tasks will include site preparation, grading, building construction, paving, and architectural coatings. The project site is currently undeveloped and does contain any existing structures, therefore, a demolition phase would not be required. Project specifics, such as construction schedule, were utilized as CalEEMod inputs where available and CalEEMod default inputs were utilized where site-specific details were not available. Grading activities would require the import of approximately 146,894 cubic yards of soil. For off-road equipment, equipment greater than or equal to 50 horsepower (HP) would utilize Tier 4 Final engines. In CalEEMod, Tier 4 Final engines were applied to equipment greater than or equal to 50 HP and engines less than 50 HP utilized fleet average engines. **Table 5** summarizes the land uses entered in CalEEMod. CalEEMod estimated emissions for all construction sources and details of modeling inputs and results are provided in Appendix A.

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Table 5. Project CalEEMod Land Uses

Land Use Type	Land Use Subtype	Values[a]
Industrial	Unrefrigerated Warehouse-No Rail	156,338 SF
Office	General Office Building	13,672 SF[b]
Parking	Parking Lot	272 General Parking spaces
Parking	Parking Lot	706 Van spaces
Parking	Parking Lot	12 Line-Haul Truck loading dock spaces
Parking	Other Asphalt Surfaces	19 acres
Retail	Automobile Care Center[c]	6,538 SF

Notes:
SF = square feet
[a] Land use values obtained from Project Site Plan.
[b] Accounts for SF related to office use (12,766 SF) and remote restrooms (906 SF). Remote restrooms are not a part of the office building SF, however, CalEEMod does not have a separate land use for restrooms, therefore, this approach was used to account for any emissions associated with the remote restrooms (e.g., water consumption and wastewater conveyance).
[c] Automobile care center selected to represent fleet service center (4,993 SF) and vehicle inspection area (1,545 SF).

Construction GHG emissions from the proposed project would be temporary and would not generate GHG emissions once construction is completed. The cumulative nature of GHG emissions implicitly precludes the potential for short-term emissions generated during construction to interfere with long-term GHG emission reduction targets established by state, regional, and local planning documentation. The total GHG emissions generated over the entire duration of the proposed project's construction activity was estimated and amortized over the lifetime of the proposed project. Neither the SBCAPCD nor the City has provided guidance on the amortization period for individual projects. The South Coast Air Quality Management District (SCAQMD) recommends a period of 30 years (SCAQMD, 2008). In contrast, the San Luis Obispo County Air Pollution Control District (SLOAPCD) recommends a 30-year project life for residential and mixed-use projects; and a 25-year project life for strictly commercial projects (SLOAPCD, 2023). To be conservative, the SLOAPCD lifetime of 25 years for commercial projects was used in the analysis. The proposed project's amortized construction GHG emissions added to the proposed project's annual operational GHG emissions.

3.2 OPERATIONS

Operations of the proposed project would generate emissions of ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$, that could result in long-term impacts on ambient air quality. Operational criteria pollutant emissions may be generated from area and mobile sources, and an emergency fire pump. Project operations would also generate GHG emissions from direct and indirect sources. Direct sources consist of area sources, mobile sources, and operation an emergency fire pump. Indirect sources include electricity generation at power plants associated building electricity consumption, electricity consumption related to water and wastewater conveyance, and waste decomposition at landfills from solid waste generation.

The proposed project would also incorporate sustainability features including a solar-ready roof and installation of electric vehicle charging stations, which could include up to 200-Level 2 chargers and 2-Level 3 (DC Fast-Charging) chargers. Level 2 chargers operate at 208 to 240 volts, and Level 3 chargers, also known as DC Fast-Charging, can operate at 400 to 1,000-volts DC (USDOT, 2025).

Operational emissions for the proposed project were estimated using emission factors and methodologies from CalEEMod and EMFAC2021. Project operational emissions were estimated using a buildout year of 2027. The emissions estimation approach for each operational emission source is discussed in the following sections. Details on the operational emissions modeling is provided in Appendix A.

3.2.1 Area Sources

Criteria pollutants from area sources would be generated from the reapplication of architectural coatings, consumer products, and landscaping equipment emissions. GHG emissions would be emitted by landscaping equipment only. All area source emissions were estimated using CalEEMod (CAPCOA, 2022).

3.2.1.1 Architectural Coatings

Architectural coatings would primarily result in volatile organic compounds (VOC)[1] off-gassing from the evaporation of solvents contained in surface coatings. The application of architectural coatings would generate VOC emissions due to off-gassing emissions resulting from the evaporation of solvents contained in surface coatings. Emission factors for architectural coatings are based on the VOC content of the surface coating. VOC emissions for architectural coatings in non-residential buildings, such as the warehouse building are based on the amount of surface to be coated. For non-residential buildings, the total surface amount is two times the square footage. Additionally, of the total surface area to be coated, CalEEMod assumes that 75 percent of the area would be for the interior surfaces and 25 percent would be for the exterior shell. The VOC content for building coatings was 250 grams per liter, consistent with CalEEMod's default value for non-residential coatings used within the SBCAPCD (CAPCOA, 2022b). CalEEMod uses a reapplication rate of 10 percent, indicating all buildings are assumed to be repainted at a rate of 10 percent of the total area per year (CAPCOA, 2022b). Application of architectural coatings would not generate GHG emissions.

3.2.1.2 Consumer Products

Consumer products would primarily result in VOC emissions from chemically formulated products (cleaning compounds, detergents, degreasers, etc.). CalEEMod estimates consumer product emissions from three categories: general, pesticide/fertilizers, and parking degreasers. For each category, the emissions factors are based on the amount of VOC per square foot per day. Emissions would be based on the emissions factors and the land use size and type (e.g., general office building). Consumer products would not generate GHG emissions.

3.2.1.3 Landscaping Equipment

Criteria pollutant and GHG emissions from landscaping activities would result from fuel combustion in landscaping equipment. CalEEMod's emission factors for landscaping equipment are in grams per square foot of building type (residential or non-residential). Landscaping emissions are based on

[1] CalEEMod uses the term volatile organic gases (VOC) when referring to emissions from the application of architectural coatings, consistent with local regulations. VOCs are organic compounds that can evaporate into an organic gas. VOC can be either reactive or non-reactive. Over the years, non-reactive VOCs have been exempted from regulation. Both VOC and ROG are precursors to ozone, so they are summed in the CalEEMod output under the header ROG (CAPCOA, 2022. CalEEMod User's Guide, Appendix C)

landscaping equipment emissions factors, area to be landscaped, and the number of summer days for the project area. The CalEEMod default value is 250 summer days.

3.2.2 Mobile Sources

The proposed project's mobile sources would include employee vehicles, delivery vehicles (vans and private carriers), and line-haul trucks. Mobile sources would generate criteria pollutant and GHG emissions from different processes including exhaust (fuel combustion), evaporative, and fugitive dust from brake wear, tire wear, and paved roads. Emission factors for mobile sources were obtained from EMFAC2021 and AP-42 (only paved road dust). A Vehicle Miles Traveled Analysis (VMT Analysis) was prepared for the proposed project (NV5, 2024). The VMT Analysis evaluated the daily trips and VMT related to the proposed project's employees, delivery vans, private carrier vehicles, and line-haul trucks. **Table 6** summarizes the daily trips and VMT for the proposed project's mobile sources. Details for the mobile source categories and vehicle processes are discussed in the following sections.

Table 6. Project Daily Trips and VMT Summary

Project Vehicle Type	Daily Offsite Trips (trips/day)[c]	Daily Offsite VMT (miles/day)[d]	Daily Onsite Trips (trips/day)	Daily Onsite VMT (miles/day)[e]
Employee[a]	1,176	7,762	588	306
Delivery Van	690	26,296	345	179
Private Carriers[b]	194	3,673	97	50
Line-Haul	68	7,616	34	26

Notes:
VMT = vehicle miles traveled
[a] Employee trips account for personal vehicles of employees working at the warehouse and delivery van drivers. For example, delivery van drivers would travel to the project site in their personal vehicle, park their vehicle at the project site, then drive the delivery vans.
[b] Private carrier vehicle VMT is for the outbound delivery only since personnel does not return to the site each day.
[c] Offsite daily trips obtained from VMT Analysis and represent one-way trips.
[d] Offsite VMT obtained from VMT Analysis and represent the net increase in VMT.
[e] Onsite VMT based on daily onsite trips and onsite trip lengths.

3.2.2.1 Fleet Mix

Employee Vehicles

Employee vehicles were categorized using a light-duty fleet mix consisting of the following EMFAC vehicle categories: light-duty automobiles (LDA), light-duty trucks 1 (LDT1), and light-duty trucks 2 (LDT2). Emission factors were based on all fuel types an aggregate model year. Selecting the aggregate model year allows EMFAC to generate emission factors that account for all model years of a vehicle category, rather than a single model year.

Delivery Vans and Private Carrier Vehicles

Delivery vans and private carrier vehicles were categorized using EMFAC's medium-duty vehicle (MDV) vehicle category. Private carrier trips are made by private contractors who deliver packages in their own automobiles. Unlike line-haul trucks, private carriers do not make a return trip to the delivery station after making their final deliveries. Emission factors were based on all fuel types except electric-powered vehicles and an aggregate model year. Selecting the aggregate model year

allows EMFAC to generate emission factors that account for all model years of a vehicle category, rather than a single model year.

Line-Haul Trucks

Line-haul trucks were categorized using a fleet mix of Class 8 trucks, which have a gross vehicle weight rating (GVWR) of 33,001 pounds and greater (CARB, 2021b). Emission factors for line-haul trucks were based on EMFAC vehicle categories below, all fuel types except electric-powered, an aggregate model year, and the following EMFAC vehicle categories. Selecting the aggregate model year allows EMFAC to generate emission factors that account for all model years of a vehicle category, rather than a single model year.

- T7 CA International Registration Plan Class 8 (T7 CAIRP Class 8)
- T7 Non-Neighboring Out-of-State Class 8 (T7 NNOOS Class 8)
- T7 Neighboring Out-of-State Class 8 (T7 NOOS Class 8)
- T7 Single Other Class 8
- T7 Tractor Class 8

Line-haul truck VMT was based on trucks traveling from two potential fulfillment/sorting centers located in Shafter, CA and Oxnard, CA. The Shafter and Oxnard sites are located approximately 121 and 103 miles from the project site, respectively. The VMT Analysis used the average of these trip lengths to estimate line-haul truck VMT. The haul routes would occur within SBCAPCD boundaries and extend outside SBCAPCD boundaries in other air districts such as the San Joaquin Valley Air Pollution Control District (SJVAPCD) and SLOAPCD for the Shafter site, and the Ventura County Air Pollution Control District (VCAPCD) for the Oxnard site. Based on this, offsite line-haul truck emissions were estimated for emissions occurring within and outside the SBCAPCD. Table 7 summarizes the haul truck route and the portions that occur within and outside the SBCAPCD. Details of the line-haul truck route analysis are provided in Appendix A.

Table 7. Line-Haul Truck Offsite Trip Routes

Haul Truck Origin	Haul Route Length from Project Site (miles)[a]	Portion of Haul Route within SBCAPCD (miles)	Portion of Haul Route outside SBCAPCD (miles)	Other Air Districts
Shafter, CA 93263	121	51	70	SJVAPCD & SLOAPCD
Oxnard, CA 93030	103	78	25	VCAPCD
Average[b]	**112**	**65**	**47**	

Notes:
County = Santa Barbara County
SJVAPCD = San Joaquin Valley Air Pollution Control District
SLOAPCD = San Luis Obispo County Air Pollution Control District
VCAPCD = Ventura County Air Pollution Control District
[a] These values represent a one-way trip length.
[b] VMT Analysis used the average trip lengths from fulfilment/sorting centers to estimate line-haul truck VMT.

3.2.2.2 Exhaust Emissions

Exhaust emissions of criteria pollutants and GHGs would be generated from fuel combustion during vehicle travel, as well as engine starting and idling. Exhaust emissions were estimated based on EMFAC2021 emissions factors for the running (i.e., traveling), starting, and idling processes, combined with the daily vehicle activity data (number of trips and VMT).

Onsite exhaust emissions would be generated from all mobile sources when traveling throughout the project site. Emission factors for onsite vehicle travel were based on aggregate model year and a speed of 10 miles per hour (mph). The onsite trip length for employee vehicles, delivery vans, and private carrier vehicles was 0.52 miles and 0.76 miles for line-haul trucks. This trip length accounts for vehicle travel entering and exiting the site.

Offsite exhaust emissions would be generated from all mobile sources traveling to and from the project site. Emission factors for offsite vehicle travel were based on aggregate model years and aggregate vehicle speeds.

3.2.2.3 Evaporative Emissions

Mobile sources would also generate evaporative emissions, primarily VOC emissions, due to fuel evaporation from leaks in fuel systems, hoses, connectors, and carbon canisters. Emission factors were obtained from EMFAC2021 for the various evaporative processes including diurnal, hot soak, and running loss. Evaporative emissions were based on these emission factors and daily vehicle trips.

3.2.2.4 Fugitive Dust Emissions

PM_{10} and $PM_{2.5}$ fugitive dust emissions would be generated during vehicle travel from tire wear, brake wear, and dust from paved roads. Emission factors for tire wear and brake wear were obtained from EMFAC2021. Mobile sources would also generate dust when traveling along paved roads. When a vehicle travels over a road, the force of the wheels on the road can resuspend surface material that is entrained by vehicular travel and this road dust contributes to airborne PM_{10} and $PM_{2.5}$ fugitive dust. Emission factors for entrained road dust were calculated using the methodologies from AP-42 Chapter 13.2.1 Paved Roads. Fugitive dust emissions from tire wear, brake wear, and paved roads were estimated using the emission factors combined with daily vehicle activity (daily trips and VMT).

3.2.3 Stationary Sources

The proposed project would install a diesel-powered emergency fire pump to provide water for the building's fire suppression system during emergency power outages. The emergency fire pump would generate criteria pollutant and GHG emissions. The emergency fire pump would require an Authority to Construction (ATC) permit from SBCAPCD, which would occur under a separate permitting analysis. The emissions analysis only includes the emissions associated with periodic maintenance and testing of the fire pump. Allotted hours during emergency use will be determined during the permit process. Fire pump emissions factors were based on a Tier 4 Final engine with an engine rating of 317 horsepower (HP). Emissions were estimated based on the engine size, load factor from CalEEMod, emission factors for Tier 4 engines, and engine activity. Engine activity for maintenance and testing purposes was assumed to be a maximum of two hours on a given day and 50 hours annually.

3.2.4 Energy

GHG emissions would be generated from electricity consumption during operation of the proposed project. CalEEMod was used to estimate GHG emissions from each of the project land uses in **Table 5.** Electricity for the proposed project is provided by Pacific Gas & Electric Company (PG&E). PG&E has a CO_2e intensity factor measured in pounds per megawatt-hour (lb/MWh). The CO_2e intensity factor represents the amount of CO_2e emissions (pounds) produced per megawatt-hour (MWh) of electricity generated. Based on information from the California Energy Commission (CEC), PG&E's 2023 CO_2e intensity factor was 12 lb/MWh (CEC, 2025). 2023 is the latest published data from CEC and this value was used in CalEEMod. CalEEMod estimates the annual electricity consumption in megawatt-hours (MWh) for each land use. Emissions were estimated based on the annual consumption multiplied by PG&E's CO_2e intensity factor. The proposed project would not utilize natural gas.

3.2.5 Water and Wastewater Conveyance

Water and wastewater conveyance would generate GHG emissions due to the energy (electricity) required to supply, distribute, and treat the water and wastewater. Emissions related to water use were calculated using CalEEMod and were based on the water usage rate for the land use categories, the electrical intensity factors for water supply, treatment, and distribution, and PG&E's CO_2e intensity factor. Wastewater emissions were calculated using CalEEMod and were based on the water usage rate for the land use categories, electrical intensity factors for treatment, method of wastewater treatment, and PG&E's CO_2e intensity factor.

3.2.6 Waste

GHG emissions related to solid waste disposal at landfills were also calculated using CalEEMod. CalEEMod estimates the annual solid waste amounts based on the size of the land use and solid waste generation rates. GHG emissions, primarily CO_2 and CH_4, are generated from the decomposition of solid waste. The GHG emission factors, particularly for CH_4, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. The default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, flaring, energy recovery) are statewide averages and were used in the GHG analysis.

3.2.7 Refrigerants

CalEEMod estimates GHG emissions from refrigerants used in air conditioning and refrigeration. Refrigerants are typically composed of hydrofluorocarbons (HFCs) and or/blends of HFCs and can have high GWPs. GHG emissions are based on the equipment that uses refrigerants and the charge size (i.e., quantity of refrigerant the equipment contains), an operational refrigerant leak rate, and the GWP that is specific to that refrigerant. CalEEMod quantifies refrigerant emissions from leaks during regular operation and routine servicing over the equipment lifetime and then derives average annual emissions from the lifetime estimate. CalEEMod estimated refrigerant emissions from the proposed project's office space, fleet service center, and vehicle inspection area.

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4.0 SIGNIFICANCE CRITERIA

4.1 AIR QUALITY

To satisfy the requirements of the California Environmental Quality Act (CEQA), air quality impacts are analyzed in accordance with CEQA Guidelines. Impacts are considered significant if the proposed project would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- 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.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The SBCAPCD has developed or adopted significance thresholds, discussed below, to assist Lead Agencies in assessing a project's potential to regional air quality during short-term construction and long-term operation.

4.1.1 Santa Barbara Air Pollution Control District Air Quality Impact Guidelines

The City uses the SBCAPCD thresholds of significance for evaluating air quality. In accordance with the SBCAPCD's *Environmental Review Guidelines* and *Scope and Content of Air Quality Sections in Environmental Documents*, the SBCAPCD does not consider a proposed project to have a significant impact on air quality, either individually or cumulatively, if operation of the project will:

- Emit (from all project sources, both stationary and mobile) less than 240 pounds per day for ROG and NO_X, and 80 pounds per day for PM_{10};
- Emit less than 25 pounds per day of ROG or NO_X from motor vehicle trips only;
- Not cause or contribute to a violation of any CAAQS or NAAQS (except ozone);
- Not exceed the SBCAPCD health risks public notification thresholds adopted by the SBCAPCD Board ((10 excess cancer cases in a million for cancer risk and a Hazard Index of more than one (1.0) for non-cancer risk);
- Be consistent with the latest adopted federal and state air quality plans applicable to the Santa Barbara County.

SBCAPCD does not have construction thresholds specific to land development projects, however, under SBCAPCD Rule 202 D.16, if the combined emissions from all construction equipment used to construct a stationary source which requires an Authority to Construct permit, have the potential to exceed 25 tons of any pollutant, except carbon monoxide, in a 12-month period, the owner of the stationary source shall provide offsets under the provisions of Rule 804 and shall demonstrate that no ambient air quality standard will be violated. Based on this, the proposed project will compare its construction emissions to an annual 25-ton threshold for all pollutants except CO.

Additionally, the SBCAPCD requires standard dust control measures be implemented for any discretionary project involving earth-moving activities. Some projects have the potential for construction-related dust to cause a nuisance. Since Santa Barbara County violates the state

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standard for PM_{10}, dust, mitigation measures are required for all discretionary construction activities regardless of the significance of the fugitive dust impacts based on the policies in the 1979 Air Quality Attainment Plan.

Additionally, the proposed project's line-haul trucks would occur within other air districts including the SJVAPCD, SLOAPCD, and VCAPCD. The line-haul truck emissions occurring outside the SBCAPCD will be compared to each of these air district's significance thresholds as shown in **Table 8**.

Table 8. Air Quality Significance Thresholds for Other Air Districts

Air District	ROG	NO_X	CO	SO_X	Total PM_{10}[a]	Total $PM_{2.5}$[a]
SJVAPCD Annual Threshold (tons per year)[a]	10	10	100	27	15	15
VCAPCD Daily Threshold (lb per day)[b]	25	25	N/A			
Air District	**ROG + NO_X (combined)**		**CO**	**DPM (Exhaust PM_{10})**	**Fugitive PM_{10}**	
SLOAPCD Daily Threshold (lb per day)[c]	25		550	1.25	25	
SLOAPCD Annual Threshold (tons per year)[c]	25		N/A	N/A	25	

Source: SJVAPCD, 2015; SLOAPCD, 2023; VCAPCD, 2003
Notes:
SJVAPCD = San Joaquin Valley Air Pollution Control District
SLOAPCD = San Luis Obispo County Air Pollution Control District
VCAPCD = Ventura County Air Pollution Control District
N/A = No threshold established for this pollutant
[a] Value includes emissions from exhaust and fugitive dust.

4.1.2 Cumulative Impacts

Potential cumulative air quality impacts would result when the pollutant emissions of the proposed project combine with those of other projects' pollutant emissions to degrade air quality conditions below acceptable levels. This could occur on a local level (e.g., increased vehicle emissions at congested intersections or concurrent construction activities at sensitive receptor locations) or a regional level (e.g., potential O_3 impacts from multiple past, present, and reasonably foreseeable projects within the City and Santa Barbara County).

As shown in **Table 1**, Santa Barbara County is currently in nonattainment status for the state ozone and PM_{10} standards. Consequently, cumulative development in Santa Barbara County as a whole could violate an air quality standard or contribute to an existing or projected air quality violation. SBCAPCD does not consider a proposed project to have a significant impact on air quality, either individually or cumulatively, if operation of the project meets the significance criteria listed in Section 4.1.1. Thus, if the proposed project meets the criteria listed in Section 4.1.1, then it would be considered to not have a cumulative impact.

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4.2 GREENHOUSE GAS EMISSIONS

To satisfy the requirements of the California Environmental Quality Act (CEQA), greenhouse gas emissions/climate change impacts are analyzed in accordance with CEQA Guidelines. Impacts are considered significant if the proposed project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

CEQA Guidelines Section 15064.4 provides guidance to lead agencies for determining the significance of impacts from GHG emissions. Section 15064.4(a) provides that a lead agency shall make a good-faith effort based, to the extent possible, on scientific and factual data to describe, calculate, or estimate the amount of GHG emissions resulting from a project. Section 15064.4(a) further provides that a lead agency shall have the discretion to determine, in the context of a particular project, whether to (1) quantify GHG emissions resulting from a project and/or (2) to rely on qualitative analysis or performance-based standards.

Pursuant to CEQA Guidelines Section 15064.4(a), the analysis presented herein quantifies GHG emissions resulting from the proposed project and provides a good-faith effort to describe, calculate, and estimate GHG emissions resulting from the proposed project.

CEQA Guidelines Section 15064.4(b) also provides that, when assessing the significance of impacts from GHG emissions, a lead agency should focus the analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change and consider a timeframe that is appropriate for the project. The lead agency's analysis should reasonably reflect evolving scientific knowledge and state regulatory schemes, and consider (1) the extent to which the project may increase or reduce GHG emissions compared with existing conditions, (2) whether the project's GHG emissions exceed a threshold of significance that the lead agency determines applies to the project, and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The analysis of the potential impacts from the proposed project's GHG emissions follows this approach.

The CEQA Guidelines do not provide numeric or qualitative thresholds of significance for evaluating GHG emissions. Instead, they leave the determination of the significance of GHG emissions up to the lead agency and authorize the lead agency to consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence (CEQA Guidelines Sections 15064.7[b] and 15064.7[c]). Additionally, any public agency may also use an environmental standard as a threshold of significance, as it would promote consistency in significance determination and integrates environmental review with other environmental program planning and regulations (CEQA Guidelines Section 15064.7[d]). CARB, SBCAPCD, the Governor's OPR, nor the City have established significance thresholds for a land development project's GHG emissions under CEQA. In the absence of quantitative GHG thresholds and/or a qualified GHG reduction plan for use by a project to tier or streamline its environmental analysis, CEQA provides that a lead agency could rely on regulatory compliance to show a less-than-significant GHG impact if the project complies with or exceeds those programs adopted by CARB or other state agencies. For the proposed project, the most applicable and adopted regulatory plans to reduce GHG emissions are the 2022 Scoping Plan and SBCAG 2050 RTP/SCS.

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5.0 IMPACTS ANALYSIS

5.1 AIR QUALITY

5.1.1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

5.1.1.1 SBCACPD 2022 Ozone Plan

The SBCAPCD adopted the 2022 Ozone Plan in December 2022 (SBCAPCD, 2022b). The 2022 Ozone Plan was prepared to develop the SBCAPCD's strategies for reducing ozone precursor emissions, ROG and NO_X, to meet the state ozone standards. The 2022 Ozone Plan includes control measures for stationary sources and on-road transportation, and builds upon measures previously adopted in prior plans.

Stationary Sources

Air districts must demonstrate a five percent reduction in emissions per year or adopt every measure feasible available to SBCAPCD. Historically, the SBCAPCD has not achieved the annual five percent reduction and has relied on adopting feasible reduction measures and has adopted 30 measures to date. For the 2022 Ozone Plan, the SBCAPCD evaluated additional stationary source control measures, but no measures were identified for adoption. Instead, the SBCACPD developed contingency measures if CARB determines that SBCACPD is not making adequate progress towards attainment. Contingency measures included revising the ROG contents of solvents used during general solvent operations (i.e., cleaning manufacture products or maintaining production equipment) and revising the ROG content of surface coatings for wood products.

The proposed project would install an emergency fire pump that would require a permit from the SBCAPCD. The emergency fire pump would comply with permit conditions established by the SBCAPCD, and would meet Tier 4 Final engine standards. As it is an emergency fire pump, its usage would be limited to non-emergency operations for maintenance and testing, and emergency use during grid power outages to supply water for the fire suppression system. The emergency fire pump would not be a significant source of emissions as shown in **Table 10**. Overall, the proposed project would not install large stationary sources, and would not conflict with SBCACPD's stationary source control measures.

Transportation Measures

The SBCAPCD and SBCAG collaborate to develop the transportation elements for air quality plans. SBCAG assists SBCAPCD with development of transportation elements for SBCAPCD's state and federal air quality plans, including estimates for the on-road mobile sources emissions and transportation control measures (TCM) for the 2022 Ozone Plan. The TCMs are the primary mechanism for reducing VMT and are programs or activities that can be implemented to encourage the traveling public to rely less on vehicles or use them more efficiently.

The 2022 Ozone Plan highlights TCM-14: Activity Centers and T-18: Alternative Fuels. A portion of TCM-14 relates to SBCAG's Connected 2050 Regional Transportation Plan/Sustainable Communities Strategy (2050 RTP/SCS). The RTP is a long-range planning document that defines how the region plans to invest in the transportation system over 20 plus years based on regional goals, multi-modal transportation needs for people and goods, and estimates of available funding. The SCS sets forth a forecasted development pattern for the region, which, when integrated with the transportation

network and other transportation measures and policies, will reduce GHG emissions from passenger vehicles and light trucks to achieve the GHG reduction targets set by CARB. The SCS emphasizes the implementation of transit-oriented development and infill approaches to land use and housing complemented by transportation and transit systems to efficiently move people and goods. A portion of T-18 relates to alternative fuel and infrastructure planning efforts for on-road vehicles. The SBCAPCD has collaborated with local coalitions, such as the Electric Drive 805 coalition, to secure grants for planning efforts and installation of electric vehicle charging stations and hydrogen fueling infrastructure in the Central Coast region.

The proposed project supports these efforts by incorporating sustainability features including a solar-ready roof, and installing Level 2 and Level 3 (DC Fast-Charging) chargers, which would have the capability to charge electric-powered employee vehicles and delivery vans. These design features promote and encourage the use of electric vehicles, which would reduce on-road criteria pollutant and GHG emissions. Additionally, the proposed project would create job opportunities in the City, which would attract a local workforce and increase the City's employment and jobs-to-housing ratio. The proposed project would install bike racks at the project site, which would encourage employees to use alternative modes of transportation when commuting to the project site. The proposed project would not conflict with transportation control measures.

Overall, the proposed project would not conflict with control measures in the 2022 Ozone Plan for meeting the state ozone standard. Therefore, the proposed project would be considered consistent with the 2022 Ozone Plan, and impacts would be less than significant.

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5.1.2 Would the project result in 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?

5.1.2.1 Construction

The proposed project would generate emissions of ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ during construction activities. Criteria pollutants would be generated from various construction sources including off-road equipment; mobile sources including worker vehicles, vendor trucks, and haul trucks; fugitive dust emissions during site grading and earth movement activities; and ROG off-gassing emissions from paving and application of architectural coatings. Annual construction emissions for the proposed project are summarized in **Table 9.** As shown in **Table 9**, annual construction emissions would be below SBCAPCD significance thresholds, therefore, construction emissions would not result in a cumulatively considerable net increase of criteria pollutants for which the project region is nonattainment under an applicable federal or state ambient air quality standard, and impacts would be less than significant.

Table 9. Project Annual Construction Emissions Summary

	Annual Emissions (tons/year)					
Construction Year	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10}[a]**	**$PM_{2.5}$[a]**
2026	<1	2	8	<0.1	<1	<1
2027	2	<1	2	<0.1	<0.1	<0.1
Maximum Annual Emissions	**2**	**2**	**8**	**<0.1**	**<1**	**<1**
SBCAPCD Significance Threshold	25	25	N/A	25	25	25
Exceeds Threshold?	No	No	No	No	No	No

Notes:
N/A = No threshold established for this pollutant
[a] Value includes emissions from exhaust and fugitive dust.

SBCAPCD does not consider a proposed project to have a significant impact on air quality, either individually or cumulatively, if operation of the project meets the significance criteria listed in Section 4.1.1. Because the proposed project's construction emissions would not exceed the applicable SBCAPCD construction significance thresholds, the proposed project's emissions would not be cumulatively considerable, and impacts would be less than significant.

5.1.2.2 Operations

Operation of the proposed project will generate criteria pollutant emissions from area sources including landscaping equipment, consumer products, and architectural coatings; mobile sources, including employee vehicles, delivery vehicles (vans and private carrier vehicles), and line-haul trucks; and operation of an emergency fire pump for maintenance and testing purposes. **Table 10** summarizes the proposed project's unmitigated daily operational emissions occurring within SBCAPCD. As shown in **Table 10**, the proposed project would exceed the SBCAPCD's mobile source threshold for NO_X, all other pollutants would be below SBCAPCD significance thresholds. Based on the NO_X exceedance, the proposed project's operational emissions may be potentially significant, and mitigation measures may be required.

Table 10. Unmitigated Project Operational Daily Emissions in SBCAPCD

	Daily Emissions (lb/day)[a]					
Source Category	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10}[b]**	**$PM_{2.5}$[b]**
Area	6	<0.1	8	<0.1	<0.1	<0.1
Mobile-Employee Vehicles (Onsite)	1	<1	5	<0.1	<1	<0.1
Mobile-Employee Vehicles (Offsite)	3	2	20	<0.1	5	1
Mobile-Delivery Vans (Onsite)	1	<1	4	<0.1	<1	<0.1
Mobile-Delivery Vans (Offsite)	3	6	55	<1	32	8
Mobile-Private Carrier Vehicles (Onsite)	<1	<1	1	<0.1	<0.1	<0.1
Mobile-Private Carrier Vehicles (Offsite)	<1	<1	9	<0.1	4	1
Mobile-Line-Haul Trucks (Onsite)	<0.1	<1	<1	<0.1	<1	<0.1
Mobile-Line-Haul Trucks (Offsite)	<1	15	2	<1	22	6
Stationary (Fire Pump)	<1	<1	3	<0.1	<0.1	<0.1
Project Emissions Total	**16**	**26**	**106**	**<1**	**64**	**16**
SBCAPCD Thresholds (All Sources)	240	240	N/A	N/A	80	N/A
Exceeds Threshold?	No	No	N/A	N/A	No	N/A
Project Mobile Emissions Total	**10**	**26**	**96**	**<1**	**64**	**16**
SBCAPCD Mobile Source Threshold	25	25	N/A			
Exceeds Threshold?	No	**Yes**				

Notes:
N/A = No threshold established for these pollutants
[a] Totals may vary due to rounding.
[b] Value includes emissions from exhaust and fugitive dust.

Table 11, Table 12, and **Table 13** summarize the proposed project's emissions from line-haul truck travel occurring outside the SBCAPCD in other air districts, such as SJVAPCD, VCAPCD, and SLOAPCD. The proposed project's total line-haul emissions occurring outside the SBCAPCD were compared to thresholds from SJVAPCD, VCAPCD, and SLOAPCD. As shown in these tables, line-haul truck emissions would be below the significance thresholds for these air districts. Therefore, haul truck emissions in SJVAPCD, VCAPCD, and SLOAPCD would not result in a cumulatively considerable net increase of criteria pollutants for which the project region is nonattainment under an applicable federal or state ambient air quality standard, and impacts would be less than significant.

Table 11. Unmitigated Project Line-Haul Truck Emissions in SJVAPCD

	Annual Emissions (tons/year)					
Source Category	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10}[b]**	**$PM_{2.5}$[b]**
Mobile-Line-Haul Trucks (Offsite)	<0.1	2	<1	<0.1	3	<1
SJVAPCD Thresholds[a]	10	10	100	27	15	15
Exceeds Threshold?	No	No	No	No	No	No

Notes:
[a] SJVAPCD Air Quality Thresholds of Significance-Criteria Pollutants, March 2015
[b] Value includes emissions from exhaust and fugitive dust.

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Table 12. Unmitigated Project Line-Haul Truck Emissions in VCAPCD

	Daily Emissions (lb/day)					
Source Category	ROG	NO_X	CO	SO_X	PM_{10}[b]	$PM_{2.5}$[b]
Mobile-Line-Haul Trucks (Offsite)	<0.1	10	<1	<0.1	16	4
VCAPCD Thresholds[a]	25	25	N/A			
Exceeds Threshold?	No	No				

Notes:
N/A = No threshold established for these pollutants
[a] Ventura County Air Quality Assessment Guidelines, October 2003
[b] Value includes emissions from exhaust and fugitive dust.

Table 13. Unmitigated Project Line-Haul Truck Emissions in SLOAPCD

	Daily Emissions (lb/day)			
Source Category	ROG + NO_X (combined)	CO	DPM (Exhaust PM_{10})	Fugitive PM_{10}
Mobile-Line-Haul Trucks (Offsite)	10	<1	<1	16
SLOAPCD Daily Threshold (lb per day)[a]	25	550	1.25	25
Exceeds Threshold?	No	No	No	No
	Annual Emissions (tons/year)			
Source Category	ROG + NO_X (combined)	CO	DPM (Exhaust PM_{10})	Fugitive PM_{10}
Mobile-Line-Haul Trucks (Offsite)	2	<1	<0.1	3
SLOAPCD Annual Threshold (tons per year)[a]	25	N/A	N/A	25
Exceeds Threshold?	No	N/A	N/A	No

Notes:
N/A = No threshold established for these pollutants
[a] San Luis Obispo County Air Pollution Control District, CEQA Air Quality Handbook, 2023

5.1.2.3 Mitigation Measures

As shown above in **Table 10**, the proposed project would exceed the SBCACPD mobile source threshold for NO_X. SBCAPCD's cumulative air quality impact methodology indicates that if an individual project results in criteria pollutants emissions that exceed the SBCAPCD's recommended annual thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of these criteria pollutants for which the project region is in nonattainment under an applicable federal or state ambient air quality standard. Because the proposed project's operational emissions would exceed the applicable SBCAPCD operational significance thresholds, the proposed project's emissions would be potentially cumulatively considerable.

To reduce project-related NO_X emissions, the following mitigation measure (MM) would be implemented:

MM-AQ-1: The proposed project owner or operators shall require the use of line-haul trucks with model years 2014 or newer.

With implementation of **MM-AQ-1**, the proposed project's mobile source NO_X emissions would be reduced to levels below SBCAPCD's mobile source threshold as shown in **Table 14**. Therefore, the

proposed project's operational emissions would not result in a cumulatively considerable net increase of criteria pollutants for which the project region is nonattainment under an applicable federal or state ambient air quality standard, and impacts would be less than significant with mitigation.

Additionally, SBCAPCD does not consider a proposed project to have a significant impact on air quality, either individually or cumulatively, if operation of the project meets the significance criteria listed in Section 4.1.1. As shown in **Table 14**, the proposed project's operational emissions would not exceed the applicable SBCAPCD operations significance thresholds. Therefore, the proposed project's operational emissions would not be cumulatively considerable, and impacts would be less than significant.

Table 14. Mitigated Project Operational Daily Emissions in SBCAPCD

	Daily Emissions (lb/day)[a]					
Source Category	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Area	6	<0.1	8	<0.1	<0.1	<0.1
Mobile-Employee Vehicles (Onsite)	1	<1	5	<0.1	<1	<0.1
Mobile-Employee Vehicles (Offsite)	3	2	20	<0.1	5	1
Mobile-Delivery Vans (Onsite)	1	<1	4	<0.1	<1	<0.1
Mobile-Delivery Vans (Offsite)	3	6	55	<1	32	8
Mobile-Private Carrier Vehicles (Onsite)	<1	<1	1	<0.1	<0.1	<0.1
Mobile-Private Carrier Vehicles (Offsite)	<1	<1	9	<0.1	4	1
Mobile-Line-Haul Trucks (Onsite)	<0.1	<1	<1	<0.1	<1	<0.1
Mobile-Line-Haul Trucks (Offsite)	<1	13	2	<1	22	6
Stationary (Fire Pump)	<1	<1	3	<0.1	<0.1	<0.1
Project Emissions Total	**16**	**24**	**106**	**<1**	**64**	**16**
SBCAPCD Thresholds (All Sources)	240	240	N/A	N/A	80	N/A
Exceeds Threshold?	No	No	N/A	N/A	No	N/A
Project Mobile Emissions Total	**10**	**24**	**95**	**<1**	**64**	**16**
SBCAPCD Mobile Source Threshold	25	25	N/A			
Exceeds Threshold?	No	No				

Notes:
N/A = No threshold established for these pollutants
[a] Totals may vary due to rounding.

With implementation of mitigation measures, the proposed project's construction and operations would not exceed the SBCAPCD's significance thresholds for criteria pollutants. Because the proposed project would not exceed SBCAPCD's significance thresholds for ozone precursors, ROG and NO_X, the proposed project would not cause or contribute to a violation of any CAAQS or NAAQS.

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5.1.3 Would the project expose sensitive receptors to substantial pollutant concentrations?

5.1.3.1 Toxic Air Contaminants

The proposed project would also generate diesel particulate matter (DPM) during construction from off-road equipment and heavy-duty trucks, and during operations from diesel-powered line-haul trucks and fire pump usage during maintenance and testing. DPM is considered a toxic air contaminant (TAC) by CARB and SBCAPCD. As discussed in Section 1.2, the nearest sensitive receptor is the residence located approximately 400 feet south of the project site. CARB conducted health risk modeling for siting new sensitive land uses near various source categories (e.g., freeways/high-traffic roads and distribution centers). For freeways and high-traffic roads, CARB's analysis included a study for Southern California freeways that showed measured concentrations of vehicle-related pollutants decreased dramatically, approximately 70 percent, within approximately 300 feet of the freeways analyzed. Furthermore, CARB's study estimated an 80 percent drop-off in pollutant concentrations at approximately 1,000 feet from a distribution center (CARB, 2005). Based on the health risk evaluation results of CARB's study, CARB recommends avoiding siting new sensitive land uses 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 (TRUs) per day, or where TRU operations exceed 300 hours per week (CARB, 2005). The proposed project's line-haul trucks would not operate TRUs at the project site as all goods would be dry goods and would not require cold storage. Additionally, CARB's data for distribution centers indicate that pollutant concentrations would be expected to have an approximately 60 percent drop-off at 400 feet.

Construction activities would be short-term and DPM and criteria pollutant emissions would cease upon construction completion. Based on this fact, combined with CARB observations that pollutant concentrations decrease significantly with distance from a source, such as a 400-foot distance between the project site and sensitive receptors, the proposed project would not expose sensitive receptors to substantial concentrations of criteria pollutants during construction, nor would it expose sensitive receptors to DPM concentrations that would be expected to result in health risks exceeding SBCACPD's health risk thresholds for cancer risk and noncancer risk. Overall, the proposed project's construction emissions would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

Operations activities would require up to 34 daily line-haul truck roundtrips, and occasional maintenance and testing of the diesel-powered emergency fire pump. Based on the low volume of daily truck trips compared to the CARB study's 100 trucks per day, and sporadic use of the emergency fire pump, combined with CARB observations that pollutant concentrations decrease significantly with distance from a source, such as a 400-foot distance between the project site and sensitive receptors, the proposed project would not expose sensitive receptors to substantial concentrations of criteria pollutants during operations, nor would it expose sensitive receptors to DPM concentrations that would be expected to result in health risks exceeding SBCACPD's health risk thresholds for cancer risk and noncancer risk. Overall, the proposed project's operational emissions would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

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5.1.4 Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

5.1.4.1 Construction

During construction of the proposed project, exhaust from equipment, activities associated with the application of architectural coatings and other interior and exterior finishes, and paving activities may produce discernible odors typical of most construction sites. Construction-generated emissions would occur intermittently throughout the workday and would dissipate rapidly with increasing distance from the source. Such odors would be, at worst, a temporary source of nuisance to adjacent uses, and would not affect a substantial number of people. The proposed project would be required to comply with SBCAPCD Rule 303—Nuisance, which prohibits the discharge of air contaminants or other material that would cause injury, detriment, nuisance, or annoyance to any considerable number of persons. The proposed project would also use architectural coatings compliant with SBCAPCD Rule 323.1. Overall, these odors would not affect a substantial number of people because construction would be temporary and intermittent, and construction-generated emissions dissipate rapidly with increasing distance from the source. Therefore, odors associated with construction would not create a significant level of objectionable odors affecting a substantial number of people, and impacts would be less than significant.

5.1.4.2 Operations

According to the SBCAPCD, land uses that may cause significant odor impacts include fast food restaurants, bakeries, and coffee roasting facilities. Additionally, the SCAQMD CEQA Air Quality Handbook notes land uses associated with odor complaints typically include agricultural uses, wastewater treatment facilities, food processing plants, chemical plants, composting areas, refineries, landfills, dairies, and fiberglass molding facilities (SCAQMD, 1993). The proposed project is not associated with any of the aforementioned land uses. The project site would include various trash receptacles, which would be covered and properly maintained to prevent adverse odors. Overall, the proposed project's operations would not create a significant level of objectionable odors affecting a substantial number of people, and impacts would be less than significant.

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5.2 GREENHOUSE GAS EMISSIONS

5.2.1 Would the project result in greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

5.2.1.1 Construction

Construction of the proposed project would result in temporary GHG emissions from off-road equipment and mobile sources, including worker vehicles, vendor trucks, and haul trucks. As discussed in Section 3.1, construction GHG emissions would be amortized over a project lifetime of 25 years and added to the annual operational GHG emissions. Because construction emission sources would cease once construction is complete, construction emissions are considered short term. Proposed project construction emissions are summarized in **Table 15**.

Table 15. Project Construction Greenhouse Gas Emissions

Construction Year	GHG Emissions ($MTCO_2e$)
2026	1,856
2027	272
Total Emissions	**2,128**
Amortized Construction Emissions (25 Years)	85
Notes: [a] Totals may vary due to rounding.	

5.2.1.2 Operations

Operations of the proposed project would generate long-term GHG emissions from direct and indirect sources. Direct sources consist of mobile sources and area sources related to landscaping equipment, and emergency fire pump usage during maintenance and testing activities. Indirect sources include electricity generation at offsite power plants associated with building electricity consumption and electricity consumption related to water and wastewater conveyance, and waste decomposition at landfills from solid waste generation. **Table 16** summarizes the proposed project's unmitigated annual operational GHG emissions.

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Table 16. Unmitigated Project Annual GHG Operational Emissions

Source Category	GHG Emissions ($MTCO_2e$)[a]
Area	3
Mobile-Employee Vehicles (Onsite)	76
Mobile-Employee Vehicles (Offsite)	783
Mobile-Delivery Vans (Onsite)	66
Mobile-Delivery Vans (Offsite)	3,768
Mobile-Private Carrier Vehicles (Onsite)	18
Mobile-Private Carrier Vehicles (Offsite)	531
Mobile-Line-Haul Trucks (Onsite)	36
Mobile-Line-Haul Trucks (Offsite)[b]	4,344
Electricity Consumption-Buildings	15
Water	25
Waste	58
Refrigerants	224
Stationary (Fire Pump)	6
Construction (amortized)	85
Project Total	10,038

Notes:

[a] Totals may vary due to rounding.

[b] Offsite line-haul truck emissions include the total GHG emissions from haul truck travel within *and* outside Santa Barbara County.

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With the implementation of MM-AQ-1, the proposed project's annual GHG emissions would be slightly reduced as shown in **Table 17**.

Table 17. Mitigated Project Annual GHG Operational Emissions

Source Category	GHG Emissions ($MTCO_2e$)[a]
Area	3
Mobile-Employee Vehicles (Onsite)	76
Mobile-Employee Vehicles (Offsite)	783
Mobile-Delivery Vans (Onsite)	66
Mobile-Delivery Vans (Offsite)	3,768
Mobile-Private Carrier Vehicles (Onsite)	18
Mobile-Private Carrier Vehicles (Offsite)	531
Mobile-Line-Haul Trucks (Onsite)[c]	36
Mobile-Line-Haul Trucks (Offsite)[b,c]	4,334
Electricity Consumption-Buildings	15
Water	25
Waste	58
Refrigerants	224
Stationary (Fire Pump)	6
Construction (amortized)	85
Project Total	**10,028**

Notes:

[a] Totals may vary due to rounding.

[b] Offsite line-haul truck emissions include the total GHG emissions from haul truck travel within *and* outside Santa Barbara County.

[c] Line-haul truck emissions decrease slightly due to MM-AQ-1.

The proposed project would also incorporate sustainability features including a solar-ready roof and installation of Level 2 and Level 3 charging stations. These design features would promote and encourage the use of electric vehicles, which could lead to potential reductions in VMT and GHG emissions compared to the use of fossil-fueled vehicles. The proposed project would also install bike racks at the project site to encourage commuting to the project site via bicycles rather than vehicles. Lastly, implementation of MM-AQ-1 would also lead to reductions in GHG emissions through newer and more efficient line-haul trucks.

As discussed in Section 4.2, in the absence of quantitative GHG thresholds and/or a qualified GHG reduction plan for use by a project to tier or streamline its environmental analysis, CEQA provides that a lead agency can rely on regulatory compliance to show a less-than-significant GHG impact if the project complies with or exceeds those programs adopted by CARB or other state agencies. For the proposed project, the most applicable and adopted regulatory plans to reduce GHG emissions are the 2022 Scoping Plan and SBCAG 2050 RTP/SCS. Although the proposed project would generate GHG emissions from construction and operations, it would incorporate design features that would support efforts to reduce energy and transportation fuel consumption and associated GHG emissions, which are goals of the 2022 Scoping Plan and SBCAG 2050 RTP/SCS. For these reasons

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and the analysis provided in Section 5.2.2, the proposed project's GHG emissions would not result in a significant impact on the environment, and impacts would be less than significant.

5.2.2 Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

5.2.2.1 Consistency with State and Local Plans

State Plans

AB 32, SB 32, and AB 1279 outline the state's GHG emissions reduction targets for 2020, 2030, and 2045, respectively. In 2008 and 2014, CARB adopted the 2008 Scoping Plan and the First Update to the Climate Change Scoping Plan, respectively, as a framework for achieving the emissions reduction targets in AB 32 (CARB, 2008, 2014). These plans outline a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions. CARB adopted California's 2017 Climate Change Scoping Plan (CARB, 2017) in November 2017 as a framework to achieve the 2030 GHG reduction goal described in SB 32, which is to reduce statewide GHG emissions to 1990 levels by 2020 and to 40 percent below 1990 levels by 2030. Most recently, the 2022 Scoping Plan was adopted in September 2022 and outlines how the state will achieve carbon neutrality and reduce statewide GHG emissions 85 percent below 1990 levels by 2045.

The 2022 Scoping Plan focuses on key sectors which will need to transition to alternative clean technology and fuels to support decarbonization. Relevant sectors for the proposed project include Transportation Sustainability, Clean Electricity Grid, and Sustainable Manufacturing and Buildings.

The Transportation Sustainability section focuses on transitioning to zero-emission vehicles (ZEVs) and reducing vehicle miles traveled (VMT) by promoting electric and hydrogen fuel cell vehicles, improving public transit, and encouraging active transportation. It also emphasizes developing infrastructure for renewable fuels and hydrogen, and implementing urban planning and incentives to reduce VMT. The proposed project would support transition goals of this key sector by installing Level 2 and Level 3 (DC Fast-Charging) chargers, which would have the capability to charge electric-powered employee vehicles and delivery vans. Additionally, the proposed project would include a 4,993 square-foot fleet service center. The onsite fleet service center would be used to maintain the proposed project's delivery vans, which would substantially reduce the need for delivery vans to be serviced at offsite vendors, thus reducing ancillary VMT and associated GHG emissions. Furthermore, MM-AQ-1 would also lead to reductions in GHG emissions through newer and more efficient line-haul trucks.

The Clean Electricity Grid section aims to transition to 100% renewable and zero-carbon electricity by increasing solar and wind capacity, developing energy storage solutions, and enhancing grid reliability. The proposed project would support transition goals of this key sector by having a solar-ready roof, which would allow for future installation of a solar photovoltaic (PV) system that would generate electricity.

The Sustainable Manufacturing and Buildings section focuses on decarbonizing industrial processes and building operations by implementing energy efficiency measures and transitioning to renewable energy sources. It promotes electrification of industrial equipment, use of low-carbon materials, energy-efficient building designs, retrofits, and transitioning to electric appliances. The proposed project would support transition goals of this key sector by using electric appliances for building heat,

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and would not install a natural gas connection to the project site. The proposed project would not utilize any onsite combustion equipment such as forklifts.

Overall, the proposed project would support the 2022 Scoping Plan strategies for reducing GHG emissions from transportation, electricity grid, and buildings, and would not conflict with the 2022 Scoping Plan's goals for reducing GHG emissions.

Local Plans

While the City has not adopted a qualified greenhouse gas reduction plan pursuant to CEQA Guidelines Section 15183.5(b)(1), the SBCAG's 2050 RTP/SCS was designed to help the county achieve its GHG emissions reduction target. The 2050 RTP/SCS, particularly the SCS, involves land use assumptions that identify general locations, residential densities, and building intensities in the region. Although local jurisdictions retain land use authority under SB 375, Connected 2050 must make land use assumptions and allocate future growth accordingly. These assumptions were developed with local planning staff, and aimed to 1) intensify residential and commercial uses near transit and multi-modal options to reduce VMT and 2) address the jobs/housing imbalance by providing more housing in the jobs-rich South Coast and more jobs in North County, which includes the City of Santa Maria. The City of Santa Maria is the largest city in Santa Barbara County, is forecasted to have the highest population increase over the 2017-2050 period, and is expected to have an increase of 10,900 jobs over this period as well. The proposed project would be consistent with the 2050 RTP/SCS by creating job opportunities in North County.

The 2050 RTP/SCS developed goals to implement the Connected 2050 plan. The proposed project's consistency with relevant goals, objectives, and policies of the 2050 RTP/SCS is discussed in **Table 18**. As shown in **Table 18**, the proposed project would be consistent with goals and policies to support implementation of the 2050 RTP/SCS.

Table 18. Consistency of Proposed Project with SBCAG 2050 RTP/SCS

Connected 2050 RTP/SCS Goals and Policies	Project Consistency
Goal Area 1: Environment	
Policy 1.1 Land Use	
Policy 1.1.2: Promote better balance of jobs and housing to reduce long-distance commuting by means of traditional land use zoning, infill development, and other, unconventional land use tools, such as employer-sponsored housing programs, economic development programs, commercial growth management ordinances, average unit size ordinances and parking pricing policies.	The proposed project would be consistent with this policy as it would be an infill project. It would create job opportunities in the City, and support reducing long-distance commuting as the project site is located near residential neighborhoods.
Policy 1.1.5: Identify, minimize and mitigate adverse environmental impacts and, in particular, require mitigation of traffic impacts of new land development through on-site and related off-site improvements for all modes of transportation, including incentives to encourage the use of alternative transportation modes.	The proposed project would be consistent with this policy as it would install onsite Level 2 and Level 3 charging stations, which would support the use of electric vehicles. Additionally, the project site would install bike racks to encourage the use of bicycling to the project site. The proposed project would also include an onsite fleet service center to maintain delivery vans, thus significantly reducing the need to

Connected 2050 RTP/SCS Goals and Policies	Project Consistency
	send delivery vans for maintenance at offsite vendors.
Policy 1.2 Air Quality	
Policy 1.2.1: Lead to reductions in greenhouse gas and criteria pollutant emissions, consistent with the air quality goals of the region, including targets for greenhouse gas emissions from passenger vehicles in 2020 and 2035 as required by Senate Bill 375 (SB 375).	The proposed project would be consistent with this policy as it would include a solar-ready roof, which would allow for future installation of PV systems. Additionally, the proposed project would support efforts to reduce GHG emissions from passenger vehicles by installing Level 2 and Level 3 charging stations.
Policy 1.3 Alternative Fuels and Energy	
Policy 1.3.1: Encourage the use of alternative fuels, and the application of advanced transportation and energy technologies to reduce vehicular emission production and energy consumption.	The proposed project would be consistent with this policy as it would install onsite Level 2 and Level 3 charging stations, which would support the use of electric vehicles.
Policy 1.3.2: Promote renewable energy and energy conservation, consistent with applicable federal, State, and local energy programs, goals, and objectives.	The proposed project would be consistent with this policy as it would a solar-ready roof, which would allow for future installation of PV systems.
Goal Area 2: Mobility and System Reliability	
Policy 2.3 Alternative Transportation Modes	
Policy 2.3.1: Encourage alternatives to single-occupancy vehicle trips and the use alternative transportation modes to reduce vehicle miles traveled and increase bike, walk and transit mode share.	The proposed project would be consistent with this policy as it would install onsite Level 2 and Level 3 charging stations, which would support the use of electric vehicles. Additionally, the project site would install bike racks to encourage the use of bicycling to the project site.
Source: SBCAG, 2021	

Overall, the proposed project would not conflict with the 2022 Scoping Plan or SBCAG 2050 RTP/SCS policies for reducing GHG emissions. Therefore, the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions, and impacts would be less than significant.

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6.0 REFERENCES

California Air Pollution Control Officers Association (CAPCOA). 2022a. California Emissions Estimator Model, version 2022.1.1.29. Available at: https://caleemod.com/. Accessed: April 14, 2025.

California Air Pollution Control Officers Association (CAPCOA). 2022b. California Emissions Estimator Model, User's Guide Appendix C-Emission Calculation Details for CalEEMod. April. Available at: https://caleemod.com/. Accessed: April 14, 2025.

California Air Resources Board (CARB). 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. October. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/diesel/documents/rrpfinal.pdf. Accessed: April 14, 2025.

California Air Resources Board (CARB). 2005. Air Quality and Land Use Handbook: A Community Health Perspective. April. Available at: https://www.aqmd.gov/docs/default-source/ceqa/handbook/california-air-resources-board-air-quality-and-land-use-handbook-a-community-health-perspective.pdf. Accessed: April 14, 2025.

California Air Resources Board (CARB). 2008. Climate Change Scoping Plan. December 11. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed: April 14, 2025.

California Air Resources Board (CARB). 2014. First Update to the Climate Change Scoping Plan: Building on the Framework. Pursuant to AB 32, the California Global Warming Solutions Act of 2006. May. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf. Accessed: April 14, 2025.

California Air Resources Board (CARB). 2015. *Risk Management Guidance for Stationary Source Air Toxics.* July, 23. *arb.ca.gov/sites/default/files/classic/toxics/rma/rmgssat.pdf*. Accessed: April 14, 2025.

California Air Resources Board (CARB). 2017. California's 2017 Climate Change Scoping Plan. January 20. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf. Accessed: April 14, 2025.

California Air Resources Board (CARB). 2021a. EMission FACtors model (EMFAC2021). Available at: https://arb.ca.gov/emfac/. Accessed: April 14, 2025

California Air Resources Board (CARB). 2021b. EMFAC 2021 Volume I - User's Guide EMFAC. Appendix 4. January 15. Available at: https://ww2.arb.ca.gov/sites/default/files/2021-06/emfac202x_users_guide_01112021_final_ada.pdf. Accessed: April 14, 2025.

California Air Resources Board (CARB). 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. November 16. arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf. Accessed: April 14, 2025.

California Air Resources Board (CARB). 2023. Maps of State and Federal Area Designations. Available at: https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations. Accessed: April 14, 2025.

DRAFT

California Air Resources Board (CARB). 2024a. *Ambient Air Quality Standards*. July 16. https://ww2.arb.ca.gov/sites/default/files/2024-08/AAQS%20Table_ADA_FINAL_07222024.pdf. Accessed July 15, 2024.

California Air Resources Board (CARB). 2024b. California Greenhouse Gas Emissions from 2000 to 2022: Trends of Emissions and Other Indicators. September 20. Available at: https://ww2.arb.ca.gov/sites/default/files/2024-09/nc-2000_2022_ghg_inventory_trends.pdf. Accessed: April 14, 2025.

California Air Resources Board (CARB). 2025. GHG Global Warming Potentials. Available at: https://ww2.arb.ca.gov/ghg-gwps. Accessed: April 14, 2025.

California Department of Transportation (Caltrans). 2020. *Air Quality Pollution Standards Tables*. May. dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/ser/aq-updates-air-pollution-stds-tbl-a11y.docx. Accessed: April 14, 2025.

California Energy Commission (CEC). 2025. Pacific Gas & Electric Company, 2023 Power Content Label. Available at: https://www.energy.ca.gov/filebrowser/download/7281. Accessed: May 5, 2025.

California Environmental Protection Agency (CalEPA). 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. March. *planning.lacity.org/eir*. Accessed: April 14, 2025.

Intergovernmental Panel on Climate Change (IPCC). 1995. Second Assessment, Climate Change 1995. Available at: https://www.ipcc.ch/site/assets/uploads/2018/02/2nd-assessment-en_SYR.pdf. Accessed: April 14, 2025.

Intergovernmental Panel on Climate Change (IPCC). 2007. Climate Change 2007 – The Physical Science Basis, Working Group I Contribution to the Fourth Assessment Report of the IPCC. Available at: ipcc.ch/site/assets/uploads/2018/05/ar4_wg1_full_report-1.pdf. Accessed: April 14, 2025.

NV5. 2024. Vehicle Miles Traveled (VMT) Analysis for Santa Maria Delivery Station. December 5.

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Air Quality Thresholds of Significance-Criteria Pollutants. March 19. Available at: https://ww2.valleyair.org/media/m2ecyxiw/1-cms-format-ceqa-air-quality-thresholds-of-significance-criteria-pollutants.pdf. Accessed: April 14, 2025.

San Luis Obispo County Air Pollution Control District (SLOAPCD). 2023. CEQA Air Quality Handbook. Available at : https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/CEQA%20Handbook%202023_Final.pdf. Accessed: April 14, 2025.

Santa Barbara County Air Pollution Control District (SBCAPCD). 1992. Rule 329-Cutback and Emulsified Asphalt Paving Materials. February 25. Available at: https://www.ourair.org/wp-content/uploads/rule329.pdf. Accessed: April 14, 2025.

Santa Barbara County Air Pollution Control District (SBCAPCD). 2008. Rule 201-Permits Required. June 19. Available at: https://www.ourair.org/wp-content/uploads/rule201.pdf. Accessed: April 14, 2025.

Santa Barbara County Air Pollution Control District (SBCAPCD). 2010. Rule 345-Control of Fugitive Dust from Construction and Demolition Activities. January 21. Available at: https://www.ourair.org/wp-content/uploads/rule323.1.pdf. Accessed: April 14, 2025.

DRAFT

Santa Barbara County Air Pollution Control District (SBCAPCD). 2015a. Environmental Review Guidelines. April. Available at: https://www.ourair.org/wp-content/uploads/APCDCEQAGuidelinesApr2015-1.pdf. Accessed: April 14, 2025.

Santa Barbara County Air Pollution Control District (SBCAPCD). 2015b. Rule 323.1-Architectural Coatings. January. Available at: https://www.ourair.org/wp-content/uploads/rule323.1.pdf. Accessed: April 14, 2025.

Santa Barbara County Air Pollution Control District (SBCAPCD). 2022a. Scope and Content of Air Quality Sections in Environmental Documents. January. Available at: https://www.ourair.org/wp-content/uploads/ScopeContentJanuary2022-LimitedUpdates.pdf. Accessed: April 14, 2025.

Santa Barbara County Air Pollution Control District (SBCAPCD). 2022b. 2022 Ozone Plan. December. Available at: https://www.ourair.org/wp-content/uploads/2022-Ozone-Plan.pdf. Accessed: April 14, 2025.

Santa Barbara County Association of Governments (SBCAG). 2021. Connected 2050 Regional Transportation Plan and Sustainable Communities Strategy. August. Available at: https://www.sbcag.org/wp-content/uploads/2023/09/Connected-2050-Final.pdf. Accessed: April 14, 2025.

South Coast Air Quality Management District (SCAQMD). 1993. CEQA Air Quality Handbook.

South Coast Air Quality Management District (SCAQMD). 2008. Interim CEQA Greenhouse Gas (GHG) Significance Threshold for Stationary Sources, Rules and Plans. December 5. Available at: https://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf. Accessed: April 14, 2025.

U.S. Department of Transportation (US DOT). 2025. Charger Types and Speeds. Available at: https://www.transportation.gov/rural/ev/toolkit/ev-basics/charging-speeds. Accessed: April 14, 2025.

U.S. Environmental Protection Agency (EPA). 2013. *The Clean Air Act in a Nutshell: How It Works*. March 22. *epa.gov/sites/default/files/2015-05/documents/caa_nutshell.pdf*. Accessed: April 14, 2025.

U.S. Environmental Protection Agency (EPA). 2025. AP-42: Compilation of Air Emissions Factors from Stationary Sources. Available at: https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emissions-factors-stationary-sources. Accessed: April 14, 2025.

Ventura County Air Pollution Control District (VCAPCD). 2003. Ventura County Air Quality Assessment Guidelines. October. Available at: http://www.vcapcd.org/pubs/Planning/VCAQGuidelines.pdf. Accessed: April 14, 2025.

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APPENDIX A: AIR QUALITY AND GREENHOUSE GAS EMISSIONS CALCULATION FILES

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Appendix A - 1: Project Construction Emissions Summary and CalEEMod Output File

Project Annual Construction Emissions-UNMITIGATED

	Annual Emissions (tons/year)[a]						Annual Emissions (MT/year)[a]				
Construction year	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10} Total**	**$PM_{2.5}$ Total**	**CO_2**	**CH_4**	**N_2O**	**R**	**CO_2e**
2026	0.241	2.252	7.768	0.016	0.831	0.337	1,820.58	0.08	0.11	0.60	1,856.02
2027	2.332	0.494	1.797	0.003	0.046	0.021	269.57	0.01	0.01	0.06	271.74
Max	2.332	2.252	7.768	0.016	0.831	0.337	**2,090.15**	**0.09**	**0.12**		**2,127.76**
SBCAPCD Thresholds[b]	25	25	N/A	25	25	25	25 -Year Amortization				**85.11**
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**					

Notes:

SBCAPCD = Santa Barbara County Air Pollution Control District; R = Refrigerants from Vehicle Air Conditioning

a. Values from CalEEMod Output File. Values are from the mitigated construction values because the dust control measure for watering 2 times per day was applied. This is not necessarily a mitigation measure because SBCAPCD requires standard dust control measures for all projects involving earthmoving activities.

b. SBCAPCD Scope and Content of Air Quality Sections in Environmental Documents, January 2022

West Stowell Delivery Station-Construction Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	West Stowell Delivery Station-Construction
Construction Start Date	6/2/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.90
Precipitation (days)	10.0
Location	34.93700207344493, -120.46965023732841
County	Santa Barbara
City	Santa Maria
Air District	Santa Barbara County APCD
Air Basin	South Central Coast
TAZ	3387
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	156	1000sqft	3.59	156,338	278,784	—	—	Landscape Area is 20% of Site acreage

General Office Building	13.7	1000sqft	0.31	13,672	0.00	—	—	Size values includes square footage for office and remote restrooms
Parking Lot	272	Space	2.45	0.00	0.00	—	—	—
Parking Lot	706	Space	6.35	0.00	0.00	—	—	—
Parking Lot	12.0	Space	0.11	0.00	0.00	—	—	—
Other Asphalt Surfaces	19.0	Acre	19.0	0.00	0.00	—	—	—
Automobile Care Center	6.54	1000sqft	0.15	6,538	0.00	—	—	Size values includes square footage for vehicle inspection structures and fleet service center.

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-A	Water Exposed Surfaces

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	132	132	27.2	91.0	0.19	0.67	52.9	53.2	0.60	27.2	27.4	—	23,767	23,767	1.08	1.49	19.0	24,257
Mit.	132	132	27.2	91.0	0.19	0.67	20.8	21.0	0.60	10.6	10.9	—	23,767	23,767	1.08	1.49	19.0	24,257

% Reduced	—	—	—	—	—	—	61%	60%	—	61%	60%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.64	2.93	27.6	91.2	0.19	0.67	16.7	17.4	0.60	6.25	6.85	—	23,757	23,757	1.07	1.49	0.49	24,228
Mit.	3.64	2.93	27.6	91.2	0.19	0.67	8.23	8.90	0.60	2.90	3.50	—	23,757	23,757	1.07	1.49	0.49	24,228
% Reduced	—	—	—	—	—	—	51%	49%	—	54%	49%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	12.8	12.8	12.3	42.6	0.09	0.30	8.97	9.27	0.27	3.52	3.79	—	10,996	10,996	0.50	0.66	3.62	11,210
Mit.	12.8	12.8	12.3	42.6	0.09	0.30	4.25	4.55	0.27	1.57	1.84	—	10,996	10,996	0.50	0.66	3.62	11,210
% Reduced	—	—	—	—	—	—	53%	51%	—	55%	51%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.34	2.33	2.25	7.77	0.02	0.05	1.64	1.69	0.05	0.64	0.69	—	1,821	1,821	0.08	0.11	0.60	1,856
Mit.	2.34	2.33	2.25	7.77	0.02	0.05	0.78	0.83	0.05	0.29	0.34	—	1,821	1,821	0.08	0.11	0.60	1,856
% Reduced	—	—	—	—	—	—	53%	51%	—	55%	51%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.65	2.93	27.2	91.0	0.19	0.67	52.9	53.2	0.60	27.2	27.4	—	23,767	23,767	1.08	1.49	19.0	24,257
2027	132	132	8.74	32.8	0.05	0.25	0.58	0.83	0.24	0.14	0.38	—	5,501	5,501	0.22	0.13	2.81	5,548

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.64	2.93	27.6	91.2	0.19	0.67	16.7	17.4	0.60	6.25	6.85	—	23,757	23,757	1.07	1.49	0.49	24,228
2027	1.61	1.41	8.79	32.9	0.05	0.25	0.58	0.83	0.24	0.14	0.38	—	5,492	5,492	0.22	0.13	0.07	5,536
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.63	1.32	12.3	42.6	0.09	0.30	8.97	9.27	0.27	3.52	3.79	—	10,996	10,996	0.50	0.66	3.62	11,210
2027	12.8	12.8	2.70	9.84	0.01	0.08	0.17	0.25	0.07	0.04	0.12	—	1,628	1,628	0.07	0.04	0.36	1,641
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.30	0.24	2.25	7.77	0.02	0.05	1.64	1.69	0.05	0.64	0.69	—	1,821	1,821	0.08	0.11	0.60	1,856
2027	2.34	2.33	0.49	1.80	< 0.005	0.01	0.03	0.05	0.01	0.01	0.02	—	270	270	0.01	0.01	0.06	272

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.65	2.93	27.2	91.0	0.19	0.67	20.8	21.0	0.60	10.6	10.9	—	23,767	23,767	1.08	1.49	19.0	24,257
2027	132	132	8.74	32.8	0.05	0.25	0.58	0.83	0.24	0.14	0.38	—	5,501	5,501	0.22	0.13	2.81	5,548
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.64	2.93	27.6	91.2	0.19	0.67	8.23	8.90	0.60	2.90	3.50	—	23,757	23,757	1.07	1.49	0.49	24,228
2027	1.61	1.41	8.79	32.9	0.05	0.25	0.58	0.83	0.24	0.14	0.38	—	5,492	5,492	0.22	0.13	0.07	5,536
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.63	1.32	12.3	42.6	0.09	0.30	4.25	4.55	0.27	1.57	1.84	—	10,996	10,996	0.50	0.66	3.62	11,210
2027	12.8	12.8	2.70	9.84	0.01	0.08	0.17	0.25	0.07	0.04	0.12	—	1,628	1,628	0.07	0.04	0.36	1,641
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2026	0.30	0.24	2.25	7.77	0.02	0.05	0.78	0.83	0.05	0.29	0.34	—	1,821	1,821	0.08	0.11	0.60	1,856
2027	2.34	2.33	0.49	1.80	< 0.005	0.01	0.03	0.05	0.01	0.01	0.02	—	270	270	0.01	0.01	0.06	272

3. Construction Emissions Details

3.1. Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.23	6.39	68.0	0.12	0.25	—	0.25	0.25	—	0.25	—	13,081	13,081	0.53	0.11	—	13,126
Dust From Material Movement	—	—	—	—	—	—	52.7	52.7	—	27.1	27.1	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	1.30	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	251	251	0.01	< 0.005	—	252
Dust From Material Movement	—	—	—	—	—	—	1.01	1.01	—	0.52	0.52	—	—	—	—	—	—	—

Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.24	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	41.5	41.5	< 0.005	< 0.005	—	41.7
Dust From Material Movement	—	—	—	—	—	—	0.18	0.18	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.13	0.10	1.12	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	200	200	0.01	0.01	0.84	204
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.77	3.77	< 0.005	< 0.005	0.01	3.83
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.62	0.62	< 0.005	< 0.005	< 0.005	0.63
Vendor	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	0.00
Hauling	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	0.00

3.2. Site Preparation (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.23	6.39	68.0	0.12	0.25	—	0.25	0.25	—	0.25	—	13,081	13,081	0.53	0.11	—	13,126
Dust From Material Movement	—	—	—	—	—	—	20.6	20.6	—	10.6	10.6	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	1.30	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	251	251	0.01	< 0.005	—	252
Dust From Material Movement	—	—	—	—	—	—	0.39	0.39	—	0.20	0.20	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.02	0.24	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	41.5	41.5	< 0.005	< 0.005	—	41.7
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.13	0.10	1.12	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	200	200	0.01	0.01	0.84	204
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.77	3.77	< 0.005	< 0.005	0.01	3.83
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.62	0.62	< 0.005	< 0.005	< 0.005	0.63
Vendor	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	0.00
Hauling	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	0.00

3.3. Grading-Building Foundation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.18	7.11	53.1	0.09	0.25	—	0.25	0.24	—	0.24	—	9,898	9,898	0.40	0.08	—	9,932
Dust From Material Movement	—	—	—	—	—	—	13.8	13.8	—	5.49	5.49	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.10	0.58	4.37	0.01	0.02	—	0.02	0.02	—	0.02	—	814	814	0.03	0.01	—	816
Dust From Material Movement	—	—	—	—	—	—	1.14	1.14	—	0.45	0.45	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.11	0.80	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	135	135	0.01	< 0.005	—	135

Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.13	0.10	1.12	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	200	200	0.01	0.01	0.84	204
Vendor	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	0.00
Hauling	0.32	0.09	5.86	1.98	0.03	0.08	1.08	1.15	0.05	0.30	0.35	—	4,297	4,297	0.23	0.67	7.95	4,511
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.1	16.1	< 0.005	< 0.005	0.03	16.4
Vendor	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	0.00
Hauling	0.03	0.01	0.50	0.16	< 0.005	0.01	0.09	0.09	< 0.005	0.02	0.03	—	353	353	0.02	0.06	0.28	370
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.67	2.67	< 0.005	< 0.005	< 0.005	2.72
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.09	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	58.5	58.5	< 0.005	0.01	0.05	61.3

3.4. Grading-Building Foundation (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.18	7.11	53.1	0.09	0.25	—	0.25	0.24	—	0.24	—	9,898	9,898	0.40	0.08	—	9,932
Dust From Material Movement	—	—	—	—	—	—	5.40	5.40	—	2.14	2.14	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.10	0.58	4.37	0.01	0.02	—	0.02	0.02	—	0.02	—	814	814	0.03	0.01	—	816
Dust From Material Movement	—	—	—	—	—	—	0.44	0.44	—	0.18	0.18	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.11	0.80	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	135	135	0.01	< 0.005	—	135
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.03	0.03	—	—	—	—	—	—	—

Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.13	0.10	1.12	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	200	200	0.01	0.01	0.84	204
Vendor	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	0.00
Hauling	0.32	0.09	5.86	1.98	0.03	0.08	1.08	1.15	0.05	0.30	0.35	—	4,297	4,297	0.23	0.67	7.95	4,511
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.1	16.1	< 0.005	< 0.005	0.03	16.4
Vendor	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	0.00
Hauling	0.03	0.01	0.50	0.16	< 0.005	0.01	0.09	0.09	< 0.005	0.02	0.03	—	353	353	0.02	0.06	0.28	370
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.67	2.67	< 0.005	< 0.005	< 0.005	2.72
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.09	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	58.5	58.5	< 0.005	0.01	0.05	61.3

3.5. Grading-Rest of Site (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.23	1.18	7.11	53.1	0.09	0.25	—	0.25	0.24	—	0.24	—	9,898	9,898	0.40	0.08	—	9,932
Dust From Material Movement	—	—	—	—	—	—	13.9	13.9	—	5.49	5.49	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.18	7.11	53.1	0.09	0.25	—	0.25	0.24	—	0.24	—	9,898	9,898	0.40	0.08	—	9,932
Dust From Material Movement	—	—	—	—	—	—	13.9	13.9	—	5.49	5.49	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.47	2.87	21.4	0.04	0.10	—	0.10	0.10	—	0.10	—	3,986	3,986	0.16	0.03	—	4,000
Dust From Material Movement	—	—	—	—	—	—	5.58	5.58	—	2.21	2.21	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.09	0.09	0.52	3.90	0.01	0.02	—	0.02	0.02	—	0.02	—	660	660	0.03	0.01	—	662
Dust From Material Movement	—	—	—	—	—	—	1.02	1.02	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.13	0.10	1.12	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	200	200	0.01	0.01	0.84	204
Vendor	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	0.00
Hauling	0.61	0.17	11.1	3.76	0.05	0.15	2.04	2.19	0.10	0.57	0.67	—	8,149	8,149	0.44	1.27	15.1	8,554
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.11	1.15	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	196	196	0.01	0.01	0.02	199
Vendor	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	0.00
Hauling	0.60	0.16	11.4	3.80	0.05	0.15	2.04	2.19	0.10	0.57	0.67	—	8,152	8,152	0.44	1.27	0.39	8,542
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.45	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	79.1	79.1	0.01	< 0.005	0.15	80.5
Vendor	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	0.00
Hauling	0.24	0.07	4.63	1.52	0.02	0.06	0.82	0.88	0.04	0.23	0.27	—	3,283	3,283	0.18	0.51	2.62	3,442
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.1	13.1	< 0.005	< 0.005	0.02	13.3
Vendor	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	0.00
Hauling	0.04	0.01	0.84	0.28	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	543	543	0.03	0.08	0.43	570

3.6. Grading-Rest of Site (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.18	7.11	53.1	0.09	0.25	—	0.25	0.24	—	0.24	—	9,898	9,898	0.40	0.08	—	9,932
Dust From Material Movement	—	—	—	—	—	—	5.41	5.41	—	2.14	2.14	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.18	7.11	53.1	0.09	0.25	—	0.25	0.24	—	0.24	—	9,898	9,898	0.40	0.08	—	9,932
Dust From Material Movement	—	—	—	—	—	—	5.41	5.41	—	2.14	2.14	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.47	2.87	21.4	0.04	0.10	—	0.10	0.10	—	0.10	—	3,986	3,986	0.16	0.03	—	4,000

Dust From Material Movement	—	—	—	—	—	—	2.18	2.18	—	0.86	0.86	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.09	0.52	3.90	0.01	0.02	—	0.02	0.02	—	0.02	—	660	660	0.03	0.01	—	662
Dust From Material Movement	—	—	—	—	—	—	0.40	0.40	—	0.16	0.16	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.13	0.10	1.12	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	200	200	0.01	0.01	0.84	204
Vendor	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	0.00
Hauling	0.61	0.17	11.1	3.76	0.05	0.15	2.04	2.19	0.10	0.57	0.67	—	8,149	8,149	0.44	1.27	15.1	8,554
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.11	1.15	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	196	196	0.01	0.01	0.02	199
Vendor	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	0.00
Hauling	0.60	0.16	11.4	3.80	0.05	0.15	2.04	2.19	0.10	0.57	0.67	—	8,152	8,152	0.44	1.27	0.39	8,542
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.45	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	79.1	79.1	0.01	< 0.005	0.15	80.5
Vendor	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	0.00

Hauling	0.24	0.07	4.63	1.52	0.02	0.06	0.82	0.88	0.04	0.23	0.27	—	3,283	3,283	0.18	0.51	2.62	3,442
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.1	13.1	< 0.005	< 0.005	0.02	13.3
Vendor	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	0.00
Hauling	0.04	0.01	0.84	0.28	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	543	543	0.03	0.08	0.43	570

3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.30	1.13	7.93	30.2	0.05	0.26	—	0.26	0.25	—	0.25	—	4,571	4,571	0.19	0.04	—	4,587
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.30	1.13	7.93	30.2	0.05	0.26	—	0.26	0.25	—	0.25	—	4,571	4,571	0.19	0.04	—	4,587
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.52	0.45	3.18	12.1	0.02	0.11	—	0.11	0.10	—	0.10	—	1,834	1,834	0.07	0.01	—	1,840

Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.58	2.21	< 0.005	0.02	—	0.02	0.02	—	0.02	—	304	304	0.01	< 0.005	—	305
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.30	0.21	2.48	0.00	0.00	0.45	0.45	0.00	0.11	0.11	—	444	444	0.03	0.02	1.86	453
Vendor	0.05	0.02	0.78	0.36	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	505	505	0.02	0.07	1.21	528
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.30	0.23	2.55	0.00	0.00	0.45	0.45	0.00	0.11	0.11	—	435	435	0.02	0.02	0.05	442
Vendor	0.04	0.02	0.80	0.37	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	505	505	0.02	0.07	0.03	527
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.09	0.99	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	175	175	0.01	0.01	0.32	178
Vendor	0.02	0.01	0.32	0.15	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	202	202	0.01	0.03	0.21	211
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.18	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.9	28.9	< 0.005	< 0.005	0.05	29.4
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	33.5	33.5	< 0.005	< 0.005	0.04	35.0
Hauling	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	0.00

3.8. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.30	1.13	7.93	30.2	0.05	0.26	—	0.26	0.25	—	0.25	—	4,571	4,571	0.19	0.04	—	4,587
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.30	1.13	7.93	30.2	0.05	0.26	—	0.26	0.25	—	0.25	—	4,571	4,571	0.19	0.04	—	4,587
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.52	0.45	3.18	12.1	0.02	0.11	—	0.11	0.10	—	0.10	—	1,834	1,834	0.07	0.01	—	1,840
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.58	2.21	< 0.005	0.02	—	0.02	0.02	—	0.02	—	304	304	0.01	< 0.005	—	305

Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.30	0.21	2.48	0.00	0.00	0.45	0.45	0.00	0.11	0.11	—	444	444	0.03	0.02	1.86	453
Vendor	0.05	0.02	0.78	0.36	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	505	505	0.02	0.07	1.21	528
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.30	0.23	2.55	0.00	0.00	0.45	0.45	0.00	0.11	0.11	—	435	435	0.02	0.02	0.05	442
Vendor	0.04	0.02	0.80	0.37	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	505	505	0.02	0.07	0.03	527
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.09	0.99	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	175	175	0.01	0.01	0.32	178
Vendor	0.02	0.01	0.32	0.15	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	202	202	0.01	0.03	0.21	211
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.18	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.9	28.9	< 0.005	< 0.005	0.05	29.4
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	33.5	33.5	< 0.005	< 0.005	0.04	35.0
Hauling	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	0.00

3.9. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.26	1.10	7.80	30.2	0.05	0.25	—	0.25	0.23	—	0.23	—	4,571	4,571	0.19	0.04	—	4,586
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.26	1.10	7.80	30.2	0.05	0.25	—	0.25	0.23	—	0.23	—	4,571	4,571	0.19	0.04	—	4,586
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.30	2.15	8.33	0.01	0.07	—	0.07	0.06	—	0.06	—	1,261	1,261	0.05	0.01	—	1,265
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.06	0.39	1.52	< 0.005	0.01	—	0.01	0.01	—	0.01	—	209	209	0.01	< 0.005	—	210
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.31	0.29	0.19	2.31	0.00	0.00	0.45	0.45	0.00	0.11	0.11	—	436	436	0.01	0.02	1.71	444
Vendor	0.04	0.02	0.74	0.34	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	494	494	0.02	0.07	1.10	517
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.29	0.22	2.38	0.00	0.00	0.45	0.45	0.00	0.11	0.11	—	427	427	0.02	0.02	0.04	434
Vendor	0.04	0.02	0.77	0.35	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	494	494	0.02	0.07	0.03	516
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.06	0.64	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	118	118	< 0.005	0.01	0.20	120
Vendor	0.01	0.01	0.21	0.10	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	136	136	0.01	0.02	0.13	143
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	19.5	19.5	< 0.005	< 0.005	0.03	19.9
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.6	22.6	< 0.005	< 0.005	0.02	23.6
Hauling	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	0.00

3.10. Building Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.26	1.10	7.80	30.2	0.05	0.25	—	0.25	0.23	—	0.23	—	4,571	4,571	0.19	0.04	—	4,586

Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.26	1.10	7.80	30.2	0.05	0.25	—	0.25	0.23	—	0.23	—	4,571	4,571	0.19	0.04	—	4,586
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.30	2.15	8.33	0.01	0.07	—	0.07	0.06	—	0.06	—	1,261	1,261	0.05	0.01	—	1,265
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.06	0.39	1.52	< 0.005	0.01	—	0.01	0.01	—	0.01	—	209	209	0.01	< 0.005	—	210
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.29	0.19	2.31	0.00	0.00	0.45	0.45	0.00	0.11	0.11	—	436	436	0.01	0.02	1.71	444
Vendor	0.04	0.02	0.74	0.34	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	494	494	0.02	0.07	1.10	517
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.31	0.29	0.22	2.38	0.00	0.00	0.45	0.45	0.00	0.11	0.11	—	427	427	0.02	0.02	0.04	434
Vendor	0.04	0.02	0.77	0.35	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	494	494	0.02	0.07	0.03	516
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.06	0.64	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	118	118	< 0.005	0.01	0.20	120
Vendor	0.01	0.01	0.21	0.10	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	136	136	0.01	0.02	0.13	143
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	19.5	19.5	< 0.005	< 0.005	0.03	19.9
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.6	22.6	< 0.005	< 0.005	0.02	23.6
Hauling	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	0.00

3.11. Paving (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.69	4.46	13.8	0.02	0.18	—	0.18	0.17	—	0.17	—	1,974	1,974	0.08	0.02	—	1,981
Paving	4.58	4.58	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.03	0.03	0.20	0.61	< 0.005	0.01	—	0.01	0.01	—	0.01	—	86.5	86.5	< 0.005	< 0.005	—	86.8
Paving	0.20	0.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.01	0.01	0.04	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.3	14.3	< 0.005	< 0.005	—	14.4
Paving	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.05	0.64	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	121	121	< 0.005	0.01	0.47	123
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.20	5.20	< 0.005	< 0.005	0.01	5.29
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.86	0.86	< 0.005	< 0.005	< 0.005	0.88
Vendor	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	0.00
Hauling	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	0.00

3.12. Paving (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.69	4.46	13.8	0.02	0.18	—	0.18	0.17	—	0.17	—	1,974	1,974	0.08	0.02	—	1,981
Paving	4.58	4.58	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.20	0.61	< 0.005	0.01	—	0.01	0.01	—	0.01	—	86.5	86.5	< 0.005	< 0.005	—	86.8
Paving	0.20	0.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.3	14.3	< 0.005	< 0.005	—	14.4
Paving	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.05	0.64	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	121	121	< 0.005	0.01	0.47	123
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.20	5.20	< 0.005	< 0.005	0.01	5.29
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.86	0.86	< 0.005	< 0.005	< 0.005	0.88
Vendor	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	0.00
Hauling	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	0.00

3.13. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134

Architectural	127	127	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.8	12.8	< 0.005	< 0.005	—	12.8
Architectural Coatings	12.1	12.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.12	2.12	< 0.005	< 0.005	—	2.13
Architectural Coatings	2.22	2.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.46	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	87.2	87.2	< 0.005	< 0.005	0.34	88.9
Vendor	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	0.00

Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.20	8.20	< 0.005	< 0.005	0.01	8.34
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.36	1.36	< 0.005	< 0.005	< 0.005	1.38
Vendor	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	0.00
Hauling	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	0.00

3.14. Architectural Coating (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	127	127	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.8	12.8	< 0.005	< 0.005	—	12.8
Architectural Coatings	12.1	12.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.12	2.12	< 0.005	< 0.005	—	2.13
Architectural Coatings	2.22	2.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.46	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	87.2	87.2	< 0.005	< 0.005	0.34	88.9
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.20	8.20	< 0.005	< 0.005	0.01	8.34
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.36	1.36	< 0.005	< 0.005	< 0.005	1.38
Vendor	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	0.00
Hauling	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	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	4/20/2026	4/28/2026	5.00	7.00	—
Grading-Building Foundation	Grading	4/29/2026	6/9/2026	5.00	30.0	—
Grading-Rest of Site	Grading	6/10/2026	12/31/2026	5.00	147	—
Building Construction	Building Construction	6/10/2026	5/21/2027	5.00	248	—
Paving	Paving	5/22/2027	6/14/2027	5.00	16.0	—
Architectural Coating	Architectural Coating	5/22/2027	7/9/2027	5.00	35.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Final	7.00	9.20	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	6.00	9.10	84.0	0.37
Grading-Building Foundation	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Grading-Building Foundation	Graders	Diesel	Tier 4 Final	2.00	6.00	148	0.41
Grading-Building Foundation	Rubber Tired Dozers	Diesel	Tier 4 Final	2.00	6.00	367	0.40
Grading-Building Foundation	Scrapers	Diesel	Tier 4 Final	3.00	8.00	423	0.48
Grading-Building Foundation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Grading-Rest of Site	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Grading-Rest of Site	Graders	Diesel	Tier 4 Final	2.00	6.00	148	0.41
Grading-Rest of Site	Rubber Tired Dozers	Diesel	Tier 4 Final	2.00	6.00	367	0.40
Grading-Rest of Site	Scrapers	Diesel	Tier 4 Final	3.00	8.00	423	0.48

Grading-Rest of Site	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Tier 4 Final	1.00	6.80	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Final	9.00	7.80	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	3.00	7.80	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	6.00	6.80	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	7.80	46.0	0.45
Paving	Pavers	Diesel	Tier 4 Final	2.00	8.80	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Final	2.00	8.80	89.0	0.36
Paving	Rollers	Diesel	Average	4.00	8.80	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Final	7.00	9.20	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	6.00	9.10	84.0	0.37
Grading-Building Foundation	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Grading-Building Foundation	Graders	Diesel	Tier 4 Final	2.00	6.00	148	0.41
Grading-Building Foundation	Rubber Tired Dozers	Diesel	Tier 4 Final	2.00	6.00	367	0.40
Grading-Building Foundation	Scrapers	Diesel	Tier 4 Final	3.00	8.00	423	0.48
Grading-Building Foundation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Grading-Rest of Site	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Grading-Rest of Site	Graders	Diesel	Tier 4 Final	2.00	6.00	148	0.41
Grading-Rest of Site	Rubber Tired Dozers	Diesel	Tier 4 Final	2.00	6.00	367	0.40

Grading-Rest of Site	Scrapers	Diesel	Tier 4 Final	3.00	8.00	423	0.48
Grading-Rest of Site	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Tier 4 Final	1.00	6.80	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Final	9.00	7.80	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	3.00	7.80	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	6.00	6.80	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	7.80	46.0	0.45
Paving	Pavers	Diesel	Tier 4 Final	2.00	8.80	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Final	2.00	8.80	89.0	0.36
Paving	Rollers	Diesel	Average	4.00	8.80	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	32.5	8.80	LDA,LDT1,LDT2
Site Preparation	Vendor	—	5.30	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading-Building Foundation	—	—	—	—
Grading-Building Foundation	Worker	32.5	8.80	LDA,LDT1,LDT2
Grading-Building Foundation	Vendor	—	5.30	HHDT,MHDT
Grading-Building Foundation	Hauling	59.5	20.0	HHDT
Grading-Building Foundation	Onsite truck	—	—	HHDT
Grading-Rest of Site	—	—	—	—

Grading-Rest of Site	Worker	32.5	8.80	LDA,LDT1,LDT2
Grading-Rest of Site	Vendor	—	5.30	HHDT,MHDT
Grading-Rest of Site	Hauling	113	20.0	HHDT
Grading-Rest of Site	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	72.1	8.80	LDA,LDT1,LDT2
Building Construction	Vendor	28.9	5.30	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	8.80	LDA,LDT1,LDT2
Paving	Vendor	—	5.30	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	14.4	8.80	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	5.30	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	32.5	8.80	LDA,LDT1,LDT2
Site Preparation	Vendor	—	5.30	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading-Building Foundation	—	—	—	—

Grading-Building Foundation	Worker	32.5	8.80	LDA,LDT1,LDT2
Grading-Building Foundation	Vendor	—	5.30	HHDT,MHDT
Grading-Building Foundation	Hauling	59.5	20.0	HHDT
Grading-Building Foundation	Onsite truck	—	—	HHDT
Grading-Rest of Site	—	—	—	—
Grading-Rest of Site	Worker	32.5	8.80	LDA,LDT1,LDT2
Grading-Rest of Site	Vendor	—	5.30	HHDT,MHDT
Grading-Rest of Site	Hauling	113	20.0	HHDT
Grading-Rest of Site	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	72.1	8.80	LDA,LDT1,LDT2
Building Construction	Vendor	28.9	5.30	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	8.80	LDA,LDT1,LDT2
Paving	Vendor	—	5.30	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	14.4	8.80	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	5.30	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	264,822	88,274	73,050

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	28.2	0.00	—
Grading-Building Foundation	14,272	—	117	0.00	—
Grading-Rest of Site	132,622	—	662	0.00	—
Paving	0.00	0.00	0.00	0.00	27.9

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	0.00	0%
General Office Building	0.00	0%
Parking Lot	2.45	100%
Parking Lot	6.35	100%
Parking Lot	0.11	100%
Other Asphalt Surfaces	19.0	100%
Automobile Care Center	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	5.56	annual days of extreme heat
Extreme Precipitation	4.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	42.7	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A

Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	11.6
AQ-PM	10.5
AQ-DPM	39.4
Drinking Water	52.8
Lead Risk Housing	43.8
Pesticides	99.6
Toxic Releases	10.3
Traffic	19.9
Effect Indicators	—
CleanUp Sites	72.4
Groundwater	99.8
Haz Waste Facilities/Generators	95.6
Impaired Water Bodies	83.0
Solid Waste	97.6
Sensitive Population	—
Asthma	54.8
Cardio-vascular	10.8
Low Birth Weights	26.6
Socioeconomic Factor Indicators	—
Education	92.9
Housing	60.1
Linguistic	83.8
Poverty	83.0
Unemployment	69.1

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	18.91441037
Employed	48.77454125
Median HI	33.1707943
Education	—
Bachelor's or higher	21.73745669
High school enrollment	100
Preschool enrollment	34.98011036
Transportation	—
Auto Access	36.49428975
Active commuting	47.32452201
Social	—
2-parent households	24.86847171
Voting	58.09059412
Neighborhood	—
Alcohol availability	48.68471705
Park access	56.33260619
Retail density	30.43757218
Supermarket access	58.51405107
Tree canopy	3.798280508
Housing	—
Homeownership	33.00397793
Housing habitability	24.75298345
Low-inc homeowner severe housing cost burden	34.38983703
Low-inc renter severe housing cost burden	51.96971641

Uncrowded housing	6.108045682
Health Outcomes	—
Insured adults	16.74579751
Arthritis	64.8
Asthma ER Admissions	63.2
High Blood Pressure	70.1
Cancer (excluding skin)	80.0
Asthma	16.4
Coronary Heart Disease	51.0
Chronic Obstructive Pulmonary Disease	25.1
Diagnosed Diabetes	40.6
Life Expectancy at Birth	58.8
Cognitively Disabled	72.6
Physically Disabled	87.9
Heart Attack ER Admissions	98.0
Mental Health Not Good	14.9
Chronic Kidney Disease	35.4
Obesity	25.3
Pedestrian Injuries	72.4
Physical Health Not Good	20.5
Stroke	39.4
Health Risk Behaviors	—
Binge Drinking	52.5
Current Smoker	17.7
No Leisure Time for Physical Activity	22.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0

Children	4.8
Elderly	91.7
English Speaking	20.3
Foreign-born	70.8
Outdoor Workers	1.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	42.5
Traffic Density	17.7
Traffic Access	0.0
Other Indices	—
Hardship	90.3
Other Decision Support	—
2016 Voting	45.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	71.0
Healthy Places Index Score for Project Location (b)	33.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Demolition phase was not required as Project site is undeveloped and currently used for agricultural purposes. Grading-Building Foundation phase would require 14,272 cubic yard (CY) of soil import and Grading-Rest of Site phase would require 132,622 CY, for a project total of 146,894 CY of soil import.
Construction: Off-Road Equipment	Project-specific equipment fleet, all equipment greater than 50 HP would meet Tier 4 Final engine standards.
Construction: Dust From Material Movement	Grading-Building Foundation phase would require 14,272 cubic yard (CY) of soil import and Grading-Rest of Site phase would require 132,622 CY, for a project total of 146,894 CY of soil import.

Appendix A - 2: Unmitigated Project Operations Emissions Summary

Operations Year	2027

Project Operational Emissions-Unmitigated

Project Daily Operational Emissions WITHIN SBCAPCD Boundaries

	Daily Emissions (lbs/day)									
Source Category	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10} Fugitive**	**PM_{10} Exhaust**	**PM_{10} Total**	**$PM_{2.5}$ Fugitive**	**$PM_{2.5}$ Exhaust**	**$PM_{2.5}$ Total**
Area	6.35	0.06	7.68	0.00	-	0.01	0.01	-	0.01	0.01
Mobile-Employee Vehicles (Onsite)	1.41	0.41	5.09	0.00	0.18	0.01	0.19	0.05	0.01	0.05
Mobile-Employee Vehicles (Offsite)	2.91	1.61	19.83	0.05	4.52	0.02	4.55	1.14	0.02	1.16
Mobile-Delivery Vans (Onsite)	1.12	0.39	3.70	0.00	0.22	0.00	0.22	0.06	0.00	0.06
Mobile-Delivery Vans (Offsite)	2.98	6.20	55.12	0.22	32.12	0.07	32.19	8.08	0.07	8.14
Mobile-Private Carrier Vehicles (Onsite)	0.31	0.11	1.04	0.00	0.06	0.00	0.06	0.02	0.00	0.02
Mobile-Private Carrier Vehicles (Offsite)	0.72	0.96	8.56	0.03	4.49	0.01	4.50	1.13	0.01	1.14
Mobile-Line-Haul Trucks (Onsite)	0.03	0.97	0.50	0.00	0.13	0.00	0.13	0.03	0.00	0.03
Mobile-Line-Haul Trucks (Offsite) (within SBCAPCD)	0.18	14.96	1.82	0.14	21.96	0.26	22.22	5.56	0.25	5.82
Stationary (Fire Pump)	0.14	0.31	2.65	0.01	-	0.01	0.01	-	0.01	0.01
Project Emissions Total	**16.16**	**25.98**	**105.99**	**0.46**	**63.68**	**0.41**	**64.09**	**16.06**	**0.38**	**16.45**
SBCAPCD Thresholds (All Sources)[a]	240	240	N/A	N/A	N/A	N/A	80	N/A	N/A	N/A
Exceeds Threshold?	**No**	**No**	**N/A**	**N/A**	**N/A**	**N/A**	**No**	**N/A**	**N/A**	**N/A**
Mobile Emissions Total	9.67	25.61	95.65	0.45	63.68	0.39	64.07	16.06	0.36	16.43
SBCAPCD Mobile Source Threshold	25	25	—							
Exceeds Threshold?	**No**	**Yes**								

Project Operational Emissions OUTSIDE SBCAPCD Boundaries

	Daily Emissions (lbs/day)									
Project Vehicle Category	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10} Fugitive**	**PM_{10} Exhaust**	**PM_{10} Total**	**$PM_{2.5}$ Fugitive**	**$PM_{2.5}$ Exhaust**	**$PM_{2.5}$ Total**
Mobile-Line-Haul Trucks (Offsite) (Outside SBCAPCD)	0.09	10.10	0.66	0.10	16.01	0.19	16.20	4.06	0.18	4.24
VCAPCD Thresholds[b]	25	25	—							
Exceeds Threshold?	**No**	**No**								

	Annual Emissions (tons/year)									
Project Vehicle Category	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10} Fugitive**	**PM_{10} Exhaust**	**PM_{10} Total**	**$PM_{2.5}$ Fugitive**	**$PM_{2.5}$ Exhaust**	**$PM_{2.5}$ Total**
Mobile-Line-Haul Trucks (Offsite) (Outside SBCAPCD)	0.02	1.84	0.12	0.02	2.92	0.04	2.96	0.74	0.03	0.77
SJVAPCD Thresholds[c]	10	10	100	27	N/A	N/A	15	N/A	N/A	15
Exceeds Threshold?	**No**	**No**	**No**	**No**	N/A	N/A	**No**	N/A	N/A	**No**

Project Operational Emissions OUTSIDE SBCAPCD Boundaries

	Daily Emissions (lbs/day)								
Project Vehicle Category	**ROG + NOX (combined)**	**CO**	**DPM (PM_{10} Exhaust)**	**PM_{10} Fugitive**					
Mobile-Line-Haul Trucks (Offsite) (Outside SBCAPCD)	10.19	0.66	0.19	16.01					
SLOAPCD Daily Threshold	25	550	1.25	25					
Exceeds Threshold?	No	No	No	No					

	Annual Emissions (tons/year)								
Project Vehicle Category	**ROG + NOX (combined)**	**CO**	**DPM (PM_{10} Exhaust)**	**PM_{10} Fugitive**					
Mobile-Line Haul Trucks (Offsite) (Outside SBCAPCD)	1.86	0.12	0.04	2.92					
SLOAPCD Annual Threshold	25	N/A	N/A	25					
Exceeds Threshold?	No	N/A	N/A	No					

Project Operational Emissions-Unmitigated

Project Annual GHG Emissions[d]

	Annual Emissions (MT/year)			
Project Vehicle Category	**CO_2**	**CH_4**	**N_2O**	**CO_2e**
Area	2.58	0.00	0.00	2.6
Mobile-Employee Vehicles (Onsite)	73.21	0.02	0.01	76.0
Mobile-Employee Vehicles (Offsite)	773.56	0.04	0.03	783.0
Mobile-Delivery Vans (Onsite)	63.59	0.01	0.01	65.8
Mobile-Delivery Vans (Offsite)	3,739.74	0.06	0.09	3,768.3
Mobile-Private Carrier Vehicles (Onsite)	17.88	0.00	0.00	18.5
Mobile-Private Carrier Vehicles (Offsite)	526.01	0.01	0.01	530.5
Mobile-Line-Haul Trucks (Onsite)	34.60	0.00	0.01	36.2
Mobile-Line-Haul Trucks (Offsite)	4,148.35	0.02	0.65	4,343.8
Electricity Consumption-Buildings	15.19	-	-	15.2
Water	15.09	0.05	0.03	25.3
Waste	16.48	1.65	-	57.6
Refrigerants				224.4
Stationary (Fire Pump)	6.04	0.00	0.00	6.1
Construction (amortized)				85.1
Project Total	**9,432.31**	**1.85**	**0.84**	**10,038.5**

Notes:

SBCAPCD = Santa Barbara County Air Pollution Control District

VCAPCD = Ventura County Air Pollution Control District

SJVAPCD = San Joaquin Valley Air Pollution Control District

a) SBCAPCD Scope and Content of Air Quality Sections in Environmental Documents, January 2022

b) Ventura County Air Quality Assessment Guidelines, October 2003

c) SJVAPCD Air Quality Thresholds of Significance-Criteria Pollutants, March 2015

d) Mobile GHG emissions for line-haul trucks account for emissions within and outside SBCAPCD boundaries.

Appendix A - 3: Unmitigated Project Operations Mobile Emissions Calculations

Operations Year	2027

UNMITIGATED MOBILE EMISSIONS

Project Mobile Emissions within SBCAPCD Boundaries (Criteria Pollutants)

	Daily Emissions (lbs/day)									
Project Vehicle Category	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10} Fugitive**	**PM_{10} Exhaust**	**PM_{10} Total**	**$PM_{2.5}$ Fugitive**	**$PM_{2.5}$ Exhaust**	**$PM_{2.5}$ Total**
Mobile-Employee Vehicles (Onsite)	1.41	0.41	5.09	0.00	0.18	0.01	0.19	0.05	0.01	0.05
Mobile-Employee Vehicles (Offsite)	2.91	1.61	19.83	0.05	4.52	0.02	4.55	1.14	0.02	1.16
Mobile-Delivery Vans (Onsite)	1.12	0.39	3.70	0.00	0.22	0.00	0.22	0.06	0.00	0.06
Mobile-Delivery Vans (Offsite)	2.98	6.20	55.12	0.22	32.12	0.07	32.19	8.08	0.07	8.14
Mobile-Private Carrier Vehicles (Onsite)	0.31	0.11	1.04	0.00	0.06	0.00	0.06	0.02	0.00	0.02
Mobile-Private Carrier Vehicles (Offsite)	0.72	0.96	8.56	0.03	4.49	0.01	4.50	1.13	0.01	1.14
Mobile-Line-Haul Trucks (Onsite)	0.03	0.97	0.50	0.00	0.13	0.00	0.13	0.03	0.00	0.03
Mobile-Line-Haul Trucks (Offsite) (within SBCAPCD)	0.18	14.96	1.82	0.14	21.96	0.26	22.22	5.56	0.25	5.82
Total	**9.67**	**25.61**	**95.65**	**0.45**	**63.68**	**0.39**	**64.07**	**16.06**	**0.36**	**16.43**

Project Mobile Emissions outside SBCAPCD Boundaries (Criteria Pollutants)

	Daily Emissions (lbs/day)									
Project Vehicle Category	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10} Fugitive**	**PM_{10} Exhaust**	**PM_{10} Total**	**$PM_{2.5}$ Fugitive**	**$PM_{2.5}$ Exhaust**	**$PM_{2.5}$ Total**
Mobile-Line-Haul Trucks (Offsite) (Outside SBCAPCD)	0.09	10.10	0.66	0.10	16.01	0.19	16.20	4.06	0.18	4.24

	Annual Emissions (tons/year)									
Project Vehicle Category	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10} Fugitive**	**PM_{10} Exhaust**	**PM_{10} Total**	**$PM_{2.5}$ Fugitive**	**$PM_{2.5}$ Exhaust**	**$PM_{2.5}$ Total**
Mobile-Line-Haul Trucks (Offsite) (Outside SBCAPCD)	0.02	1.84	0.12	0.02	2.92	0.04	2.96	0.74	0.03	0.77

Project Mobile GHG Emissions

	Annual Emissions (MT/year)			
Project Vehicle Category	**CO_2**	**CH_4**	**N_2O**	**CO_2e**
Mobile-Employee Vehicles (Onsite)	73.2	0.017	0.008	76.0
Mobile-Employee Vehicles (Offsite)	773.6	0.037	0.029	783.0
Mobile-Delivery Vans (Onsite)	63.6	0.014	0.006	65.8
Mobile-Delivery Vans (Offsite)	3,739.7	0.057	0.091	3,768.3
Mobile-Private Carrier Vehicles (Onsite)	17.9	0.004	0.002	18.5
Mobile-Private Carrier Vehicles (Offsite)	526.0	0.012	0.014	530.5
Mobile-Line-Haul Trucks (Onsite)	34.6	0.001	0.005	36.2
Mobile-Line-Haul Trucks (Offsite)	4,148.4	0.018	0.654	4,343.8
Total	**9,376.9**	**0.159**	**0.810**	**9,622.2**

*Offsite Haul Truck emissions include emissions from inside and outside of SBCAPCD boundaries.

EMPLOYEE VEHICLE EMISSIONS (ONSITE)

Calendar Year:	2027
Project Vehicle Type:	Employees
Daily One-Way Trips (trips/day)[1]:	1,176
Daily Onsite Trips (trips/day):	588
Onsite Trip Length (miles):	0.52
Daily Onsite VMT (miles/day)[1]:	306
Onsite Vehicle Speed (mph):	10
Annual Operational Days (days/year):	365
Annual Insite Trips (trips/year):	214,620
Annual Onsite VMT (miles/year):	111,602

EMISSION FACTORS

Running Exhaust Emission Factors (g/mile)[2,3]													Other Vehicle Processes Emission Factors (g/trip)[2,4]											
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O
0.043	0.087	1.254	0.005	0.266	0.005	0.271	0.067	0.005	0.072	520.813	0.011	0.008	1.064	0.275	3.272	0.001	-	0.002	0.002	-	0.002	0.002	70.298	0.071	0.033

EMISSIONS

Daily Emissions (lbs/day)													Annual Emissions (tons/year)												Annual Emissions (MT/year)[5]			
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
1.41	0.41	5.09	0.00	0.18	0.01	0.19	0.05	0.01	0.05	442.20	0.10	0.05	0.26	0.08	0.93	0.00	0.03	0.00	0.03	0.01	0.00	0.01	73.21	0.02	0.01	76.00

Notes:

1. Data provided from Project VMT Analysis (Dated 12/5/24).
2. Emission factors generated from EMFAC2021.v.1.0.2. **Region:** Santa Barbara County APCD; **Season:** Annual; **Vehicle Classification:** EMFAC202x Categories; **Model Year:** Aggregate; **Speed:** 10 MPH; **Vehicle Category:** LDA/LDT1/LDT2; **Fuel Type:** All fuels
3. Running emission factors account for exhaust and fugitive dust from brake wear, tire wear, and road dust from paved roads.
4. Other Vehicle Processes emission factors account for additional exhaust and evaporative processes. **Exhaust:** Engine starting and idling. **Evaporative (ROG Only):** Runloss, Diurnal, and Hotsoak.
5. CO_2e is estimated using Global Warming Potential values based on IPCC Assessment Report 4 (AR4) in accordance with CARB methodology. CO_2 = 1; CH_4 = 25; N_2O = 298
6. Onsite trip length estimate based on employee/delivery van route in project site plan.

g = grams
lb = pounds
mph = miles per hour
MT = metric tons
VMT = vehicle miles traveled

EMPLOYEE VEHICLE EMISSIONS (OFFSITE)

Calendar Year:	2027
Project Vehicle Type:	Employees
Daily One-Way Trips (trips/day)[1]:	1,176
Daily VMT (miles/day)[1]:	7,762
Annual Operational Days (days/year):	365
Annual Trips (trips/year):	429,240
Annual VMT (miles/year):	2,833,130

EMISSION FACTORS

Running Exhaust Emission Factors (g/mile)[2,3]													Other Vehicle Processes Emission Factors (g/trip)[2,4]												
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O
0.009	0.053	0.663	0.003	0.264	0.001	0.265	0.067	0.001	0.068	262.389	0.002	0.005	1.064	0.275	3.272	0.001	-	0.002	0.002	-	0.002	0.002	70.298	0.071	0.033

EMISSIONS

Daily Emissions (lbs/day)													Annual Emissions (tons/year)										Annual Emissions (MT/year)[5]			
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
2.91	1.61	19.83	0.05	4.52	0.02	4.55	1.14	0.02	1.16	4,672.34	0.22	0.17	0.53	0.29	3.62	0.01	0.83	0.00	0.83	0.21	0.00	0.21	773.56	0.04	0.03	782.98

Notes:

1. Data provided from Project VMT Analysis (Dated 12/5/24).

2. Emission factors generated from EMFAC2021.v.1.0.2. **Region:** Santa Barbara County APCD; **Season:** Annual; **Vehicle Classification:** EMFAC202x Categories; **Model Year:** Aggregate; **Speed:** Aggregate; **Vehicle Category:** LDA/LDT1/LDT2; **Fuel Type:** All fuels

3. Running emission factors account for exhaust and fugitive dust from brake wear, tire wear, and road dust from paved roads.

4. Other Vehicle Processes emission factors account for additional exhaust and evaporative processes. **Exhaust:** Engine starting and idling. **Evaporative (ROG Only):** Runloss, Diurnal, and Hotsoak.

5. CO_2e is estimated using Global Warming Potential values based on IPCC Assessment Report 4 (AR4) in accordance with CARB methodology. CO_2 = 1; CH_4 = 25; N_2O = 298

g = grams

lb = pounds

MT = metric tons

VMT = vehicle miles traveled

DELIVERY VAN EMISSIONS (ONSITE)

Calendar Year:	2027
Project Vehicle Type:	Delivery Vans
Daily One-Way Trips (trips/day)[1]:	690
Daily Onsite Trips (trips/day):	345
Onsite Trip Length (miles):	0.52
Daily Onsite VMT (miles/day):	179
Onsite Vehicle Speed (mph):	10
Annual Operational Days (days/year):	365
Annual Trips (trips/year):	125,925
Annual VMT (miles/year):	65,481

EMISSION FACTORS

Running Exhaust Emission Factors (g/mile)[2,3]													Other Vehicle Processes Emission Factors (g/trip)[2,4]											
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O
0.070	0.158	1.650	0.008	0.557	0.0059	0.563	0.140	0.0054	0.146	774.174	0.016	0.014	1.432	0.428	4.008	0.001	-	0.002	0.002	-	0.002	0.002	102.393	0.101	0.041

EMISSIONS

Daily Emissions (lbs/day)													Annual Emissions (tons/year)												Annual Emissions (MT/year)[5]			
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
1.12	0.39	3.70	0.00	0.22	0.00	0.22	0.06	0.00	0.06	384.07	0.08	0.04	0.20	0.07	0.68	0.00	0.04	0.00	0.04	0.01	0.00	0.01	63.59	0.01	0.01	65.75

Notes:

1. Data provided from Project VMT Analysis (Dated 12/5/24).
2. Emission factors generated from EMFAC2021.v.1.0.2. **Region:** Santa Barbara County APCD; **Season:** Annual; **Vehicle Classification:** EMFAC202x Categories; **Model Year:** Aggregate; **Speed:** 10 MPH; **Vehicle Category:** MDV; **Fuel Type:** All fuels except electric.

3. Running emission factors account for exhaust and fugitive dust from brake wear, tire wear, and road dust from paved roads.

4. Other Vehicle Processes emission factors account for additional exhaust and evaporative processes. **Exhaust:** Engine starting and idling. **Evaporative (ROG Only):** Runloss, Diurnal, and Hotsoak.

5. CO_2e is estimated using Global Warming Potential values based on IPCC Assessment Report 4 (AR4) in accordance with CARB methodology. CO_2 = 1; CH_4 = 25; N_2O = 298

6. Onsite trip length estimate based on employee/delivery van route in project site plan.

g = grams
lb = pounds
mph = miles per hour
MT = metric tons
VMT = vehicle miles traveled

DELIVERY VAN EMISSIONS (OFFSITE)

Calendar Year:	2027
Project Vehicle Type:	Delivery Vans
Daily One-Way Trips (trips/day)[1]:	690
Daily VMT (miles/day)[1]:	26,296
Annual Operational Days (days/year):	365
Annual Trips (trips/year):	251,850
Annual VMT (miles/year):	9,598,040

EMISSION FACTORS

Running Exhaust Emission Factors (g/mile)[2,3]													Other Vehicle Processes Emission Factors (g/trip)[2,4]												
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O
0.014	0.096	0.846	0.004	0.554	0.001	0.555	0.139	0.001	0.140	386.948	0.003	0.008	1.432	0.428	4.008	0.001	-	0.002	0.002	-	0.002	0.002	102.393	0.101	0.041

EMISSIONS

Daily Emissions (lbs/day)													Annual Emissions (tons/year)										Annual Emissions (MT/year)[5]			
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
2.98	6.20	55.12	0.22	32.12	0.07	32.19	8.08	0.07	8.14	22,588.21	0.34	0.55	0.54	1.13	10.06	0.04	5.86	0.01	5.88	1.47	0.01	1.49	3,739.74	0.06	0.09	3,768.32

Notes:

1. Data provided from Project VMT Analysis (Dated 12/5/24).

2. Emission factors generated from EMFAC2021.v.1.0.2. **Region:** Santa Barbara County APCD; **Season:** Annual; **Vehicle Classification:** EMFAC202x Categories; **Model Year:** Aggregate; **Speed:** Aggregate; **Vehicle Category:** MDV; **Fuel Type:** All fuels except electric.

3. Running emission factors account for exhaust and fugitive dust from brake wear, tire wear, and road dust from paved roads.

4. Other Vehicle Processes emission factors account for additional exhaust and evaporative processes. **Exhaust:** Engine starting and idling. **Evaporative (ROG Only):** Runloss, Diurnal, and Hotsoak.

5. CO_2e is estimated using Global Warming Potential values based on IPCC Assessment Report 4 (AR4) in accordance with CARB methodology. CO_2 = 1; CH_4 = 25; N_2O = 298

g = grams

lb = pounds

MT = metric tons

VMT = vehicle miles traveled

PRIVATE CARRIER VEHICLE EMISSIONS (ONSITE)

Calendar Year:	2027
Project Vehicle Type:	PRIVATE CARRIER
Daily One-Way Trips (trips/day)[1]:	194
Daily Onsite Trips (trips/day):	97
Onsite Trip Length (miles):	0.52
Daily Onsite VMT (miles/day):	50
Onsite Vehicle Speed (mph):	10
Annual Operational Days (days/year):	365
Annual Trips (trips/year):	35,405
Annual VMT (miles/year):	18,411

EMISSION FACTORS

Running Exhaust Emission Factors (g/mile)[2,3]													Other Vehicle Processes Emission Factors (g/trip)[2,4]											
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O
0.070	0.158	1.650	0.008	0.557	0.006	0.563	0.140	0.005	0.146	774.174	0.016	0.014	1.432	0.428	4.008	0.001	-	0.002	0.002	-	0.002	0.002	102.393	0.101	0.041

EMISSIONS

Daily Emissions (lbs/day)													Annual Emissions (tons/year)											Annual Emissions (MT/year)[5]			
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
0.31	0.11	1.04	0.00	0.06	0.00	0.06	0.02	0.00	0.02	107.99	0.02	0.01	0.06	0.02	0.19	0.00	0.01	0.00	0.01	0.00	0.00	0.00	17.88	0.00	0.00	18.49

Notes:

1. Data provided from Project VMT Analysis (Dated 12/5/24).
2. Emission factors generated from EMFAC2021.v.1.0.2. **Region:** Santa Barbara County APCD; **Season:** Annual; **Vehicle Classification:** EMFAC202x Categories; **Model Year:** Aggregate; **Speed:** Aggregate; **Vehicle Category:** MDV; **Fuel Type:** All fuels except electric.
3. Running emission factors account for exhaust and fugitive dust from brake wear, tire wear, and road dust from paved roads.
4. Other Vehicle Processes emission factors account for additional exhaust and evaporative processes. **Exhaust:** Engine starting and idling. **Evaporative (ROG Only):** Runloss, Diurnal, and Hotsoak.
5. CO_2e is estimated using Global Warming Potential values based on IPCC Assessment Report 4 (AR4) in accordance with CARB methodology. CO_2 = 1; CH_4 = 25; N_2O = 298
6. Onsite trip length estimate based on employee/delivery van route in project site plan.

g = grams
lb = pounds
mph = miles per hour
MT = metric tons
VMT = vehicle miles traveled

PRIVATE CARRIER VEHICLE EMISSIONS (OFFSITE)

Calendar Year:	2027
Project Vehicle Type:	PRIVATE CARRIER
Daily One-Way Trips (trips/day)[1]:	194
Daily VMT (miles/day)[1]:	3,673
Annual Operational Days (days/year):	365
Annual Trips (trips/year):	70,810
Annual VMT (miles/year):	1,340,645

EMISSION FACTORS

Running Exhaust Emission Factors (g/mile)[2,3]													Other Vehicle Processes Emission Factors (g/trip)[2,4]												
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O
0.014	0.096	0.846	0.004	0.554	0.001	0.555	0.139	0.001	0.140	386.948	0.003	0.008	1.432	0.428	4.008	0.001	-	0.002	0.002	-	0.002	0.002	102.393	0.101	0.041

EMISSIONS

Daily Emissions (lbs/day)													Annual Emissions (tons/year)										Annual Emissions (MT/year)[5]			
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
0.72	0.96	8.56	0.03	4.49	0.01	4.50	1.13	0.01	1.14	3,177.14	0.07	0.09	0.13	0.17	1.56	0.01	0.82	0.00	0.82	0.21	0.00	0.21	526.01	0.01	0.01	530.53

Notes:

1. Data provided from Project VMT Analysis (Dated 12/5/24).

2. Emission factors generated from EMFAC2021.v.1.0.2. **Region:** Santa Barbara County APCD; **Season:** Annual; **Vehicle Classification:** EMFAC202x Categories; **Model Year:** Aggregate; **Speed:** Aggregate; **Vehicle Category:** MDV; **Fuel Type:** All fuels except electric.

3. Running emission factors account for exhaust and fugitive dust from brake wear, tire wear, and road dust from paved roads.

4. Other Vehicle Processes emission factors account for additional exhaust and evaporative processes. **Exhaust:** Engine starting and idling. **Evaporative (ROG Only):** Runloss, Diurnal, and Hotsoak.

5. CO_2e is estimated using Global Warming Potential values based on IPCC Assessment Report 4 (AR4) in accordance with CARB methodology. CO_2 = 1; CH_4 = 25; N_2O = 298

g = grams

lb = pounds

MT = metric tons

VMT = vehicle miles traveled

LINE-HAUL TRUCK EMISSIONS (ONSITE)

Calendar Year:	2027
Project Vehicle Type:	Line-Haul Trucks
Daily One-Way Trips (trips/day)[1]:	68
Daily Onsite Trips (trips/day):	34
Onsite Trip Length (miles):	0.76
Daily Onsite VMT (miles/day)[1]:	26
Onsite Vehicle Speed (mph):	10
Annual Operational Days (days/year):	365
Annual Trips (trips/year):	12,410
Annual VMT (miles/year):	9,432

EMISSION FACTORS

Running Exhaust Emission Factors (g/mile)[2,3]													Other Vehicle Processes Emission Factors (g/trip)[2,4]											
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O
0.066	7.369	0.755	0.023	2.323	0.009	2.332	0.595	0.009	0.603	2,475.616	0.034	0.391	0.412	7.356	6.100	0.009	-	0.002	0.002	-	0.002	0.002	906.263	0.038	0.143

EMISSIONS

Daily Emissions (lbs/day)													Annual Emissions (tons/year)										Annual Emissions (MT/year)[5]			
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
0.03	0.97	0.50	0.00	0.13	0.00	0.13	0.03	0.00	0.03	208.96	0.00	0.03	0.01	0.18	0.09	0.00	0.02	0.00	0.02	0.01	0.00	0.01	34.60	0.00	0.01	36.24

Notes:

1. Data provided from Project VMT Analysis (Dated 12/5/24).
2. Emission factors generated from EMFAC2021.v.1.0.2. **Region:** Santa Barbara County APCD; **Season:** Annual; **Vehicle Classification:** EMFAC202x Categories; **Model Year:** Aggregate; **Speed:** 10MPH; **Vehicle Category:** T7 CAIRP Class 8, T7 NNOOS Classs 8, T7 NOOS Class 8, T7 Single Other Class 8, T7 Tractor Class 8; **Fuel Type:** All fuels except electric.
3. Running emission factors account for exhaust and fugitive dust from brake wear, tire wear, and road dust from paved roads.
4. Other Vehicle Processes emission factors account for additional exhaust and evaporative processes. **Exhaust:** Engine starting and idling. **Evaporative (ROG Only):** Runloss, Diurnal, and Hotsoak.
5. CO_2e is estimated using Global Warming Potential values based on IPCC Assessment Report 4 (AR4) in accordance with CARB methodology. CO_2 = 1; CH_4 = 25; N_2O = 298
6. Onsite trip length estimate based on haul truck route in project site plan.

g = grams
lb = pounds
mph = miles per hour
MT = metric tons
VMT = vehicle miles traveled

LINE-HAUL TRUCK EMISSIONS (OFFSITE)

Calendar Year:	2027
Project Vehicle Type:	Line-Haul Trucks
Daily One-Way Trips (trips/day)[1]:	68
Total Trip Length (miles/trip)	112
Avg Trip Length Within SBCAPCD (miles):	65
Avg Trip Length Outside SBCAPCD (miles):	47
Total Daily VMT (miles/day)[1]:	7,616
Daily VMT Within SBCAPCD (miles/day):	4,406
Daily VMT Outside SBCAPCD (miles/day):	3,213
Annual Operational Days (days/year):	365
Annual Trips (trips/year):	24,820
Total Annual VMT (miles/year):	2,779,840
Annual VMT within SBCAPCD (miles/year):	1,608,336
Annual VMT outside SBCAPCD (miles/year):	1,172,745

EMISSION FACTORS

Running Exhaust Emission Factors (g/mile)[2,3]													Other Vehicle Processes Emission Factors (g/trip)[2,4]											
ROG	NO_x	CO	SO_x	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_x	CO	SO_x	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O
0.012	1.426	0.093	0.014	2.260	0.027	2.288	0.573	0.026	0.599	1,483.542	0.006	0.234	0.412	7.356	6.100	0.009	-	0.002	0.002	-	0.002	0.002	906.263	0.038	0.143

EMISSIONS WITHIN SBCAPCD BOUNDARIES

Daily Emissions (lbs/day)													Annual Emissions (tons/year)												Annual Emissions (MT/year)[5]			
ROG	NO_x	CO	SO_x	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_x	CO	SO_x	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
0.18	14.96	1.82	0.14	21.96	0.26	22.22	5.56	0.25	5.82	14,547.67	0.07	2.30	0.03	2.73	0.33	0.03	4.01	0.05	4.06	1.02	0.05	1.06	2,408.53	0.01	0.38	2,522.04

EMISSIONS OUTSIDE SBCAPCD BOUNDARIES[6]

Daily Emissions (lbs/day)													Annual Emissions (tons/year)												Annual Emissions (MT/year)[5]			
ROG	NO_x	CO	SO_x	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_x	CO	SO_x	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
0.09	10.10	0.66	0.10	16.01	0.19	16.20	4.06	0.18	4.24	10,508.61	0.04	1.66	0.02	1.84	0.12	0.02	2.92	0.04	2.96	0.74	0.03	0.77	1,739.82	0.01	0.27	1,821.80

TOTAL HAUL TRUCK EMISSIONS FROM PROJECT (WITHIN AND OUTSIDE SBCAPCD)[7]

TOTAL EMISSIONS

Daily Emissions (lbs/day)													Annual Emissions (tons/year)												Annual Emissions (MT/year)[5]			
ROG	NO_x	CO	SO_x	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_x	CO	SO_x	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
																							4,148.35	0.02	0.65	4,343.84

Notes:

1. Data provided from Project VMT Analysis (Dated 12/5/24).
2. Emission factors generated from EMFAC2021.v.1.0.2. **Region:** Santa Barbara County APCD; **Season:** Annual; **Vehicle Classification:** EMFAC202x Categories; **Model Year:** Aggregate; **Speed:** Aggregate; **Vehicle Category:** T7 CAIRP Class 8, T7 NNOOS Classs 8; T7 NOOS Class 8, T7 Single Other Class 8, T7 Tractor Class 8; **Fuel Type:** All fuels except electric.
3. Running emission factors account for exhaust and fugitive dust from brake wear, tire wear, and road dust from paved roads.
4. Other Vehicle Processes emission factors account for additional exhaust and evaporative processes. **Exhaust:** Engine starting and idling. **Evaporative (ROG Only):** Runloss, Diurnal, and Hotsoak.
5. CO_2e is estimated using Global Warming Potential values based on IPCC Assessment Report 4 (AR4) in accordance with CARB methodology. CO_2 = 1; CH_4 = 25; N_2O = 298
6. To avoid double counting, the emissions outside SBCAPCD only evaluate emissions based on VMT and not trips. Emissions from Daily Trips and Annual Trips are accounted for in the calculations for "within SBCAPCD".
7. Total GHG emissions from haul trucks inside and outside of SBCAPCD will be used for reporting Project annual GHG emissions.

g = grams
lb = pounds
MT = metric tons
VMT = vehicle miles traveled

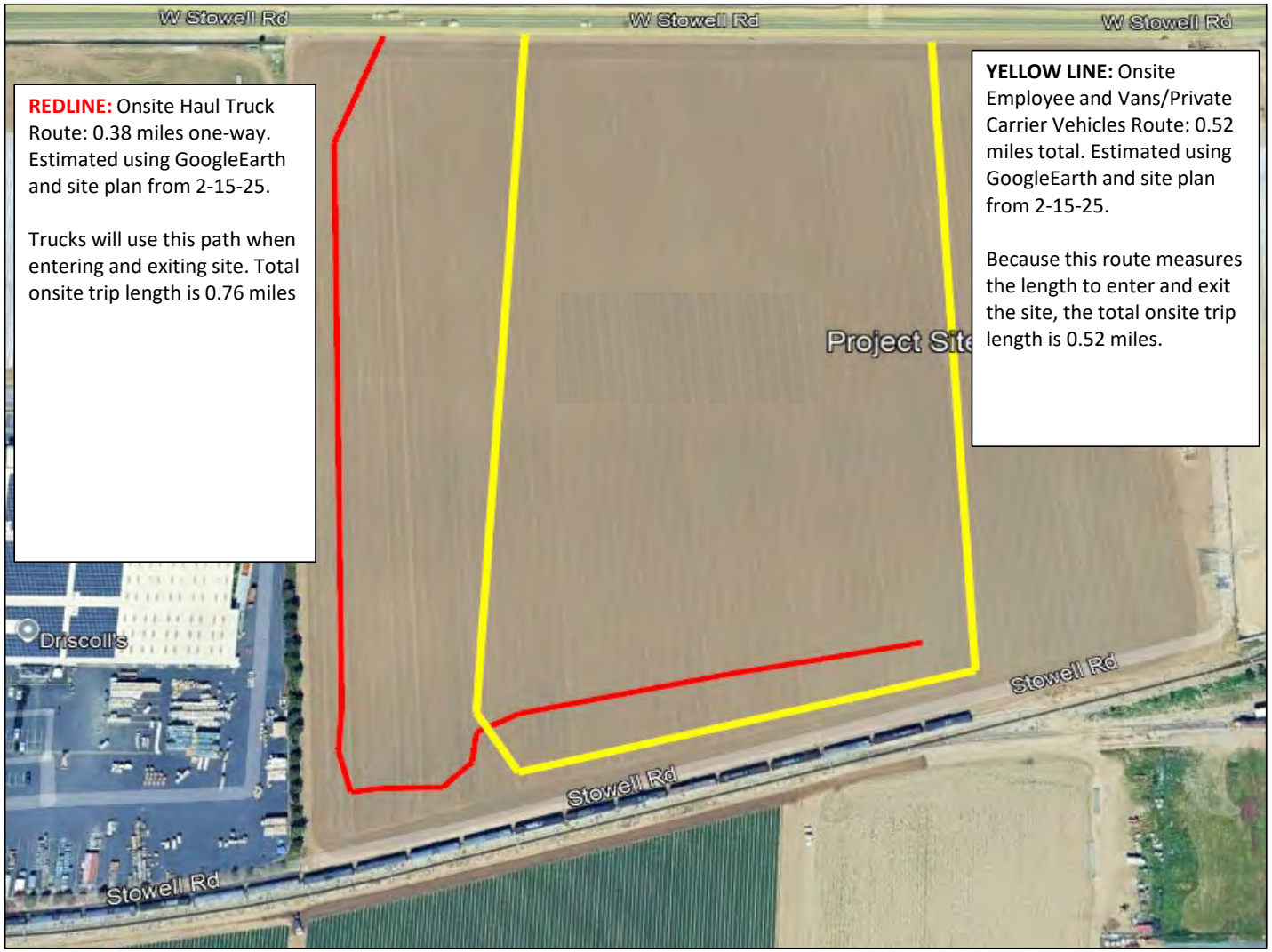
Haul Truck Offsite Trip Length Evaluation

Potential Haul Truck Origins	Total Distance from Project Site (miles)	Haul Route Segments	Haul Truck Route Length (miles)	Air District in which Haul Truck Route traverses	Total Haul Truck Route Length in SBCAPCD (miles)	Total Haul Truck Route Length outside SBCAPCD (miles)
Shafter, CA 93263	121	SJVAPCD Route (Fulfillment Center to SJVAPCD/SLOAPCD Boundary)	51	SJVAPCD		
		SLOACPD Route (Between SJVAPCD/SLOAPCD Boundary and SLOACPD/SBCAPCD Boundary)	7	SLOAPCD		
		SBCAPCD Route (Between SBCAPCD/SLOACPD [Eastern Boundary] to SBCAPCD/SLOACPD [Central Boundary]	46	SBCAPCD		
		SLOAPCD Route (Between SBCAPCD/SLOACPD [Central Boundary] to SBCAPCD/SLOACPD [Western Boundary]	12	SLOAPCD		
		SBCAPCD Route (Between SBCAPCD/SLOACPD [Western Boundary to Project Site]	5	SBAPCD		
		Total	**121**		51	70
Oxnard, CA 93030	103	VCAPCD Route (Sort Center to SBCAPCD/VCAPCD Boundary)	25	VCAPCD		
		SBCAPCD Route (SBCAPCD/VCAPCD Boundary to Project Site)	78	SBCAPCD		
		Total	**103**		**78**	**25**
Average	**112**		112		65	47

Notes:
Map details for the haul routes provided in Appendix A.

Onsite Trip Length Evaluation

Onsite Vehicle Trip Type	Entering	Exiting	Total
Haul Truck Onsite Trip Length (miles):	0.38	0.38	0.76
Employees, Vans, and Private Carrier Onsite Trip Length (miles):			0.52



Daily Paved Road Dust Emission Factor[a]

$$EF_{paved} = (k \times (sL)^{0.91} \times (W)^{1.02}) \times (1 - P/4N)$$

Parameter	Parameter Description
E_{paved}	Annual or other long-term average emission factor in the same units as k
k	Particle size multiplier for particle size range and units of interest
sL	road surface silt loading (g/m^2)
W	average weight (tons) of all the vehicles raveling the road
P	Number of "wet" days with at least 0.254 mm (0.01 in) of precipitation during the averaging period
N	Number of days in the averaging period (e.g. 365 for annual, 91 for seasonal, 30 for monthly)

	Employee Vehicles (LDA/LDT1/LDT2)		Vans and Private Carrier Vehicles (MDV)		Heavy-Duty Trucks (T7 Class 8 Mix)	
Parameters	**PM_{10}**	**$PM_{2.5}$**	**PM_{10}**	**$PM_{2.5}$**	**PM_{10}**	**$PM_{2.5}$**
k (g/mile)	1.000	0.250	1.000	0.250	1.000	0.250
sL (g/m^2)[b]	0.1	0.1	0.1	0.1	0.1	0.1
W (tons)	2	2	4.3	4.3	16.5	16.5
P ("wet" days)[c]	10	10	10	10	10	10
N (days per year)	365	365	365	365	365	365
EF_{Paved} (Without natural dust control (precipitation)) (g/mi)[d]	2.49E-01	6.24E-02	5.38E-01	1.35E-01	2.15E+00	5.37E-01
EF_{Paved} (With natural dust control (precipitation) (g/mi)	2.48E-01	6.19E-02	5.35E-01	1.34E-01	2.13E+00	5.33E-01

Notes:

a) AP42, Section 13.2.1 Paved Roads, January 2011 (Consistent with CalEEMod methodology)

b) Silt loading values for from CalEEMod for Project in Santa Maria,CA.
https://ww3.arb.ca.gov/ei/areasrc/fullpdf/2021_paved_roads_7_9.pdf

c) Precipitation days per year from CalEEMod for Project in Santa Maria,CA.

d) Consistent with CalEEMod methodology, daily emissions would use emission factors that do not account for natural dust control (precepitation).

Parameter	Employee Vehicles (LDA/LDT1/LDT2)[a]	Vans and Private Carrier Vehicle (MDV)[b]	Heavy-Duty Trucks (HHDT-Class8)[c]
Gross Vehicle Weight Rating (lbs)	4000	8500	33001
Gross Vehicle Weight Rating (tons)	2	4.25	16.5

a) AP-42: Chapter 13.2.1 Paved Roads, Page 13.2.1-4 mentions that cars/trucks are 2 tons.

b) EMFAC2021 Volume I User's Guide, Vehicle Category list, Maximum Gross Vehicle Weight Rating for MDV.

c) EMFAC2021 Volume I User's Guide, Vehicle Category list, Maximum Gross Vehicle Weight Rating for Class 8 Trucks.

Appendix A - 4: Project Operations CalEEMod Output File (Same for Unmitigated & Mitigated)

West Stowell Delivery Station-Operations Detailed Report

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5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	West Stowell Delivery Station-Operations
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.90
Precipitation (days)	10.0
Location	34.93690599373765, -120.4691250944679
County	Santa Barbara
City	Santa Maria
Air District	Santa Barbara County APCD
Air Basin	South Central Coast
TAZ	3387
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	156	1000sqft	3.59	156,338	278,784	—	—	Landscape Area is 20% of Site acreage

General Office Building	13.7	1000sqft	0.31	13,672	0.00	—	—	Size values includes square footage for office and remote restrooms
Parking Lot	272	Space	2.45	0.00	0.00	—	—	—
Parking Lot	706	Space	6.35	0.00	0.00	—	—	—
Parking Lot	12.0	Space	0.11	0.00	0.00	—	—	Loading Dock Area
Other Asphalt Surfaces	19.0	Acre	19.0	0.00	0.00	—	—	—
Automobile Care Center	6.54	1000sqft	0.15	6,538	0.00	—	—	Size values includes square footage for vehicle inspection structures and fleet service center.

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.45	6.35	0.06	7.68	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	183	131	314	10.2	0.18	1,355	1,980
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.09	5.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	183	99.2	282	10.2	0.18	1,355	1,948

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.76	5.71	0.03	3.79	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	183	115	298	10.2	0.18	1,355	1,964
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.05	1.04	0.01	0.69	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	30.3	19.0	49.3	1.69	0.03	224	325

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	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	0.00
Area	6.45	6.35	0.06	7.68	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.6	31.6	< 0.005	< 0.005	—	31.7
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	91.8	91.8	0.00	0.00	—	91.8
Water	—	—	—	—	—	—	—	—	—	—	—	83.8	7.40	91.2	0.29	0.18	—	153
Waste	—	—	—	—	—	—	—	—	—	—	—	99.5	0.00	99.5	9.95	0.00	—	348
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,355	1,355
Total	6.45	6.35	0.06	7.68	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	183	131	314	10.2	0.18	1,355	1,980
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	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	0.00
Area	5.09	5.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	91.8	91.8	0.00	0.00	—	91.8
Water	—	—	—	—	—	—	—	—	—	—	—	83.8	7.40	91.2	0.29	0.18	—	153
Waste	—	—	—	—	—	—	—	—	—	—	—	99.5	0.00	99.5	9.95	0.00	—	348
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,355	1,355
Total	5.09	5.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	183	99.2	282	10.2	0.18	1,355	1,948

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	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	0.00
Area	5.76	5.71	0.03	3.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	15.6	15.6	< 0.005	< 0.005	—	15.6
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	91.8	91.8	0.00	0.00	—	91.8
Water	—	—	—	—	—	—	—	—	—	—	—	83.8	7.40	91.2	0.29	0.18	—	153
Waste	—	—	—	—	—	—	—	—	—	—	—	99.5	0.00	99.5	9.95	0.00	—	348
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,355	1,355
Total	5.76	5.71	0.03	3.79	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	183	115	298	10.2	0.18	1,355	1,964
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	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	0.00
Area	1.05	1.04	0.01	0.69	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.58	2.58	< 0.005	< 0.005	—	2.59
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	15.2	15.2	0.00	0.00	—	15.2
Water	—	—	—	—	—	—	—	—	—	—	—	13.9	1.22	15.1	0.05	0.03	—	25.3
Waste	—	—	—	—	—	—	—	—	—	—	—	16.5	0.00	16.5	1.65	0.00	—	57.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	224	224
Total	1.05	1.04	0.01	0.69	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	30.3	19.0	49.3	1.69	0.03	224	325

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated	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	0.00
General Office Building	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	0.00
Parking Lot	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	0.00
Other Asphalt Surfaces	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	0.00
Automobile Care Center	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	0.00
Total	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	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	0.00
General Office Building	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	0.00
Parking Lot	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	0.00
Other Asphalt Surfaces	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	0.00
Automobile Care Center	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	0.00
Total	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrig Warehouse-No Rail	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	0.00
General Office Building	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	0.00
Parking Lot	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	0.00
Other Asphalt Surfaces	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	0.00
Automobile Care Center	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	0.00
Total	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	0.00

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	63.4	63.4	0.00	0.00	—	63.4
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	12.4	12.4	0.00	0.00	—	12.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	11.2	11.2	0.00	0.00	—	11.2

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	4.83	4.83	0.00	0.00	—	4.83
Total	—	—	—	—	—	—	—	—	—	—	—	—	91.8	91.8	0.00	0.00	—	91.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	63.4	63.4	0.00	0.00	—	63.4
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	12.4	12.4	0.00	0.00	—	12.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	11.2	11.2	0.00	0.00	—	11.2
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	4.83	4.83	0.00	0.00	—	4.83
Total	—	—	—	—	—	—	—	—	—	—	—	—	91.8	91.8	0.00	0.00	—	91.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	10.5	10.5	0.00	0.00	—	10.5
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	2.05	2.05	0.00	0.00	—	2.05

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1.85	1.85	0.00	0.00	—	1.85
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	0.80	0.80	0.00	0.00	—	0.80
Total	—	—	—	—	—	—	—	—	—	—	—	—	15.2	15.2	0.00	0.00	—	15.2

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	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
General Office Building	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
Parking Lot	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
Other Asphalt Surfaces	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
Automobile Care Center	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
Total	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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	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
General Office Building	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
Parking Lot	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
Other Asphalt Surfaces	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
Automobile Care Center	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
Total	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	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
General Office Building	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
Parking Lot	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
Other Asphalt Surfaces	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

Automobile Care Center	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
Total	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

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.87	3.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.21	1.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.37	1.26	0.06	7.68	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.6	31.6	< 0.005	< 0.005	—	31.7
Total	6.45	6.35	0.06	7.68	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.6	31.6	< 0.005	< 0.005	—	31.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.87	3.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural Coating	1.21	1.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	5.09	5.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.71	0.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.22	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.12	0.11	0.01	0.69	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.58	2.58	< 0.005	< 0.005	—	2.59
Total	1.05	1.04	0.01	0.69	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.58	2.58	< 0.005	< 0.005	—	2.59

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	77.3	6.85	84.1	0.27	0.17	—	141
General Office Building	—	—	—	—	—	—	—	—	—	—	—	5.19	0.43	5.63	0.02	0.01	—	9.45

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	1.31	0.11	1.42	< 0.005	< 0.005	—	2.39
Total	—	—	—	—	—	—	—	—	—	—	—	83.8	7.40	91.2	0.29	0.18	—	153
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	77.3	6.85	84.1	0.27	0.17	—	141
General Office Building	—	—	—	—	—	—	—	—	—	—	—	5.19	0.43	5.63	0.02	0.01	—	9.45
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	1.31	0.11	1.42	< 0.005	< 0.005	—	2.39
Total	—	—	—	—	—	—	—	—	—	—	—	83.8	7.40	91.2	0.29	0.18	—	153
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	12.8	1.13	13.9	0.04	0.03	—	23.4

General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.86	0.07	0.93	< 0.005	< 0.005	—	1.56
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	0.22	0.02	0.24	< 0.005	< 0.005	—	0.40
Total	—	—	—	—	—	—	—	—	—	—	—	13.9	1.22	15.1	0.05	0.03	—	25.3

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	79.2	0.00	79.2	7.92	0.00	—	277
General Office Building	—	—	—	—	—	—	—	—	—	—	—	6.85	0.00	6.85	0.68	0.00	—	24.0
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Automo Care Center	—	—	—	—	—	—	—	—	—	—	—	13.5	0.00	13.5	1.35	0.00	—	47.1
Total	—	—	—	—	—	—	—	—	—	—	—	99.5	0.00	99.5	9.95	0.00	—	348
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrig erated Wareho use-No Rail	—	—	—	—	—	—	—	—	—	—	—	79.2	0.00	79.2	7.92	0.00	—	277
General Office Building	—	—	—	—	—	—	—	—	—	—	—	6.85	0.00	6.85	0.68	0.00	—	24.0
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Automo bile Care Center	—	—	—	—	—	—	—	—	—	—	—	13.5	0.00	13.5	1.35	0.00	—	47.1
Total	—	—	—	—	—	—	—	—	—	—	—	99.5	0.00	99.5	9.95	0.00	—	348
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrig erated Wareho use-No Rail	—	—	—	—	—	—	—	—	—	—	—	13.1	0.00	13.1	1.31	0.00	—	45.9
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.13	0.00	1.13	0.11	0.00	—	3.97
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	2.23	0.00	2.23	0.22	0.00	—	7.80
Total	—	—	—	—	—	—	—	—	—	—	—	16.5	0.00	16.5	1.65	0.00	—	57.6

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,355	1,355
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,355	1,355
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,355	1,355

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,355	1,355
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	224	224
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	224	224

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipm Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Automobile Care Center	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

0	0.00	264,822	88,274	73,050

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	1,928,869	12.0	0.0000	0.0000	0.00
General Office Building	375,860	12.0	0.0000	0.0000	0.00
Parking Lot	93,412	12.0	0.0000	0.0000	0.00
Parking Lot	242,459	12.0	0.0000	0.0000	0.00
Parking Lot	4,121	12.0	0.0000	0.0000	0.00
Other Asphalt Surfaces	0.00	12.0	0.0000	0.0000	0.00
Automobile Care Center	146,792	12.0	0.0000	0.0000	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	36,153,163	3,329,631
General Office Building	2,429,976	0.00
Parking Lot	0.00	0.00

Parking Lot	0.00	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
Automobile Care Center	615,102	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	147	—
General Office Building	12.7	—
Parking Lot	0.00	—
Parking Lot	0.00	—
Parking Lot	0.00	—
Other Asphalt Surfaces	0.00	—
Automobile Care Center	25.0	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Automobile Care Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Automobile Care Center	Supermarket refrigeration and condensing units	R-404A	3,922	26.5	16.5	16.5	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	5.56	annual days of extreme heat
Extreme Precipitation	4.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	42.7	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	11.6
AQ-PM	10.5
AQ-DPM	39.4
Drinking Water	52.8
Lead Risk Housing	43.8
Pesticides	99.6
Toxic Releases	10.3
Traffic	19.9
Effect Indicators	—
CleanUp Sites	72.4
Groundwater	99.8
Haz Waste Facilities/Generators	95.6
Impaired Water Bodies	83.0
Solid Waste	97.6
Sensitive Population	—
Asthma	54.8
Cardio-vascular	10.8
Low Birth Weights	26.6
Socioeconomic Factor Indicators	—

Education	92.9
Housing	60.1
Linguistic	83.8
Poverty	83.0
Unemployment	69.1

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	18.91441037
Employed	48.77454125
Median HI	33.1707943
Education	—
Bachelor's or higher	21.73745669
High school enrollment	100
Preschool enrollment	34.98011036
Transportation	—
Auto Access	36.49428975
Active commuting	47.32452201
Social	—
2-parent households	24.86847171
Voting	58.09059412
Neighborhood	—
Alcohol availability	48.68471705
Park access	56.33260619
Retail density	30.43757218
Supermarket access	58.51405107

Tree canopy	3.798280508
Housing	—
Homeownership	33.00397793
Housing habitability	24.75298345
Low-inc homeowner severe housing cost burden	34.38983703
Low-inc renter severe housing cost burden	51.96971641
Uncrowded housing	6.108045682
Health Outcomes	—
Insured adults	16.74579751
Arthritis	64.8
Asthma ER Admissions	63.2
High Blood Pressure	70.1
Cancer (excluding skin)	80.0
Asthma	16.4
Coronary Heart Disease	51.0
Chronic Obstructive Pulmonary Disease	25.1
Diagnosed Diabetes	40.6
Life Expectancy at Birth	58.8
Cognitively Disabled	72.6
Physically Disabled	87.9
Heart Attack ER Admissions	98.0
Mental Health Not Good	14.9
Chronic Kidney Disease	35.4
Obesity	25.3
Pedestrian Injuries	72.4
Physical Health Not Good	20.5
Stroke	39.4
Health Risk Behaviors	—

Binge Drinking	52.5
Current Smoker	17.7
No Leisure Time for Physical Activity	22.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	4.8
Elderly	91.7
English Speaking	20.3
Foreign-born	70.8
Outdoor Workers	1.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	42.5
Traffic Density	17.7
Traffic Access	0.0
Other Indices	—
Hardship	90.3
Other Decision Support	—
2016 Voting	45.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	71.0
Healthy Places Index Score for Project Location (b)	33.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Operations: Vehicle Data	Project Mobile Emissions Estimated outside of CalEEMod.
Operations: Energy Use	CalEEMod generated default annual electricity (kWh) and natural gas consumption in kBTU/year for the Project Land uses, however, the Project would not consume natural gas. Therefore, the annual natural gas consumption value (kBTU) was converted to the equivalent kWh to account for the additional electricity consumption that is substituted for natural gas, this additional electricity was then added to the default electricity consumption value generated by CalEEMod.
Operations: Refrigerants	Fleet service center was modeled as an Automobile Care Center.
Characteristics: Utility Information	Intensity factor updated to use 2023 Power Content Label for Pacific Gas and Electric Company value of 12 lbCO2e/MWh.

Appendix A - 5: Project Operations Emergency Fire Pump Emissions (Same for Unmitigated & Mitigated)

EMERGENCY FIRE PUMP EMISSIONS (Maintenance & Testing)

Source Type	Engine Rating (HP)[1]	Engine Load Factor[2]	Daily Usage (hrs/day)[3]	Annual Usage (hours/year)[3]	Engine Tier
Emergency Fire Pump	317	0.73	2	50	Tier 4 Final

EMISSION FACTORS

Emission Factors (g/hp-hr)[4,5]												
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O
0.140	0.300	2.600	0.0055	-	0.010	0.010	-	0.010	0.010	521.640	0.021	0.004

DAILY EMISSIONS

Daily Emissions (lbs/day)												
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O
0.143	0.306	2.653	0.006	-	0.010	0.010	-	0.010	0.010	532.252	0.021	0.004

ANNUAL EMISSIONS

Annual Emissions (tons/year)										Annual Emissions (MT/year)[5]			
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
0.002	0.004	0.033	0.000	-	0.000	0.000	-	0.000	0.000	6.036	0.000	0.000	6.06

Notes:

1. Horsepower estimated on anticipated engine size for project.
2. Engine load factor based on CalEEMod default value.
3. Engine activity would be related to maintenance and testing operations.
4. Emission factors obtained from SBCAPCD's Diesel Engine Emission Factors webpage.from SBCAPCD. https://www.ourair.org/emission-factors-2/#data-table
5. GHG emission factors obtained from CalEEMod.

Appendix A - 6: Mitigated Project Operations Emissions Summary

Operations Year	2027

Project Operational Emissions-Mitigated

Mitigation Includes

*Model Year 2014 or newer for Line Haul Trucks

Project Daily Operational Emissions WITHIN SBCAPCD Boundaries

	Daily Emissions (lbs/day)									
Source Category	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10} Fugitive**	**PM_{10} Exhaust**	**PM_{10} Total**	**$PM_{2.5}$ Fugitive**	**$PM_{2.5}$ Exhaust**	**$PM_{2.5}$ Total**
Area	6.35	0.06	7.68	0.00	-	0.01	0.01	-	0.01	0.01
Mobile-Employee Vehicles (Onsite)	1.41	0.41	5.09	0.00	0.18	0.01	0.19	0.05	0.01	0.05
Mobile-Employee Vehicles (Offsite)	2.91	1.61	19.83	0.05	4.52	0.02	4.55	1.14	0.02	1.16
Mobile-Delivery Vans (Onsite)	1.12	0.39	3.70	0.00	0.22	0.00	0.22	0.06	0.00	0.06
Mobile-Delivery Vans (Offsite)	2.98	6.20	55.12	0.22	32.12	0.07	32.19	8.08	0.07	8.14
Mobile-Private Carrier Vehicles (Onsite)	0.31	0.11	1.04	0.00	0.06	0.00	0.06	0.02	0.00	0.02
Mobile-Private Carrier Vehicles (Offsite)	0.72	0.96	8.56	0.03	4.49	0.01	4.50	1.13	0.01	1.14
Mobile-Line-Haul Trucks (Onsite)	0.03	0.97	0.50	0.00	0.13	0.00	0.13	0.03	0.00	0.03
Mobile-Line-Haul Trucks (Offsite) (within SBCAPCD)	0.17	13.41	1.57	0.14	21.96	0.26	22.22	5.56	0.25	5.81
Stationary (Fire Pump)	0.14	0.31	2.65	0.01	-	0.01	0.01	-	0.01	0.01
Project Emissions Total	**16.14**	**24.42**	**105.75**	**0.45**	**63.68**	**0.40**	**64.09**	**16.06**	**0.38**	**16.44**
SBCAPCD Thresholds (All Sources)[a]	240	240	N/A	N/A	N/A	N/A	80	N/A	N/A	N/A
Exceeds Threshold?	**No**	**No**	**N/A**	**N/A**	**N/A**	**N/A**	**No**	**N/A**	**N/A**	**N/A**
Mobile Emissions Total	9.65	24.05	95.41	0.45	63.68	0.38	64.06	16.06	0.36	16.42
SBCAPCD Mobile Source Threshold	25	25	—							
Exceeds Threshold?	**No**	**No**								

Project Operational Emissions OUTSIDE SBCAPCD Boundaries

	Daily Emissions (lbs/day)									
Project Vehicle Category	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10} Fugitive**	**PM_{10} Exhaust**	**PM_{10} Total**	**$PM_{2.5}$ Fugitive**	**$PM_{2.5}$ Exhaust**	**$PM_{2.5}$ Total**
Mobile-Line-Haul Trucks (Offsite) (Outside SBCAPCD)	0.07	8.96	0.46	0.10	16.01	0.19	16.20	4.06	0.18	4.24
VCAPCD Thresholds[b]	25	25	—							
Exceeds Threshold?	**No**	**No**								

	Annual Emissions (tons/year)									
Project Vehicle Category	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10} Fugitive**	**PM_{10} Exhaust**	**PM_{10} Total**	**$PM_{2.5}$ Fugitive**	**$PM_{2.5}$ Exhaust**	**$PM_{2.5}$ Total**
Mobile-Line-Haul Trucks (Offsite) (Outside SBCAPCD)	0.01	1.64	0.08	0.02	2.92	0.03	2.96	0.74	0.03	0.77
SJVAPCD Thresholds[c]	10	10	100	27	N/A	N/A	15	N/A	N/A	15
Exceeds Threshold?	**No**	**No**	**No**	**No**	N/A	N/A	**No**	N/A	N/A	**No**

Project Operational Emissions OUTSIDE SBCAPCD Boundaries

	Daily Emissions (lbs/day)								
Project Vehicle Category	**ROG + NOX (combined)**	**CO**	**DPM (PM10 Exhaust)**	**PM10 Fugitive**					
Mobile-Line-Haul Trucks (Offsite) (Outside SBCAPCD)	**10.19**	**0.66**	0.19	16.01					
SLOAPCD Daily Threshold	**25.00**	**550.00**	1.25	25					
Exceeds Threshold?	**No**	**No**	**No**	**No**					

	Annual Emissions (tons/year)								
Project Vehicle Category	**ROG + NOX (combined)**	**CO**	**DPM (PM10 Exhaust)**	**PM10 Fugitive**					
Mobile-Line Haul Trucks (Offsite) (Outside SBCAPCD)	**1.86**	**0.12**	0.04	2.92					
SLOAPCD Annual Threshold	**25.00**	N/A	N/A	25					
Exceeds Threshold?	**No**	N/A	N/A	**No**					

Project Operational Emissions-Mitigated

Project Annual GHG Emissions[d]

	Annual Emissions (MT/year)			
Project Vehicle Category	**CO_2**	**CH_4**	**N_2O**	**CO_2e**
Area	2.58	0.00	0.00	2.6
Mobile-Employee Vehicles (Onsite)	73.21	0.02	0.01	76.0
Mobile-Employee Vehicles (Offsite)	773.56	0.04	0.03	783.0
Mobile-Delivery Vans (Onsite)	63.59	0.01	0.01	65.8
Mobile-Delivery Vans (Offsite)	3,739.74	0.06	0.09	3,768.3
Mobile-Private Carrier Vehicles (Onsite)	17.88	0.00	0.00	18.5
Mobile-Private Carrier Vehicles (Offsite)	526.01	0.01	0.01	530.5
Mobile-Line-Haul Trucks (Onsite)	34.06	0.00	0.01	35.7
Mobile-Line-Haul Trucks (Offsite)	4,139.27	0.01	0.65	4,334.1
Electricity Consumption-Buildings	15.19	-	-	15.2
Water	15.09	0.05	0.03	25.3
Waste	16.48	1.65	-	57.6
Refrigerants				224.4
Stationary (Fire Pump)	6.04	0.00	0.00	6.1
Construction (amortized)				85.1
Project Total	**9,422.69**	**1.85**	**0.84**	**10,028.2**

Notes:

SBCAPCD = Santa Barbara County Air Pollution Control District

VCAPCD = Ventura County Air Pollution Control District

SJVAPCD = San Joaquin Valley Air Pollution Control District

a) SBCAPCD Scope and Content of Air Quality Sections in Environmental Documents, January 2022

b) Ventura County Air Quality Assessment Guidelines, October 2003

c) SJVAPCD Air Quality Thresholds of Significance-Criteria Pollutants, March 2015

d) Mobile GHG emissions for line-haul trucks account for emissions within and outside SBCAPCD boundaries.

Appendix A - 7: Mitigated Project Operations Mobile Emissions Calculations

Operations Year	2027

MITIGATED MOBILE EMISSIONS - Model Year 2014 or newer for Line-Haul Trucks

Project Mobile Emissions within SBCAPCD Boundaries (Criteria Pollutants)

	Daily Emissions (lbs/day)									
Project Vehicle Category	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10} Fugitive**	**PM_{10} Exhaust**	**PM_{10} Total**	**$PM_{2.5}$ Fugitive**	**$PM_{2.5}$ Exhaust**	**$PM_{2.5}$ Total**
Mobile-Employee Vehicles (Onsite)	1.41	0.41	5.09	0.00	0.18	0.01	0.19	0.05	0.01	0.05
Mobile-Employee Vehicles (Offsite)	2.91	1.61	19.83	0.05	4.52	0.02	4.55	1.14	0.02	1.16
Mobile-Delivery Vans (Onsite)	1.12	0.39	3.70	0.00	0.22	0.00	0.22	0.06	0.00	0.06
Mobile-Delivery Vans (Offsite)	2.98	6.20	55.12	0.22	32.12	0.07	32.19	8.08	0.07	8.14
Mobile-Private Carrier Vehicles (Onsite)	0.31	0.11	1.04	0.00	0.06	0.00	0.06	0.02	0.00	0.02
Mobile-Private Carrier Vehicles (Offsite)	0.72	0.96	8.56	0.03	4.49	0.01	4.50	1.13	0.01	1.14
Mobile-Line-Haul Trucks (Onsite)	0.03	0.97	0.50	0.00	0.13	0.00	0.13	0.03	0.00	0.03
Mobile-Line-Haul Trucks (Offsite) (within SBCAPCD)	0.17	13.41	1.57	0.14	21.96	0.26	22.22	5.56	0.25	5.81
Total	**9.65**	**24.05**	**95.41**	**0.45**	**63.68**	**0.38**	**64.06**	**16.06**	**0.36**	**16.42**

Project Mobile Emissions within SBCAPCD Boundaries (Criteria Pollutants)

	Daily Emissions (lbs/day)									
Project Vehicle Category	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10} Fugitive**	**PM_{10} Exhaust**	**PM_{10} Total**	**$PM_{2.5}$ Fugitive**	**$PM_{2.5}$ Exhaust**	**$PM_{2.5}$ Total**
Mobile-Line-Haul Trucks (Offsite) (Outside SBCAPCD)	0.07	8.96	0.46	0.10	16.01	0.19	16.20	4.06	0.18	4.24

	Annual Emissions (tons/year)									
Project Vehicle Category	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10} Fugitive**	**PM_{10} Exhaust**	**PM_{10} Total**	**$PM_{2.5}$ Fugitive**	**$PM_{2.5}$ Exhaust**	**$PM_{2.5}$ Total**
Mobile-Line-Haul Trucks (Offsite) (Outside SBCAPCD)	0.01	1.64	0.08	0.02	2.92	0.03	2.96	0.74	0.03	0.77

Project Mobile GHG Emissions

	Annual Emissions (MT/year)			
Project Vehicle Category	**CO_2**	**CH_4**	**N_2O**	**CO_2e**
Mobile-Employee Vehicles (Onsite)	73.2	0.017	0.008	76.0
Mobile-Employee Vehicles (Offsite)	773.6	0.037	0.029	783.0
Mobile-Delivery Vans (Onsite)	63.6	0.014	0.006	65.8
Mobile-Delivery Vans (Offsite)	3,739.7	0.057	0.091	3,768.3
Mobile-Private Carrier Vehicles (Onsite)	17.9	0.004	0.002	18.5
Mobile-Private Carrier Vehicles (Offsite)	526.0	0.012	0.014	530.5
Mobile-Line-Haul Trucks (Onsite)	34.1	0.001	0.005	35.7
Mobile-Line-Haul Trucks (Offsite)	4,139.3	0.014	0.653	4,334.1
Total	**9,367.3**	**0.2**	**0.8**	**9,611.9**

*Offsite Haul Truck emissions include emissions from inside and outside of SBCAPCD boundaries.

EMPLOYEE VEHICLE EMISSIONS (ONSITE)

Calendar Year:	2027
Project Vehicle Type:	Employees
Daily One-Way Trips (trips/day)[1]:	1,176
Daily Onsite Trips (trips/day):	588
Onsite Trip Length (miles):	0.52
Daily Onsite VMT (miles/day)[1]:	306
Onsite Vehicle Speed (mph):	10
Annual Operational Days (days/year):	365
Annual Insite Trips (trips/year):	214,620
Annual Onsite VMT (miles/year):	111,602

EMISSION FACTORS

Running Exhaust Emission Factors (g/mile)[2,3]													Other Vehicle Processes Emission Factors (g/trip)[2,4]											
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O
0.043	0.087	1.254	0.005	0.266	0.005	0.271	0.067	0.005	0.072	520.813	0.011	0.008	1.064	0.275	3.272	0.001	-	0.002	0.002	-	0.002	0.002	70.298	0.071	0.033

EMISSIONS

Daily Emissions (lbs/day)													Annual Emissions (tons/year)										Annual Emissions (MT/year)[5]			
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
1.41	0.41	5.09	0.00	0.18	0.01	0.19	0.05	0.01	0.05	442.20	0.10	0.05	0.26	0.08	0.93	0.00	0.03	0.00	0.03	0.01	0.00	0.01	73.21	0.02	0.01	76.00

Notes:

1. Data provided from Project VMT Analysis (Dated 12/5/24).
2. Emission factors generated from EMFAC2021.v.1.0.2. **Region:** Santa Barbara County APCD; **Season:** Annual; **Vehicle Classification:** EMFAC202x Categories; **Model Year:** Aggregate; **Speed:** 10 MPH; **Vehicle Category:** LDA/LDT1/LDT2; **Fuel Type:** All fuels

3. Running emission factors account for exhaust and fugitive dust from brake wear, tire wear, and road dust from paved roads.

4. Other Vehicle Processes emission factors account for additional exhaust and evaporative processes. **Exhaust:** Engine starting and idling. **Evaporative (ROG Only):** Runloss, Diurnal, and Hotsoak.
5. CO_2e is estimated using Global Warming Potential values based on IPCC Assessment Report 4 (AR4) in accordance with CARB methodology. CO_2 = 1; CH_4 = 25; N_2O = 298
6. Onsite trip length estimate based on employee/delivery van route in project site plan.

g = grams
lb = pounds
mph = miles per hour
MT = metric tons
VMT = vehicle miles traveled

EMPLOYEE VEHICLE EMISSIONS (OFFSITE)

Calendar Year:	2027
Project Vehicle Type:	Employees
Daily One-Way Trips (trips/day)[1]:	1,176
Daily VMT (miles/day)[1]:	7,762
Annual Operational Days (days/year):	365
Annual Trips (trips/year):	429,240
Annual VMT (miles/year):	2,833,130

EMISSION FACTORS

Running Exhaust Emission Factors (g/mile)[2,3]													Other Vehicle Processes Emission Factors (g/trip)[2,4]												
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O
0.009	0.053	0.663	0.003	0.264	0.001	0.265	0.067	0.001	0.068	262.389	0.002	0.005	1.064	0.275	3.272	0.001	-	0.002	0.002	-	0.002	0.002	70.298	0.071	0.033

EMISSIONS

Daily Emissions (lbs/day)													Annual Emissions (tons/year)										Annual Emissions (MT/year)[5]			
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
2.91	1.61	19.83	0.05	4.52	0.02	4.55	1.14	0.02	1.16	4,672.34	0.22	0.17	0.53	0.29	3.62	0.01	0.83	0.00	0.83	0.21	0.00	0.21	773.56	0.04	0.03	782.98

Notes:

1. Data provided from Project VMT Analysis (Dated 12/5/24). VMT represents the net new VMT (Project minus Existing).

2. Emission factors generated from EMFAC2021.v.1.0.2. **Region:** Santa Barbara County APCD; **Season:** Annual; **Vehicle Classification:** EMFAC202x Categories; **Model Year:** Aggregate; **Speed:** Aggregate; **Vehicle Category:** LDA/LDT1/LDT2; **Fuel Type:** All fuels

3. Running emission factors account for exhaust and fugitive dust from brake wear, tire wear, and road dust from paved roads.

4. Other Vehicle Processes emission factors account for additional exhaust and evaporative processes. **Exhaust:** Engine starting and idling. **Evaporative (ROG Only):** Runloss, Diurnal, and Hotsoak.

5. CO_2e is estimated using Global Warming Potential values based on IPCC Assessment Report 4 (AR4) in accordance with CARB methodology. CO_2 = 1; CH_4 = 25; N_2O = 298

g = grams

lb = pounds

MT = metric tons

VMT = vehicle miles traveled

DELIVERY VAN EMISSIONS (ONSITE)

Calendar Year:	2027
Project Vehicle Type:	Delivery Vans
Daily One-Way Trips (trips/day)[1]:	690
Daily Onsite Trips (trips/day):	345
Onsite Trip Length (miles):	0.52
Daily Onsite VMT (miles/day):	179
Onsite Vehicle Speed (mph):	10
Annual Operational Days (days/year):	365
Annual Trips (trips/year):	125,925
Annual VMT (miles/year):	65,481

EMISSION FACTORS

Running Exhaust Emission Factors (g/mile)[2,3]													Other Vehicle Processes Emission Factors (g/trip)[2,4]											
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O
0.070	0.158	1.650	0.008	0.557	0.0059	0.563	0.140	0.0054	0.146	774.174	0.016	0.014	1.432	0.428	4.008	0.001	-	0.002	0.002	-	0.002	0.002	102.393	0.101	0.041

EMISSIONS

Daily Emissions (lbs/day)													Annual Emissions (tons/year)										Annual Emissions (MT/year)[5]			
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
1.12	0.39	3.70	0.00	0.22	0.00	0.22	0.06	0.00	0.06	384.07	0.08	0.04	0.20	0.07	0.68	0.00	0.04	0.00	0.04	0.01	0.00	0.01	63.59	0.01	0.01	65.75

Notes:

1. Data provided from Project VMT Analysis (Dated 12/5/24).
2. Emission factors generated from EMFAC2021.v.1.0.2. **Region:** Santa Barbara County APCD; **Season:** Annual; **Vehicle Classification:** EMFAC202x Categories; **Model Year:** Aggregate; **Speed:** 10 MPH; **Vehicle Category:** MDV; **Fuel Type:** All fuels except electric.
3. Running emission factors account for exhaust and fugitive dust from brake wear, tire wear, and road dust from paved roads.
4. Other Vehicle Processes emission factors account for additional exhaust and evaporative processes. **Exhaust:** Engine starting and idling. **Evaporative (ROG Only):** Runloss, Diurnal, and Hotsoak.
5. CO_2e is estimated using Global Warming Potential values based on IPCC Assessment Report 4 (AR4) in accordance with CARB methodology. CO_2 = 1; CH_4 = 25; N_2O = 298
6. Onsite trip length estimate based on employee/delivery van route in project site plan.

g = grams
lb = pounds
mph = miles per hour
MT = metric tons
VMT = vehicle miles traveled

DELIVERY VAN EMISSIONS (OFFSITE)

Calendar Year:	2027
Project Vehicle Type:	Delivery Vans
Daily One-Way Trips (trips/day)[1]:	690
Daily VMT (miles/day)[1]:	26,296
Annual Operational Days (days/year):	365
Annual Trips (trips/year):	251,850
Annual VMT (miles/year):	9,598,040

EMISSION FACTORS

Running Exhaust Emission Factors (g/mile)[2,3]													Other Vehicle Processes Emission Factors (g/trip)[2,4]											
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O
0.014	0.096	0.846	0.004	0.554	0.001	0.555	0.139	0.001	0.140	386.948	0.003	0.008	1.432	0.428	4.008	0.001	-	0.002	0.002	-	0.002	0.002	102.393	0.101	0.041

EMISSIONS

Daily Emissions (lbs/day)													Annual Emissions (tons/year)										Annual Emissions (MT/year)[5]			
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
2.98	6.20	55.12	0.22	32.12	0.07	32.19	8.08	0.07	8.14	22,588.21	0.34	0.55	0.54	1.13	10.06	0.04	5.86	0.01	5.88	1.47	0.01	1.49	3,739.74	0.06	0.09	3,768.32

Notes:

1. Data provided from Project VMT Analysis (Dated 12/5/24). VMT represents the net new VMT (Project minus Existing).

2. Emission factors generated from EMFAC2021.v.1.0.2. **Region:** Santa Barbara County APCD; **Season:** Annual; **Vehicle Classification:** EMFAC202x Categories; **Model Year:** Aggregate; **Speed:** Aggregate; **Vehicle Category:** MDV; **Fuel Type:** All fuels except electric.

3. Running emission factors account for exhaust and fugitive dust from brake wear, tire wear, and road dust from paved roads.

4. Other Vehicle Processes emission factors account for additional exhaust and evaporative processes. **Exhaust:** Engine starting and idling. **Evaporative (ROG Only):** Runloss, Diurnal, and Hotsoak.

5. CO_2e is estimated using Global Warming Potential values based on IPCC Assessment Report 4 (AR4) in accordance with CARB methodology. CO_2 = 1; CH_4 = 25; N_2O = 298

g = grams

lb = pounds

MT = metric tons

VMT = vehicle miles traveled

PRIVATE CARRIER VEHICLE EMISSIONS (ONSITE)

Calendar Year:	2027
Project Vehicle Type:	PRIVATE CARRIER
Daily One-Way Trips (trips/day)[1]:	194
Daily Onsite Trips (trips/day):	97
Onsite Trip Length (miles):	0.52
Daily Onsite VMT (miles/day):	50
Onsite Vehicle Speed (mph):	10
Annual Operational Days (days/year):	365
Annual Trips (trips/year):	35,405
Annual VMT (miles/year):	18,411

EMISSION FACTORS

Running Exhaust Emission Factors (g/mile)[2,3]													Other Vehicle Processes Emission Factors (g/trip)[2,4]											
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O
0.070	0.158	1.650	0.008	0.557	0.006	0.563	0.140	0.005	0.146	774.174	0.016	0.014	1.432	0.428	4.008	0.001	-	0.002	0.002	-	0.002	0.002	102.393	0.101	0.041

EMISSIONS

Daily Emissions (lbs/day)													Annual Emissions (tons/year)											Annual Emissions (MT/year)[5]			
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
0.31	0.11	1.04	0.00	0.06	0.00	0.06	0.02	0.00	0.02	107.99	0.02	0.01	0.057	0.020	0.190	0.000	0.011	0.000	0.012	0.003	0.000	0.003	17.88	0.00	0.00	18.49

Notes:

1. Data provided from Project VMT Analysis (Dated 12/5/24).
2. Emission factors generated from EMFAC2021.v.1.0.2. **Region:** Santa Barbara County APCD; **Season:** Annual; **Vehicle Classification:** EMFAC202x Categories; **Model Year:** Aggregate; **Speed:** Aggregate; **Vehicle Category:** MDV; **Fuel Type:** All fuels except electric.
3. Running emission factors account for exhaust and fugitive dust from brake wear, tire wear, and road dust from paved roads.
4. Other Vehicle Processes emission factors account for additional exhaust and evaporative processes. **Exhaust:** Engine starting and idling. **Evaporative (ROG Only):** Runloss, Diurnal, and Hotsoak.
5. CO_2e is estimated using Global Warming Potential values based on IPCC Assessment Report 4 (AR4) in accordance with CARB methodology. CO_2 = 1; CH_4 = 25; N_2O = 298
6. Onsite trip length estimate based on employee/delivery van route in project site plan.

g = grams
lb = pounds
mph = miles per hour
MT = metric tons
VMT = vehicle miles traveled

PRIVATE CARRIER VEHICLE EMISSIONS (OFFSITE)

Calendar Year:	2027
Project Vehicle Type:	PRIVATE CARRIER
Daily One-Way Trips (trips/day)[1]:	194
Daily VMT (miles/day)[1]:	3,673
Annual Operational Days (days/year):	365
Annual Trips (trips/year):	70,810
Annual VMT (miles/year):	1,340,645

EMISSION FACTORS

Running Exhaust Emission Factors (g/mile)[2,3]													Other Vehicle Processes Emission Factors (g/trip)[2,4]												
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O
0.014	0.096	0.846	0.004	0.554	0.001	0.555	0.139	0.001	0.140	386.948	0.003	0.008	1.432	0.428	4.008	0.001	-	0.002	0.002	-	0.002	0.002	102.393	0.101	0.041

EMISSIONS

Daily Emissions (lbs/day)													Annual Emissions (tons/year)										Annual Emissions (MT/year)[5]			
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
0.72	0.96	8.56	0.03	4.49	0.01	4.50	1.13	0.01	1.14	3,177.14	0.07	0.09	0.13	0.17	1.56	0.01	0.82	0.00	0.82	0.21	0.00	0.21	526.01	0.01	0.01	530.53

Notes:

1. Data provided from Project VMT Analysis (Dated 12/5/24). VMT represents the net new VMT (Project minus Existing).

2. Emission factors generated from EMFAC2021.v.1.0.2. **Region:** Santa Barbara County APCD; **Season:** Annual; **Vehicle Classification:** EMFAC202x Categories; **Model Year:** Aggregate; **Speed:** Aggregate; **Vehicle Category:** MDV; **Fuel Type:** All fuels except electric.

3. Running emission factors account for exhaust and fugitive dust from brake wear, tire wear, and road dust from paved roads.

4. Other Vehicle Processes emission factors account for additional exhaust and evaporative processes. **Exhaust:** Engine starting and idling. **Evaporative (ROG Only):** Runloss, Diurnal, and Hotsoak.

5. CO_2e is estimated using Global Warming Potential values based on IPCC Assessment Report 4 (AR4) in accordance with CARB methodology. CO_2 = 1; CH_4 = 25; N_2O = 298

g = grams

lb = pounds

MT = metric tons

VMT = vehicle miles traveled

LINE-HAUL TRUCK EMISSIONS (ONSITE)

Calendar Year:	2027
Project Vehicle Type:	Line-Haul Trucks
Daily One-Way Trips (trips/day)[1]:	68
Daily Onsite Trips (trips/day):	34
Onsite Trip Length (miles):	0.76
Daily Onsite VMT (miles/day)[1]:	26
Onsite Vehicle Speed (mph):	10
Annual Operational Days (days/year):	365
Annual Trips (trips/year):	12,410
Annual VMT (miles/year):	9,432

EMISSION FACTORS

Running Exhaust Emission Factors (g/mile)[2,3]													Other Vehicle Processes Emission Factors (g/trip)[2,4]											
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O
0.057	7.162	0.652	0.023	2.323	0.008	2.331	0.595	0.008	0.603	2,424.029	0.024	0.382	0.420	7.461	6.238	0.009	-	0.002	0.002	-	0.002	0.002	902.532	0.032	0.142

EMISSIONS

Daily Emissions (lbs/day)													Annual Emissions (tons/year)										Annual Emissions (MT/year)[5]			
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
0.03	0.97	0.50	0.00	0.13	0.00	0.13	0.03	0.00	0.03	205.74	0.00	0.03	0.0063	0.1765	0.0921	0.0004	0.0241	0.0001	0.0243	0.0062	0.0001	0.0063	34.06	0.00	0.01	35.68

Notes:

1. Data provided from Project VMT Analysis (Dated 12/5/24).
2. Emission factors generated from EMFAC2021.v.1.0.2. **Region:** Santa Barbara County APCD; **Season:** Annual; **Vehicle Classification:** EMFAC202x Categories; **Model Year:** Aggregate; **Speed:** 10MPH; **Vehicle Category:** T7 CAIRP Class 8, T7 NNOOS Classs 8, T7 NOOS Class 8, T7 Single Other Class 8, T7 Tractor Class 8; **Fuel Type:** All fuels except electric.
3. Running emission factors account for exhaust and fugitive dust from brake wear, tire wear, and road dust from paved roads.
4. Other Vehicle Processes emission factors account for additional exhaust and evaporative processes. **Exhaust:** Engine starting and idling. **Evaporative (ROG Only):** Runloss, Diurnal, and Hotsoak.
5. CO_2e is estimated using Global Warming Potential values based on IPCC Assessment Report 4 (AR4) in accordance with CARB methodology. CO_2 = 1; CH_4 = 25; N_2O = 298
6. Onsite trip length estimate based on haul truck route in project site plan.

g = grams
lb = pounds
mph = miles per hour
MT = metric tons
VMT = vehicle miles traveled

LINE-HAUL TRUCK EMISSIONS (OFFSITE)

Calendar Year:	2027
Project Vehicle Type:	Line-Haul Trucks
Daily One-Way Trips (trips/day)[1]:	68
Total Trip Length (miles/trip)[1]	112
Avg Trip Length Within SBCAPCD (miles):	64.8
Avg Trip Length Outside SBCAPCD (miles):	47.3
Total Daily VMT (miles/day)[1]:	7,616
Daily VMT Within SBCAPCD (miles/day):	4,406
Daily VMT Outside SBCAPCD (miles/day):	3,213
Annual Operational Days (days/year):	365
Annual Trips (trips/year):	24,820
Total Annual VMT (miles/year):	2,779,840
Annual VMT within SBCAPCD (miles/year):	1,608,336
Annual VMT outside SBCAPCD (miles/year):	1,172,745

EMISSION FACTORS

Running Exhaust Emission Factors (g/mile)[2,3]													Other Vehicle Processes Emission Factors (g/trip)[2,4]											
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O
0.011	1.265	0.066	0.014	2.260	0.027	2.287	0.573	0.026	0.598	1,480.310	0.005	0.233	0.420	7.461	6.238	0.009	-	0.002	0.002	-	0.002	0.002	902.532	0.032	0.142

EMISSIONS WITHIN SBCAPCD BOUNDARIES

Daily Emissions (lbs/day)													Annual Emissions (tons/year)												Annual Emissions (MT/year)[5]			
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
0.17	13.41	1.57	0.14	21.96	0.26	22.22	5.56	0.25	5.81	14,515.71	0.05	2.29	0.03	2.45	0.29	0.03	4.01	0.05	4.05	1.02	0.05	1.06	2,403.24	0.01	0.38	2,516.39

EMISSIONS OUTSIDE SBCAPCD BOUNDARIES[6]

Daily Emissions (lbs/day)													Annual Emissions (tons/year)												Annual Emissions (MT/year)[5]			
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
0.07	8.96	0.46	0.10	16.01	0.19	16.20	4.06	0.18	4.24	10,485.71	0.03	1.65	0.01	1.64	0.08	0.02	2.92	0.03	2.96	0.74	0.03	0.77	1,736.03	0.01	0.27	1,817.75

TOTAL HAUL TRUCK EMISSIONS FROM PROJECT (WITHIN AND OUTSIDE SBCAPCD)[7]

TOTAL GHG EMISSIONS

Daily Emissions (lbs/day)													Annual Emissions (tons/year)												Annual Emissions (MT/year)[5]			
ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	ROG	NO_X	CO	SO_X	PM_{10} Fugitive	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Fugitive	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total	CO_2	CH_4	N_2O	CO_2e
																							4,139.27	0.01	0.65	4,334.14

Notes:

1. Data provided from Project VMT Analysis (Dated 12/5/24).
2. Emission factors generated from EMFAC2021.v.1.0.2. **Region:** Santa Barbara County APCD; **Season:** Annual; **Vehicle Classification:** EMFAC202x Categories; **Model Year:** Aggregate; **Speed:** Aggregate; **Vehicle Category:** T7 CAIRP Class 8, T7 NNOOS Classs 8; T7 NOOS Class 8, T7 Single Other Class 8, T7 Tractor Class 8; **Fuel Type:** All fuels except electric.
3. Running emission factors account for exhaust and fugitive dust from brake wear, tire wear, and road dust from paved roads.
4. Other Vehicle Processes emission factors account for additional exhaust and evaporative processes. **Exhaust:** Engine starting and idling. **Evaporative (ROG Only):** Runloss, Diurnal, and Hotsoak.
5. CO_2e is estimated using Global Warming Potential values based on IPCC Assessment Report 4 (AR4) in accordance with CARB methodology. CO_2 = 1; CH_4 = 25; N_2O = 298
6. To avoid double counting, the emissions outside SBCAPCD only evaluate emissions based on VMT and not trips. Emissions from Daily Trips and Annual Trips are accounted for in the calculations for "within SBCAPCD".
7. Total GHG emissions from haul trucks inside and outside of SBCAPCD will be used for reporting Project annual GHG emissions.

g = grams
lb = pounds
MT = metric tons
VMT = vehicle miles traveled

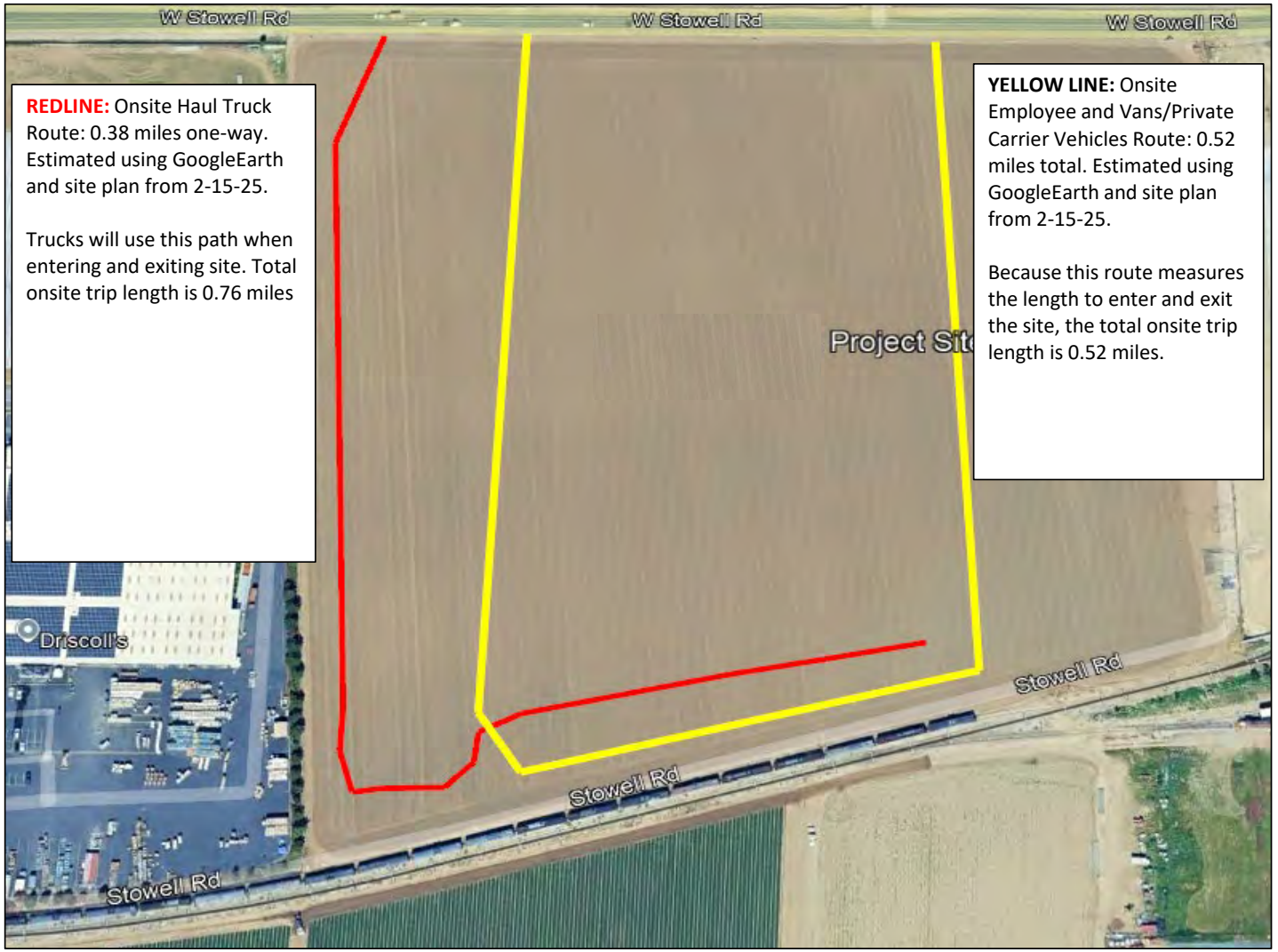
Haul Truck Offsite Trip Length Evaluation

Potential Haul Truck Origins	Total Distance from Project Site (miles)	Haul Route Segments	Haul Truck Route Length (miles)	Air District in which Haul Truck Route traverses	Total Haul Truck Route Length in SBCAPCD (miles)	Total Haul Truck Route Length outside SBCAPCD (miles)
Shafter, CA 93263	121	SJVAPCD Route (Fulfillment Center to SJVAPCD/SLOAPCD Boundary)	51	SJVAPCD		
		SLOACPD Route (Between SJVAPCD/SLOAPCD Boundary and SLOACPD/SBCAPCD Boundary)	7	SLOAPCD		
		SBCAPCD Route (Between SBCAPCD/SLOACPD [Eastern Boundary] to SBCAPCD/SLOACPD [Central Boundary]	46	SBCAPCD		
		SLOAPCD Route (Between SBCAPCD/SLOACPD [Central Boundary] to SBCAPCD/SLOACPD [Western Boundary]	12	SLOAPCD		
		SBCAPCD Route (Between SBCAPCD/SLOACPD [Western Boundary to Project Site]	5	SBAPCD		
		Total	**121**		51	70
Oxnard, CA 93030	103	VCAPCD Route (Sort Center to SBCAPCD/VCAPCD Boundary)	25	VCAPCD		
		SBCAPCD Route (SBCAPCD/VCAPCD Boundary to Project Site)	78	SBCAPCD		
		Total	**103**		**78**	**25**
Average	**112**		**112**		**65**	**47**

Notes:
Map details for the haul routes provided in Appendix A.

Onsite Trip Length Evaluation

Onsite Vehicle Trip Type	Entering	Exiting	Total
Haul Truck Onsite Trip Length (miles):	0.38	0.38	0.76
Employees, Vans, and Private Carrier Onsite Trip Length (miles):			0.52



Daily Paved Road Dust Emission Factor[a]

$$EF_{paved} = (k \times (sL)^{0.91} \times (W)^{1.02}) \times (1 - P/4N)$$

Parameter	Parameter Description
E_{paved}	Annual or other long-term average emission factor in the same units as k
k	Particle size multiplier for particle size range and units of interest
sL	road surface silt loading (g/m^2)
W	average weight (tons) of all the vehicles raveling the road
P	Number of "wet" days with at least 0.254 mm (0.01 in) of precipitation during the averaging period
N	Number of days in the averaging period (e.g. 365 for annual, 91 for seasonal, 30 for monthly)

	Employee Vehicles (LDA/LDT1/LDT2)		Vans and Private Carrier Vehicles (MDV)	
Parameters	**PM_{10}**	**$PM_{2.5}$**	**PM_{10}**	**$PM_{2.5}$**
k (g/mile)	1.000	0.250	1.000	0.250
sL (g/m^2)[b]	0.1	0.1	0.1	0.1
W (tons)	2	2	4.3	4.3
P ("wet" days)[c]	10	10	10	10
N (days per year)	365	365	365	365
EF_{Paved} (Without natural dust control (precipitation)) (g/mi)[d]	2.49E-01	6.24E-02	5.38E-01	1.35E-01
EF_{Paved} (With natural dust control (precipitation) (g/mi)	2.48E-01	6.19E-02	5.35E-01	1.34E-01

Notes:

a) AP42, Section 13.2.1 Paved Roads, January 2011 (Consistent with CalEEMod methodology)

b) Silt loading values for from CalEEMod for Project in Santa Maria,CA.
https://ww3.arb.ca.gov/ei/areasrc/fullpdf/2021_paved_roads_7_9.pdf

c) Precipitation days per year from CalEEMod for Project in Santa Maria,CA.

d) Consistent with CalEEMod methodology, daily emissions would use emission factors that do not account for natural dust control (precepitation).

Parameter	Employee Vehicles (LDA/LDT1/LDT2)[a]	Vans and Private Carrier Vehicles (MDV)[b]	Heavy-Duty Trucks (HHDT-Class8)[c]
Gross Vehicle Weight Rating (lbs)	4000	8500	33001
Gross Vehicle Weight Rating (tons)	2	4.25	16.5

a) AP-42: Chapter 13.2.1 Paved Roads, Page 13.2.1-4 mentions that cars/trucks are 2 tons.

b) EMFAC2021 Volume I User's Guide, Vehicle Category list, Maximum Gross Vehicle Weight Rating for MDV.

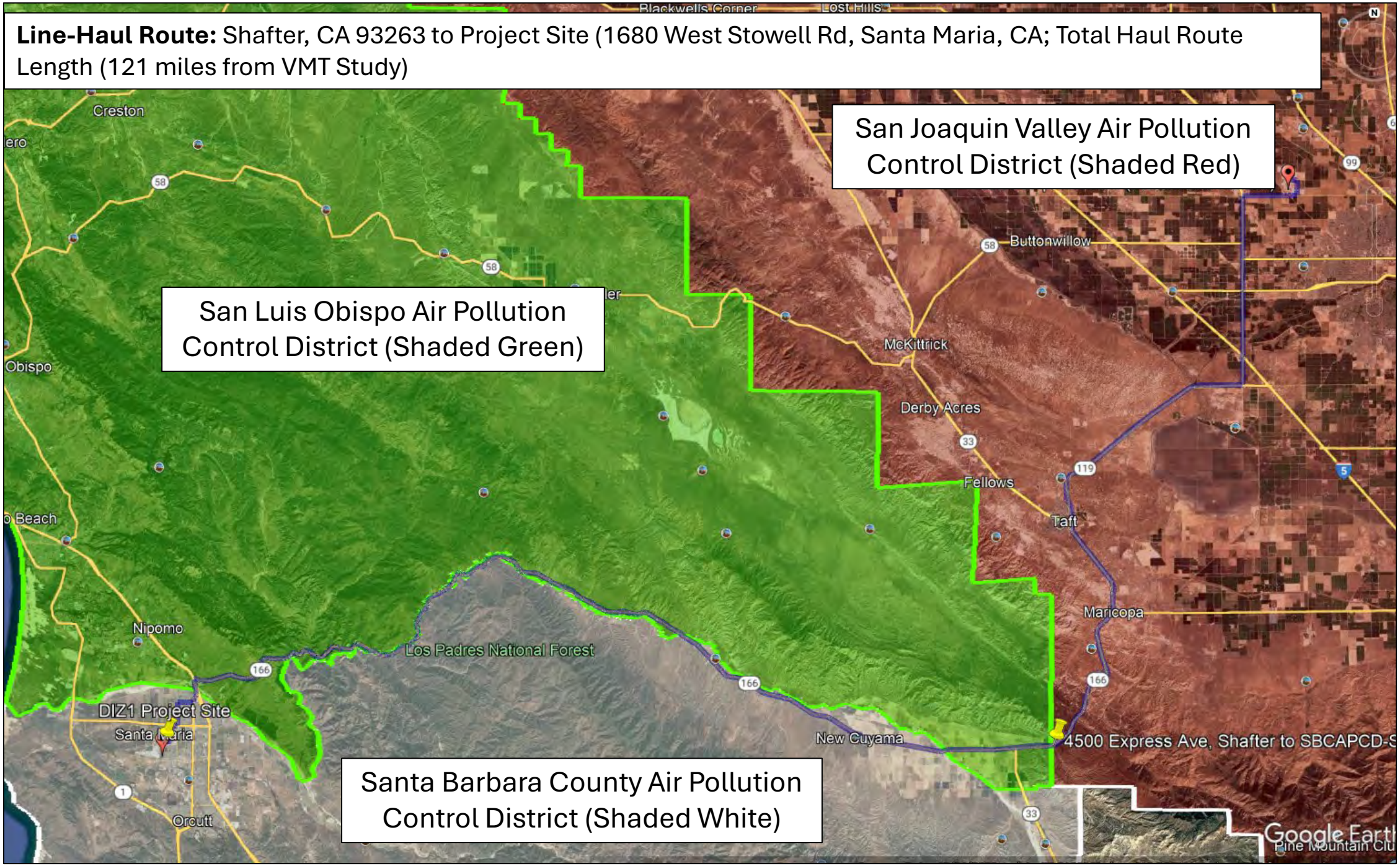
c) EMFAC2021 Volume I User's Guide, Vehicle Category list, Maximum Gross Vehicle Weight Rating for Class 8 Trucks.

Heavy-Duty Trucks (T7 Class 8 Mix)	
PM_{10}	$PM_{2.5}$
1.000	0.250
0.1	0.1
16.5	16.5
10	10
365	365
2.15E+00	5.37E-01
2.13E+00	5.33E-01

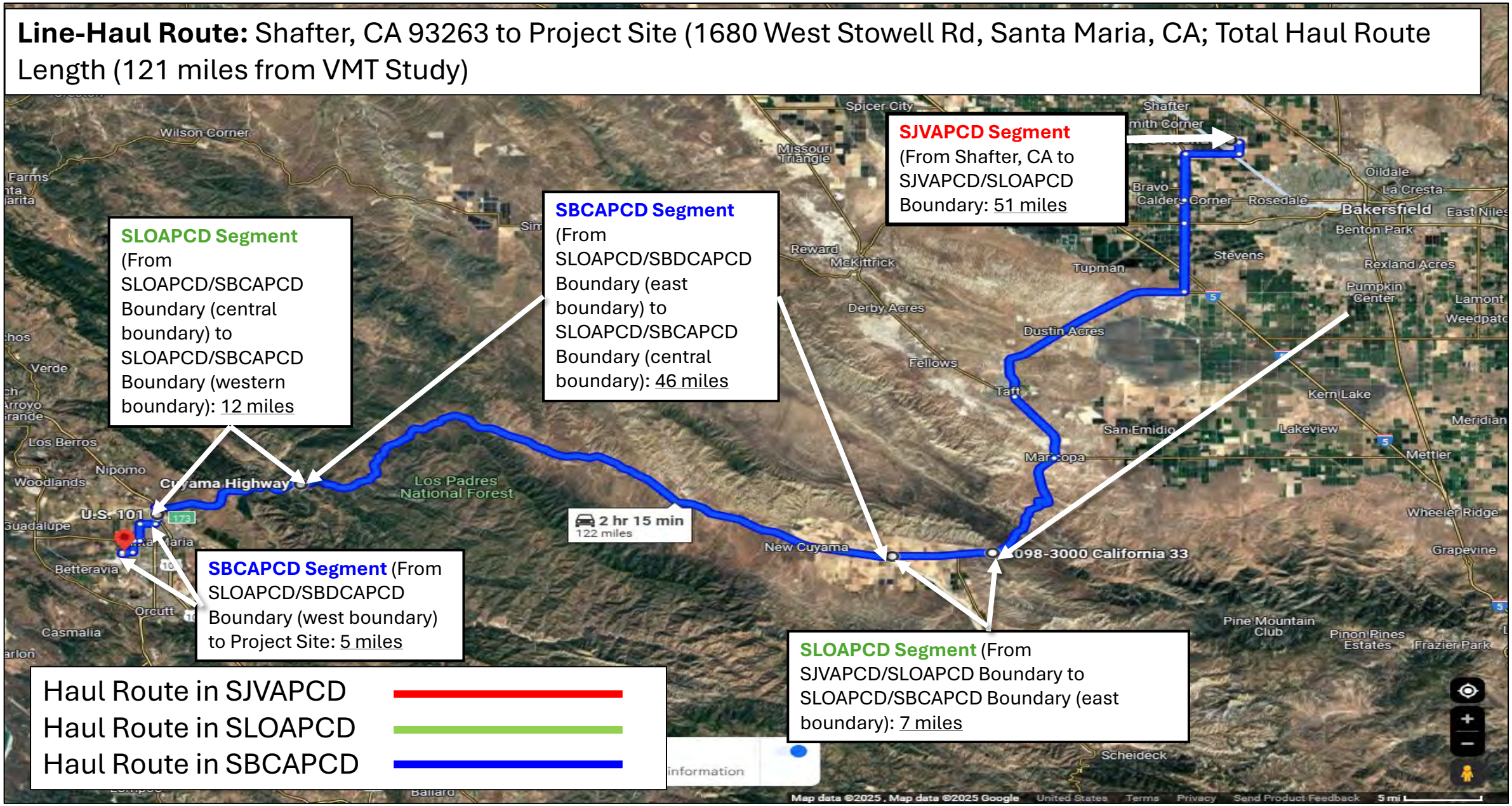
Appendix A - 8: Line-Haul Truck Route Information

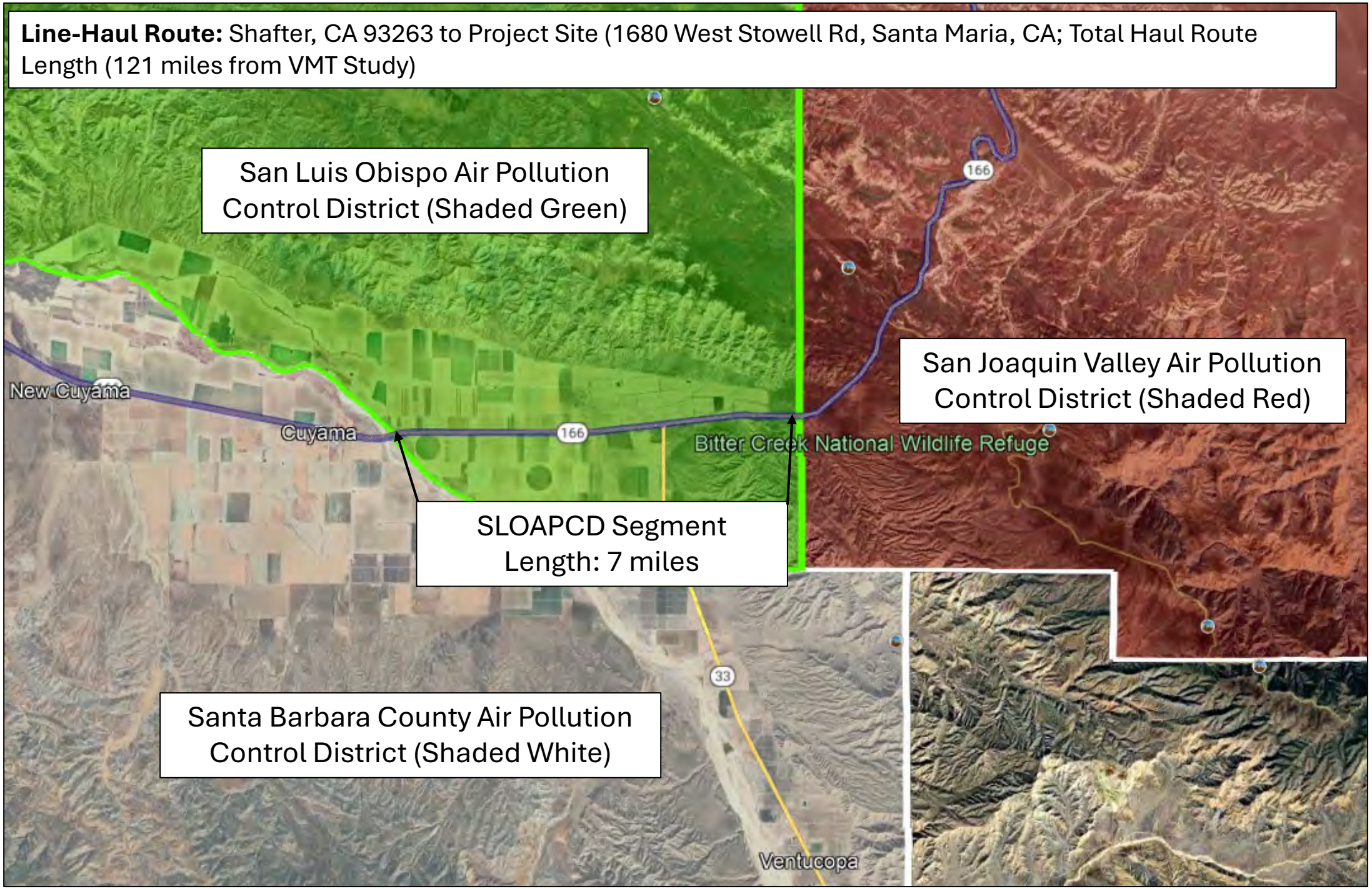
Line-Haul Route: Shafter, CA 93263 to Project Site (1680 West Stowell Rd, Santa Maria, CA; Total Haul Route Length (121 miles from VMT Study)

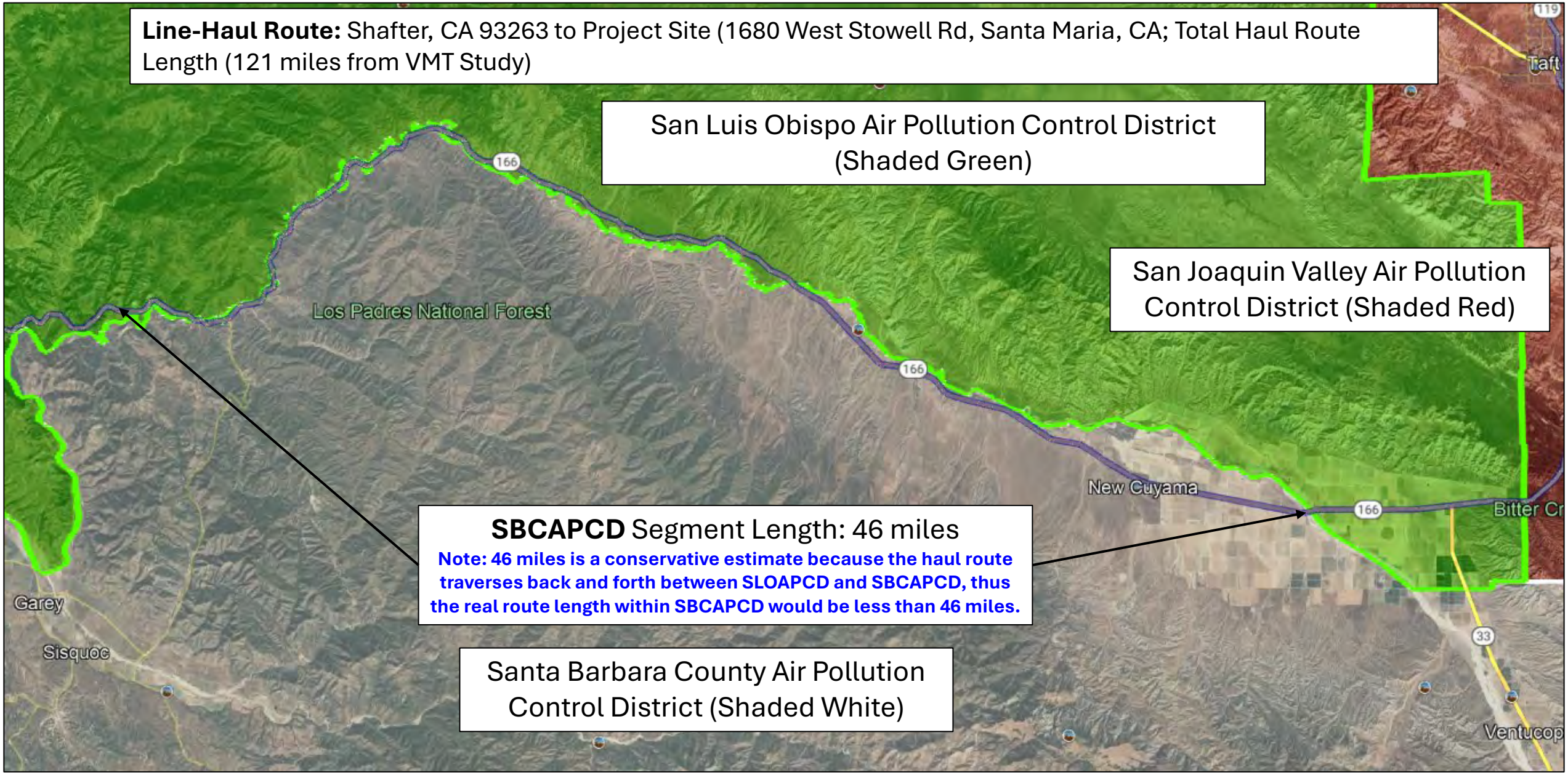
Line-Haul Route: Shafter, CA 93263 to Project Site (1680 West Stowell Rd, Santa Maria, CA; Total Haul Route Length (121 miles from VMT Study)

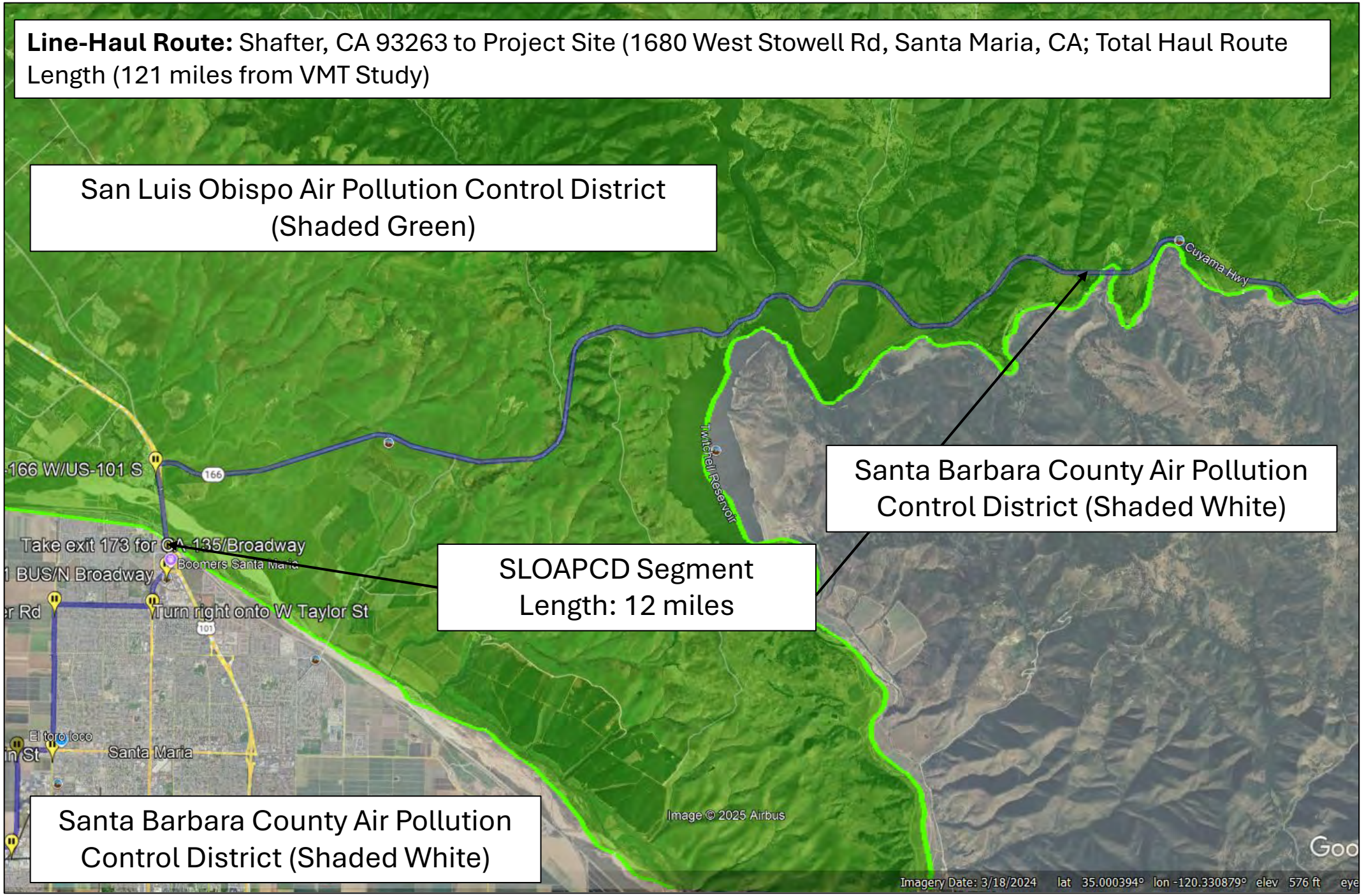


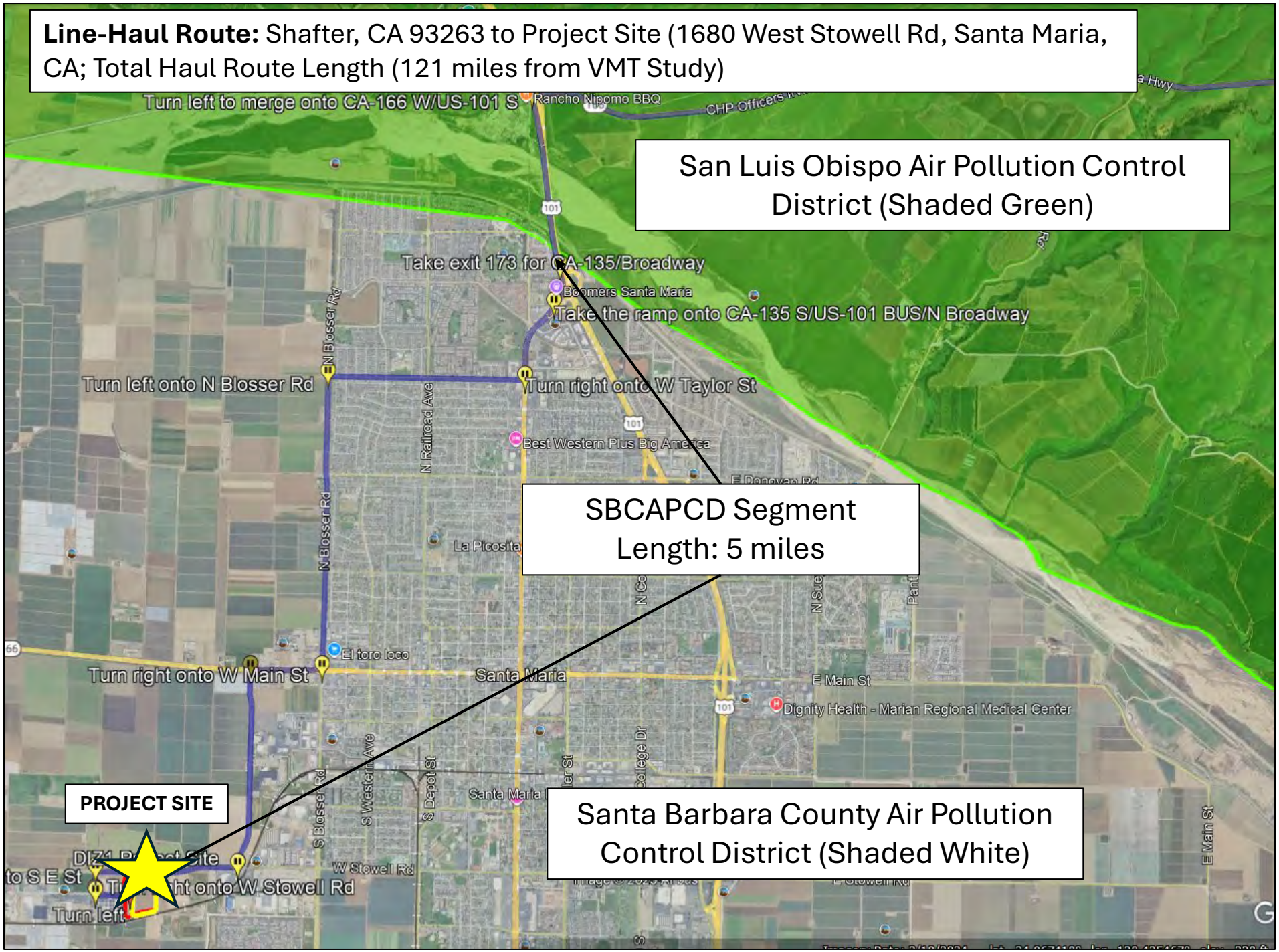
Line-Haul Route: Shafter, CA 93263 to Project Site (1680 West Stowell Rd, Santa Maria, CA; Total Haul Route Length (121 miles from VMT Study)




Line-Haul Route: Shafter, CA 93263 to Project Site (1680 West Stowell Rd, Santa Maria, CA; Total Haul Route Length (121 miles from VMT Study)
San Luis Obispo Air Pollution Control District (Shaded Green)
San Joaquin Valley Air Pollution Control District (Shaded Red)
SLOAPCD Segment Length: 7 miles
Santa Barbara County Air Pollution Control District (Shaded White)
New Cuyama
Cuyama
166
Bitter Creek National Wildlife Refuge
33
Ventucopa


Line-Haul Route: Shafter, CA 93263 to Project Site (1680 West Stowell Rd, Santa Maria, CA; Total Haul Route Length (121 miles from VMT Study)
San Luis Obispo Air Pollution Control District (Shaded Green)
San Joaquin Valley Air Pollution Control District (Shaded Red)
Los Padres National Forest
New Cuyama
SBCAPCD Segment Length: 46 miles
Note: 46 miles is a conservative estimate because the haul route traverses back and forth between SLOAPCD and SBCAPCD, thus the real route length within SBCAPCD would be less than 46 miles.
Santa Barbara County Air Pollution Control District (Shaded White)
Garey
Sisquoc
Taft
Bitter Cr
Ventucop
166
119
33


Line-Haul Route: Shafter, CA 93263 to Project Site (1680 West Stowell Rd, Santa Maria, CA; Total Haul Route Length (121 miles from VMT Study)
San Luis Obispo Air Pollution Control District (Shaded Green)
Santa Barbara County Air Pollution Control District (Shaded White)
SLOAPCD Segment Length: 12 miles
Santa Barbara County Air Pollution Control District (Shaded White)
Cuyama Hwy
Twitchell Reservoir
166 W/US-101 S
Take exit 173 for CA-135/Broadway
Boomers Santa Maria
BUS/N Broadway
Turn right onto W Taylor St
Santa Maria
Image © 2025 Airbus
Imagery Date: 3/18/2024 lat 35.000394° lon -120.330879° elev 576 ft


Line-Haul Route: Shafter, CA 93263 to Project Site (1680 West Stowell Rd, Santa Maria, CA; Total Haul Route Length (121 miles from VMT Study)
San Luis Obispo Air Pollution Control District (Shaded Green)
SBCAPCD Segment Length: 5 miles
Santa Barbara County Air Pollution Control District (Shaded White)
PROJECT SITE
Turn left to merge onto CA-166 W/US-101 S
Rancho Nipomo BBQ
CHP Officers
Take exit 173 for CA-135/Broadway
Boomers Santa Maria
Take the ramp onto CA-135 S/US-101 BUS/N Broadway
Turn left onto N Blosser Rd
Turn right onto W Taylor St
N Blosser Rd
N Railroad Ave
Best Western Plus Big America
La Picosita
N Blosser Rd
El toro loco
Turn right onto W Main St
Santa Maria
E Main St
Dignity Health - Marian Regional Medical Center
S Blosser Rd
S Western Ave
S Depot St
College Dr
W Stowell Rd
Turn left onto W Stowell Rd
Turn left
E Main St

Line-Haul Route: Oxnard, CA 93030 to Project Site (1680 West Stowell Rd, Santa Maria, CA; Total Haul Route Length (103 miles from VMT Study)


DIZ1 Project Site
PROJECT SITE
Line-Haul Route: Oxnard, CA 93030 to Project Site (1680 West Stowell Rd, Santa Maria, CA; Total Haul Route Length (103 miles from VMT Study)
Santa Barbara County Air Pollution Control District (Shaded White)
Ventura County Air Pollution Control District (Shaded Teal)
SBCAPCD Segment Length: 78 miles
VCAPCD Segment Length: 25 miles
Pine Mountain Club
Los Alamos
Los Olivos
Ballard
Solvang
Lompoc
Naples
Santa Barbara
Ojai
Oak View
Santa Paula
Ventura
Camarillo
Data MBARI
Google Earth
Imagery Date: 12/31/2020 lat 34.208271° lon -120.087060° elev -1894 ft eye alt 81.39 mi

NV5

Attachment 3

Biological Resources Assessment

Kevin Merk Associates, LLC | P.O. Box 318, San Luis Obispo, CA 93406 | 805-748-5837

May 6, 2025

Ms. Pamela Ricci
RRM Design Group
3765 S. Higuera, Suite 102
San Luis Obispo, CA 93401

Subject: **Transmittal of Updated Biological Resources Assessment for Proposed Commercial Development at 1680 West Stowell Road, Santa Maria, Santa Barbara County, California**

Dear Ms. Ricci:

Kevin Merk Associates, LLC has updated the Biological Resources Assessment we prepared for the proposed commercial development at 1680 West Stowell Road in Santa Maria, California. The attached report, dated May 6, 2025, includes an update to the project description provided by RRM Design Group. The report also was updated to clarify our methodologies and findings following a peer review completed by Rincon Consultants that was done in support of their preparation of an Environmental Impact Report for the proposed project.

As you will see, our conclusions remain unchanged from the original report submitted on July 9, 2024. Please note the peer review incorrectly identified the date of this report as July 9, 2019. Based on their review, two comments were identified where clarification was needed. Comment 1 questioned the background review and database query methodology used in our analysis, and Comment 2 identified a drainage ditch referenced in the review of three species of fish (e.g., arroyo chub, steelhead southern California DPS, and unarmored threespine stickleback) in the table included in Appendix C.

In regards to Comment 1, while the final report discusses species occurrences in a five-mile buffer around the site, the background review used a 10 quadrangle search of the California Natural Diversity Database maintained by the California Department of Fish and Wildlife to ensure all species with potential to occur in the study area were identified. This search included the following U.S. Geological Survey 7.5-minute topographic quadrangles surrounding the Santa Maria quadrangle where the site is located: Oceano, Nipomo, Huasna Peak, Pt. Sal, Guadalupe, Twitchell Dam, Casmalia, Orcutt, and Sisquoc. We also used the same 10 quadrangles to search the Rare Plant Inventory maintained by the California Native Plant Society to overcome any lack of observation data in the CNDDB. Given this approach, coupled with the highly altered nature of the Santa Maria Valley and our over 25 years of on-the-ground field work in this region, we focused the special status plant discussion in the report to those species with potential to occur in the project area.

For Comment 2, we reviewed the table provided in Appendix C of the July 9, 2024 report and removed the reference of a drainage ditch in the analysis of the three fish that have been

recorded in riverine habitats in the region. As discussed in the report, no drainage ditches or other drainage features connecting the site to the Santa Maria River are present on the property. As such, the table summary for these three fish was updated to ensure accurate characterization of the property and findings of the investigation. No further changes to the report were warranted.

I trust the above information and updated Biological Resources Assessment are sufficient for your reporting requirements at this time. Thank you for the opportunity to assist you with this project, and respond to the comments identified in the peer review. Please do not hesitate to contact me if you or the project team have any questions.

Sincerely,
KEVIN MERK ASSOCIATES, LLC

Kevin B. Merk
Principal Biologist

Attachment: Biological Resources Assessment, Updated May 6, 2025

1680 WEST STOWELL ROAD, SANTA MARIA, CALIFORNIA

(Assessor's Parcel Numbers 117-820-012 & -013)

BIOLOGICAL RESOURCES ASSESSMENT



Prepared for:

Seefried Development Management, Inc.
2321 Rosecrans Avenue, Suite 2220
El Segundo, California 90245

Prepared by:

Kevin Merk Associates, LLC
P.O. Box 318
San Luis Obispo, California 93406

Originally Submitted July 9, 2024; Updated May 6, 2025

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1.0 INTRODUCTION

Kevin Merk Associates, LLC (KMA) conducted this biological resources assessment (BRA) for the proposed construction of a commercial facility at 1680 West Stowell Road in Santa Maria, Santa Barbara County, California ("project"). The project site is in the western part of the City of Santa Maria, in an historic agricultural setting on the south side of West Stowell Road. The approximately 33-acre property is assigned Assessor's Parcel Number (APN) 117-820-012 and -013 ("property"). It is located on the central west portion of the United States Geological Survey (USGS) Santa Maria 7.5-minute topographic quadrangle (T 10 N, R 34 W; 34.936714° N, -120.469491° W; Figure 1). The property evaluated herein is agricultural land just west of the urban area in the City of Santa Maria (Figure 2). The site is within the West Stowell Specific Plan area (Fugro West, Inc., 1994 and reformatted 2009), and zoned Planned Development/Commercial Manufacturing/Agricultural (PD/CM/AG). The southern property line abuts the Santa Maria Valley Railroad and agricultural lands to the south. The northern property line is along West Stowell Road, and to the west is commercial development. To the east of the site is disturbed ground undergoing development.

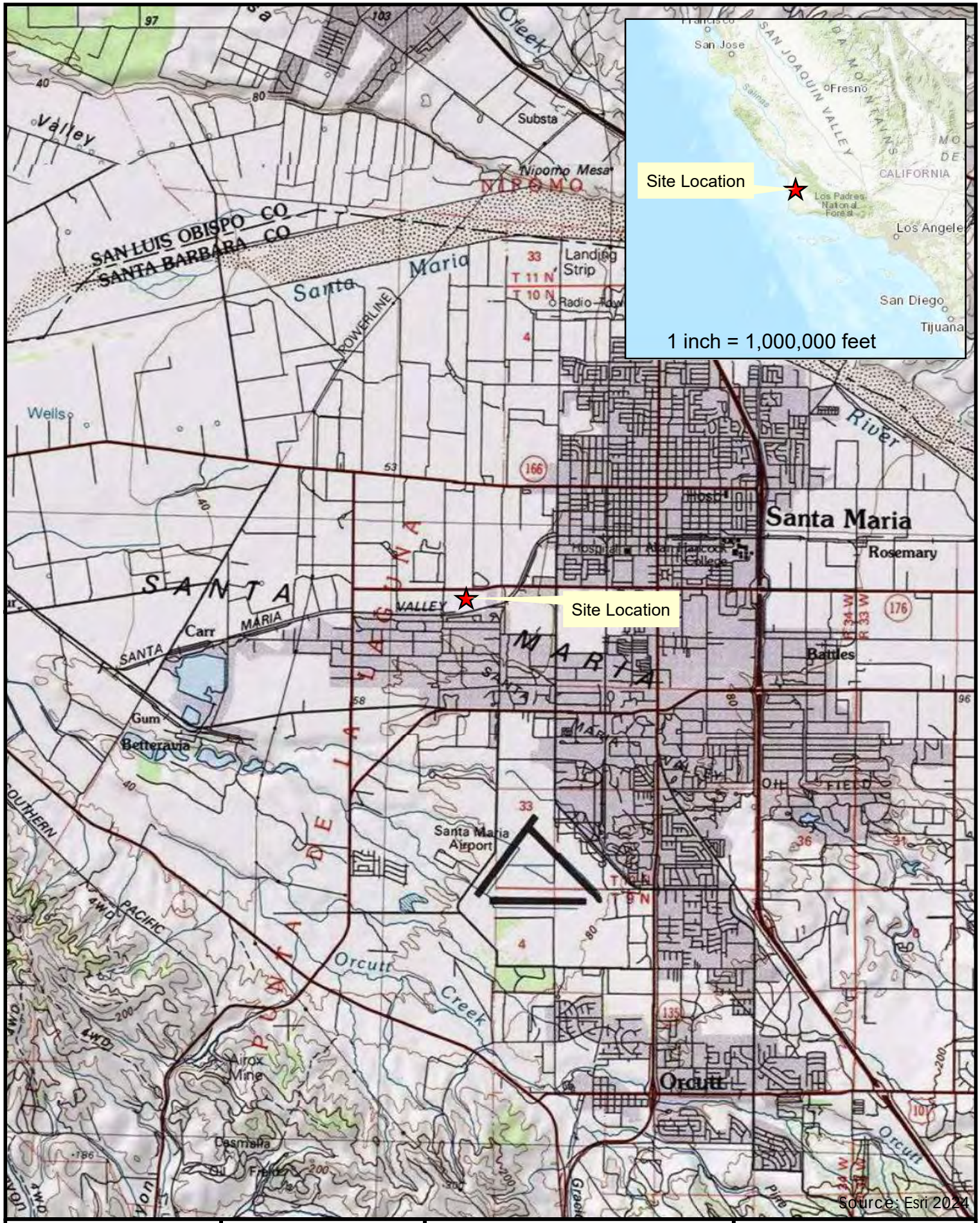
The purpose of this BRA is to assist the project proponent with technical biological resources information for the City of Santa Maria's review of the project under the California Environmental Quality Act (CEQA). This report evaluates the potential for the project site to support special-status biological resources (plants, animals, designated critical habitat, and sensitive natural communities) that may be present onsite and could be adversely affected by the project. For any potentially significant impacts, recommended mitigation measures are provided to avoid or reduce the level of project impacts as defined under CEQA.

1.1 Project Description

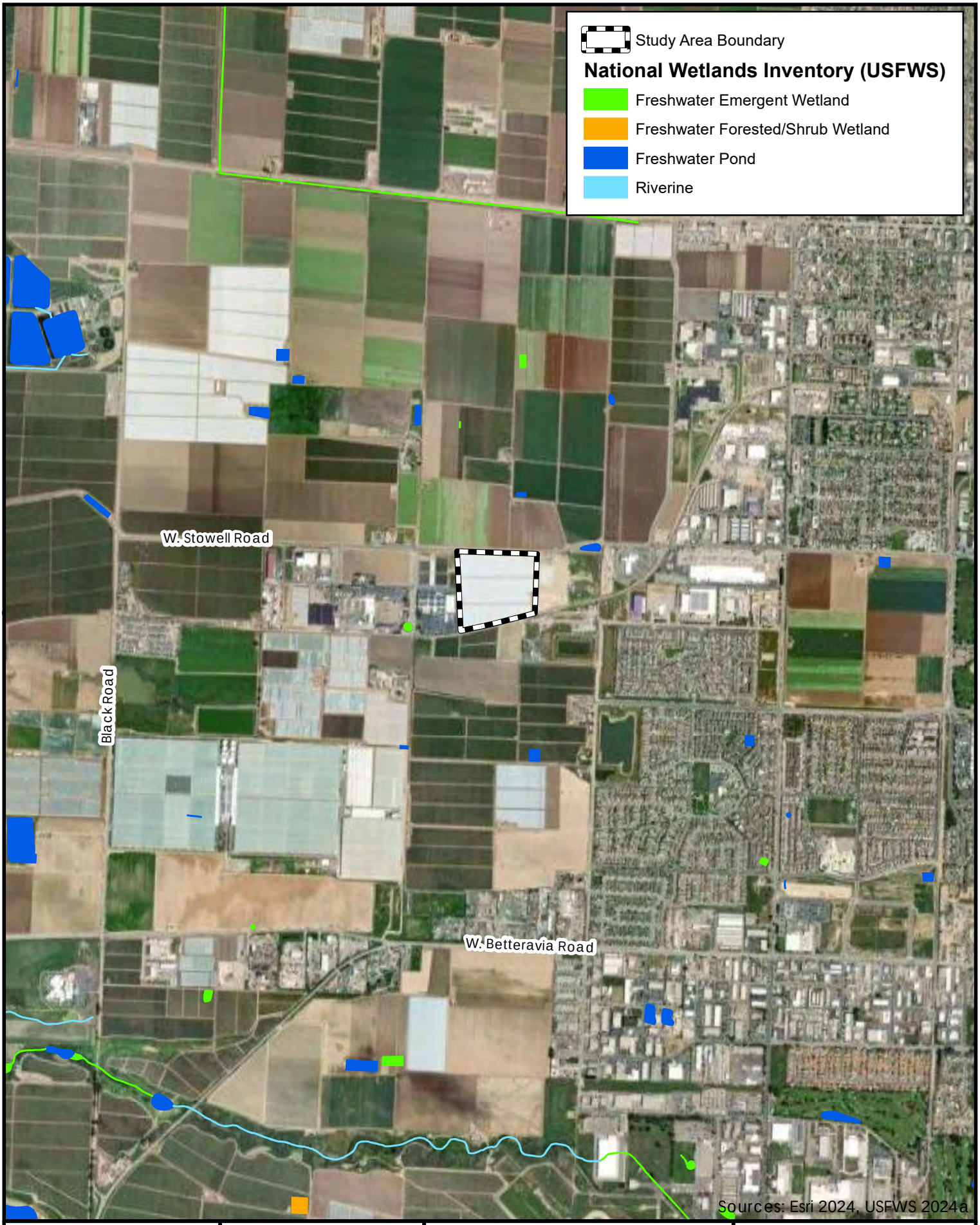
The proposed project is the construction of a commercial facility and associated driveways and parking areas (see Site Plan, April 16, 2025; Appendix A). The proposed development includes a new 169,104 square-foot single-story distribution warehouse to be operated as a delivery service building, which is oriented north to south in the center of the approximately 33-acre site. The main onsite facility will include delivery and distribution, office and processing uses, and shipping and receiving. It is anticipated that the facility will have two shifts working days and evenings, with a potential third shift during peak season.

The main facility building would be concrete tilt-up construction with a supporting office area, training room, and break room. The proposed facility is being designed for a package delivery service. The building includes ground level doors serving as the main entrance facing West Stowell Road (north). A 34,325 square-foot canopy is located on the west side, and a 33,545 square-foot canopy is located on the east side, which serve as loading carports. The south side of the building will have dock-high doors for tractor trailer access. In addition to the main facility building, there are a few other smaller accessory structures to support the business.

Three unsignalized driveway accesses will serve the site. The westernmost driveway would provide access for all line-haul trucks to the loading dock area at the southernmost end of the main building. The majority of vans and employees will enter the site via the central and easternmost driveways. These two driveways provide access to parking fields to the north, west, and east of the main building. Parking for up to 978 passenger cars and vans will be available on-site. There are also 12 stalls at the loading dock to accommodate semi-trucks on the south side of the main facility. Parking for overnight fleet vehicles and driver's personal vehicle parking totaling 272 spaces would be available north of the building.



KEVIN MERK ASSOCIATES	1 inch = 8,000 feet	1680 West Stowell Road Commercial Facility Seefried Development Management, Inc.	Figure 1 Site Location Map



KEVIN MERK ASSOCIATES

N W E S

1 inch = 2,000 feet

1680 West Stowell Road
Commercial Facility

Seefried Development Management, Inc.

Figure 2

Aerial Overview Map

1.2 Regulatory Overview

1.2.1 Compliance with the California Environmental Quality Act

The CEQA defines a *significant effect on the environment* as "a substantial, or potentially substantial, adverse change in the environment." Projects that may have significant effects that cannot be mitigated are required to be analyzed in an Environmental Impact Report (EIR). Under CEQA Guidelines Section 15065, a project's effects on biotic resources would have a mandatory finding of significance if the project would do any of the following:

- Have potential to substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare or threatened species.
- Have the potential to achieve short-term goals to the disadvantage of long-term environmental goals.
- Have possible environmental effects that are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

In addition to the criteria listed above that trigger mandatory findings of significance, *Appendix G* of the *CEQA Guidelines, Section IV Biological Resources*, includes six additional impacts to consider when analyzing the significance of project effects. A project's effects on biological resources could be deemed significant if the project would do the following:

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 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, or regulations, or by 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.

If the project proponent agrees to mitigation measures or project modifications that would avoid all significant effects or would mitigate the significant effect(s) to a point below the level of significance, an EIR would not be required. The project proponent would be bound to implement the mitigation measures to reduce the project effects to below a level of significance. Mitigation is not required for effects that are less than significant.

1.2.2 Special-status Species

For the purpose of this BRA, special-status species are those plants and animals listed, or Candidates for listing, as Threatened or Endangered by the USFWS under the federal Endangered Species Act (FESA); federal Birds of Conservation Concern (USFWS 2021); those listed, or Candidate for listing, as Threatened or Endangered under the California Endangered Species Act (CESA); animals designated as "Species of Special Concern," "Fully Protected," or "Watch List" by the CDFW; plants considered Endangered or Rare under the California Native Plant Protection Act; and, animals considered sensitive that do not have a specific listing status but which are recorded in the California Natural Diversity Database (CNDDB; CDFW 2024a) and/or CDFW's (2024b) *Special Animals List*.

FESA provisions protect federally listed species and their habitats from unlawful take, which is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 U.S.C. §1532(19). Under USFWS regulations, "harm" may include significant habitat modification or degradation that kills or injures wildlife (50 C.F.R. §17.3.). Candidate species are not afforded legal protection under FESA; however, Candidate species typically receive special attention during the CEQA environmental review process.

CESA prohibits the take of state endangered, threatened, or candidate species. "Take" under CESA is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." (Fish & Game Code § 86.) Habitat degradation or modification is not expressly included in the definition of take under CESA.

Rare plants are those defined as having a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, 2B, 3 or 4 (CDFW 2024c). Rank 4 species are a watch list, and typically do not meet the CEQA Guidelines' rarity definition (Section 15380), but are included here because they may be of local concern. The CRPR definitions are as follows:

- *Rank 1A: Presumed extirpated in California and either rare or extinct elsewhere.* These species are presumed extirpated because they have not been recorded in the wild in California for many years.
- *Rank 1B: Rare, threatened or endangered in California and elsewhere.* Plants that are rare throughout their range and the majority in this rank are endemic to California.
- *Rank 2A: Presumed extirpated in California, but more common elsewhere.* These species are presumed extirpated because they have not been recorded in the wild in California for many years, but they are common outside of the state.
- *Rank 2B: Rare, threatened or endangered in California, but more common elsewhere.* Plants that have ranges that extend into California, where they are rare, but are common in areas outside of the state.
- *Rank 3: Plants needing more information - A review list.* Information necessary to assign the species to one of the lists or reject them is lacking. Most species in this rank are taxonomically unresolved.
- *Rank 4: Plants of limited distribution - A watch list.* Species of limited distribution or infrequent occurrence throughout their range in California but which their vulnerability to extirpation appears low at this time and should be monitored.

Additionally, the CRPR system further assigns threat codes as a decimal extension to the rank, ranging from 1 to 3. CRPR 3 species do not have a threat code due to difficulty in ascertaining threats for these species, and CRPR 1A and 2A also do not have threat codes because there are no known extant populations in California. The threat code extensions are as follows:

- *0.1: Seriously threatened in California.* More than 80% of occurrences are threatened and there is high degree and immediacy of threat.
- *0.2: Moderately threatened in California.* Approximately 20 to 80% of occurrences are threatened and there is a moderate degree of immediacy of threat.
- *0.3: Not very threatened in California.* Less than 20% of occurrences are threatened and the is a low degree and immediacy of threat, or no current threats are known.

CDFW (2024b) maintains a list of Species of Special Concern for those animal species in which declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating species as special concern is to halt or reverse their decline early enough to secure their long-term viability. Species of Special Concern may receive special attention during environmental review, but do not have statutory protection. FESA and CESA emphasize early consultation to avoid impacts on Threatened and Endangered species. As part of the consultation process, project proponents are directed to develop appropriate mitigation plans to offset project effects on listed species and their habitats.

Raptors (e.g., eagles, hawks, and owls) and their nests are protected under both federal and state regulations. These birds of prey are protected in California under the California Fish and Game Code Section 3503.5. Disturbance that causes nest abandonment or loss of reproductive effort is considered take by CDFW. Eagles are protected under the federal Bald and Golden Eagle Protection Act. The federal Migratory Bird Treaty Act (MBTA) applies to many bird species, including common species, and prohibits killing, possessing, or trading in migratory birds, including whole birds, parts of birds, bird nests, and eggs. The act restricts construction disturbance during the nesting season that could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Under California Fish and Game Code Section 3503, it is also unlawful to take, possess or needlessly destroy the nest or eggs of any bird.

1.2.3 Designated Critical Habitat

Critical habitat designations are made for species listed under FESA, and are specific geographic areas that contain the attributes essential for the conservation of those species. Areas that are currently occupied by the species are evaluated based upon whether physical and biological features are present that provide the necessary components for its life history functions. Unoccupied areas may be included in the designation. Critical habitat designations affect only federal agency actions or federally funded or permitted activities. Activities by private landowners are not affected if there is no federal nexus. Biological resources assessments usually address project effects on designated critical habitat when the boundaries overlap a project site, although the presence of designated critical habitat would not prevent land development or other activities. Only activities that involve a federal permit, license, or funding, and are likely to destroy or adversely modify critical habitat would be affected. In these cases, the federal agency (USFWS or National Marine Fisheries Service [NMFS]) works with the project proponent to enable the project to proceed with modifications to avoid adversely affecting the habitat.

1.2.4 Sensitive Natural Communities

Sensitive natural communities are those native plant communities listed in the CNDDB (CDFW 2024a) as rare or of limited distribution. They are evaluated using NatureServe's Heritage Methodology to assign global and state ranks based on rarity and threat, and these ranks are reviewed and adopted by CDFW's (2024d) *Vegetation Classification and Mapping Program* (VegCAMP). Evaluation with the state (S) level results in ranks ranging from 1 (very rare or threatened) to 5 (demonstrably secure). Those with ranks of S1 to S3 are to be addressed in the environmental review process under CEQA (CDFW 2024d).

2.0 METHODS

KMA conducted a desktop review of natural resources databases, maps, literature and online sources to identify special-status biological resources documented from the region that could be present in the study area. Time series aerial photography (Google Earth 2024) and street view photography (Google Maps 2024) were viewed for information on the history of site conditions and surrounding area. Parcel information was obtained from the City's (2024) *Santa Maria Maps* online server (https://www.cityofsantamaria.org/about-us/maps).

KMA's Principal Biologist Kevin Merk conducted a survey for special-status plants and to assess the potential of the site to support special-status animal species on May 24, 2024 from 1000 to 1230 hours. Weather conditions were clearing fog with northwest wind five to seven miles per hour and air temperature 64 degrees Fahrenheit (°F). The study area for the surveys was the limits of the parcel and was evaluated by driving the perimeter agricultural roads and walking select areas. All plant and animal species observed during the surveys were recorded. No focused surveys for animals were conducted, but those seen incidentally during the site visits were recorded. Plant taxonomy followed *Jepson eFlora* (Jepson Flora Project 2024) with additional information on common names obtained from *Information on Wild California Plants* (Calflora 2024). The land use types were mapped on ESRI (2024) aerial imagery to create a habitat map. Land use types followed *A Guide to Wildlife Habitats in California*, which is updated through the California Wildlife Habitat Relationships (CWHR) System (CDFW 2024e). Designation of plant communities generally followed Holland's (1986) *Preliminary Descriptions of the Terrestrial Natural Communities of California*, and the *Manual of California Vegetation* (Sawyer et al.'s 2009) and *VegCAMP* (CDFW 2023d) were also referenced. Representative photographs of site conditions were compiled in a photo plate.

National Wetlands Inventory (NWI) data were mapped on ESRI (2024) imagery, and reviewed for any identified wetlands on the site and in the vicinity (USFWS 2024a). USGS topographic maps were also reviewed for information on hydrologic and topographic features. *Web Soil Survey* (Natural Resources Conservation Service [NRCS] 2024) soil mapping units were mapped and described to aid in the habitat suitability evaluation.

A query of the CNDDB was conducted to identify occurrence records of special-status biological resources (plants, animals and sensitive natural communities) documented within the vicinity of the project site. This search included the Santa Maria USGS 7.5-minute quadrangle in which the project is located and the surrounding quadrangles: Oceano, Nipomo, Guadalupe, Casmalia and Orcutt. CNDDB records of special-status plant and animal occurrences within a five-mile buffer from the study area were mapped. CNDDB data for a larger 10-quadrangle search, as well as a query of the CNPS *Rare Plant Inventory* were also reviewed to ensure a sufficient review of rare plants occurred to identify species with potential to occur onsite. Species that occur within the

Santa Maria Valley, as well as each species recorded in the CNDDB within five miles, were considered to be within the project vicinity. Other species from a larger ten-quadrangle search that have limited distributions restricted to higher elevations of the surrounding mountains (i.e., Casmalia Hills), coastal bluffs and beaches, Guadalupe Dunes, Vandenberg Space Force Base/Lompoc, and Burton and Nipomo Mesas were considered to be outside of the project vicinity and were not evaluated further unless there were records within five miles of the site. Based upon our knowledge of the local area and other sources of species occurrence records (particularly observations recorded in Calflora [2024] and The Cornell Lab of Ornithology [2024a]), additional special-status biological resources in the project vicinity were included. For the list of special-status species identified in the search, local distribution and ecological information was obtained from a variety of online and published sources (Jennings and Hayes 1994, Bolster 1998, Moyle et al. 2015, Thomson et al. 2016, Lehman 2022, Audubon 2024, Calflora 2024, California Native Plant Society [CNPS] 2024, California Herps 2024, The Cornell Lab of Ornithology 2024a, 2024b; CDFW 2024e). Designated critical habitat for plant and animal species listed under FESA was identified and mapped based upon information provided in *Environmental Conservation Online System* (USFWS 2024b).

Within the list compiled of special-status species known from the project vicinity, an evaluation of occurrence was performed based upon the suitability of habitat conditions on the property and the local distribution (geographical and elevational ranges) and specific requirements (plant communities and soils) of the species considered. We relied on existing information and known occurrence records in the region coupled with our site-specific observations from other locations in the northwestern Santa Barbara County inland region to make determinations for the probability of occurrence of special-status species in the study area. Those species considered as "Potential" met the following requirements: records in the site vicinity, appropriate plant community and/or soil associations onsite, and the site is within the elevational range of the species. If any one of these elements was not met or considered to be marginal for the site, but the other elements were present, that species was considered "Unlikely". If onsite environmental conditions were clearly inappropriate or the species has a limited distribution that does not overlap the site, those species were considered "Not Expected". If the onsite conditions met the requirements of any lifestage or particular life history use (e.g., foraging) for wildlife while other aspects were inappropriate for certain functions (e.g., breeding), these species were considered to have Potential to occur and the likelihood of their occurrence onsite is summarized in the table and analyzed fully with regard to species ecology in the text. If any special-status species had been observed during the surveys, they would have been listed as "Present" in Appendix C. Because environmental conditions during the year when the surveys were conducted were favorable for the detection of the plant species on the target list, and the surveys covered the collective blooming period of these species, each of these plant species was subsequently considered as Not Expected in Appendix C.

We determined whether special-status plant and animal species, designated critical habitat, and sensitive natural communities could or do occur in the study area. Potential impacts of the proposed project were evaluated for each of these biological resource issues, including the six additional impacts in CEQA Guidelines Appendix G. An evaluation of significance as defined under CEQA is provided for each potential impact, and mitigation is proposed to reduce any potentially significant impact to a level below the significance threshold.

3.0 RESULTS

Figure 1 is a site location map and Figure 2 is an aerial overview map with drainage features and wetland habitats recorded in the NWI. Figure 3 is a soils map and Figure 4 is a habitat map of the study area delineating the land use types onsite. Figure 5 shows the locations of special-status

plants and animals, respectively, recorded in the CNDDB within five miles of the study area. Designated critical habitat and sensitive natural communities within five miles of the study area are shown on Figure 6. Photographs taken during the site visit to characterize onsite conditions are provided in a Photo Plate in Appendix B. Appendix C is a summary of the special-status species, designated critical habitat and sensitive plant communities recorded within the site vicinity, and our evaluation of their potential presence onsite.

3.1 Existing Conditions

The study area is in the California Central Coast region, within the western city limits of Santa Maria in northwestern Santa Barbara County (Figure 1). The region has a Mediterranean climate with cool, rainy winters and dry summers in which temperatures are moderated by prevailing winds from the Pacific Ocean about 11 miles to the west. The temperature typically varies from 40°F to 73°F, and is rarely below 32°F or above 84°F (Weather Spark 2024). The average annual precipitation at the Santa Maria Airport is 13.00 inches (Western Regional Climate Center 2024), and rainfall over the last two years has been above average to average (National Oceanic and Atmospheric Administration [NOAA] 2024).

Land use in the surrounding area is generally agricultural with commercial and urban residential development expanding from the east. A variety of row crops were present throughout the study area at the time of the May 2024 survey, and the property was actively farmed and planted to strawberries. Based on review of historic aerial imagery obtained from Google Earth (2024), the site and surrounding areas have been farmed for well over 50 years. The site is level with onsite elevations ranging from 181 feet (55 meters) above mean sea level (msl) in the south to 185 feet (56 meters) above msl in the north.

3.2 Soils

One soil map unit, Corralitos loamy sand, 0-2% slopes, was identified within the study area (Figure 3). This soil type is typically deep, and is somewhat excessively drained. It formed in recent sandy alluvium derived from acid sandstone and related rocks. The Corralitos soils are on alluvial fans and in small valleys, typically on flat ground with very little slope aspect. They are not rated as hydric soils (NRCS 2024). Observations in the field were of loose sandy soils that were disturbed from agricultural activities.

3.3 Hydrologic Features, Wetlands and Riparian Habitats

The project site is within the Santa Maria River Valley (Figure 1). No natural drainage features, wetlands or topographic depressions were observed on the project site nor were any drainage features identified on the property by the National Wetland Inventory (Figure 2). Numerous irrigation ponds, constructed stormwater detention basins and water treatment ponds are present in the general area, but all appear to be constructed features in historic upland habitats. As such, these features would not be regulated the U.S. Army Corps of Engineers pursuant the federal Clean Water Act. Further south of the property, south of Betteravia Road, lies the Green Canyon drainage system, which historically connected western Santa Maria to the Betteravia Lakes and the Santa Maria River. No direct hydrologic connection is present linking the project site to the Santa Maria River to the north, Green Canyon to the south or any other natural drainage feature in the region.



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1 inch = 300 feet

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Figure 3

Soil Type Map

3.4 Land Use (or Habitat) Types

The site is a highly disturbed agricultural field that is tilled and planted on a regular basis. No native habitat areas were observed onsite, and very little vegetation was present due to the recent site preparation and planting activities. At the time of the survey, the entire site had been tilled, roads maintained, and new planting rows established with plastic. Recently planted areas were being irrigated and irrigation pipes were present throughout the site. Scattered weeds were present along the fenceline and included ripgut brome (*Bromus diandrus*), Bermuda grass (*Cynodon dactylon*), and summer mustard (*Hirschfeldia incana*). Bare soil areas were present outside the planting footprint, and an old well site and storage area were present in the southern and eastern parts of the site. An old fan palm tree (*Washingtonia* sp.) was present in this area outside the active agricultural footprint. These features were mapped as ruderal. Ruderal is term to characterize disturbed land use types, and is not described by any vegetation classification system. The land use types, agriculture and ruderal, present onsite are shown on Figure 4 and representative photographs are provided in Appendix B.

3.5 Special-status Biological Resources

The CNDDB query identified numerous special-status species of plants and animals along with sensitive natural community and designated critical habitat records in the project area. The diversity of habitats ranging from coastal areas and old dune systems in the western part of the search area to mountains in the eastern and southern part resulted in a large number of occurrences. Species that are greatly associated with habitats that do not occur in the local area in which the project site is situated, such as coastal dunes along the ocean, maritime chaparral on the Nipomo Mesa and Vandenberg Airforce Base, and surrounding mountainous areas were excluded from the species table in Appendix C since those areas are out of range and no suitable habitats are present. The species that were determined to have Potential to occur in the study area are described in further detail below.

3.5.1 Special-status Plants

The CNDDB search identified six special-status plant species with recorded occurrences within a five-mile radius of the project site (Figure 5). Other rare plant species recorded in the Santa Maria Valley region were also assessed for their potential to occur on the project site (see Special-status Biological Resources Summary provided in Appendix C). The La Graciosa thistle (*Cirsium scariosum* var. *loncholepis*), a state threatened, federally endangered, California Rare Plant Rank (CRPR) 1B.1 species, is a wetland species. No suitable wetland habitats occur on the property, and the site is regularly maintained and devoid of vegetation. Further, the species was not observed during the survey, and therefore is not expected to occur onsite or be affected by the project.

Other special-status plant species (none formally listed) known from the region are upland species that include: the Blochman's leafy daisy (*Erigeron blochmaniae*; CRPR 1B.2), blushing layia (*Layia erubescens*; CRPR 1B.1), dune larkspur (*Delphinium parryi* ssp. *blochmaniae;* CRPR 1B.2), Nipomo Mesa ceanothus (*Ceanothus impressus* var. *nipomensis*; CRPR 1B.2), and San Luis Obispo monardella (*Monardella undulata* ssp. *crispa*; CRPR 1B.2). Several other CRPR species were identified from background sources as occurring in the region (see attached Special-status Biological Resources Summary). The site is actively farmed and does not support suitable habitat for these species. In addition, none of these species were observed on site during the field survey, and would have been in identifiable condition if encountered. As such, no special status plants are expected to occur onsite, and no impacts to special-status botanical resources or natural communities of special concern would result from the proposed project.



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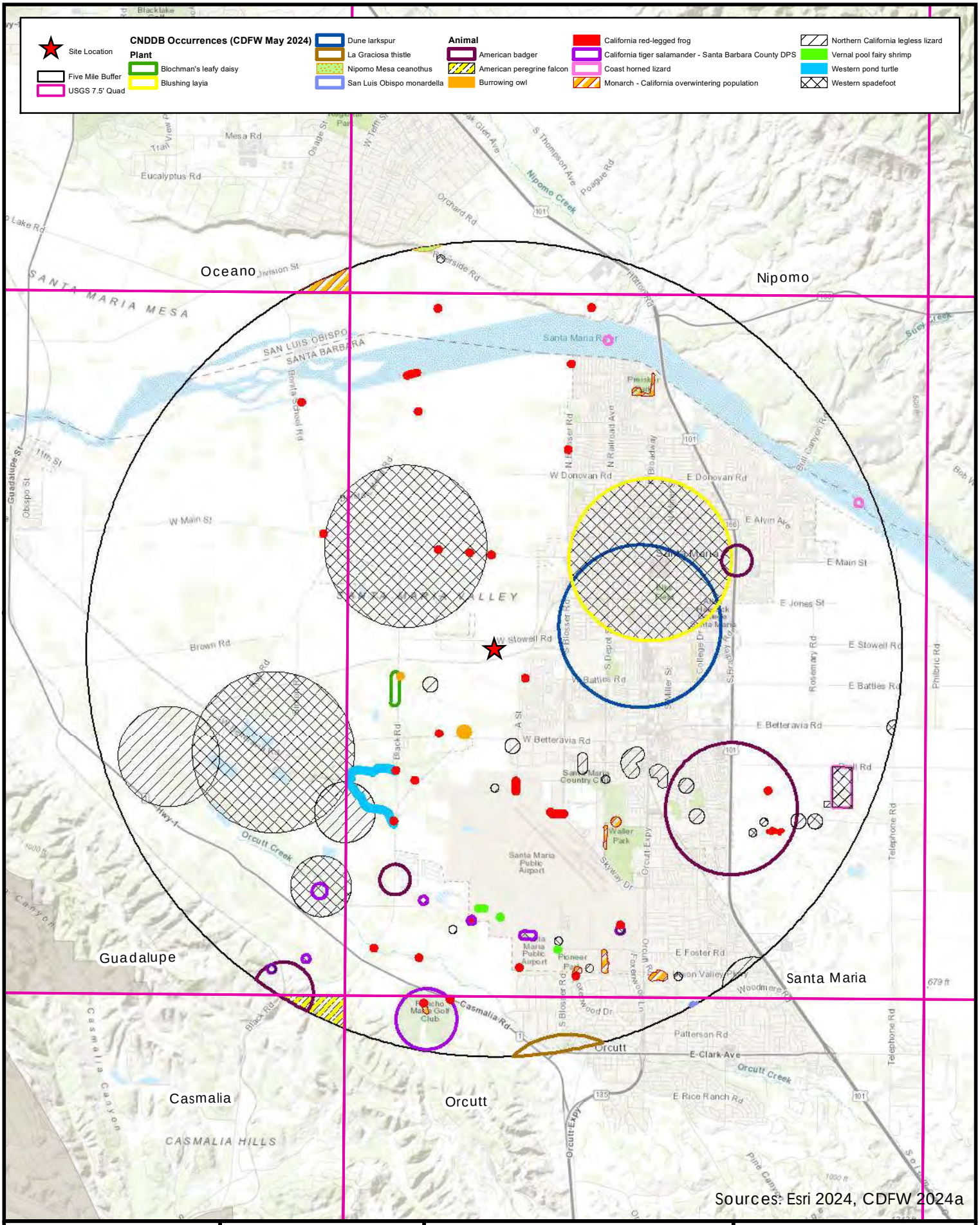
1 inch = 300 feet

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Figure 4

Habitat Map



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1 inch = 8,000 feet

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Figure 5

CNDDB Occurrences Map

3.5.2 Special-status Animals

No special-status animal species were observed incidentally during the survey, and very little wildlife activity was observed onsite or in the general area. The CNDDB identified 11 special status wildlife species within five miles of the site (Figure 5 – CNDDB Map), and the background review and our knowledge of the area evaluated the potential for additional special status wildlife to occur onsite. Our evaluation determined that one invertebrate, one amphibian, six bird, and four mammal species have potential to use the study area at some point in time. No fish were determined to have potential to occur because there is no aquatic habitat onsite. The species determined to have Potential to occur are discussed further below. The California tiger salamander (*Ambystoma californiense*) is a federal endangered and state rare species that is known to occur in the general area. It was considered Unlikely to occur, and additional information is provided below, as well as in the summary table in Appendix C to support the evaluation.

The **California red-legged frog** (CRLF) is a federally Threatened species and a CDFW Species of Special Concern. This species requires aquatic habitats for reproduction and inhabits these sites most of the year. The types of aquatic habitats they use include seasonal and permanent ponds, intermittent and perennial streams, springs, well boxes, artificial impoundments (i.e., stock ponds, reservoirs), marshes, dune ponds and lagoons. Preferred aquatic habitat is characterized by dense shoreline or emergent vegetation, such as willows, cattails, and bulrushes, with still or slow-moving water at least 2.3 feet deep (Hayes and Jennings 1989). Ephemeral sites must retain water at least into July/August in order for the tadpoles to reach metamorphosis. Sites that dry completely every few years may have higher quality habitat value because desiccation eliminates their predators, such as non-native fish (Centrarchids and Ictalurids), American bullfrogs (*Lithobates catesbeianus*) and crayfish (*Procambarus* sp.), and maintains higher quality breeding habitat by limiting dense growth of emergent vegetation along the margins (Scott and Rathbun 2010, Doubledee et al. 2003).

CRLFs also use a variety of upland habitats. Adults can be far from water during the winter during migrations between aquatic sites or for aestivation; they move away from aquatic sites when they dry down in the late summer or fall; and, post-metamorphic juveniles disperse away from aquatic sites where they remain in uplands for an unknown number of years. The adult migratory period is late-October through mid-May, and they are nocturnal and undergo movements at night (Bulger et al. 2003). They move into upland habitats in response to rain events (Christopher 2000, Bulger et al. 2003). In mesic habitats along the coast, adults have been found to move through upland habitats up to a total distance of 2 miles (3.2 kilometers) in one season, with the greatest segment without encountering a water source being 0.74 miles (1.2 kilometers) (Bulger et al. 2003). Individuals migrating between aquatic sites used for summer residence and other aquatic sites used for breeding have been found to move overland distances of at least 1.7 miles (2.8 kilometers) (Bulger et al. 2003). In xeric to moderately mesic local climates where populations did not undergo breeding migrations, they also used upland habitats in winter, but remained within 200 feet (60 meters) of water (Rathbun et al. 1993, Christopher 2000, Tatarian 2008). The USFWS uses a 1.0-mile (1.6-kilometer) radius from known localities when evaluating project sites (USFWS 2005) and for determining the extent of critical habitat within upland areas (USFWS 2010a).

While undergoing terrestrial movements, they move through grassland, agricultural fields, forest, scrub, and grazed pastures (Bulger et al. 2003). They have been documented to move overland across slopes exceeding 50%, crossing multiple drainage divides with a minimum elevation change of 2001 feet (610 meters) (Bulger et al. 2003). While occupying upland habitats, the frogs take cover in leaf litter, thatched grasses and thick herbs, and shrubby vegetation such as willows, blackberry thickets, German ivy, and nettles, as well as downed trees and are not found out in the open during the daytime (Rathbun et al. 1993, Christopher 2000). During the summer months (June

to September) the frogs stay in close proximity to water. They may make short movements into adjacent riparian habitat or dense emergent vegetation on the shore, but remain within 16 to 26 feet (5 to 8 meters) of water (Christopher 2000, Scott and Rathbun 2001, Bulger et al. 2003). They also move up and down stream channels (Tartarian 2008). Post-metamorphic juveniles begin moving away from their natal ponds in late-July and August, and presumably use upland or riparian habitats or ephemeral water sources until reaching adulthood.

Numerous records of CRLF are within five (5) miles of the site, and there are four within their known dispersal distance of about one mile (Figure 5). Many of the records from the agricultural fields in the area are over 20 years old, and changes in agricultural irrigation practices in the region have reduced the extent of habitat potentially occupied by this species. Still, the species can utilize agricultural irrigation ponds, irrigation and drainage ditches and prolonged puddles as suitable habitat. Urban development in the region has constructed stormwater basins, including one located at West Battles Road where CRLF has been observed. It is possible that adult frogs moving between these aquatic sites and juveniles could move through the property during the winter rain season when the ground is wet. No suitable ditches, ponds or seasonal aquatic habitat was observed onsite, but frogs could move through the property during rainy winter nights in search of suitable habitat. Frogs are not likely to remain onsite due to lack of cover. CRLF were considered to potentially occur on the site during the winter rain season.

The **California tiger salamander** (population 2; CTS) Santa Barbara County Distinct Population Segment (DPS) is federally Endangered in Santa Barbara County, state listed as Threatened and is on the CDFW Watch List. The species occurs in lower elevation foothills of the Coast Range ranging from Sonoma to Santa Barbara counties, and in the Central Valley from Sacramento to Tulare County. The Santa Barbara County DPS occurs in the southernmost extent of this species' range in the northwestern portion of Santa Barbara County within the Santa Maria Basin Geomorphic Province (USFWS 2016a). CTS inhabit areas of the state that historically had vernal pool complexes and seasonal ponds surrounded by relatively level terrain of grasslands and oak savannah. The distance that a majority individuals occur from breeding pools while in upland habitats has been estimated from a minimum of approximately 0.35 to 0.5 mile (0.6 to 0.8 kilometers) (Trenham and Shaffer 2005, Orloff 2007) to 1.3 miles (2.1 kilometers) (Orloff 2007, Searcy and Shaffer 2008, 2011; Searcy et al. 2013). The maximum distance that adults have been found to move between breeding ponds and upland habitat is 1.4 miles (2.2 kilometers) (Trenham et al. 2001, Orloff 2011), and the Central California DPS is estimated to be capable of migrating up to 1.5 miles (Searcy and Shaffer 2011). CTS were considered Unlikely to occur because there are no known breeding ponds in proximity to the site within their dispersal capabilities, and no suitable habitat is present on the property.

The **monarch butterfly - California overwintering population 1** (*Danaus plexippus plexippus*) is a Candidate for federal listing by the USFWS under the Endangered Species Act. This species undertakes multi-generational migrations of thousands of miles (Center for Biological Diversity et al. 2014). In the late summer, the butterflies leave Canada and the northern United States to their overwintering habitat on the south-central California/Baja California coast or mountains of central Mexico. "Population 1" of the species refers to those that overwinter in California, historically ranging from northern Mendocino County through San Diego County. They roost colonially during the winter in protected groves of blue gum eucalyptus, Monterey pine and Monterey cypress (USFWS 2020). The groves provide indirect sunlight, source of moisture, protection against freezing temperatures, and protection from strong winds and the coastal locations have a mild climate (USFWS 2020). These colonial roost sites are occupied by large numbers of butterflies throughout the winter and the individual sites are generally reused each year. The butterflies cluster together at the roost sites, which have specific microclimates that keep them cool enough to

conserve lipid reserves but do not reach freezing temperatures (Center for Biological Diversity et al. 2014). Overwintering is the most vulnerable element in the monarch life cycle, and over the past 30 years the overwintering population has declined by at least 95% (Schultz et al. 2017). "Autumnal sites" are temporary sites used for roosting that do not persist through the winter and may not be used every year. Roost sites were historically documented from the Santa Maria area, but only a few individuals have been found during surveys in recent decades and the habitat has been lost at some of these locations (CDFW 2024a). Currently, most overwintering sites are closer to the coast (CDFW 2024a). The study area does not support any suitable woodland habitat to be used for overwintering or autumnal congregation, and is located too far from the coast to be used by monarch butterflies in the winter. Still, individuals could fly over the site and potentially forage on agricultural weeds that may be present. No milkweed plants were observed during the field survey, and therefore, breeding monarch butterflies are not expected to be present onsite.

A diverse group of special-status birds are known to occur in the project area, and several were determined to have potential to occur onsite, primarily on a periodic basis while moving through the area during migration and foraging. The following species could potentially stopover or forage onsite:

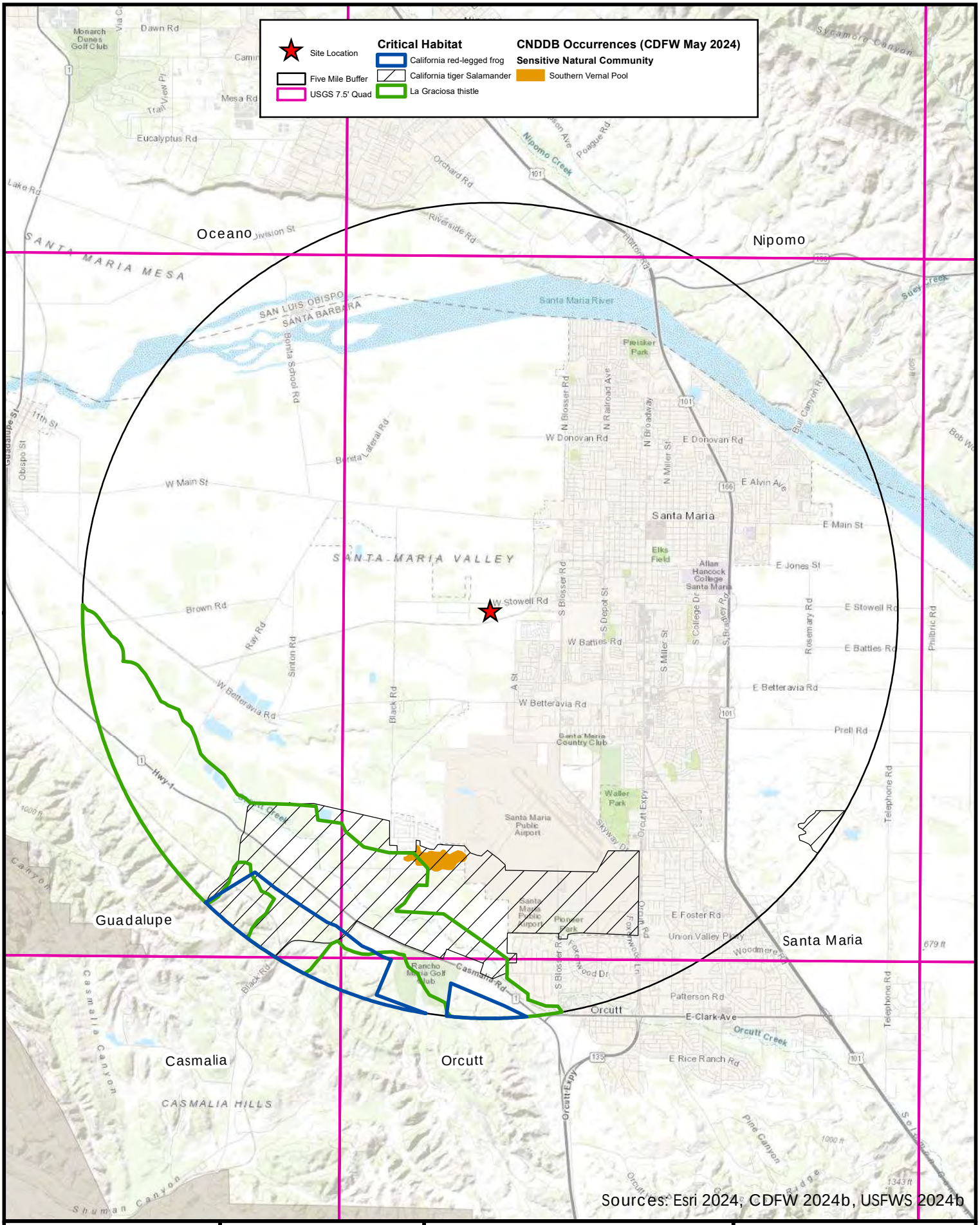
- **American peregrine falcon** (*Falco peregrinus anatum*)
- **California gull** (*Larus californicus*)
- **California horned lark** (*Eremophila alpestris actia*)
- **Ferruginous hawk** (*Buteo regalis*)
- **Prairie falcon** (*Falco mexicanus*)
- **Sharp-shinned hawk** (*Accipiter striatus*)

One palm tree is the only potential bird nesting site on the property. Ground nesting birds would not occur onsite given the regular cycle of disturbance from ongoing farming activities. There are no significant stands of large trees within 250 feet of the site; therefore, raptors would not be expected to roost or nest nearby and be affected by project activities. A hedge row of smaller trees and shrubs is present just offsite to the west of the southern property line that could support nesting birds. A variety of common species that are protected under the Migratory Bird Treaty Act and/or California Fish and Game Code could utilize the palm tree and the offsite hedgerow for nesting. Direct mortality of eggs and/or chicks, nest failure, or nest abandonment are considered significant effects under CEQA. Mitigation measures to reduce potential impacts on nesting birds to less than significant levels are provided at the end of this section.

Special-status bat species could forage over the site, but are unlikely to use the old palm tree for roosting. No guano piles or other indicators of bat use were observed in this area. The **pallid bat** (*Antrozous pallidus*; CDFW Species of Special Concern), the **silver-haired bat** (*Lasionycteris noctivagans*; Sensitive), **Townsend's big-eared bat** (*Corynorhinus townsendii*; CDFW Species of Special Concern), and **western red bat** (*Lasiurus frantzii*; CDFW Species of Special Concern) could forage periodically over the site but there is no quality roosting habitat. Project effects on special-status bat species would be below the level of significance and no mitigation is needed.

3.5.3 Designated Critical Habitat

The study area is not within or near the boundaries of designated critical habitat for any federally listed species, but several critical habitat units are within five miles (Figure 6). Designated critical habitat for the California red-legged frog Unit STB-2 San Antonio Terrace is present to the south.



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Figure 6

Critical Habitat/Sensitive Natural Communities Map

This unit extends from Casmalia through the Casmalia Hills to Highway 1 (USFWS 2010). Critical habitat Unit 1 (western Santa Maria/Orcutt) for the California tiger salamander lies to the south of the project on the Orcutt Dune Sheet mostly outside of urban areas of Santa Maria extending onto Santa Maria Airport lands (USFWS 2004). La Graciosa thistle critical habitat Unit 2 is also present to the south of the study area and surrounds the Highway 1 corridor at the base of the Casmalia and Solomon hills (USFWS 2009). It borders Orcutt Creek to the west of the urban area of Orcutt, but the project site is well-removed from this area. The project will not adversely affect federally-designated critical habitat.

3.5.4 Migratory Birds and Raptors

Special-status and common bird species protected under the MBTA could nest in the palm tree on the property. Bird species that are tolerant of human disturbance may nest in the offsite ornamental trees/bushes associated with the neighboring development to the west. No raptors are expected to nest in the study area due to the amount of regular disturbance surrounding the palm tree and lack of larger trees such as eucalyptus. Additionally, no large stick nests indicative of raptors were seen onsite or in the project area during the survey.

3.5.5 Sensitive Natural Communities

Only one sensitive natural community, Southern Vernal Pool, was recorded in the CNDDB within five miles of the study area (Figure 6), but the CDFW does not maintain an updated inventory for all locations. Other sensitive natural communities recorded for other areas in the Santa Maria Valley, as well as others known to occur in the Central Coast region, were also evaluated for their likelihood to occur in the study area (refer to Appendix C).

Southern Vernal Pools are mapped to the west of the Santa Maria Public Airport (Figure 6). The Santa Barbara Vernal Pool Region includes western and southern portions of Santa Barbara County from the Santa Maria area south and east to western Ventura County (Keeler-Wolf et al. 1998). Therefore, the study area lies within the historic vernal pool region. Although some of the vernal pools in this region have sandy surface soils, many are underlain by relatively impervious soils (i.e., sandstone) and accumulations of clay (Keeler-Wolf et al. 1998), which are not present in the soil unit that occurs onsite. No vernal pools were identified in the study area, and no topographic depressions composed of hydrophytic vernal pool plant species were observed onsite; therefore, this community does not occur onsite and would not be affected by the project.

4.0 IMPACT ANALYSIS AND RECOMMENDED MITIGATION

The types of project effects (or impacts) described below follow the guidelines in CEQA Guidelines *Appendix G* to aid in the environmental review process conducted by the City of Santa Maria. Direct effects are caused by a project at the same time and place, and occur as a direct result of project activities. Indirect effects are caused by a project, but occur at a different time or place, such as in an adjacent area and occurring incidental to project activities. Cumulative effects are those that result from when the effects of the project combine with effects from other projects to compound environmental harm. Mitigation measures to reduce impacts of future construction to a level below significance under CEQA are provided below.

4.1 Direct and Indirect Effects

The project would result in the loss of approximately 33 acres of agricultural lands that are highly disturbed and do not support any native habitat. No special status plants are expected to occur

based on the lack of suitable habitat, but several special status wildlife species could occur onsite seasonally. Project effects to important biological resources may occur during the construction phase of the project, but are unlikely to result in significant effects to larger populations given the disturbed nature of the site, lack of native habitat, or stands of trees and shrubs.

4.1.1 Potential Adverse Effects on Candidate, Sensitive or Special-status Species

A suite of special-status plant and animal species that are known to occur in the site vicinity were evaluated to determine their potential to occur in the study area. Not all species with potential to occur onsite may be directly or indirectly affected by the project. Evaluating the significance level of effects under CEQA involves an assessment of how each species would use the site relative to its life history, what features may be used, and when they would occur relative to when project activities take place.

No rare plant species were found during the seasonally timed, focused botanical survey. As detailed above, the site is composed of bare sandy soils and is actively farmed. Tilling and site preparation activities have removed all vegetation and the potential to support rare plants is low. The surveys occurred during the blooming period of the plant species on the target list, and rainfall conditions were normal and above normal during the last two years. If special status plants were present onsite, they would have been in identifiable condition. Therefore, the survey effort is considered to be conclusive that no special status plants are present onsite, and no additional surveys are recommended. Because there would be no effect of the project on special-status plant species, no mitigation is needed.

Individuals of several special-status animal species have potential to occur in the project impact area on a periodic basis. Most of these species would not be present in the work area, would be able to move away from construction activities, and would not be adversely affected by the project. The California red-legged frog could be present onsite during the winter rain season while moving between areas of suitable habitat. Should initial project activities commence in the winter when the ground is wet, individual CRLF could be directly affected by construction activities. Frogs may be injured or killed during grading and trenching/excavation, and therefore mitigation in the form of avoidance and protection measures are required. Special-status and common birds could utilize the one palm tree for nesting, and be affected if the project's initial clearing and ground disturbance occurs during the nesting bird season. Because the site has no large trees and is within an actively farmed area with substantial on-going human disturbance, raptors are not expected to nest in the palm tree or immediately surrounding the study area. However, mitigation will be required to decrease project effects on nesting birds within the project impact area for the removal of the palm tree.

Other species that were determined to have Potential to occur in the study area are mobile species that could use the site for foraging or on a transitory basis, and would not be significantly affected by the project. Individuals of these species would likely move away from construction disturbance, and would not be directly affected by these activities. Although their behavior could be disrupted, which is a type of effect, the level of effect would be less than significant under CEQA given the large expanses of open space in the region. The nocturnal foraging by special-status bat species would also not be affected, and no roosting habitat is present in the impact area. The special-status animal species for which project effects would be considered less than significant or no effect are monarch butterfly, California gull, California horned lark, ferruginous hawk, prairie falcon, sharp-shinned hawk, pallid bat, silver hair bat, Townsend's big-eared bat, and western red bat.

The loss of approximately 33 acres of agricultural and ruderal habitats would be a less than significant effect on habitat loss for wildlife because no significant resources for wildlife are present in the small impact area and the project area is surrounded by urban and agricultural development. The wildlife species that use the site would be tolerant of human activities (such as common birds). In summary, the project would not substantially: reduce species diversity or abundance; reduce the quality and quantity of nesting areas; limit reproductive capacity through loss of individuals or habitat; or, interfere with natural processes (i.e., fire or flooding) that maintain the native habitats in nearby areas, such as maritime chaparral on Vandenberg Airforce Base. Therefore, the effect of habitat loss for wildlife species would be less than significant pursuant to CEQA.

Because there is no designated critical habitat for federally listed species within or near the study area, there would be no effect of the project on critical habitat. Since the project area has numerous recorded occurrences of the California red-legged frog, and no significant barriers to movement are present between suitable habitat areas, the project could impact frogs moving during the winter rain season. Therefore the following impact statement and recommended mitigation measures are provided.

Impact BIO-1. Construction activities occurring during the winter rain season could directly result in the mortality of migrating California red-legged frogs. This is a potentially significant but mitigable impact.

While the site does not support suitable aquatic habitat for the CLRF, the species is known to occur throughout the project area. Individual frogs could be present in the project impact areas during the winter rain season when they move between aquatic habitats. The species has been documented moving through agricultural fields in close proximity to the site. The California red-legged frog would only be expected to occur in the project impact areas during the winter following substantial rain events when the ground conditions are moist. They would not be present in the work areas during dry periods of the summer and fall. If present in the project area, individuals could be injured or killed by construction activities that commence during the late fall, winter and early spring after sufficient rainfall. Because the frog is federally listed as Threatened, individuals cannot be affected or "taken" without authorization from the USFWS. The following mitigation measures would ensure the project avoids adversely affecting migrating California red-legged frogs that may be present onsite during the winter rain season.

Mitigation Measure BIO-1a: Attempt to avoid initial ground disturbance during the winter months. Initial site disturbance and grading for construction should be planned to occur outside the winter rain season in which frogs move through upland habitats. Initial site grading should occur between May 1st and October 31th to avoid impacts to frogs using upland habitat during the rainy season. If this is not feasible, Mitigation Measures BIO-1c, -1d and -1e should be followed. In any season, Mitigation Measures BIO-1b, -1d and -1e shall be implemented because these measures will avoid or minimize project impacts on other wildlife species.

Mitigation Measure BIO-1b: Prepare and present a Worker Environmental Awareness Program. A qualified biologist shall prepare a Worker Environmental Awareness Program that will be presented to all project personnel. This program shall detail measures to avoid and minimize impacts on the CRLF and other biological resources such as nesting birds. It shall include a description of the CRLF and other special-status species potentially occurring on the project site and their natural history; the status of the species and their protection under environmental laws and regulations; and, the penalties for take. Recommendations shall be given as to actions to avoid "take" should a special-status species be found on the project site. All project personnel who attended the training shall sign an attendance sheet. The program shall be repeated for any new

crews that arrive subsequently on the project site. The applicant shall provide the sign in sheets to the City to document the trainings.

Mitigation Measure BIO-1c: For initial site disturbance during winter months, conduct a California red-legged frog preconstruction survey. Within 48 hours prior to initial ground disturbance occurring from November 1st through April 30th, a qualified biologist shall survey all areas proposed for temporary and permanent disturbance to ensure no CRLF are present. If any California red-legged frogs are found in the work area, the animal shall be allowed to leave the work area under its own volition. If the frog does not leave the work area, work shall be delayed or halted in that location plus a 50 foot buffer until the frog can be captured and relocated to suitable habitat away from project impacts pursuant to authorization required by the USFWS. A report describing the methods and results of the survey shall be prepared by the biologist and submitted to the City.

Mitigation Measure BIO-1d: Install high-visibility construction fencing along the site's southern, eastern and western perimeters to exclude CRLF. A high-visibility construction fence (i.e., orange protection fence) together with a silt fence, or an approved wildlife exclusion fence (i.e., ERTEC Triple-function E-fence), shall be erected along the perimeter of the site. To prevent animals from getting under the fence, the bottom edge of the fence shall be trenched into the ground to a depth of at least six (6) inches, and the soil recompacted along either side. The fence shall remain in place throughout all construction and checked weekly by construction personnel for needed maintenance. The fence shall be inspected by construction personnel prior to the start of work each day in which at least one-quarter inch of precipitation has fallen within the prior 24 hours for California red-legged frogs that may have entered the work area or are disoriented on the outside of the fence. If any California red-legged frogs are found within the work area, the project biologist shall be contacted to inspect the site. If the animal(s) do not leave the site on their own volition, work shall be halted within 50 feet of the frog until the frog can be captured and relocated to suitable habitat away from project impacts pursuant to any authorization required by USFWS or USFWS otherwise authorizes work to proceed.

Mitigation Measure BIO-1e: Employ measures to prevent entrapment of CRLF in open excavations and trenches. During the period in which there are open trenches or excavations more than six (6) inches deep, such as during the excavation for building foundations or utility lines, escape ramps shall be installed so that CRLF and other wildlife that may have become entrapped have the ability to escape. Escape ramps are to consist of a 2:1 sloped soil area leading from the bottom to ground level. Alternatively, as a second option, a qualified biologist shall inspect open trenches each day prior to the start of work for entrapped animals. Alternatively, as a third option is that trenches/excavations can be completely covered with plywood, steel plates or similar material during overnight periods. If a California red-legged frog is located in a trench by construction personnel, the qualified biologist shall be contacted immediately to assist with relocation upon authorization from USFWS. For common wildlife, the biologist shall capture and relocate the individual out of harm's way. Work shall be halted until the entrapped animal has been relocated.

Implementation of these mitigation measures would reduce potential project effects on California red-legged frogs to a less than significant level.

Impact BIO-2. Construction activities could directly impact nesting of special-status avian species as well as birds protected under the Migratory Bird Treaty Act and California Fish and Game Code. This is a potentially significant but mitigable impact.

If construction activities occur during the nesting season (February 1st to August 31st), impacts on protected nesting birds could occur. Active nests containing eggs and/or young could be killed during removal of the one palm tree. Other species could nest in ornamental landscaping on adjacent property outside of project impact limits but be in close enough proximity that their nesting behavior could be affected by construction disturbance. The effects of construction activities on nesting birds would be limited to the seasonal time period that birds nest in this area; if the nesting season is avoided, no adverse effects are expected. The following mitigation measures would reduce potential project impacts to nesting birds to a less than significant level.

Mitigation Measure BIO-2a: If feasible, conduct the initial construction activities (vegetation removal and grading) outside of the nesting season. All initial site disturbance should be limited to the time period between September 1st to October 31th, if feasible to avoid construction during the nesting season (February 1st to August 31st) and to avoid the seasonal work restriction associated with the California red-legged frog (November 1st to April 30th)(see Mitigation Measure BIO-1a). Tree removal should occur between September 1st and January 31st to avoid the nesting period. If vegetation removal and grading cannot feasibly be conducted during this time period, then Mitigation Measure BIO-2b should be followed.

Mitigation Measure BIO-2b: Conduct a preconstruction nesting bird survey and avoid active nests. For any initial construction (vegetation removal and grading) scheduled to start between February 1st and August 31st, a qualified biologist shall conduct a preconstruction survey for nesting birds within a 250-foot buffer of project impact areas. The survey shall be conducted within seven days before the initiation of construction activities occurring during this time period. During this survey, the qualified biologist shall search for birds exhibiting nesting behavior and inspect all potential nest substrates in the impact and buffer areas. Any nests identified shall be monitored to determine if they are active. If no active nests are found, construction may proceed. If an active nest is found within 50 feet of the construction area, the biologist, in consultation with the City and CDFW as appropriate, shall determine the extent of a buffer to be established around the nest. The buffer will be delineated with flagging, and no work shall take place within the buffer area until the young have left the nest, as determined by the qualified biologist. The applicant shall submit to the City a report from the qualified biologist documenting the methods and results of the survey.

Implementation of these mitigation measures would reduce potential project effects on protected nesting birds to a less than significant level.

4.1.2 Adverse Effects on Riparian Habitat or Sensitive Natural Communities

As detailed above, no riparian habitat or sensitive natural communities are present on the project site. No drainage features or wetland habitats are present onsite or in close proximity that could be indirectly affected by stormwater runoff. Best Management Practices (BMPs) to be developed as part of the project's anticipated Stormwater Pollution Prevention Plan would be adequate to ensure project activities do not adversely affect offsite resources. The following BMPs are recommended for the prevention of erosion, sedimentation, and toxic substances from leaving the site during construction:

1. Spill kits shall be maintained on the site to ensure project-related spills of hazardous materials are cleaned up immediately.
2. Vehicles or construction equipment stored overnight shall be checked for leaks and drip pans or ground covers used to minimize ground contamination. All equipment and vehicles should be checked and maintained on a daily basis to ensure proper operation and to avoid potential leaks or spills.
3. No concrete washout shall be conducted on the site outside of an appropriate containment system. Washing of equipment, tools, etc. should not be allowed in any location where the tainted water could leave the property.
4. The use of chemicals, fuels, lubricants, or biocides shall be in compliance with all local, state, and federal regulations. All uses of such compounds shall observe label and other restrictions mandated by the United States Environmental Protection Agency, California Department of Food and Agriculture, and other state and federal legislation.
5. Dust suppression shall occur during construction activities when necessary to meet air quality standards and protect neighboring properties. BMPs for dust abatement are likely to be a component of the project's construction documents.
6. The City will likely require that a *Sediment and Erosion Control Plan* and/or *Stormwater Pollution Prevention Plan* be prepared by a qualified engineer. The use of silt fence, straw wattles, erosion control blankets, straw bales, sandbags, fiber rolls and other appropriate techniques should be maintained onsite to prevent erosion.

Incorporation of the above-recommended BMPs would avoid indirect effects to offsite biological resources during the construction period.

4.1.3 Protected Wetlands

No wetlands with hydrophytic vegetation or vernal pools are present onsite. The sandy soils in the study area lack an underlying impervious sandstone or clay layer characteristic of other vernal pools in the region (Keeler-Wolf et al. 1998). The project will not affect any naturally-occurring or potentially jurisdictional wetlands.

4.1.4 Interference with Movement of Native Fish or Wildlife, Wildlife Corridors, and Wildlife Nursery Sites

The proposed project would not affect the movement of native fish because all work will be conducted in upland areas outside of stream channels that could support fish. The project site will be fenced and would be a barrier to the movement of medium- to large-sized mammals. The fenced area will be adjacent to other developed or agricultural areas and there are no habitat resources on immediately adjacent sites that terrestrial wildlife would move to. The project would not substantially fragment, eliminate, or otherwise disrupt foraging areas and/or access to food sources. Additionally, the project would not substantially limit or fragment the geographic range of species, their movement, or dispersal corridors. Project impacts on the movement of native fish or wildlife, wildlife corridors or wildlife nursery sites would be less than significant.

4.1.5 Conflicts with Local Policies or Ordinances, Such as Tree Preservation

The City of Santa Maria oversees land use planning through implementation of the City's *General Plan*. Biological resources are specifically addressed in the *General Plan Resources Management Element* (City of Santa Maria 2001). The project would not conflict with the policies related to the

protection of biological resources described therein. The element describes the vernal pool complex to the southwest of the Airport as a significant wildlife habitat area. This habitat is outside of the project footprint and there would be no direct effects on protected habitats or trees, and mitigation measures are provided herein to ensure no indirect effects occur. Therefore, the project would not conflict with any local policies or ordinances related to biological resources.

4.1.6 Conflicts with Conservation Plans

No local, regional or state conservation plans have been prepared for the project site or immediate area. The project site is not located in any Natural Community Conservation Plan area. Therefore, there would be no conflicts with these plans and no mitigation is required.

4.2 Cumulative Effects

The proposed project would result in the loss of approximately 33 acres of agricultural and disturbed lands. The site is located in the West Stowell Specific Plan area, which anticipates future development of this site. Other development projects in this general area (i.e., Driscoll's to the west and Maxco Box Facility to the east) are agriculturally focused commercial facilities that have been designed to preserve the area's designated agriculture and industrial character. No intact stands of important biological resources remain in this area, however some wildlife such as the California red-legged frog has been able to persist amongst the farm fields and in nearby stormwater management basins. Focused wildlife preconstruction surveys are detailed above to confirm that no special-status wildlife occur onsite, but if found, measures to avoid or mitigate project effects are described. Because all project effects will be fully mitigated under CEQA, the project will not contribute significantly to cumulative effects on biological resources in the area.

5.0 CONCLUSIONS

The project is a proposed commercial facility located in an agricultural and industrial area of western Santa Maria on the southside of West Stowell Road. The property is an existing 33-acre agricultural field within the West Stowell Road Specific Plan area, and has commercial development to the west and new development occurring to the east. No sensitive habitat areas are present onsite due to the long history of farming, and no special status plants are expected to be affected by the project. Still, potential occurs for the California red-legged frog to move across the site in search of suitable aquatic habitat during the winter rain season. A variety of birds could also utilize the palm tree on the site and ornamental plantings on neighboring developments for nesting. As such, recommended mitigation measures were developed to ensure the project avoids or minimizes potential impacts to these special status biological resources. This analysis determined that the proposed project does not meet any of the criteria that trigger mandatory findings of significance under CEQA. With the incorporation of the recommended mitigation measures and guidance as described herein, development of the project would not result in significant impacts to biological resources onsite or in the region.

6.0 REFERENCES

Alvarez, J.A., M.A. Shea, J.T. Wilcox, M.L. Allaback, S.M. Foster, G.E. Padgett-Flohr, and J.L. Haire. 2013. Sympatry in California tiger salamander and California red-legged frog breeding habitat within their overlapping range. California Fish and Game 99(1):42-48.

Audubon. 2024. Guide to North American Birds. Accessed via: https://www.audubon.org/bird-guide in September 2023.

Baumberger, K.L., M.V. Eitzel, M.E. Kirby, and M.H. Horn. 2019. Movement and habitat selection of the western spadefoot (*Spea hammondii*) in southern California. PLOS ONE 14(10):e0222532.

Bolster, B.C. (editor). 1998. Draft Terrestrial Mammal Species of Special Concern in California. Contributing authors: P.V. Brylski, P.W. Collins, E.D. Pierson, W.E. Rainey and T.E. Kucera. Prepared for California Department of Fish and Game, Wildlife Management Division, Nongame Bird and Mammal Conservation Program. Contract FG3146WM.

Brower, L.P., L.S. Fink, and P. Walford. 2006. Fueling the fall migration of the monarch butterfly. Integrative and Comparative Biology 46:1123-1142.

Bulger, J.B., N.J. Scott, and R.B. Seymour. 2003. Terrestrial activity and conservation of adult California red-legged frogs *Rana aurora draytonii* in coastal forests and grasslands. Biological Conservation 110:85-95.

Calflora. 2024. Information on Wild California Plants for Conservation, Education, and Appreciation. Berkeley, California. Accessed via http://www.calflora.org/ in June 2024.

California Department of Fish and Wildlife (CDFW). 2019 (April 4). Evaluation of the Petition from the Xerces Society, Defenders of Wildlife, and Center for Food Safety to List Four Species of Bumble Bees as Endangered Under the California Endangered Species Act. Report to the Fish and Game Commission.

California Department of Fish and Wildlife (CDFW). 2024a. California Natural Diversity Database (CNDDB). Commercial version accessed May 2024.

California Department of Fish and Wildlife (CDFW). 2024b. Special Animals List. Biogeographic Data Branch, California Natural Diversity Database, Sacramento, California.

California Department of Fish and Wildlife (CDFW). 2024c. Special Vascular Plants, Bryophytes, and Lichens List. California Natural Diversity Database, Sacramento, California.

California Department of Fish and Wildlife (CDFW). 2024d. Vegetation Classification and Mapping Program (VegCAMP). Accessed via: https://www.wildlife.ca.gov/Data/VegCAMP in April and June 2024.

California Department of Fish and Wildlife (CDFW). 2024e. California Wildlife Habitat Relationships (CWHR) System. Accessed via: https://www.wildlife.ca.gov/data/cwhr in June 2024.

California Herps. 2024. A Guide to the Amphibians and Reptiles of California. Accessed via: http://www.californiaherps.com in June 2024.

California Invasive Plant Council (Cal-IPC). 2024. The Cal-IPC Inventory. Accessed via: https://www.cal-ipc.org/plants/inventory/ in June 2024.

California Native Plant Society (CNPS). 2024. Rare Plant Inventory. Online edition V9.5. Rare Plant Program. Accessed via: http://www.rareplants.cnps.org in June 2024.

Center for Biological Diversity, Center for Food Safety, The Xerces Society, and Dr. Lincoln Brower. 2014 (August 26). Petition to Protect the Monarch Butterfly (*Danaus plexippus plexippus*) Under the Endangered Species Act. Submitted to the U.S. Secretary of Interior, U.S. Fish and Wildlife Service.

Central Coast Bat Survey. 2024. Central Coast Bats. Accessed online via: https://centralcoastbatsurvey.org/ in June 2024.

Christopher, S.V. 2018. Ecology of the western spadefoot in eastern San Luis Obispo County. Central Coast Chapter of the Wildlife Society Annual Wildlife Symposium, November 9, 2018.

Christopher, S.V. 2000 (November). Natural History and Ecology of the California Red-legged Frog and Bullfrog at the Waterfowl Ponds, Vandenberg Air Force Base, California. Prepared for 30 CES/CEV, Vandenberg Air Force Base. Department of Ecology, Evolution, and Marine Biology, University of California, Santa Barbara and the Santa Barbara Museum of Natural History.

The Cornell Lab of Ornithology. 2024a. eBird. Accessed via: https://ebird.org in September 2023.

The Cornell Lab of Ornithology. 2024b. All About Birds. Accessed via: https://www.allaboutbirds.org in June 2024.

City of Santa Maria. 1994. West Stowell Specific Plan (Fugro West, Inc.). Prepared for the Community Development Department.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1992. Classification of Wetlands and Deepwater Habitats of the United States. United States Department of the Interior, Fish and Wildlife Service, Office of Biological Services, Washington, D.C. FWS/OBS-79/31.

Doubledee, R.A., E.B. Muller and R.M. Nisbet. 2003. Bullfrogs, disturbance regimes, and the persistence of California red-legged frogs. Journal of Wildlife Management 67(2):424-438.

Fisher, R.N. and H.B. Shaffer. 1996. The decline of amphibians in California's Great Central Valley. Conservation Biology 10(5):1387-1397.

Fisher, R.N., A.V. Suarez, and T.J. Case. 2002. Spatial patterns in the abundance of the coastal horned lizard. Conservation Biology 16(1):205-215.

Google Earth. 2024. Google Earth Pro Version 7.3.6.9345. 12/1985 to 6/2024.

Gruver, J.C. and D.A. Keinath. 2006 (October 25). Townsend's Big-eared Bat (*Corynorhinus townsendii*): A Technical Conservation Assessment. Prepared for the USDA Forest Service, Rocky Mountain Region, Species Conservation Project.

Hayes, M. P., and M. R. Jennings. 1989. Habitat correlates of the distribution of the California red-legged frog (*Rana aurora draytonii*) and the foothill yellow-legged frog (*Rana boylii*): Implications for management. Pages 144-158 *in* R. E. Szaro, K. E. Severson and D. R. Patton (technical coordinators). Management of amphibians, reptiles and small mammals in North America. July 19-21, 1988 - Flagstaff, Arizona. USDA General Technical Report RM-166:1-458.

Jennings, M. R., and M. P. Hayes. 1994. Amphibian and reptile species of special concern in California, 1 November 1994. California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California. 255 pp.

Jepson Flora Project (editors). 2024. Jepson eFlora. The Jepson Herbarium, University of California, Berkeley. Accessed via: http://ucjeps.berkeley.edu/eflora/ in June 2024.

Keeler-Wolf, T., D.R. Elam, K. Lewis, and S.A. Flint. 1998 (May). California Vernal Pool Assessment Preliminary Report. California Department of Fish and Game.

Kuhnz, L.A. 2000. Microhabitats and home range of the California legless lizard using biotelemetry. Master's Thesis, San Jose State University.

Lehman, P.E. 2022 (May). The Birds of Santa Barbara County, California. Accessed via: http://sbcobirding.com/lehmanbosbc.html in June 2024.

Morey, S.R. 1998. Pool duration influences age and body mass at metamorphosis in the western spadefoot toad: Implications for vernal pool conservation. Pages 86-91 *in* C.W. Witham, E.T. Bauder, D. Belk, W.R. Ferren, Jr., and R. Ornduff (editors). Ecology, Conservation and Management of Vernal Pool Ecosystems, Proceedings from a 1996 conference. California Native Plant Society, Sacramento, California.

National Oceanic and Atmospheric Administration (NOAA). 2024. Observed Precipitation, Water Year Archive. California Nevada River Forecast Center. Accessed via: https://www.cnrfc.noaa.gov/?product=PPS in June 2024.

National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS). 2005 (September). 50 CFR Part 226. Endangered and Threatened Species; Designation of Critical Habitat for Seven Evolutionary Significant Units of Pacific Salmon and Steelhead in California. United States Department of Commerce. Federal Register 70(170):54288-52627.

Natural Resources Conservation Service (NRCS). 2024. Web Soil Survey. National Cooperative Soil Survey, U.S. Department of Agriculture. Accessed via: http://websoilsurvey.nrcs.usda.gov/ in June 2024.

Orloff, S.G. 2007. Migratory movements of California tiger salamander in upland habitat — A five-year study, Pittsburg, California. Prepared for Baily Estates LLC.

Orloff, S.G. 2011. Movement patterns and migration distances in an upland population of California tiger salamander (*Ambystoma californiense*). Herpetological Conservation and Biology 6:266-276.

Sawyer, J. O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento, California.

Schultz, C.B., L.M. Brown, E. Pelton, and E.E. Crone. 2017. Citizen science monitoring demonstrates dramatic declines of monarch butterflies in western North America. Biological Conservation 214:343-346.

Scott, N. J., Jr., and G. B Rathbun. 2001 (September). Biology of the aquatic vertebrates of coastal San Luis Obispo County, California: A study of the effects of highway bridge construction. Piedras Blancas Field Station, Western Ecology Research Center, U.S. Geological Survey, San Simeon, California. Prepared for California Department of Transportation, San Luis Obispo, California.

Scott, N.J., Jr., and G. B. Rathbun. 2010 (March). California Red-legged Frog Workshop. Elkhorn Slough Coastal Training Program.

Searcy, C.A. and H.B. Shaffer. 2008. Calculating biologically accurate mitigation credits: insights from the California tiger salamander. Conservation Biology 22:997-1005.

Searcy, C.A. and H.B. Shaffer. 2011. Determining the migration distance of a vagile vernal pool specialist: How much land is required for conservation of California tiger salamander: Pages 73-87 *In* D.G. Alexander and R.A Schlising (editors) Research and recovery in vernal pool landscapes. Studies from the Herbarium, Number 16. California State University, Chico, California.

Searcy, C.A., E. Gabbai-Saldate, and H.B. Shaffer. 2013. Microhabitat use and migration distance of an endangered grassland amphibian. Biological Conservation 158:80-87.

Shaffer, H.B. and P.C. Trenham. 2004. *Ambystoma californiense* Gray 1853, California Tiger Salamander. Pages 1093-1102 *In* Amphibian Declines: The Conservation Status of United States Species (M. Lannoo, editor). University of California Press.

Shaffer, H.B., G.B. Pauly, J.C. Oliver, and P.C. Trenham. 2004. The molecular phylogenetics of endangerment: cryptic variation and historical phylogeography of the California tiger salamander, *Ambystoma californiense*. Molecular Ecology 13:3033-3049.

Tatarian, P.J. 2008. Movement patterns of California red-legged frogs (*Rana draytonii*) in an inland California environment. Herpetological Conservation and Biology 3(2):155-169.

Thomson, R.C., A.N. Wright, and H.B. Shaffer. 2016. California Amphibian and Reptile Species of Special Concern. University of California Press, Oakland, California.

Thorp, R.W., D.S. Horning, Jr. and L.L. Dunning. 1983. Bumble Bees and Cuckoo Bumble Bees of California (Hymenoptera: Apidae). Bulletin of the California Insect Survey. Volume 23. University of California Press, Berkeley, California.

Trenham, P.C. 2001. Terrestrial habitat use by adult California tiger salamanders. Journal of Herpetology 35:343-346.

Trenham P.C. and H.B. Shaffer. 2005. Amphibian upland habitat use and its consequences for population viability. Ecological Applications 15:1158–1168.

Trenham, P.C., H.B. Shaffer, W.D. Koenig, and M.R. Stromberg. 2000. Life history and demographic variation in the California tiger salamander. Copeia 2000(2):365-377.

Trenham, P.C., W. Koenig, and H.B. Shaffer. 2001. Spatially autocorrelated demography and interpond dispersal in the California tiger salamander, *Ambystoma californiense*. Ecology 82:3519-3530.

United States Fish and Wildlife Service (USFWS). 2004 (November 24). Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the California Tiger Salamander (*Ambystoma californiense*) in Santa Barbara County; Final Rule. Federal Register 69(226):68568-68609.

United States Fish and Wildlife Service (USFWS). 2005 (August 15). Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog.

United States Fish and Wildlife Service (USFWS). 2009. Endangered and Threatened Wildlife and Plants: Revised Designation of Critical Habitat for *Cirsium loncholepis* (La Graciosa Thistle). Federal Register 74(211):56978-57046.

United States Fish and Wildlife Service (USFWS). 2010. Endangered and Threatened Wildlife and Plants: Revised Designation of Critical Habitat for California Red-legged Frog; Final Rule. Federal Register 75(51):12816-12959.

United States Fish and Wildlife Service (USFWS). 2020 (September). Monarch (*Danaus plexippus*) Species Status Assessment Report. Version 2.1.

United States Fish and Wildlife Service (USFWS). 2021. Birds of Conservation Concern 2021. Migratory Bird Program.

United States Fish and Wildlife Service (USFWS). 2022 (July). California Tiger Salamander (*Ambystoma californiense*) Santa Barbara County Distinct Population Segment 5-Year Review: Evaluation and Summary. Ventura Fish and Wildlife Office, Ventura, California.

United States Fish and Wildlife Service (USFWS). 2024a. National Wetlands Inventory. U.S. Department of the Interior, Washington, D.C. Accessed via: http://www.fws.gov/wetlands/ in June 2024.

United States Fish and Wildlife Service (USFWS). 2024b. Threatened and Endangered Species Active Critical Habitat Report. ECOS Environmental Conservation Online System. Accessed via: https://ecos.fws.gov/ecp/report/table/critical-habitat.html in May 2024.

United States Fish and Wildlife Service (USFWS). 2024c. Species Reports. ECOS Environmental Conservation Online System. Accessed via: https://ecos.fws.gov/ecp/species-reports in May 2024.

Wang, I.J., W.K. Savage, and H.B. Shaffer. 2009. Landscape genetics and least-cost path analysis reveal unexpected dispersal routes in the California tiger salamander (*Ambystoma californiense*). Molecular Ecology 2009(18):1365-1374.

Weather Spark. 2024. The Weather Year Round Anywhere on Earth. Accessed via: https://weatherspark.com/ in June 2024.

Western Regional Climate Center. 2024. Cooperative Climatological Data Summaries. National Oceanic and Atmospheric Administration. Accessed via: https://wrcc.dri.edu/Climate/west_coop_summaries.php in June 2024.

The Xerces Society for Invertebrate Conservation, Defenders of Wildlife, and Center for Food Safety. 2018 (October). A Petition to the State of California Fish and Game Commission to List the Crotch Bumble Bee (*Bombus crotchii*), Franklin's Bumble Bee (*Bombus franklini*), Suckley Cuckoo Bumble Bee (*Bombus suckleyi*) and Western Bumble Bee (*Bombus occidentalis*) as Endangered Under the California Endangered Species Act.

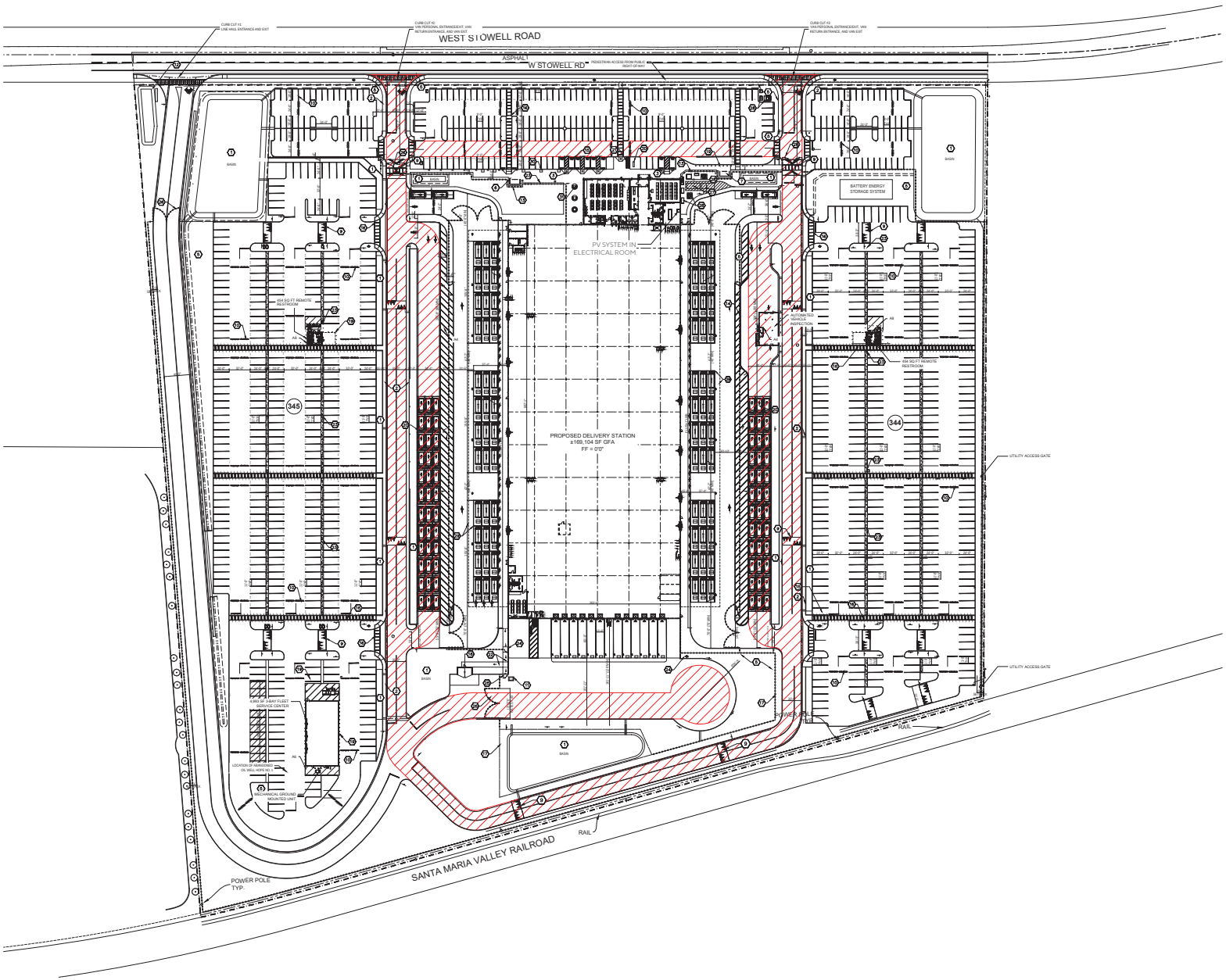
Xerces Society for Invertebrate Conservation. 2024. Obscure Bumble Bee (*Bombus caliginosus*). Accessed via: https://xerces.org/endangered-species/species-profiles/at-risk-bumble-bees/obscure-bumble-bee in June 2024.

Yasuda, C. 2012 (May). California Legless Lizard, *Anniella pulchra*. U.S. Forest Service, Species Account.

APPENDIX A

Site Plans

KMA



KEYNOTES

1. STORMWATER MANAGEMENT AS REQUIRED BY CODE
2. CONCRETE SIDEWALK
3. ACCESSIBLE CURB RAMP
4. RIDE SHARE DROP-OFF
5. LANDSCAPE
6. PREFABRICATED SMOKING SHELTER
7. RIDE-SHARE SHELTER
8. WHEEL STOP
9. SPEED HUMP / PEDESTRIAN TABLE
10. SPEED BUMP
11. 4'x6' TRUCK YARD SPILL KIT SHED (BY TENANT) ON 6'X8' CONCRETE PAD
12. SIGNAGE PER SIGNAGE AND STRIPING PLAN
13. PEDESTRIAN BARRIER FENCE PER SITE DETAILS
14. STRIPED TRAFFIC SEPARATION WITH JERSEY BARRIERS (OR EQUAL)
15. ACCESSIBLE PARKING STALL
16. STRIPED PEDESTRIAN ACCESS
17. YARD PERIMETER SECURITY FENCE
18. TRASH ENCLOSURE
19. BOLLARDS PER SITE PLAN ENLARGEMENTS AND SITE DETAILS
20. EMPLOYEE MUSTER AREA SIGNAGE PER SIGNAGE AND STRIPING PLAN
21. BIKE RACKS
22. 8' WIDE CONCRETE SIDEWALK (5% MAX SLOPE) WITH GUARDRAILS AND LANDINGS AS REQUIRED
23. TRASH CAN ON CONCRETE PAD
24. RETAINING WALL WITH GUARD RAIL AS REQUIRED, PER STRUCTURAL PLANS
25. 5' WIDE MAIN GATE WITH LOCKING HARDWARE
26. PAIR OF 8'-0"H GALVANIZED MANUAL SWING GATES WITH DROP ROD AND LOCKING HARDWARE. IS REQUIRED, PROVIDE GATE WITH RUBBER ROLLERS OR TIRED. IN-GROUND TRACK SYSTEMS ARE NOT ALLOWED
27. EMERGENCY MOBILE GENERATOR PARKING
28. ELECTRICAL EQUIPMENT WITH BOLLARD PROTECTION PER ELECTRICAL PLANS
29. BUILDING CANOPY AND COLUMNS PER ARCHITECTURAL PLAN
30. BENCH
31. OUTDOOR BREAK AREA
32. LOADING ZONE SECURITY FENCE
33. 42" HIGH CABLE RAILING FENCE
34. 8' HIGH BLACK TUBULAR FENCE

LEGEND:

- 42" HIGH CABLE RAILING FENCE
- 8' HIGH BLACK TUBULAR FENCE
- PROPERTY LINE
- 30'-0" (TYPICAL) WIDE FIRE LANE (HATCHED), 24'-0" AT NORTH ELEVATION, EXTENT OF FIRE LANE CONTINUOUS CURB PAINTED RED & MARKED WITH "FIRE LANE NO PARKING" PER THE FIRE DEPARTMENT HAVING JURISDICTION

REQUIRED PARKING

WAREHOUSE	157,507 SF	1 PER 1,040 SF	151	STALLS
OFFICE	11,597 SF	1 PER 260 SF	45	STALLS
TOTALS	169,104 SF		196	STALLS REQUIRED

PROPOSED PARKING

STANDARD STALLS (9' x 19')	210	STALLS
EV CAPABLE STALLS*	54	STALLS
HANDICAP STALLS	8	STALLS
TOTAL PARKING PROVIDED	272	STALLS

*ELECTRONIC VEHICLE CHARGING STATIONS (EVCS) 25% OF OVERALL EV CAPABLE STALLS 14 STALLS

DELIVERY VAN PARKING

VAN STALLS (11' x 27')	504 STALLS
EVCS VAN STALLS (11' X 27')	202 STALLS
TOTAL DELIVERY VAN PARKING	706 STALLS

SEMI TRUCK PARKING

DOCK POSITIONS (53') 12 STALLS

HEIGHT LIMIT

MAXIMUM: 40'-0" PER SANTA MARIA ZONING
PROPOSED: *MAXIMUM HEIGHT OF ±45'-0"

*REQUEST FOR A MODIFICATION TO THE MAX BUILDING HEIGHT.

SEEFRIED INDUSTRIAL PROPERTIES

DISTRIBUTION CENTER

Santa Maria, CA

SITE PLAN

0 60' 120'

Architecture. Design. Relationships.

A1

Scale 1" = 60'-0"
Job No. 2024-0141
Date 2025-04-16

APPENDIX B

Photo Plate

KMA

Photo Plate



Photo 1. Easterly view of the northern property boundary along W. Stowell Road showing bare sandy soils and recently planted strawberry field.



Photo 2. View of the western property line showing chain link fence separating the site from commercial and agricultural areas to the west.



Photo 3. View of irrigation system at western property line with pipe irrigation laid throughout the site.



Photo 4. Easterly view of recently planted strawberry field with irrigation system in place.



Photo 5. Easterly view of the southern property line adjacent to the Santa Maria Valley Railroad showing a well maintained agricultural field devoid of weeds or other vegetation.



Photo 6. Northerly view of old well house and infrastructure. Note one lone palm tree planted onsite.



Photo 7. Southerly view along the eastern property line showing bare soils and stockpiled agricultural materials.



Photo 8. Northerly view along the eastern property line showing chain link fence separating site from neighboring property currently being developed.

APPENDIX C

Special Status Species Table

KMA

Special-status Biological Resources Summary

Common Name	Scientific Name	Fed	CA	CRPR	Ecological Information	Evaluation of Occurrence/ Site Suitability / Distribution
PLANTS/LICHENS/BRYOPHYTES						
Black-flowered figwort	*Scrophularia atrata*	—	—	1B.2	Perennial herb; coniferous forest, chaparral, coastal dunes, coastal scrub and riparian scrub on sand or diatomaceous shale; 10-500 meters in elevation; blooms March to July.	**Not expected.** No suitable habitat is present as species occurs in coastal hills and dunes. Distribution is from Avila Beach to Point Conception, extending from the coast inland to Orcutt/Lompoc, and the Santa Barbara south coast. Many populations are known from the Casmalia Hills, but not recorded in the Santa Maria Valley.
Blochman's leafy daisy	*Erigeron blochmaniae*	—	—	1B.2	Perennial rhizomatous herb; stabilized coastal dunes and coastal scrub; 3-45 meters in elevation; blooms June to August.	**Not expected.** Although sands are present onsite, the entire study area has been greatly modified by agricultural development. Occurs in dunes and old dune systems from Morro Bay and Los Osos to Vandenberg SFB. Locally recorded along Black Road.
Blushing layia	*Layia erubescens*	—	—	1B.2	Annual herb; coastal dunes and openings in coastal scrub on loose, fine sand of stabilized dunes and sandhills; 10-245 meters in elevation; blooms February to June.	**Not expected.** Although sands are present onsite, the entire study area has been greatly modified by agricultural development. Species occurs from Morro Bay, Nipomo, and western Santa Barbara Co. Historical record from Santa Maria has a vague location and "needs fieldwork".
Dune larkspur	*Delphinium parryi* ssp. *blochmaniae*	—	—	1B.2	Perennial herb; maritime chaparral and coastal dunes on sandy soils; 0-200 meters in elevation; blooms April to June.	**Not expected.** Although sands are present onsite, the entire study area has been greatly modified by agricultural development. Occurs from Indian Knob, Oceano Dunes, Nipomo Mesa to Lompoc. Historic records from Santa Maria are imprecise and "need fieldwork".

Common Name	Scientific Name	Fed	CA	CRPR	Ecological Information	Evaluation of Occurrence/ Site Suitability / Distribution
Hoover's bent grass	*Agrostis hooveri*	—	—	1B.2	Stoloniferous perennial herb; chaparral, cismontane woodland, and valley and foothill grassland habitats in sandy soils; 60-600 meters in elevation; blooms April to July.	**Not expected.** Although sandy soils are present, the entire site has been greatly disturbed by agriculture that would remove this perennial species. Found in mountainous areas from San Luis Obispo to Lompoc. Not recorded from the Santa Maria Valley, and the closest records are from the Casmalia Hills.
Kellogg's horkelia	*Horkelia cuneata* var. *sericea*	—	—	1B.1	Perennial herb; openings in coniferous forest, maritime chaparral, coastal dunes and coastal scrub on sandy or gravelly soils; 10-200 meters in elevation; blooms April to September.	**Not expected.** Although sands are present onsite, the entire study area has been greatly modified by agricultural development. Species has a wide range from Point Reyes to Point Conception in coastal areas. Recorded locally from the Solomon Hills. Perennial species that would have been seen during the surveys.
La Graciosa thistle	*Cirsium scariosum* var. *loncholepis*	E	T	1B.1	Perennial herb; mesic sites in cismontane woodland, coastal dunes, coastal scrub, brackish marshes and swamps and valley and foothill grassland on sandy soils; 4-220 meters in elevation; blooms May to August.	**Not expected.** Although an agricultural drainage ditch and sandy soils are onsite, this variety is restricted to coastal dunes and extends inland along drainages. Occurs in the dune lakes in Guadalupe Dunes and along the Santa Maria River, although many of these populations have been extirpated. One historical record from south of Orcutt, but the habitat has been lost and the population is considered extirpated.
La Purisima manzanita	*Arctostaphylos purissima*	—	—	1B.1	Perennial evergreen shrub; chaparral and coastal scrub on sandy soils or sandstone; 60-555 meters in elevation; blooms November to May.	**Not expected.** No suitable habitat is present and no manzanita species occur onsite. Species occurs in the western third of Santa Barbara Co.

Common Name	Scientific Name	Fed	CA	CRPR	Ecological Information	Evaluation of Occurrence/ Site Suitability / Distribution
Lompoc yerba santa	*Eriodictyon capitatum*	E	R	1B.2	Perennial evergreen shrub; coastal bluff scrub, closed-cone coniferous forest and maritime chaparral on sandy soils; 40-900 meters in elevation; blooms May to September.	**Not expected.** No suitable habitat is present and perennial shrub that would have been eliminated during conversion to agriculture. Species is endemic to SB Co. and is distributed from the western Solomon Hills to Vandenberg AFB and westernmost Santa Ynez Mtns.
San Luis Obispo monardella	*Monardella undulata* ssp. *undulata*	—	—	1B.2	Perennial rhizomatous herb; coastal dunes and coastal scrub on sandy soils; 10-200 meters in elevation; blooms May to September.	**Not expected.** Although sands are present, the entire site has been greatly disturbed by agriculture that would remove this perennial species. Subspecies occurs along the coast in dune habitat from Morro Bay to Point Sal. Recorded from Bradley Village northeast of Orcutt in the CNDDB but there are no records in Calflora from the Santa Maria Valley.
Sand mesa manzanita	*Arctostaphylos rudis*	—	—	1B.2	Perennial shrub; maritime chaparral and coastal scrub habitats on sandy soils; 25-230 meters in elevation; blooms November to February.	**Not expected.** No suitable habitat is present and species is a perennial shrub that would have been seen during the surveys. Species is distributed throughout southeastern SLO Co. to Lompoc. Nearest records are from the Casmalia Hills.
Santa Barbara ceanothus and Nipomo ceanothus	*Ceanothus impressus* vars. *impressus* and *nipomensis*	—	—	1B.2	Perennial shrubs; endemic to chaparral on sandy mesas in Santa Barbara and San Luis Obispo Counties; 40-470 meters in elevation; blooms February to April.	**Not expected.** No suitable habitat is present as the site is a disturbed ag field. *C. impressus* is reported from Los Osos, Nipomo, Pt. Sal and the Vandenberg SFB area. These two varieties are very similar in appearance with var. *nipomensis* endemic to Nipomo Mesa. No *Ceanothus* shrubs were observed onsite during surveys.

**E = Endangered; T = Threatened; R = Rare; '—' = no status; CRPR: Rank 1A - Presumed extirpated in California and either rare or extinct elsewhere; Rank 1B – Rare, threatened or endangered in California and elsewhere; Rank 2A – Presumed extirpated in California, but more common elsewhere; Rank 2B – Rare, threatened, or endangered in California, but more common elsewhere; Rank 3 - Plants needing more information, a review list; Rank 4 – Limited distribution, a watch list. Sources: California Natural Diversity Database (California Department of Fish and Wildlife 2024a); Special Vascular Plants, Bryophytes, and Lichens List (California Department of Fish and Wildlife 2024c); Inventory of Rare and Endangered Plants of California (California Native Plant Society 2024); Information on Wild California Plants for Conservation, Education, and Appreciation (Calflora 2024); Jepson eFlora (Jepson Flora Project 2024).*

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
ANIMALS						
INVERTEBRATES						
Crotch bumble bee	*Bombus crotchii*	—	CE	—	Inhabits grasslands and scrub, especially hot and dry areas. It nests and overwinters underground. Food plants include milkweed, lupine, phacelia, sage, clarkia, poppy, and buckwheat as well as agricultural crops.	**Unlikely.** No potential native food plants were seen, although they can feed on the nectar from agricultural crops. Site is within the range of the species, but there are no records in the western half of Santa Barbara County. Recorded in mountainous and inland locations and along the south coast. Frequent plowing would not be suitable for underground nests.
Lompoc grasshopper	*Trimerotropis occulens*	—	—	—	Associated with pale, rocky or gravelly soils, such as weathered Sisquoc shale.	**Not expected.** No suitable soils are present, and distribution of species is outside of Santa Maria Valley floor. Recorded in the Casmalia Hills and Vandenberg SFB to the south.
Monarch - California overwintering population 1	*Danaus plexippus plexippus*	C	—	—	Adults feed on the nectar of various blooming plants. During breeding can be found in fields, pastures, residential areas, grassland and scrub. Eggs are laid on and caterpillars feed on milkweed. Overwinters in wind-protected tree groves of eucalyptus, Monterey pine and cypress along the coast.	**Potential.** No groves of suitable trees occur in the study area to be used as an overwintering site. However, individuals could occur periodically while flying over the area. No milkweed plants observed onsite or in the area during surveys. Overwintering and autumnal sites are documented from throughout the Santa Maria Valley, but no breeding, foraging or overwintering habitat is present onsite.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Vernal pool fairy shrimp	*Branchinecta lynchi*	T	—	—	Grasslands with temporary ponded water. Inhabits small clear-water depressions in rock, vernal pools and swales, as well as anthropogenic habitats such as tire ruts, dozer scrapes and railroad pools. Needs standing water for at least 18 days to complete its lifecycle.	**Unlikely.** No natural vernal pools are present in the study area and species does not occur in flowing water, but could occur in anthropogenic pools. Site is within the southern vernal pool region and natural vernal pools are located on adjacent properties, but conversion to agriculture on the study area has eliminated all suitable habitat. Species has been documented from vernal pools south of the Santa Maria Airport, but no suitable habitat present in project footprint.
FISH						
Arroyo chub	*Gila orcuttii*	—	—	SSC	Native to rivers and streams of the Los Angeles plain, and widely introduced north to San Luis Obispo County. Tolerates wide fluctuations in temperature and dissolved oxygen, and most common in slow-flowing or backwater areas with sand or mud substrate.	**Not expected.** The site is outside of species native range, and no natural drainage features are present. Population in the Santa Maria River estuary is introduced.
Steelhead - southern California DPS	*Oncorhynchus mykiss irideus* pop. 10	E	CE	—	Adults spawn in freshwater streams with clear, well-oxygenated, cool water and clean gravel substrate. Also require instream cover (branches, logs) and streamside vegetation. Juveniles rear in freshwater reaches or lagoons before going to the ocean to mature, and then return to freshwater to reproduce.	**Not expected.** No suitable habitat or drainage features are present on the site. DPS occurs from the Santa Maria River south to San Diego Co. Recorded in the Sisquoc River.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Unarmored threespine stickleback	*Gasterosteus aculeatus williamsoni*	E	E	FP	Slow-moving reaches of streams and rivers with continuous low flow and moderate algal cover or aquatic vegetation but also in headwaters with rapid flows. Lives for one year and breeds February to September. Requires sand or gravel substrates and detritus or aquatic vegetation for reproduction. Historically occurred in major rivers of southern CA. In the central coast, only occurs in San Antonio Creek in Santa Barbara County.	**Not expected.** No suitable habitat or natural drainage features are present. Formerly occurred in tributaries of the Santa Maria River but the population has been extirpated due to introgression with *Gasterosteus aculeatus microcephalus* that were introduced from the Santa Ynez River in 1940 (USFWS 2021e).
AMPHIBIANS/REPTILES						
Blainville's (=coast) horned lizard	*Phrynosoma blainvillii*	—	—	SSC	Arid grasslands, sandy washes, coastal scrub, chaparral, coniferous forest and woodlands with patches of open areas for sunning and bushes for cover. Often with loose sandy soils for burial, but also uses small mammal burrows. Preys on native species of ants and other small invertebrates.	**Unlikely.** Surrounding area is agriculture and open grassland, which is not considered suitable for this species due to lack of shrub cover. Regular cycle of disturbance from agriculture adversely affects potential habitat for this species.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
California red-legged frog	*Rana draytonii*	T	—	SSC	Forages and breeds in streams with deep slow-moving pools, stock ponds, reservoirs, springs, lagoons, and marshes; usually with emergent or riparian vegetation but also found at sites lacking vegetation. Uses riparian and various upland habitats in winter and for dispersal.	**Potential.** There is no suitable breeding habitat in the study area and observation records from nearby locations are nearly 20 years old. There is very little cover for upland refugia in the ag field and site is regularly disturbed from farming practices. Stowell Road and other development in the area may restrict movement between areas of suitable habitat, but no significant barriers are present between occurrence records and the site. There are numerous records within 5 miles of the site and 4 within approximately 1-mile. Three observations are from agricultural ditches along W. Main Street but it is unclear if these ditches are still present. Irrigation practices have changed in the last 20 years thereby reducing areas of standing water in roadside ditches potentially used by this species. An occurrence observed in a basin along Battles Road to the south was identified, and this basin is still present. New developments in the region have constructed stormwater basins (visible on aerial imagery) that could potentially be used by the species. Therefore, CRLF could potentially move through the site during winter rains in search of suitable habitat, but would not be expected to breed or persist onsite for long periods of time.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
California tiger salamander - Santa Barbara County DPS	*Ambystoma californiense* population 2	E	T	WL	Grassland, low foothill oak savanna and edges of mixed woodland. Breeds in rain pools, vernal pools and temporary ponds. During dry season is fossorial and uses rodent burrows in upland habitat.	**Unlikely.** No suitable upland or breeding habitat is present in the study area, and known occurrences are located further south beyond the typical dispersal distance. Based on field surveys, this site has low quality habitat due to ongoing agricultural activities. The site is located over 3 miles from the closest known occurrence at Dutard Road, which is outside the dispersal distance. While there are few hard barriers to movement, the extensive agricultural ground between the known occurrences and the site makes it highly unlikely that the species could move onto the site or use any neighboring areas.
Northern California legless lizard	*Anniella pulchra*	—	—	SSC	Beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, oak woodland, and stream terraces with riparian vegetation. Fossorial species requires moist, loose soils or leaf litter with plant cover or surface objects (rocks, boards, logs, etc.). Can occur in residential areas.	**Unlikely.** Suitable sandy soils are present, but regular tilling removes suitable habitat. In addition, there is limited plant cover and the entire study area has been tilled, disked and planted to strawberries. Has been recorded at several locations surrounding the site, but is unlikely to occur within the project footprint.
Southwestern (=western) pond turtle	*Actinemys pallida* (=*Emys marmorata*)	PT	—	SSC	Ponds, lakes, rivers, streams, marshes, brackish lagoons, and irrigation ditches with a mosaic of vegetation and open areas for basking. Uses upland areas for nesting and in winter, including woodland, forest, grassland, chaparral, and grasslands.	**Not expected.** No suitable aquatic or upland habitat for turtles is present onsite. Nearest occurrences are from the Black Road area to the southwest of the site. Due to the lack of riverine habitats and extensive agricultural lands, this species is not expected to occur onsite.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Western spadefoot - northern DPS	*Spea hammondii*	PT	—	SSC	Grassland, open woodland/savanna, coastal scrub, and chaparral habitats where it primarily occupies underground burrows that it digs in a variety of soils but often associated with sand. Breeds in vernal pools, ephemeral ponds, stock ponds and streams that dry to isolated pools which lack aquatic vertebrate predators. Species occurs in the Central Valley, Salinas Valley through eastern SLO Co., and southern CA coastal areas.	**Unlikely.** This is a vernal pool species known to occur in the historic ephemeral pools that formed throughout the valley floor. Not expected to use agricultural areas for estivation because of frequent plowing, and disking/tilling has removed temporary rain pools that could be used for breeding. Site is located within the dispersal distance of historic occurrences but no potential breeding ponds are present onsite, and unlikely to persist in developed areas and use nearby flood control basins. Species cannot persist where disking and regular ground disturbance occur.
BIRDS						
American peregrine falcon	*Falco peregrinus anatum*	BCC	—	—	Various open habitats, coastal areas, inland wetlands, and desert mountains. Feeds mainly on birds, but also eats bats, fish, rodents and insects. Nests on high cliffs, dunes or mounds near water from coastal areas north of Santa Barbara. Also uses buildings, cavities in trees or snags or old raptor nests. Occurs in this area year-round and migrants occur along the coast.	**Potential.** The open habitat onsite and in the surrounding area is suitable for foraging but no cliffs are present in the vicinity for nesting. Very little prey base was observed, but has been recorded in eBird throughout the Santa Maria Valley. Could flyover the site and stop during foraging.
Black-crowned night-heron	*Nycticorax nycticorax*	—	—	— (nesting colony)	Salt and freshwater marshes, swamps, streams, rivers, lakes, ponds, lagoons, tidal mudflats, canals, reservoirs, and wet fields where they feed on terrestrial and aquatic animals. Colonial nesting, can have >10 nests per tree, and lasting >50 years at the same location. Nests are on islands or over water. Occurs in this area year-round.	**Unlikely.** No suitable foraging or nesting habitat is present onsite. Recorded observations in eBird in the surrounding areas where basins with seasonal aquatic habitat are present.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Burrowing owl	*Athene cunicularia*	BCC	—	SSC (burrow sites & some wintering sites)	Open treeless areas with low sparse vegetation such as grasslands, deserts, pastures, agricultural fields, airports, and artificial embankments where they prey on small vertebrates and various invertebrates. Nests in burrows created by other animals with nearby lookouts such as fence posts or shrubs. Formerly occurred year-round in this area, but now restricted to winter.	**Unlikely.** No burrows and very little prey base was present in the study area and species has become very rare in this region. There are two records in the CNDDB near Betteravia and Black Roads, and several observations in eBird, but these are from at least 15 years ago. No suitable grasslands in the project area and regular ground disturbance and human presence deter the species from foraging or wintering onsite. Very low probability to move through the site during the winter.
California gull	*Larus californicus*	BCC	—	WL (nesting colonies)	Sandy beaches, mudflats, rocky intertidal, pelagic areas of marine and estuarine habitats, fresh and saline emergent wetlands, alkali and freshwater lakes, rivers, agricultural areas, pastures, landfills, and open lawns in urban areas. Omnivore on living organisms, and feeds on garbage and carrion. Nesting is on islands in alkali or freshwater lakes, and salt ponds in undisturbed areas. Occurs along the coast within the county year-round but do not breed in this area.	**Potential.** Could fly over the site but there is no suitable nesting habitat and does not breed in this area. Has been documented in eBird throughout the surrounding urban areas.
California horned lark	*Eremophila alpestris actia*	—	—	WL	Areas with sparse vegetation or bare ground in prairies, deserts, tundra, beaches, dunes, airports, plowed fields and heavily grazed pastures where they eat seeds and insects. Nesting is on bare ground. Occurs year-round in this area.	**Potential.** Could fly over and potentially stop on the project site, but no suitable nesting or foraging habitat is present. Has been recorded in eBird at many locations near the site.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Ferruginous hawk	*Buteo regalis*	BCC	—	WL (wintering)	Open country such as grasslands, sagebrush, saltbush shrubland, and edges of pinyon-juniper forest where they prey on small mammals. Nests on lone trees, cliffs, utility poles, and shrubs from ground-level to 65-feet high. Occurs in this area during winter.	**Potential.** Could fly over the site but does not nest in this area. Has been recorded at numerous locations surrounding the site in eBird.
Golden eagle	*Aquila chrysaetos*	BCC	—	FP, WL (nesting & wintering)	Uncommon resident of mountainous and valley-foothill areas. Foraging typically occurs in open terrain where they prey on small mammals. Nesting usually occurs on cliff ledges, and less commonly in large trees or on structures such as electrical towers. Occurs in this area year-round.	**Unlikely.** No nesting or roosting habitat is present and farming and urban land uses are not suitable for this species. Has been recorded in eBird in open space areas further south and west.
Great blue heron	*Ardea herodias*	—	—	— (nesting colony)	Freshwater and saltwater marshes, also foraging in grasslands and agricultural fields. Nesting colonies are near lakes, ponds and wetlands bordered by forests. Nests are placed mainly in trees, but may also nest on the ground, in bushes or artificial structures. Occurs year-round in this area.	**Unlikely.** Individuals could fly over the site but there is no nesting or foraging habitat present. There are numerous records in eBird from open habitat areas surrounding the site, but small agricultural field with no aquatic habitat is not suitable.
Great egret	*Ardea alba*	—	—	— (nesting colony)	Forages in marshes, swamps, streams, rivers, ponds, lakes, lagoons, tidal flats, canals, ditches, flooded fields, and sometimes in upland where they prey on fish, amphibians, reptiles, crustaceans, and invertebrates. Roosts communally in trees. Nesting colonies are on lakes, ponds, marshes, and estuaries, but does not nest in this area. Occurs in this area during non-breeding season.	**Unlikely.** Individuals could fly over the site but there is no nesting or foraging habitat present. There are numerous records in eBird from open habitat areas surrounding the site, but small agricultural field with no aquatic habitat is not suitable.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Lawrence's goldfinch	*Carduelis lawrencei*	BCC	—	— (nesting)	Nests in oak woodland, chaparral, weedy fields, coastal scrub, pine-juniper woodland, riparian, suburban and rural residential areas near a water source. Outside of breeding season, uses same habitats as in the nesting season plus desert arroyos, river floodplains, mesquite, roadsides, agricultural areas, orchards and parks. Migratory and occurs in this area during the breeding season.	**Unlikely.** Individuals could fly over the site but there is no nesting or foraging habitat present. There are numerous records in eBird from open habitat areas surrounding the site, but small agricultural field with no aquatic habitat is not suitable.
Loggerhead shrike	*Lanius ludovicianus*	BCC	—	SSC (nesting)	Open country with low vegetation and well-spaced shrubs or trees such as coastal scrub, grasslands, agricultural fields, pastures, riparian areas, desert scrub, savannas, prairies, golf courses, and along roadsides where they prey on insects, amphibians, reptiles and small mammals. Nests in trees, shrubs, or brush piles. Occurs in this area year-round.	**Unlikely.** Individuals could fly over the site but there is no nesting or foraging habitat present. There are numerous records in eBird from the region, but small agricultural field with no aquatic habitat is not suitable.
Long-billed curlew	*Numenius americanus*	BCC	—	WL (nesting)	Grassland, cropland, alkali lakes, tidal mudflats, wetlands, estuaries, beaches and flooded fields. Occurs in the San Joaquin Valley in winter and individuals may remain during summer that do not breed; in the central coast during winter; does not breed in this area.	**Unlikely.** Individuals could fly over the site but there is no nesting or foraging habitat present. There are records in eBird from surrounding areas, but small agricultural field with no aquatic habitat is not suitable.
Merlin	*Falco columbarius*	—	—	WL (wintering)	Coastlines, open grasslands, savannas, woodlands, lakes, wetlands, and montane conifer forests where they prey on small birds, small mammals and insects. Nests in existing corvid or hawk nest but does not nest in California. Occurs in this area during winter.	**Unlikely.** Individuals could fly over the site but there is no nesting or foraging habitat present. Small agricultural field is not suitable.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Northern harrier	*Circus cyaneus*	—	—	SSC (nesting)	Large areas of wetlands and grasslands with low vegetation where they prey on small mammals, amphibians, reptiles and birds. Nesting is in marshes, grazed meadows, and desert shrubland where they nest on the ground in a dense clump of vegetation such as willows, grasses, sedge, bulrushes or cattails. Occurs year-round in this area.	**Unlikely.** Individuals could fly over the site but there is no nesting or foraging habitat or prey base present. There are records in eBird from surrounding the site, but small agricultural field with no grassland or marsh habitat is not suitable.
Prairie falcon	*Falco mexicanus*	BCC	—	WL (nesting)	Grasslands, desert shrubland, tundra, coastal scrub, feedlots, and agricultural fields where they feed on small mammals, insects and birds. Nests on high cliff ledges and steep bluffs overlooking open areas. Occurs year-round in inland areas of this region, rarely on the coast.	**Potential.** Could forage onsite or over the site but there is no nesting habitat. Has been recorded at a few areas surrounding the site in eBird.
Sharp-shinned hawk	*Accipiter striatus*	—	—	WL (nesting)	Forages along the edges of dense mixed woodlands, brushy pastures and shorelines where they prey on birds. Roosts in tall forests. Nests are in dense coniferous and riparian forests in the Coast, Transverse and Peninsular ranges, northwestern CA, Cascades and Sierra Nevada; however, breeding in the state is uncommon. Some individuals migrate to CA and mountain populations migrate to lower elevations for the winter.	**Potential.** Could forage onsite or over the site but there is no nesting habitat. Has been recorded throughout the Santa Maria Valley in eBird.
Snowy egret	*Egretta thula*	—	—	— (nesting colony)	Lagoons, freshwater wetlands, ponds, temporary pools, and wet fields where they prey on aquatic animals and insects. Nesting colonies are in dense vegetation of islands and marshes. Occurs in this area year-round.	**Unlikely.** Individuals could fly over the site but there is no nesting or foraging habitat present. There are numerous records in eBird from surrounding the site, but small agricultural field with no aquatic habitat is not suitable.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Tricolored blackbird	*Agelaius tricolor*	BCC	T	SSC (nesting colony)	Forages in a variety of habitats including pastures, agricultural fields, rice fields, and feedlots. Nests colonially in freshwater marshes with tules or cattails, or in other dense thickets of willow, thistle, blackberry, or wild rose in close proximity to open water. Occurs year-round in this area.	**Unlikely.** Individuals could fly over the site but there is no nesting or foraging habitat present. There are numerous records in eBird from surrounding the site, but small agricultural field with no aquatic habitat is not suitable.
White-tailed kite	*Elanus leucurus*	—	—	FP (nesting)	Savannas, open woodlands (oak or pine), riparian forest, marshes, desert grasslands, and fields where they prey on small mammals, birds, lizards, and insects. Nests and roosts in the edges of forests or in tall isolated trees. Occurs in this area year-round.	**Unlikely.** Could fly over the site but there are no trees for nesting or roosting, and no prey base for foraging. Has been recorded in eBird at numerous locations in the surrounding area, but small agricultural field with no grasslands or prey base is not suitable.
Yellow-headed blackbird	*Xanthocephalus xanthocephalus*	—	—	SSC (nesting)	Wetlands, prairies, mountain meadows, agricultural fields. Nests are in emergent wetland vegetation on the borders of lakes and ponds east of the Cascade Range, east of the Sierra Nevada, Central Valley, Imperial and Colorado River valleys, and limited areas of the eastern Coast Ranges. Migrates south for winter. Migrants occur along the coast outside of the breeding season.	**Unlikely.** Could fly over the site but does not nest in this area. No suitable wetland or pond habitat present. There are several observations reported from Santa Maria Airport lands in eBird, but unlikely to use this small agricultural field based on the lack of suitable habitat.
MAMMALS						
American badger	*Taxidea taxus*	—	—	SSC	Open grasslands, fields, scrubland edges and woodland habitats. They burrow into dry loose soils for shelter and feed on a variety of small mammals such as California ground squirrel and pocket gopher. Young are born in dens in March and April.	**Not expected.** No suitable habitat onsite and developed condition of surrounding lands makes it unlikely for species to move through the area. Site is on the edge of urban development, surrounded by agriculture, and there are very limited patches of suitable grassland habitat that could support prey.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Fringed myotis	*Myotis thysanodes*	—	—	—	High elevation coniferous forest, oak woodland, mixed deciduous forest and pinyon-juniper woodland. Roosts in caves, buildings, mines and cavities of large trees. Their year-round range is all of California except the Central Valley and deserts.	**Unlikely.** No suitable forest habitat is present at or nearby the study area, and no roosting habitat occurs. Although their year-round range includes all of Santa Barbara County (CDFW 2024e), there are no records in the CNDDB in the county.
Hoary bat	*Lasiurus cinereus*	—	—	—	All types of forests and woodland with medium- to large-sized trees and dense foliage. Roosts in dense foliage of large trees. Winters along the coast and in southern CA or hibernates in cold climates. Females move inland and to northern CA during the summer and have maternity roosts in dense foliage while the males remain along the coast.	**Unlikely.** No suitable forest habitat is present at or nearby the study area, and no roosting habitat occurs. Their year-round range includes all of Santa Barbara County (CDFW 2024e) and has been recorded on Vandenberg SFB.
Pallid bat	*Antrozous pallidus*	—	—	SSC	Open dry habitats including deserts, grasslands, shrublands, woodlands, and forests. Roosts in rock outcrops, caves, crevasses, mines, hollow trees, and buildings that moderate temperature. Night roosts on porches and open buildings. The entire state of CA except the highest elevations in the Sierra Nevada are within the species' year-round range.	**Potential.** Could forage over the site but no roosting habitat is present in the study area. Has been recorded in the region.
Silver-haired bat	*Lasionycteris noctivagans*	—	—	—	In summer, occurs in coastal and montane coniferous forest, valley foothill woodland, pinyon-juniper woodland, and foothill and montane riparian habitats. Feeds over streams, ponds and brushy areas. Roosts in hollow trees, snags, buildings, rock crevices, caves, dense foliage and under bark. Does not occur in the central coast year-long but migratory individuals may periodically occur.	**Potential.** Although no suitable forest or woodland habitat is present, could forage periodically over the agricultural area.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Townsend's big-eared bat	*Corynorhinus townsendii*	—	—	SSC	Prefers mesic habitats and forages along riparian habitats. Roosts in caves, cliffs, mines, tunnels, abandoned buildings and bridges. The year-round range of the species is considered to be all of California except high elevations in the Sierra Nevada.	**Potential.** Could forage over the site, but no suitable roosting habitat. There are numerous records from the region.
Western red bat	*Lasiurus frantzii* (=*blossevillii*)	—	—	SSC	Grasslands, riparian forest, shrublands, open woodlands, and orchards. Roosts in forests and woodlands in trees or occasionally shrubs. Roost sites are in the foliage of riparian trees or in urban areas. Occurs throughout the state in summer, and in winter in coastal areas south of San Francisco.	**Potential.** Could forage onsite, but no trees for roosting are present.
Yuma myotis	*Myotis yumanensis*	—	—	—	Open forests and woodlands and forages over water sources such as ponds, streams, and stock tanks. Roosts in buildings, mines, caves, crevices and under bridges; night roosts in more open areas such as under tree bark or tree cavities. Occurs in this region yearlong.	**Not expected.** No suitable forest habitat is present at or nearby the study area, and no roosting habitat occurs.

**E = Endangered; T = Threatened; C = Candidate; PE = Proposed Endangered; PT = Proposed Threatened; BCC = Birds of Conservation Concern; SSC = Species of Special Concern; FP = Fully Protected; WL = Watch List; '—' = no status; California Natural Diversity Database (California Department of Fish and Wildlife 2024a); Special Animals List (California Department of Fish and Wildlife 2024b); California Wildlife Habitat Relationships System (CDFW 2024e); A Guide to the Amphibians and Reptiles of California (California Herps 2024); eBird (The Cornell Lab of Ornithology 2024a); All About Birds (The Cornell Lab of Ornithology 2024b); Guide to North American Birds (Audubon 2024); Birds of Conservation Concern (USFWS 2021).*

DESIGNATED CRITICAL HABITAT	
California Red-legged Frog	**Absent.** Unit STB-2 San Antonio Terrace includes the Casmalia Hills to the southwest of Highway 1. It is located south of the study area.
California Tiger Salamander	**Absent.** The study area is located north of Unit 1 Western Santa Maria/Orcutt.
La Graciosa Thistle	**Absent.** Unit 2 Santa Maria River-Orcutt Creek is located along the lower 5 miles of the Santa Maria River and along the length of Orcutt Creek southwest of the study area.

Sources: Threatened and Endangered Species Active Critical Habitat Report (United States Fish and Wildlife Service [USFWS] 2024b); USFWS 2004, 2009, 2010b.

SENSITIVE NATURAL COMMUNITIES	
Central Coast Arroyo Willow Riparian Forest — State Rarity Rank S3.2	**Absent.** Dense closed-canopy forest characterized by arroyo willow (*Salix lasiolepis*) and/or Pacific willow (*S. lasiandra*). Occurs on moist to saturated sandy or gravelly soil in floodplains, low-gradient stream reaches and dune slack ponds. No willows are present in the study area.
Central Coast Riparian Scrub — State Rarity Rank S3	**Absent.** A dense, shrubby streamside thicket dominated by any of several species of willows (*Salix* spp.) and has coyote brush (*Baccharis pilularis*) as a secondary component. Occurs on sand or gravel bars along rivers and streams with ground water close to the surface. Also occurs around dune slack ponds. No willows are present in the study area.
Central Dune Scrub — State Rarity Rank S2.2	**Absent.** Restricted to coastal strip on stabilized backdunes. It is composed of low-growing scattered shrubs, subshrubs and herbs and is indicated by the presence of mock heather (*Ericameria ericoides*), dune bush lupine (*Lupinus chamissonis*), and beach sagewort (*Artemisia pycnocephala*). Site is located away from the coastline and no shrubs are present.
Central (Lucian) Coastal Scrub — State Rarity Rank S3.3	**Absent.** Characterized by dense shrubs dominated by coyote brush (*Baccharis pilularis*), California sagebrush (*Artemisia californica*), seaside wild buckwheat (*Eriogonum latifolium*), mock heather (*Ericameria ericoides*), saw-toothed goldenbush (*Hazardia squarrosa*), and dune lupine (*Lupinus chamissonis*). It occurs on the ocean side of the Santa Lucia Range from Monterey and Point Conception on exposed, often south-facing slopes with shallow soils. All areas onsite have been disturbed by agriculture and no shrubs are present.
Central Maritime Chaparral — State Rarity Rank S2.2	**Absent.** Occurs on well-drained, sandy soils within the summer fog zone. Composed of sclerophyll shrubs dominated by one or more species of manzanita (*Arctostaphylos* spp.). Other species typically include coyote brush (*Baccharis pilularis*), chamise (*Adenostoma fasciculatum*), coast live oak (*Quercus agrifolia*), orange bush monkeyflower (*Diplacus aurantiacus*) and several species of ceanothus (*Ceanothus* spp.). All areas onsite have been disturbed by agriculture and no shrubs are present.
Coastal and Valley Freshwater Marsh — State Rarity Rank S2.1	**Absent.** Occurs in permanently flooded sites with freshwater and lacking significant flow, dominated by perennial, emergent vegetation such as bulrushes (*Scirpus* sp. and *Schoenoplectus* sp.) and cattails (*Typha* sp.). No basins or ditches with wetland vegetation are present.
Freshwater Seep — State Rarity Rank S3.2	**Absent.** Occurs in permanently moist or wet soil that seeps from surfacing groundwater or water table, usually within grassland or meadow communities. Composed of mainly perennial herbs, especially sedges (*Carex* spp.) and rushes (*Juncus* spp.). No seeps or wetland vegetation are present onsite.

SENSITIVE NATURAL COMMUNITIES	
Southern Vernal Pool — State Rarity Rank SNR	**Absent.** Seasonally wet depressions often underlain by hardpan or claypan soils that may have a hummocky topography with mounds intervening between the depressions. They fill after winter rains and dry completely after the rains have ceased. Herbaceous community is comprised of herbs and grasses adapted to seasonal inundation and growing in rings as pools dry. Occurs from southwestern San Luis Obispo County through the western half of Santa Barbara County into southwestern Ventura County, western Riverside and San Diego. Site is located in the region where historic southern vernal pools occurred. No topographic depressions supporting seasonal ponded water with the association of vernal pool and wetland plants were observed in the study area.
Vernal Marsh — State Rarity Rank S2	**Absent.** Vegetated by low, annual herbs such as sedges (*Carex* spp.) and rushes (*Juncus* spp.). Has marshy conditions or standing water following winter rains but is reduced or completely dry by summer. Often found at the transition between Coastal and Valley Freshwater Marsh and drier upland areas. The site is an actively maintained farm field with no native vegetation present.

Sources: Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986); California Natural Diversity Database (California Department of Fish and Wildlife 2024a); California Sensitive Natural Communities (California Department of Fish and Wildlife 2024d).

Attachment 4

Cultural Resources Desktop Review

Phase I Cultural Resource Inventory

for 1680 West Stowell Road,

Santa Maria, California

Prepared for Seefried Development Management, Inc



ALBION

JULY 2025

Phase I Cultural Resource Inventory for 1680 West Stowell Road, Santa Maria, California

July 2025
J2025-16.01
Photo Credit: Elliot Waters

Prepared for

Seefried Development
Management, Inc
2321 Rosecrans Avenue
Suite 2220
El Segundo, California 90245

Prepared by

Reilly Murphy, MA, RPA
Sarah Peelo, PhD, RPA

Albion Environmental, Inc.
3563 Sueldo Street, Suite P
San Luis Obispo, California 93401

Executive Summary

RRM Design Group contracted with Albion Environmental, Inc. (Albion) to conduct a Phase I Cultural Resources Inventory of a 33-acre area located at 1680 West Stowell Road (APN 117-820-012; 117-820-013) in Santa Maria in Santa Barbara County, California (Project). The property owner is proposing to develop the parcel with a new commercial warehouse. Since the Project requires permits from the City of Santa Maria (City), the Project is subject to environmental review under the California Environmental Quality Act (CEQA), and the City has asked for a Phase I Cultural Resource Inventory of the Project Area that consists of background and archival research results and a pedestrian survey.

Albion's study was conducted to support compliance with requirements under CEQA (Public Resources Code 21000 et seq.), and the City's Resources Management Element (RME). The purpose of this background and archival research is to document whether any cultural resources have been previously located within the Project Area, or if the Project Area has ever been subject to archaeological study. This study included: (1) archival and background research; (2) a search of records at the California Historical Resources Information System, Central Coast Information Center (CCoIC) at the Santa Barbara Museum of Natural History; (3) a Sacred Lands File search at the Native American Heritage Commission (NAHC); (4) pedestrian survey of the Project Area; and (5) a report of findings and recommendations. All work was conducted in accordance with guidelines and regulations set forth in the CEQA.

A search of records at the CCoIC indicated that no cultural resource studies have previously been conducted within the Project Area and two cultural resource studies had been previously conducted within a $^1/_2$-mile radius of the Project Area. The records search identified no previously recorded cultural resources within the Project Area and no previously recorded resources within a $^1/_2$-mile radius of the Project Area. Archival research and an aerial imagery review revealed evidence of historic-era structures within the Project Area on 1954 and 1967 aerial imagery. The results of the NAHC Sacred Lands File search were negative.

After reviewing the record search results, Albion conducted an intensive pedestrian survey of the Project Area on April 11, 2025. Throughout the Project Area, ground surface visibility was poor to fair, as much of the Project Area was covered by vegetation. Visual inspection of the Project Area yielded two isolated historic-era artifacts consisting of one piece of bottle glass and one ceramic sherd. No precolonial cultural resources were identified within the Project Area.

The Project Area is located within the City's Archaeological Sensitivity Area 3, which is categorized as having a negligible sensitivity to contain archaeological resources. There are no known precolonial archaeological sites located within $^1/_2$-mile radius of the Project Area, and the results of pedestrian survey were negative for precolonial resources. The Project Area is more than 200 meters from a water course and is mapped as a Pleistocene to Holocene aged landform with marine and nonmarine sedimentary rocks. Given this data, it is our assessment that the overall sensitivity of the Project Area to contain precolonial sites is low.

However, it is our assessment that potentially significant cultural materials associated with the historic-era may be located within the Project Area. While we did identify two isolated historic-era artifacts, they

were located within a heavily plowed agricultural field. Therefore, it is our assessment that isolates are likely not representative of, or an indicator that there is, an intact historic-era archaeological deposit within the Project Area. The two isolated artifacts were documented, left in place, and do not require further consideration under CEQA. However, the compound of small structures visible on the 1954 and 1967 aerial images indicates that the Project Area once contained 20th century architectural resources. Building foundations and refuse associated with this 20th century land use may still be present and intact beneath the plow zone. Therefore, it is our assessment that there is a moderate probability that construction could impact historic-era subsurface archaeological features.

Since many important cultural resources, such as Tribal Cultural Resources, do not necessarily leave an archaeological footprint or have physically identifiable manifestations, it is vital to seek out the possibility of these important resources and their locations through consultation with local tribal members. Under the authority of Assembly Bill 52, the City of Santa Maria may have received information from interested Native American tribes or representatives concerning Tribal Cultural Resources at the project site. The City is responsible for collecting and incorporating tribal information into the environmental review process. At this time, we do not know if the City has received any such information.

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A Records Search Results Memo and Sacred Lands File Search Results Memo
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Introduction

1

In February 2025, RRM Design Group contracted with Albion Environmental, Inc. (Albion) to conduct a Phase I Cultural Resources Inventory of a 33-acre area located at 1680 West Stowell Road (APN 117-820-012; 117-820-013) in Santa Maria, California (Project Area). The property owner is proposing to develop the parcel with a new commercial warehouse (Project). Since the Project requires permits from the City of Santa Maria (City), the Project is subject to environmental review under the California Environmental Quality Act (CEQA), and the City has asked for a Phase I Cultural Resources Inventory of the Project Area that consists of background and archival research results and a pedestrian survey.

Albion's study was conducted to comply with requirements under the CEQA (Public Resources Code 21000 et seq.), and the City's Resources Management Element (RME). The purpose of this background and archival research is to document whether any cultural resources have been previously located within the Project Area, or if the Project Area has ever been subject to archaeological study. This study included: (1) archival and background research; (2) a search of records at the California Historical Resources Information System, Central Coast Information Center (CCoIC) at the Santa Barbara Museum of Natural History; (3) a Sacred Lands File search at the Native American Heritage Commission (NAHC); (4) pedestrian survey of the Project Area; and (5) a report of findings and recommendations. All work was conducted in accordance with guidelines and regulations set forth in the CEQA.

The records search was conducted by Albion in March 2025. Albion Senior Archaeologist, Reilly Murphy, MA, RPA, supervised the entire project. Mr. Murphy has over 16 years of experience working in California archaeology and cultural resource management. He received his Master's in Anthropology from the California State University, Los Angeles in 2015, and he meets and exceeds the U.S. Secretary of the Interior's Professional Qualification Standards (as defined in 36 CFR Part 61) for prehistoric archaeologist.

Project Background

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PROJECT DESCRIPTION

The proposed development includes a new 169,104 square-foot single-story distribution warehouse to be operated as a delivery service building with loading awnings which is oriented north to south in the center of the approximately 32-acre site. The main onsite facility will include delivery and distribution, office and processing uses, and shipping and receiving. It is anticipated that the facility will have two shifts working days and evenings, with a potential third shift during peak season.

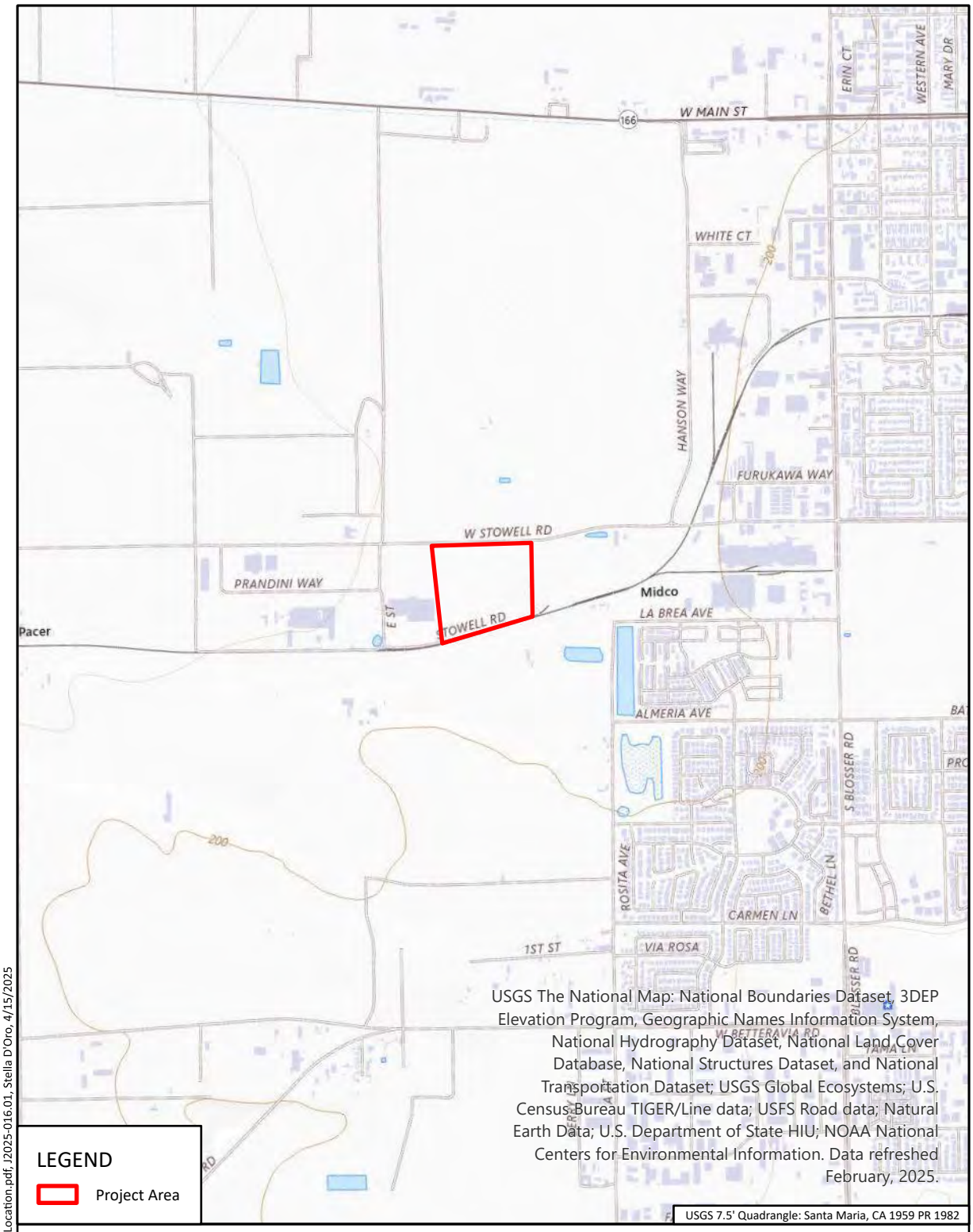
The main facility building is concrete tilt-up construction (S-1 occupancy) with a supporting office area (B occupancy), training room (A-2 occupancy), and break room (A-3 occupancy). The proposed facility is being designed for a package delivery service. The building includes ground level doors serving as the main entrance facing West Stowell (north). A 34,325 square-foot canopy is located on the west side, and a 33,545 square-foot canopy is located on the east side which serve as loading carports. The south side of the building will have dock-high doors for tractor trailer access. In addition to the main facility building, there are a few other smaller accessory structures to support the business.

PROJECT LOCATION

The Project Area consists of a 33-acre area located at 1680 West Stowell Road (APN 117-820-012; 117-820-013) in the western portion of the town of Santa Maria in northern Santa Barbara County, California. The Project Area is located on the flat agricultural fields, south of West Stowell Road (Figures 1 -3). The Project Area is in a largely undeveloped area, bound by existing agricultural fields on the south, north and east sides, and a commercial warehouse is located to the west (Photograph 1).



Photograph 1. Overview of the Project Area (facing southwest).



File name: Figure_1_ProjectLocation.pdf, J2025-016.01, Stella D'Oro, 4/15/2025

Figure 1. Project location.



Figure 2. Project Area.

File name: Figure_2_ProjectArea.pdf, J2024-016.02, Paul Rigby, 5/22/2024

File name: Figure_3_SitePlan.ai, J2025-016.01, Stella D'Oro, 02July2025

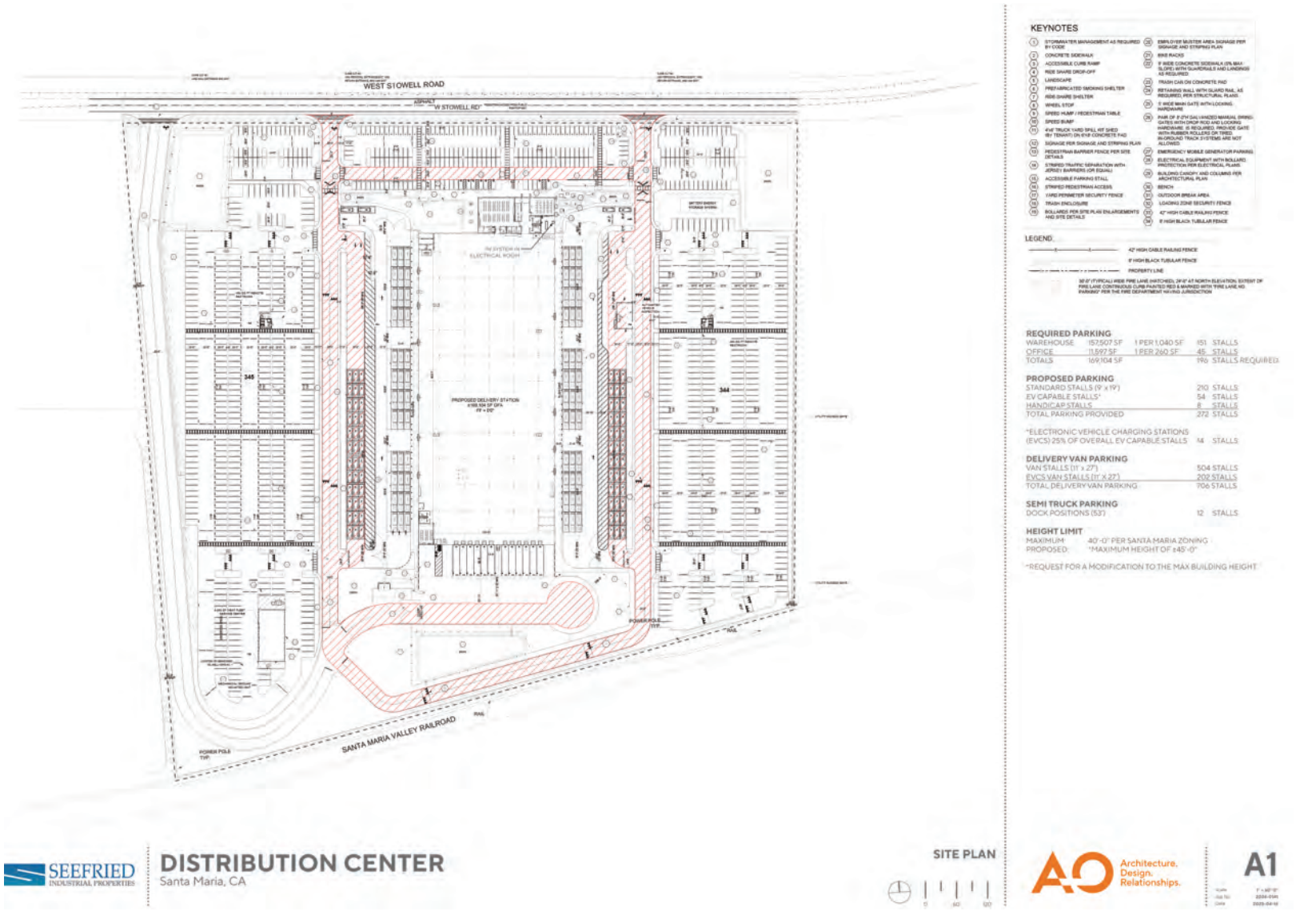


Figure 3. Site Plan.

Sources Consulted

3

RECORDS SEARCH

Aria James, Assistant Coordinator at the Central Coast Information Center (CCoIC), provided the results of a records search for a $^{1}/_{2}$-mile radius of the Project Area on March 31, 2025 (Appendix A). In addition to official maps and records, the following sources of information were consulted as part of the records search:

- National Register of Historic Places
- California Register of Historic Resources- Determined Eligible Properties
- California State Historic Property Data Files
- California Points of Historical Interest
- California Historical Landmarks
- Caltrans State and Local Bridge Survey
- US Bureau of Land Management General Land Office Records
- Special Research Collections at the UCSB Library (Aerial Images and Historic Maps)

PREVIOUSLY CONDUCTED CULTURAL RESOURCES STUDIES

According to the CCoIC, no cultural resource studies have been conducted within the Project Area and two cultural resource studies have been previously conducted within a $^{1}/_{2}$-mile radius of the Project Area (Table 1). These previous studies consist of two Phase I pedestrian surveys.

Table 1. Previous Cultural Resource Studies within $^{1}/_{2}$-mile radius of the Project Area.

CCoIC Report	Title of Study	Author and Year
SR-00384	An Archaeological Evaluation for the Flood Control Groundwater Recharge Project No. 3189 Santa Maria, California, County of Santa Barbara	Spanne (1980)
SR-04572	A Phase 1 Archaeological Study: For the Area 9 Specific Plan, an 890-acre Project Site located in the city of Santa Maria, Santa Barbara County, California	Wlodarski (2010)

PREVIOUSLY RECORDED CULTURAL RESOURCES

The record search identified no previously recorded sites or isolated artifacts within the Project Area and no previously recorded cultural resources within a $^{1}/_{2}$-mile radius of the Project Area.

HISTORICAL MAPS AND AERIAL IMAGERY

Albion conducted an online search of historic maps and aerials and found information pertinent to the Project Area from the following:

- Rancho Plat Maps
- 1938 aerial photograph

NATIVE AMERICAN HERITAGE COMMISSION SACRED LANDS FILE SEARCH

To assist the City with AB 52 Consultation, Albion coordinated to obtain a list of Native American Stakeholders from the Native American Heritage Commission (NAHC) and conducted an NAHC Sacred Lands Search (SLF) for the Project. The results of the SLF were negative, and there are no Tribal Cultural Resources on file at the NAHC that are located within the Project Area (Appendix A). The NAHC identified seven individuals representing four Tribes that are traditionally and culturally affiliated with the geographic area of the project (Appendix A).

Background

4

ENVIRONMENTAL CONTEXT

The proposed Project is situated within the South Coast Range physiographic province. This range consists of a series of longitudinal mountains and valleys, which parallel the coastline and separate the Pacific Ocean from the Central Valley. It runs for nearly 250 miles, from the San Francisco Bay Area to the Santa Ynez Mountains of the Transverse Ranges in the south. The range is highly folded and fractured and is generally attributed to events associated with subduction of the Pacific Plate beneath the western border of North America. Steep slopes with exaggerated relief are common where the mountains rise abruptly from the sea. Overall, however, this range is not particularly high. The range averages 760 meters in height, with occasional peaks reaching over 1,830 meters, most notably in the Santa Lucia Range (Burcham 1957).

The regional climate is Mediterranean, typified by long, hot summers and mild, wet winters. Summer temperatures average around 30º C to 34º C (87º F–94º F), though during the height of summer, temperatures in excess of 38º C (100º F) are common (though the coast and coastal adjacent areas typically have a milder temperature variance than the interior). Winter temperatures, by contrast, hover around 14º C (57º F) during the day but can fall to 1.1º C (30º F) at night. The Santa Lucia Range acts as a minor rain shadow for the Salinas Valley and, consequently, rainfall totals are less east of the range than along the coast. Average precipitation is approximately 384 mm (15 inches) per year and is derived from Pacific storms that sweep inland during the winter months, especially from November through March. Occasional torrential rains are common, usually occurring during so-called El Niño Southern Oscillation (ENSO) events. Drought years are common as well. The severe drought of 1862–1864, for example, wreaked economic havoc on many of the Mexican ranchos in the area by killing off herds of cattle. While snowfall is extremely rare, frost during the winter does occur on occasion.

Today, the local environment is dominated by grassland comprised chiefly of non-native, Old World species such as foxtail barley (*Hordeum leporinum*), wild oats (*Avena* spp.), bromegrass (*Bromus* spp.), and filaree (*Erodium cicutarium*). Prior to European settlement and the introduction of cattle, the native grassland would have included a diverse array of annual grasses, perennial bunchgrasses, and forbs. Conspicuous taxa would have included fescue grass (*Vulpia* or *Festuca*), maygrass (*Phalaris* spp.), native barley (*Hordeum intercedens*), native bromegrass (*Bromus* spp.), needlegrass (*Stipa* spp.), ryegrass (*Elymus* spp.), borages (*Amsinkia*, *Cryptantha*, *Plagiobothrys*), California poppy (*Eschscholzia californica*), chia (Salvia spp.), clovers, (*Trifolium* spp.), farewell-to-spring (*Clarkia* spp.), lupines (*Lupinus* spp.), various lilies (*Dichelostemma, Calochortus, Chlorogalum*), red maids (*Calandrina* spp.) tarweeds (*Madia* and *Hemizonia*), blue wildrye (*Elymus glaucus*), pine bluegrass (*Poa scabrella*), blue dicks (*Dichelostemma multiflorum*), several species of needlegrass (*Stipa* spp.), and vetches (*Lotus* spp.).

The hills are dominated by coast live oak woodland. Prominent members of this community include coast live oak (*Quercus agrifolia*), toyon (*Heteromeles arbutifolia*), California lilac (*Ceanothus* spp), redberry (*Rhamnus crocea*), islay (*Prunus ilicifolia*), and poison oak (*Toxicodendron diversilobum*). Scattered communities of blue oak (*Quercus douglasii*) and gray pine (*Pinus sabiniana*) also occur in the surrounding area. Riparian corridors exist along the banks of several of the area's prominent creeks. Common members of this community include willows (*Salix* spp.), cottonwood (*Populus fremontii*), sycamore (*Platanus racemosa*), giant reed (*Arundo donax*), cattail (*Typha domingensis*) sedges (*Carex, Cyperus, Scirpus*), wild grape (*Vitus californica*), and wild cucumber (*Marah* spp.).

A variety of mammals, birds, fish, reptiles, and amphibians inhabit San Luis Obispo County. Modern land use practices have altered the ecology of the region, and reconstructions of pre-contact faunal compositions rely on ethnographic, historic, biological, and archaeological data (Bolton 1931; Hall 1981; Ingles 1965; Jones et al. 1994; Mason 1912; Zeiner et al. 1990). Large terrestrial mammals common to the region prior to contact include tule elk (*Cervus elaphus nannodes*), mule deer (*Odocoileus hemionus*), black bear (*Ursus americanus*), mountain lion (Felis concolor), coyote (*Canis latrans*), bobcat (*Lynx rufus*), gray fox (*Urocyon cinereoargenteus*), and the locally extirpated grizzly bear (*Ursus arctos*). Smaller mammals include striped (*Mephitis mephitis*) and spotted skunk (*Spilogale gracilis*), badger (*Taxidea taxus*), weasel (*Mustela frenata*), raccoon (*Procyon lotor*), ringtail (*Bassariscus astutus*), brush rabbit (*Sylvilagus bachmani*), cottontail (*Sylvilagus audubonii*), and hare (*Lepus californicus*). Rodents common to the area include California vole (*Microtus californicus*), woodrat (*Neotoma fuscipes*), mouse (*Peromyscus* spp.), gopher (*Thomomys bottae*), gray squirrel (*Sciurus griseus*), and ground squirrel (*Spermophilus beecheyi*).

Numerous bird taxa, both resident and migratory, inhabit Santa Barbara County. Raptor and scavenger species include turkey vulture (*Cathartes aura*), osprey (*Pandion haliaetus*), bald eagle (*Haliaeetus leucocephalus*), and golden eagle (*Aquila chrysaetos*), hawks (*Accipiter* spp., *Buteo* spp.), falcons (*Falco* spp.), owls (*Tyto alba*, *Otus kennicottii*, *Bubo virginianus*, *Speotyto cunicularia*), ravens (*Corvus corax*), American crow (*Corvus brachyrhynchos*), and magpie (*Pica nuttalli*). Avian taxa associated with terrestrial habitats include California quail (*Callipepla californica*), band-tailed pigeon (*Columba fasciata*), mourning dove (*Zenaida macroura*), hummingbird (*Calypte* spp.), sapsuckers (*Sphyrapicus ruber*), woodpeckers (*Picoides* spp.), flickers (*Colaptes auratus*), and a myriad of passerine forms. Waterfowl attracted to the few riparian corridors and adjacent coastal areas include pelicans (*Pelacanus* spp.), seagulls (*Laridae* spp.), cormorants (*Phalacrocoracodae* spp.), plovers (*Charadriinae* spp.), great blue heron (*Ardea herodias*), egret (*Casmerodius albus*), and various species of ducks (*Anas* spp.).

GEOMORPHOLOGY

Geologically, the South Coast Range is a diverse region consisting predominantly of marine-derived Miocene and Pliocene-age sedimentary rocks (Alt and Hyndman 2000; Christensen 1966; Compton 1966; Dupre 1991; Hart 1976; Lewis et al. 1991; Norris and Webb 1976:245-288, 1966). However, the eastern portion of the South Coast Ranges is much older and is characterized largely by the Cretaceous-age Franciscan formation, which consists of sandstone, chert, serpentine, basalt, greenstone, shale, and blue schist. To the west is the so-called Salinan block, a large zone of granitics and metamorphic rocks. The Salinan block dates from the Paleozoic and is comprised of metamorphosed marine sedimentary rocks including schist, quartzite, granulite gneiss, granofels, and marble. West of the Salinan block is the Nacimiento fault, which trends northwest to southeast. Much of the exposed rocks in the South Coast Ranges, however, belong to the so-called Paso Robles formation, which dates to the Plio-Pleistocene era and is made up chiefly of conglomerate and sandstone but also includes some mudstone (Burch and

Durham 1970:5). Quaternary stream deposits, consisting of unconsolidated gravel, clay, and silt, overlie the Paso Robles formation.

The Project Area is mapped as having Corralitos loamy sand, which consists of deep, somewhat excessively drained soils that formed in recent sandy alluvium derived from acid sandstone and related rocks. Corralitos soils are on alluvial fans and in small valleys and have slopes of 0 to 15 percent (United States Department of Agriculture 2023).

PRECOLONIAL CONTEXT

Archaeologists working in central California generally recognize six major prehistoric periods of cultural adaptation within the last 10,000-year record of human occupation (Jones et al. 2007) (Table 2). This is adapted from a sequence initially proposed by Jones (1993) for the Big Sur area. Since that time, the sequence has been refined and expanded to characterize prehistoric cultural trends recognized in Santa Cruz, Monterey, and San Luis Obispo counties and other outlying areas. The most recent manifestation of this sequence is grounded, in part, by the work of (Jones and Ferneau 2002). The initial period, Paleoindian, originated during the Late Pleistocene and continued until approximately 9950 before present (BP). This was followed by the Millingstone (9950–5450 BP), during which milling equipment (manos and metates) become increasingly abundant in the archaeological record and populations apparently followed a generalized subsistence pattern. The ensuing period, the Early Period (5450–2550 BP), was a time of new subsistence emphases, including a greater reliance on hunting and the exploitation of acorns. The Middle Period (2550–950 BP) was marked by the intensification of subsistence practices, especially a greater reliance on marine and littoral foods. During the Middle/Late Transition (950–700 BP), central Californian populations are said to have experienced deteriorating environmental parameters, and apparently underwent major adaptive shifts in both subsistence and settlement. Finally, the Late Period (700–181 BP) was a time marked by the appearance of numerous projectile points, including small side-notched (Desert side-notched), triangular (Cottonwood series), and leaf-shaped points.

Table 2. Precolonial Sequence for California's Central Coast.

Temporal Period	Date Range
Paleo-Indian	Pre–9950 BP
Millingstone	9950–5450 BP
Early	5450–2550 BP
Middle	2550–950 BP
Middle/Late Transition	950–700 BP
Late	700–181 BP

(Codding et al. 2010; Jones et al. 2007)

ETHNOGRAPHIC CONTEXT

THE CHUMASH

Prehistorically, the San Luis Obispo, Santa Barbara, and Ventura regions were home to the maritime Chumash, considered one of the most complex hunter-gatherer societies on earth. They had economic

and socio-political systems unusually complex relative to most ethnographically known hunter-gatherers.

The Chumash occupying the northern San Luis Obispo region are known as the Obispeño, this designation being derived from the name of the nearest Spanish Mission, San Luis Obispo de Tolosa. (The community now often refers to itself as the Northern Chumash). The Obispeño Chumash represent the northernmost subdivision of the larger Chumash cultural family, and spoke the most divergent of the five Chumash dialects. Kroeber (1925) reported that the Obispeño dialect may have been the oldest of the Chumash languages. Traditionally, the geographic territory of the Obispeño was thought to extend from the Santa Maria River in the south to Point Estero in the north (Grant 1978; Kroeber 1925). However, recent archaeological evidence and archival research of Spanish diaries and mission records suggest that the northern Obispeño territorial boundary may have extended north to San Carpoforo Creek, an area, which has traditionally been regarded as Salinan territory (Breschini et al. 1983; Gibson 1983; Jones et al. 1994). Gibson (1983) reports that there were 15 major Obispeño villages in San Luis Obispo County, each of which spoke their own sub-dialects.

Unlike their more southerly neighbors, who inhabited the sheltered waters of the highly productive Santa Barbara Channel, the Obispeño did not rely on marine resources for a majority of their sustenance. They occupied an environment that was exposed to prevailing westerly winds and heavy surf. It was a rugged region characterized by narrow coastal terraces with occasional sand dunes, small valleys, and a rocky outer shore swept by winds and fog (Greenwood 1978). The resources of the area included a mix of terrestrial and marine plants and animals. Based on ethnohistoric sources, Farris (1986) and Gibson (1983) asserted that the Obispeño maintained a more generalized hunting and gathering economy. They followed a seasonal round of resource availability, traveling in regular patterns, establishing summer and winter camps in customary places with reliable water supplies. Gibson (1983) has provided a summary of this seasonal round. During the winter, the Obispeño gathered a variety of plant foods including greens, roots, tubers, and corms. Seed gathering became important during the spring when such resources as red maids, chia, and various grasses became available. The focus shifted to berries and other seeds during the summer, whereas the fall was a time when nut crops such as acorns, pine nuts, buckeye, and toyon were gathered. Land mammals were hunted throughout the year, varying in importance by season and location.

The sociopolitical organization of the Obispeño and that of the Northern Chumash (such as the Purisimeño) in general is believed to be less elaborate than that of their more southerly compatriots. In the south, several researchers (Arnold 1992; Colten 1993; Johnson 1988; Martz 1992) have argued that the Channel Chumash were organized into a simple chiefdom level of social organization. Chumash society was stratified, consisting minimally of elite and commoner families. Members of the elite class held all the important political and religious positions such as canoe owners, craft specialists, and members of the *'antap* cult. Commoners were mainly hunters, gatherers, and fishermen.

For the Chumash inhabitants north of Point Conception, however, sociopolitical organization was much less structured and hierarchical. Glassow (1996) has characterized these groups, especially the neighbors of the Obispeño, the Purisimeño, as having greater fluidity in political organization. He has argued that, in fact, it is possible that Purisimeño political organization was more of a "big man" type, in which political leadership shifted between individuals relatively frequently, depending on one's fortunes at the moment. He has also argued that status differentiation similar to that among the southern Chumash apparently existed but was not as structured (Glassow 1996:17). Glassow attributed these differences, in part, to the "Purisimeños, not depending on the plank canoe, which required the expenditure of a good

deal of wealth to construct, and perhaps also to their more dispersed and more mobile settlement pattern." (Glassow 1996:18). It is quite possible that Obispeño political and social organization was very similar to the Purisimeño, and for the same reasons. Like the Purisimeño, the Obispeño did not own the plank canoe and had a more dispersed settlement pattern.

HISTORIC CONTEXT

The first documented European contact in California was approximately 475 years ago. In 1542, under the leadership of the Portuguese navigator Juan Rodriquez Cabrillo, two small ships sailed up the California coast as far north as Monterey. Up until that time, California was depicted on early maps as an island. Following Cabrillo's expedition, European explorers visited California's central coast sporadically, including Pedro de Unamuno in 1587, Sebastián Rodriguez Cermeño in 1595 (Krieger 1988; Wagner 1929:161), and Vizcaino in 1602 (Hoover et al. 1966:379, 413).

Beginning in the 1760's, in an effort to counter the threat of expanding Russian and English forces on the western coast of the New World, the Spanish government initiated the lengthy process of establishing a series of military presidios and Catholic missions between the ports of San Diego and San Francisco (Weber 1982; Weber 1992). The first mission was established at San Diego in 1769, also marking the start-point of an expedition led by Don Gaspar de Portolá, the governor of Baja, California, to locate an overland route to Monterey Bay. Through force, coercion, and environmental, economic, political, and social pressures some native individuals and communities spent the next 60 years building, living in, and resisting twenty more missions, four presidios, and four pueblos. Even if one did not become baptized in a mission, the influence of the missions extended well beyond the immediate vicinity of the churches, quadrangles, and agricultural fields.

In 1821, Mexico achieved independence from Spain, and word of this event reached Alta California the following year. The colonial policies of the republic were to be quite different from those of the Spanish monarchy. Not only were Californians allowed to trade with foreigners, but foreigners could also now hold land in the province once they had been naturalized and converted to Catholicism. Under Spain, land grants to individuals were few in number, and title to these lands remained in the hands of the crown. Under Mexican rule, however, governors were encouraged to make more grants for individual ranchos, and these grants were to be outright. Most importantly, the new Mexican republic was determined to move to "secularize" the missions, to remove the natives and the mission property from the control of the Franciscan missionaries.

Secularization was set in motion by the Mexican Governor Echeandia in 1826, but was not carried out in earnest until 1834 when Governor José Figueroa issued an official proclamation ordering the secularization of the California missions. His proclamation turned the mission properties over to Mexican civil authorities, allowed for the disbursement of mission property, opened mission land for settlement by petitioners, and created a series of pueblos. Indian neophytes were freed from their role as personal servants to the padres; however, in reality, the effects of secularization throughout California were to deprive a large percentage of the remaining mission Indians of their property. This resulted in the creation of a relatively large population of landless Indian tenants, many of whom sought work in the newly created Ranchos.

The new Ranchos that sprang up as a result of secularization created a wholly new culture in California, one that was centered on the raising and maintaining of vast herds of cattle. These Ranchos were usually owned by individual families who supervised a veritable army of Indian laborers and *vaqueros*.

The ranch owners owed their livelihood to the sale and trade of the products, primarily hide and tallow, derived from their cattle. A flourishing trade with foreign merchants, mostly Americans, kept the Mexican Ranchos afloat; hides and tallow were traded to American merchants for everything from food staples and clothing to furniture and luxury goods. Between 1833 and 1846, Mexican governors awarded over 600 land grants in California, several of these to naturalized citizens (Cleland 1975). Cattle ranching commenced in California as early as 1784, but Mexico's secularization of mission properties saw it flourish, and by 1845 more than one-third of California's white population lived on ranchos (NPS 1990:3). Los Alamos Ranch house (P-42-40498), along SR 135, was built about 1840 and has been described as "probably the best extant example in the United States of the smaller type of traditional one-story adobe Spanish-Mexican hacienda" ("Native American Graves Protection and Repatriation Act" 1990:3).

The emphasis of cattle during the rancho period saw new expression in the growth of dairying during the American period. Over 800 California land grants in the build-up to the American period had "enormous heads of cattle" (Santos 1994:175), but dairying was not the emphasis that tallow and hides previously were. Coastal California was collectively a dairying region, due to mild climate and population centers. Dairying also helped promote railroads and alfalfa as a crop (Santos 1994:179), and farming in general also saw an explosion with the American influx. The 18,716 farms in California in 1860 had grown to 88,197 farms by 1910 (Santos 1994:182). As former rancho lands were divided and public lands opened up, crops like beans and peas saw great growth, aided by increasing mechanization and expanded irrigation; diversification of product and orcharding created more demand as well as opening new markets (JRP Historical Consulting Services 2006:9, 11).

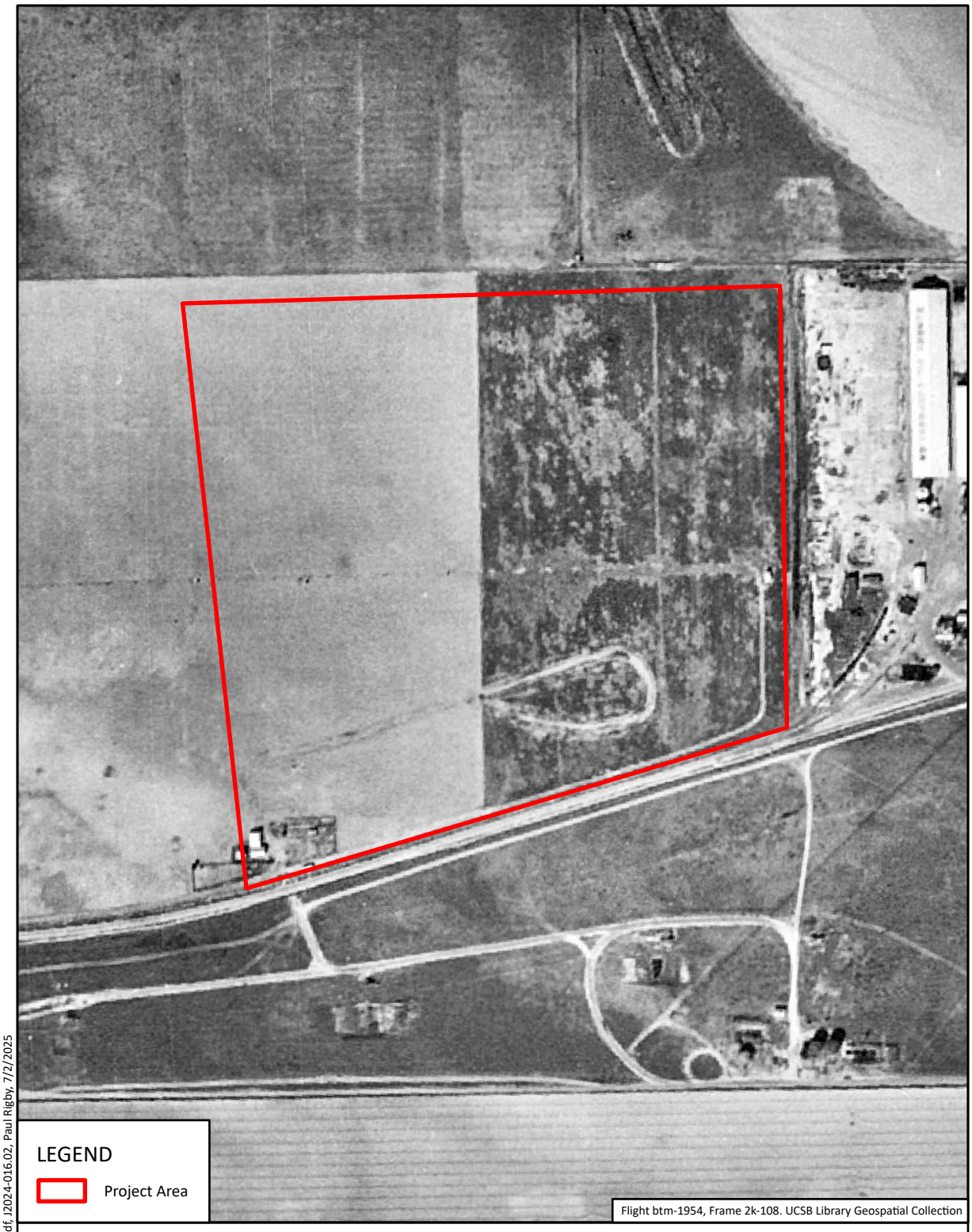
HISTORY OF THE PROJECT AREA

Much of northern Santa Barbara County was divided into several major ranchos, including Rancho Guadalupe, Rancho Punta de la Laguna, Rancho Casmalia, Todos Santos Y San Antonio, and Los Alamos, among others. The current Project Area lies within the boundaries of Rancho Punta de la Laguna. The Rancho Punta de la Laguna was a Mexican-era land grant given in 1844 by Governor Manuel Micheltorena to Luis Arellanes and Emigdio Miguel Ortega. Punta de la Laguna translates into English as "point of the lagoon" and was chosen for the Rancho due to the presence of a lake within the boundary of the Rancho. Aerial imagery from 1938 illustrates that historic-era development in the Project Area consisted of agriculture and the installation of a network of roads; there are no historic structures visible in the Project Area (Figure 4). The desktop review previously completed for this Project, imprecisely stated that there was a domestic ranch or farming complex, or oil well, within the Project Area visible on the 1938 aerial photograph. We confirm here that there is no ranching complex or oil well visible within the Project Area on the 1938 aerial photograph. The railroad is also visible to the south of the Project Area. However, the 1954 and 1967 aerial photographs show a small compound of structures visible in the southwestern corner of the Project Area (Figures 5 and 6). As evidenced by the 2002 aerial photograph, the compound was razed by the early 2000's (Figure 7).



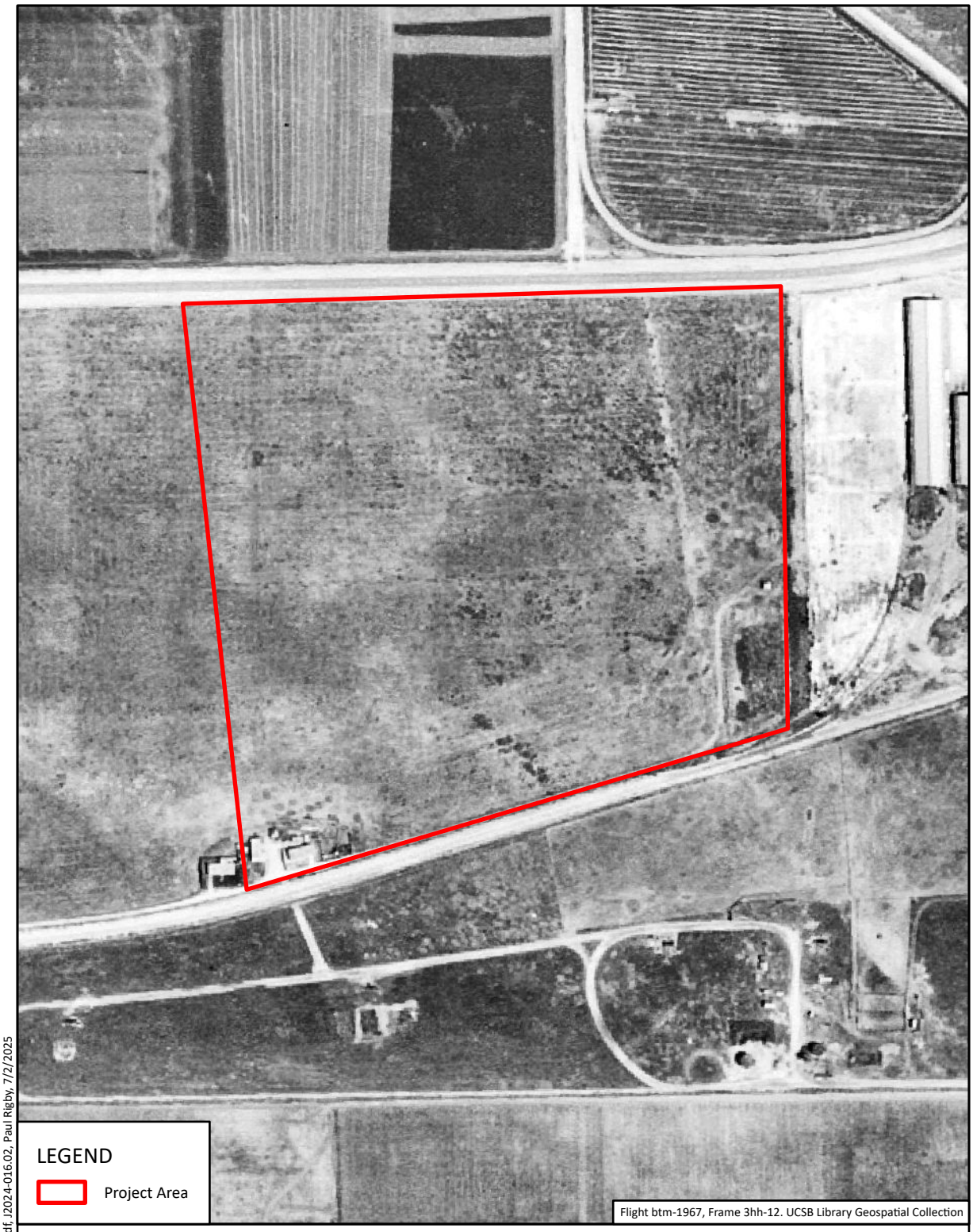
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Figure 4. Project Area on a 1938 aerial photograph.



File name: Figure_5_1954.pdf, J2024-016.02, Paul Rigby, 7/2/2025

Figure 5. Project Area on a 1954 aerial photograph.



File name: Figure_6_1967.pdf, J2024-016.02, Paul Rigby, 7/2/2025

Figure 6. Project Area on a 1967 aerial photograph.



File name: Figure_7_2002.pdf, J2024-016.02, Paul Rigby, 7/2/2025

Figure 7. Project Area on a 2002 aerial photograph.

Field Methods

5

On April 11, 2025, Albion Archaeologists MacKennah Polkinghorne and Elliot Waters conducted an intensive pedestrian survey of the entire Project Area (Figure 2). The pedestrian survey involved walking and closely inspecting the ground surface for cultural materials in 15 meter transect intervals. Surface visibility in the Project Area was poor to fair (Photograph 2). Seasonal grasses, weeds, and strawberry bushes obscured approximately 80% of the surveyed Project Area (Photograph 2). Areas devoid of any vegetation allowed appreciable ground visibility. The Project Area was generally flat along the pad and gently sloping to the west along the driveway.



Photograph 2. Typical ground visibility in the Project Area.

Study Findings

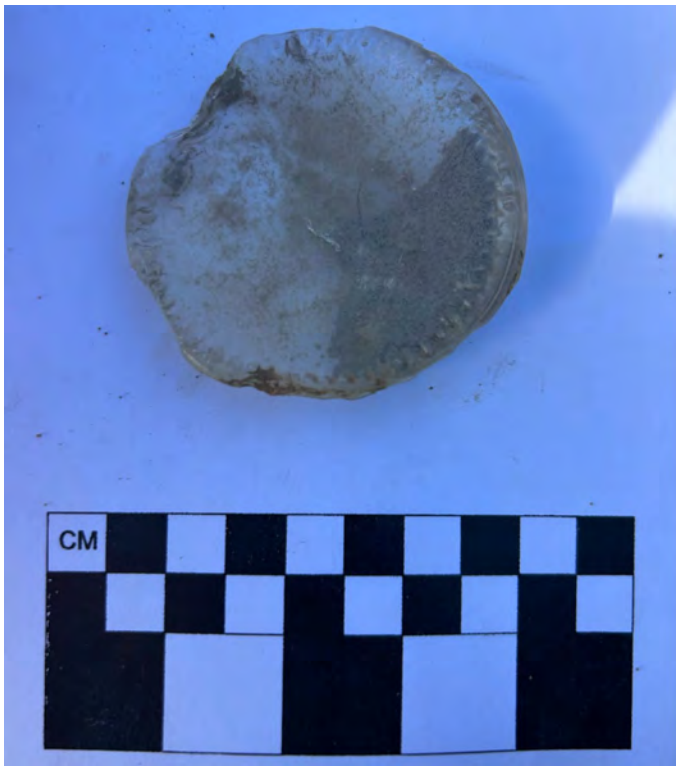
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ARCHIVAL RESEARCH RESULTS

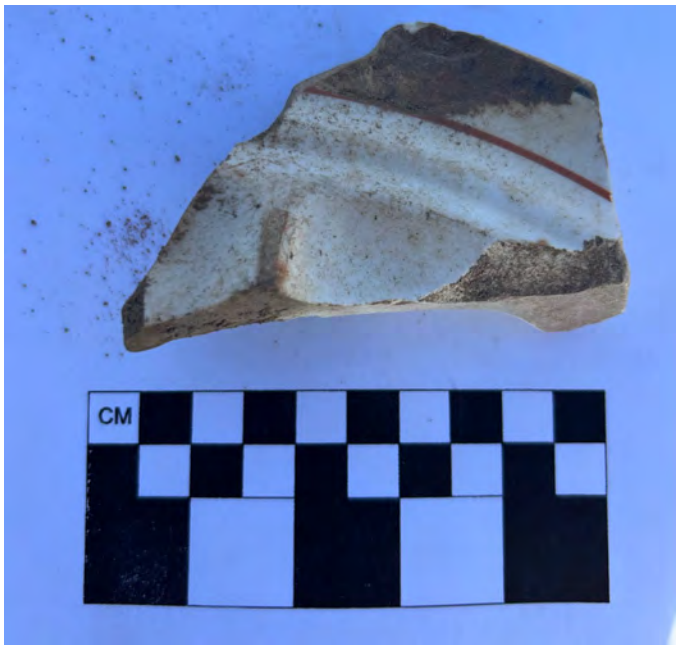
Aerial imagery from 1938 illustrates that the Project Area and general vicinity consisted of agriculture and the installation of a network of roads; there are no historic structures visible in the Project Area in the 1938 aerial (Figure 4). Aerial images from 1954-1967 (Figures 5 and 6) demonstrate that a compound of small structures with an unknown function, likely a farming outpost or other agricultural related aspects, is visible in the southwestern corner of the Project Area. By 2002, the compound has been removed and the area subject to disking and plowing for crop planting. The record search did not identify any previously recorded cultural resources within the Project Area nor within a $^{1}/_{2}$-mile radius of the Project Area.

PEDESTRIAN SURVEY RESULTS

During the survey, ground visibility was deemed poor to fair despite there being significant amounts of ground vegetation. Every effort was made to closely inspect areas with subsurface views like ground burrowing animal dens or spoils and exposed areas. The Project Area has been disturbed from use for agriculture, and the topsoils were plowed into neat, long rows. Two isolated artifacts consisting of a historic-era glass bottle base (Isolate 1) and a historic-era ceramic sherd (Isolate 2) (Photographs 3 and 4; Figure 8) were identified during the survey. No other materials were identified. Isolate 1 was identified as a machine-made, stippled glass bottle base that dates to 1940 or later (Lindsey). Isolate 2 was identified as a ceramic white improved earthenware with blue and red lines around the rim and likely dates from 1890 or later (Samford 2002). DPR isolate forms were filled out and submitted to the CCoIC for each isolate (Appendix B).



Photograph 3. Isolate 1



Photograph 4. Isolate 2



File name: Figure_8_SurveyResults.pdf, J2025-016.01, Stella D'Oro, 4/15/2025

Figure 8. Pedestrian survey results.

HISTORIC ARCHAEOLOGICAL SENSITIVITY

While we did identify two isolated historic-era artifacts, they were located within a heavily plowed agricultural field, are not *in situ*, and do not retain integrity. Therefore, it is our assessment that the isolates are likely not representative of, or an indicator that there is, an intact historic-era archaeological deposit. As no historic-era archaeological sites were previously recorded within the Project Area or identified during the pedestrian survey, sensitivity for historic-era resources within the Project Area can be assess based on archival imagery. Aerial photographs show that the Project Area does not contain any historic-era structures in 1938. Aerial images from 1954-1967 (Figures 5 and 6), however, demonstrate that a compound of small structures with an unknown function, likely a farming outpost or other agricultural related aspects, is visible in the southwestern corner of the Project Area. By 2002, the compound was razed (see Figure 7). We were not able to identify detailed records of cutting or filling in the Project Area post-2002. Therefore, it is not possible to determine whether buried historic-era archaeological deposits associated with 20th century land use as depicted on historic maps were preserved or destroyed by subsequent earth moving activities (e.g., agricultural plowing). Therefore, it is our assessment that there is a moderate probability that construction could impact historic-era subsurface archaeological features.

PRECOLONIAL ARCHAEOLOGICAL SENSITIVITY

The Project Area is located within the City's Archaeological Sensitivity Area 3, which is categorized as having a negligible sensitivity to contain archaeological resources. The Project Area is situated on less than 9-degree slopes, but it is more than 200 meters from a water course, and there are no known precolonial archaeological sites located within $^{1}/_{2}$-mile. Additionally, no archaeological resources were identified during the pedestrian survey. Therefore, the overall sensitivity of the Project Area to contain precolonial sites is low.

PRECOLONIAL ARCHAEOLOGICALLY SENSITIVE LANDFORMS

Using a model, the potential for buried archaeological sites within the Project Area can be conceptualized as a set of factors that either encouraged or discouraged human use or occupation of certain landforms (e.g., aspect, extent, setting, slope), combined with those that affected the subsequent preservation (i.e., erosion or burial) of those landforms (Meyer et al. 2010; Rosenthal and Meyer 2004). Using this model, landforms can be ranked as being more or less sensitive based on demonstrated relationships between environmental variables and known precolonial site locations.

For example, the contact between depositional and non-depositional (e.g., eroded or older) landforms can also be a factor because these often mark environmental ecotones, or spatial transitions between different ecosystems, habitats, and/or plant and animal communities (Rosenthal and Meyer 2004; Meyer et. al 2010). In California, precolonial sites are commonly identified at or along ecotones, and are frequently located near the contact between younger and older geomorphic surfaces, such as fans or terraces that are higher than the floodplain (Rosenthal and Meyer 2004; Meyer et. al 2010). For this reason, areas in which both landforms occur in close proximity have a higher potential for containing buried archaeological resources than broad, level depositional landforms that lack elevated surfaces. Additionally, a study of GIS data indicates that archaeological site densities are greatest at distances of 200 meters (~656 feet) or less from a known watercourse (Rosenthal and Meyer 2004; Meyer et. al 2010). Consequently, it is expected that previously unidentified buried sites will be located relatively close to present springs and water courses, as well as former ones.

In summary, using this model, the potential for buried archaeological deposits can be conceived as follows:

a) Very Low — pre-latest Pleistocene deposits regardless of the combination of other factors,

b) Low — Latest Pleistocene or Holocene deposits with slopes greater than 9 degrees located more than 200 m (656 feet) from a water source and/or geomorphic contact,

c) Moderate — Holocene deposits with slopes less than 9 degrees located less than 200 m (656 feet) geomorphic contact, located more than 200 m (656 feet) from a water source,

d) High — Holocene deposits with slopes less than 9 degrees located less than 200 m (656 feet) geomorphic contact, AND less than 200 m (656 feet) from a water source,

e) Very High — Holocene deposits with slopes less than 9 degrees located less than 200 m (656 feet) from a geomorphic contact, water source, and confluence of two or more watercourses, AND/OR contains previously identified buried site.

While the current Project Area has slopes of less than 9 degrees, it is more than 200 meters from a water course. The area is mapped as a Pleistocene to Holocene aged landform with marine and nonmarine sedimentary rocks, and therefore likely holds a low potential for buried archaeological resources.

Summary and Conclusions

7

Albion conducted a Phase I Cultural Resources Inventory of a 33-acre area located at 1680 West Stowell Road (APN 117-820-012; 117-820-013) in Santa Maria in Santa Barbara County, California. The property owner is proposing to develop the parcel with a new commercial warehouse. Since the Project requires permits from the City of Santa Maria (City), the Project is subject to environmental review under the California Environmental Quality Act (CEQA), and the City has asked for a Phase I Cultural Resource Inventory of the Project Area that consists of background and archival research results and a pedestrian survey.

A search of records at the CCoIC indicated that no cultural resource studies have previously been conducted within the Project Area and two cultural resource studies had been previously conducted within a $^{1}/_{2}$-mile radius of the Project Area. The records search identified no previously recorded cultural resources within the Project Area and no previously recorded resources within a $^{1}/_{2}$-mile radius of the Project Area. Archival research and an aerial imagery review revealed evidence of historic-era structures within the Project Area on 1954 and 1967 aerial imagery. The results of the NAHC Sacred Lands File were negative.

After reviewing the record search results, Albion conducted an intensive pedestrian survey of the Project Area on April 11, 2025. Throughout the Project Area, ground surface visibility was poor to fair, as much of the Project Area was covered by vegetation. Visual inspection of the Project Area yielded two isolated historic-era artifacts consisting of one piece glass and one ceramic sherd. The pedestrian survey did not identify any precolonial cultural resources within the Project Area.

The Project Area is located within the City's Archaeological Sensitivity Area 3, which is categorized as having a negligible sensitivity to contain archaeological resources. There are no known precolonial archaeological sites located within $^{1}/_{2}$-mile results of the Project Area, and the results of pedestrian survey were negative for precolonial resources. The Project Area is more than 200 meters from a water course and is mapped as a Pleistocene to Holocene aged landform with marine and nonmarine sedimentary rocks. Given this data, it is our assessment that the overall sensitivity of the Project Area to contain precolonial sites is low.

It is our assessment that potentially significant cultural materials associated with the historic-era may be located within the Project Area. While we did identify two isolated historic-era artifacts, they were located within a heavily plowed agricultural field, are not *in situ*, and do not retain integrity. Therefore, it is our assessment that the isolates are likely not representative of, or an indicator that there is, an intact historic-era archaeological deposit. As no historic-era archaeological sites were previously recorded within the Project Area or identified during the pedestrian survey, sensitivity for historic-era resources within the Project Area can be assessed based on archival imagery. Aerial photographs show that the Project Area does not contain any historic-era structures in 1938. Aerial images from 1954-1967 (Figures

5 and 6), however, demonstrate that a compound of small structures with an unknown function, likely a farming outpost or other agricultural related aspects, is visible in the southwestern corner of the Project Area. By 2002, the compound was razed (see Figure 7). We were not able to identify detailed records of cutting or filling in the Project Area post-2002. Therefore, it is not possible to determine whether buried archaeological deposits associated with 20th century land use as depicted on historic maps were preserved or destroyed by subsequent earth moving activities (e.g., agricultural plowing). Therefore, it is our assessment that there is a moderate probability that construction could impact historic-era subsurface archaeological features.

Since many important cultural resources, such as Tribal Cultural Resources, do not necessarily leave an archaeological footprint or have physically identifiable manifestations, it is vital to seek out the possibility of these important resources and their locations through consultation with local tribal members. Under the authority of Assembly Bill 52, the City of Santa Maria may have received information from interested Native American tribes or representatives concerning Tribal Cultural Resources at the project site. The City is responsible for collecting and incorporating tribal information into the environmental review process. At this time, we do not know if the City has received any such information.

RECOMMENDATIONS AND MITIGATION MEASURES

Albion recommends an Extended Phase I Investigation to test for the presence or absence of historic-era resources. The City shall verify that the project sponsor has retained a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, to develop and implement an Extended Phase I Archaeological Assessment of the project site to test for historic-era archaeological deposits to the depth of the project's grading, trenching, and excavation. The Extended Phase I Assessment shall include subsurface testing of the project site through mechanical trenching to allow the archaeologist to observe subsurface conditions and locate any buried cultural deposits, features, or artifacts. The archaeologist shall document any findings and subsurface conditions in an Extended Phase I report which shall be submitted to the City. If the Extended Phase I Investigation identifies archaeological resources, the archaeologist shall evaluate the find to determine its significance under CEQA (14 CCR 15064.5(f); Public Resources Code Section 20182).

Per the City's RME (Policy 4, Implementation Program 1), if cultural resources are discovered during construction of a Project, all work in the area of the find shall cease, and a qualified archaeologist shall be retained by the project applicant to investigate the find and to make appropriate recommendations. If human remains are encountered, all work shall cease and the Coroner's Office shall be contacted.

References

Alt, D., and D. Hyndman
2000 *Roadside Geology of Northern and Central California*. Mountain Press Publishing Company, Missoula, Montana.

Arnold, J.E.
1992 Complex Hunter-Gatherer-Fisheries of Prehistoric California: Chiefs, Specialists, and Maritime Adaptations of the Channel Islands.

Bolton, H.E.
1931 Expedition to San Francisco Bay in 1770: Diary of Pedro Fages. *Academy of Pacific Coast History 2*(3):141-159.

Breschini, G.S., T. Haversat, and R.P. Hampson
1983 *A Cultural Resources Overview of the Coast and Coast Valley Study Areas*. On file at the Archaeological Consulting, Salinas. Copies available from the Northwest Information Center of the California, Department of Anthropology, Sonoma State University, Rohnert Park.

Burch, S.H., and D.L. Durham
1970 *Complete Bouguer Gravity and General Geology of the Bradley, San Miguel, Adelaida, and Paso Robles Quadrangles, California*. Geological Survey Professional Papers 646-B. U.S. Government Printing Office, Washington D.C.

Burcham, L.T.
1957 *California Range Land: An Historic-Ecological Study of the Range Resources of California*. California Department of Natural Resources, Division of Forestry, Sacramento.

Christensen, M.N.
1966 Quaternary of the California Coast Ranges. In *Geology of Northern California*, edited by E. H. Bailey. Bulletin No. 190, California Division of Mines and Geology, San Francisco.

Cleland, R.G.
1975 *A History of California: The American Period*. Greenwood Press, Westport, Conn.

Codding, B.F., J.F. Porcasi, and T.L. Jones
2010 Explaining prehistoric variation in the abundance of large prey: A zooarchaeological analysis of deer and rabbit hunting along the Pecho Coast of Central California. *Journal of Anthropological Archaeology 29*:47-61.

Colten, R.
1993 *Prehistoric Subsistence, Specialization, and Economy in a Southern California Chiefdom.* Ph.D. Dissertation, University of California, Los Angeles.

Compton, R.R.
1966 Granitic and Metamorphic Rocks of the Salinan Block, California Coast Ranges. In *Geology of Northern California*, edited by E. H. Bailey, pp. 227-287. Bulletin No. 190, California Division of Mines and Geology, San Francisco.

Dupre, W.R.
1991 Quaternary Geology of the Southern California Coast Ranges. In *Quaternary Nonglacial Geology: Conterminous U.S.*, edited by R. B. Morrison, pp. 176-184. The Geology of North America. Vol. K-2. Geological Society of America, Boulder, Colorado.

Farris, G.
1986 Appendix A: Ethnographic Accounts of the Indians of San Simeon. In *The Prehistory of San Simeon Creek 5,800 B.P. to Missionization*. Report prepared for the Department of Parks and Recreation, Sacramento.

Gibson, R.O.
1983 Ethnography of the Salinan People: A Systems Approach. M.A. thesis, Anthropology, California State University, Hayward, Hayward.

Glassow, M.A.
1996 *Purisimeno Chumash Prehistory: Maritime Adaptations along the Southern California Coast*. Harcourt and Brace, Orlando, CA.

Grant, C.
1978 Chumash: Introduction. In *California*, edited by R. F. Heizer, pp. 505-508. Handbook of North American Indians. Vol. 8, W. C. Sturtevant, general editor. Smithsonian Institute, Washington D.C.

Greenwood, R.
1978 Obispeño and Purisimeño Chumash. In *California*, edited by R. F. Heizer and W. C. Sturtevant, pp. 520-523. Handbook of North American Indians. Smithsonian Institute, Washington, D.C.

Hall, E.R.
1981 *The Mammals of North America*. John Wiley and Sons, Inc., New York.

Hart, E.W.
1976 *Basic Geology of the Santa Margarita Area, San Luis Obispo County, California* Bulletin No. 199. California Division of Mines and Geology, San Francisco.

Hoover, M.B., H.E. Rensch, E.G. Rensch, and W.N. Abeloe
1966 *Historic Spots in California*. 3rd ed. ed. Stanford University Press, Stanford.

Ingles, L.G.
1965 *Mammals of the Pacific States: California, Oregon and Washington.* Stanford University Press, Stanford, California.

Johnson, J.J.
1988 Chumash Social Organization: An Ethnohistoric Perspective. Unpublished Ph.D. dissertation, Anthropology, University of California, Santa Barbara.

Jones, T.L.
1993 Big Sur: A Keystone in Central California Culture History. *Pacific Coast Archaeological Society Quarterly 29*(1):1-78.

Jones, T.L., K. Davis, G. Farris, S.D. Grantham, B. Rivers, and T. Fung
1994 *Toward a Prehistory of Morro Bay: Phase II Archaeological Investigations for the Morro Bay Highway 41 Widening Project, San Luis Obispo County, California*. Prepared by California Department of Transportation, Sacramento. On file at the Central Coast Information Center, University of California, Santa Barbara, California.

Jones, T.L., and J. Ferneau
2002 *Prehistory of San Simeon Reef: Archaeological Data Recovery at CA-SLO-179 and -267, San Luis Obispo County, California*. On file at the San Luis Obispo County Archaeological Society, San Luis Obispo.

Jones, T.L., N.E. Stevens, D.A. Jones, R.T. Fitzgerald, and M.G. Hylkema
2007 The Central Coast: A Midlatitude Milieu. In *California Prehistory: Colonization, Culture and Complexity*, edited by T. L. Jones and K. A. Klar, pp. 125-146. AltaMira Press, Lanham, MD.

JRP Historical Consulting Services
2006 *Historical Resources Evaluation for the Bob Jones Trail Project*, Submitted to Keith Miller, Morro Group Inc., San Luis Obispo, CA.

Kroeber, A.L.
1925 *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. Smithsonian Institution, Washington, D.C.

Lewis, L.P., E.H. Hubbard, and A. Pace
1991 *Southern Coast Ranges, Annual Field Trip Guide Book, No. 19*. On file at the South Coast Geological Society, Inc., Santa Ana, California.

Lindsey, B.
Stippling or Knurling. https://sha.org/bottle/bases.htm#Stippling. April 2025.

Martz, P.
1992 Status Distinctions Reflected in Chumash Mortuary Populations in the Santa Monica Mountains Region. In *Essays on the Prehistory of Maritime California*, edited by T. L. Jones, pp. 145-156. Vol. 10. Center for Archaeological Research at Davis, University of California, Davis.

Mason, J.A.
1912 The Ethnology of the Salinan Indians. *University of California Publications in American Archaeology and Ethnology 10*(4):97-240.

Meyer, J.D., D.C. Young, and J. Rosenthal
2010 *A Geoarchaeological Overview and Assessment of Caltrans Districts 6 and 9: Cultural Resources Inventory of Caltrans District 6/9 Rural Conventional Highways*. On file at the California Department of Transportation, District 6, Fresno.

Native American Graves Protection and Repatriation Act
1990.

Norris, R.M., and R.W. Webb
1976 *Geology of California*. John Wiley and Sons, Inc., New York.

NPS
1990 *Site of National Significance, Los Alamos Ranch House, California*. On file at the Central Coast Information Center, Santa Barbara, CA.

Rosenthal, J., and J. Meyer
2004 Landscape Evolution and the Archaeological Record: A Geoarchaeological Study of the Southern Santa Clara Valley and Surrounding Region. *Center for Archaeological Research at Davis 14*.

Samford, P.
2002 Decal Decorated Wares. https://apps.jefpat.maryland.gov/diagnostic/Post-Colonial%20Ceramics/Less%20Commonly%20Found/DecalDecoratedWares/index-DecalDecoratedWares.html. April 2025.

Santos, R.L.
1994 Dairying in California Through 1910. *Southern California Quarterly 76*(2):174-194.

Spanne, L.
1980 *An Archaeological Evaluation for the Flood Control Groundwater Recharge Project No. 3189 Santa Maria, California, County of Santa Barbara*, Santa Barbara County.

United States Department of Agriculture
2023 Web Soil Survey. https://soilseries.sc.egov.usda.gov. 2023.

Weber, D.J.
1982 *The Spanish Frontier in North America*. Yale University Press, New Haven.

Weber, F.J.
1992 *Prominent Visitors to the California Missions*. Kimberly, Los Angeles.

Wlodarski, R.
2010 *A Phase 1 Archaeological Study: For the Area 9 Specific Plan, an 890 acre Project Site located in the city of Santa Maria Santa Barbara County California*, Santa Barbara County.

Zeiner, D.C., W.F. Laundenslayer, and K.E. Mayer
1990 *California's Wildlife, Volume I, Birds, and Volume II, Mammals*. Department of Fish and Wildlife, Sacramento.

Appendix A

Records Search Results Memo and
Sacred Lands File Search Results Memo

Central Coast Information Center
Santa Barbara Museum of Natural History
2559 Puesta del Sol
Santa Barbara, CA 93105
PHONE (805) 682-4711 ext. 181
FAX (805) 682-3170
EMAIL ccic@sbnature2.org

3/31/2025 Records Search # 25-058

Reilly Murphy
Albion Environmental Inc
1414 Soquel Ave Ste 205
Santa Cruz, CA 95062

Re: J2025016.01 RRM 1680 W Stowell Road Phase I

The Central Coast Information Center received your record search request for the project area referenced above, located on the Santa Maria USGS 7.5' quad(s). The following reflects the results of the records search for the project area and a one-half mile radius:

As indicated on the data request form, the locations of reports and resources are provided in the following format: ■ custom GIS maps ☐ shapefiles ☐ hand-drawn maps ☐ none

Resources within project area:	None
Resources within ½ mile radius:	None
Reports within project area:	None
Reports within ½ mile radius:	Two: SR-04572; SR-00384

Resource Database Printout (list):	☐ enclosed	■ not requested	☐ nothing listed
Resource Database Printout (details):	☐ enclosed	■ not requested	☐ nothing listed
Resource Digital Database Records:	☐ enclosed	☐ not requested	☐ nothing listed
Report Database Printout (list):	☐ enclosed	■ not requested	☐ nothing listed
Report Database Printout (details):	☐ enclosed	■ not requested	☐ nothing listed
Report Digital Database Records:	■ enclosed	☐ not requested	☐ nothing listed
Resource Record Copies:	☐ enclosed	☐ not requested	■ nothing listed
Report Copies:	☐ enclosed	☐ not requested	■ nothing listed
OHP Historic Properties Directory:	☐ enclosed	☐ not requested	■ nothing listed
Archaeological Determinations of Eligibility:	☐ enclosed	☐ not requested	■ nothing listed

The following sources of information are available at **http://ohp.parks.ca.gov/?page_id=28065**. Some of these resources used to be available through the CHRIS but because they are now online, they can be accessed directly. The Office of Historic Preservation makes no guarantees about the availability, completeness, or accuracy of the information provided through the sources listed below.

California State Lands Commission Shipwreck Database	*Caltrans Historic Bridge Inventory*
U.S. Geological Survey Historic Topographic Maps	*Rancho Plat Maps*
National Park Service National Register of Historic Places Nominations	*Natural Resource Conservation Service Soil Survey Maps*
US Bureau of Land Management General Land Office Records	*California Historical Landmarks Listing (by county)*
Five Views: An Ethnic Historic Site Survey for California (1988)	*Historical Soil Survey Maps*

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of California Historical Resources Information System (CHRIS) data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the CHRIS.

Sincerely,

Aria James

Aria James
Assistant Coordinator

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Reginald Pagaling
Chumash

VICE CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

SECRETARY
Sara Dutschke
Miwok

PARLIAMENTARIAN
Wayne Nelson
Luiseño

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
Reid Milanovich
Cahuilla

COMMISSIONER
Bennae Calac
Pauma-Yuima Band of Luiseño Indians

COMMISSIONER
Vacant

ACTING EXECUTIVE SECRETARY
Steven Quinn

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

April 1, 2025

Reilly Murphy
Albion

Via Email to: rmurphy@albionenvironmental.com

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, J2025016.01 RRM 1680 W Stowell Road Phase I Project, Santa Barbara County

To whom it may concern:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;
- Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
- Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and
- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

    - Any report that may contain site forms, site significance, and suggested mitigation measures.

      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 in accordance with Government Code section 6254.10.

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Pricilla.Torres-Fuentes@nahc.ca.gov.

Sincerely,

Pricilla Torres-Fuentes

Pricilla Torres-Fuentes
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Santa Barbara County
4/1/2025

County	Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation	Counties	Last Updated
Santa Barbara	Chumash Council of Bakersfield	N	Julio Quair, Chairperson	729 Texas Street Bakersfield, CA, 93307	(661) 322-0121		chumashtribe@sbcglobal.net	Chumash	Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura	
	Coastal Band of the Chumash Nation	N	Gabe Frausto, Chairman	P.O. Box 40653 Santa Barbara, CA, 93140	(805) 568-8063		fraustogabriel28@gmail.com	Chumash	Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura	8/28/2023
	Northern Chumash Tribal Council	N	Violet Walker, Chairperson	P.O. Box 6533 Los Osos, CA, 93412	(760) 549-3532		violetsagewalker@gmail.com	Chumash	Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura	6/5/2023
	Santa Ynez Band of Chumash Indians	F	Sam Cohen, Government & Legal Affairs Director	100 Via Juana Road Santa Ynez, CA, 93460			scohen@chumash.gov	Chumash	Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura	7/6/2023
	Santa Ynez Band of Chumash Indians	F	Wendy Teeter, Cultural Resources Archaeologist	100 Via Juana Road Santa Ynez, CA, 93460	(805) 325-8630		wteeter@chumash.gov	Chumash	Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura	7/6/2023
	Santa Ynez Band of Chumash Indians	F	Crystal Mendoza, Elders' Council Administrative Assistant	100 Via Juana Road Santa Ynez, CA, 93460	(805) 325-5537		cmendoza@chumash.gov	Chumash	Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura	2/27/2024
	Santa Ynez Band of Chumash Indians	F	Nakia Zavalla, Tribal Historic Preservation Officer	100 Via Juana Road Santa Ynez, CA, 93460			nzavalla@chumash.gov	Chumash	Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura	7/6/2023

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed J2025016.01 RRM 1680 W Stowell Road Phase I Project, Santa Barbara County.

Record: PROJ-2025-001721
Report Type: AB52 GIS
Counties: Santa Barbara
NAHC Group: All

Appendix B

DPR Isolate Forms

State of California - Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code | Reviewer | Date:

*Resource Name or #: Isolate 1

P1. Other Identifier:

***P2. Location:** × Not for Publication Unrestricted
and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***a. County:** San Mateo

***b. USGS 7.5' Quad:** **Date:** **T** **R** **B.M.** Mount Diablo

c. Address: 1680 W Stowell Road **City:** Santa Maria

d. UTM: 10S 730958.39 m E / 3868892.31 m N

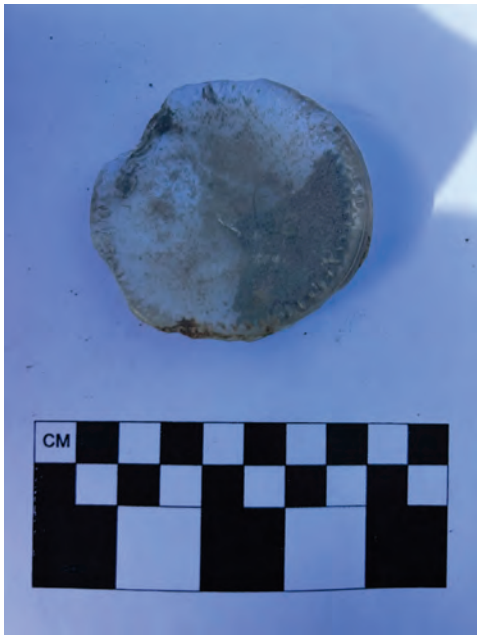
e. Other Locational Data:

***P3a. Description:**
Machine-made, stippled glass bottle base. The stippling dates the bottle base to 1940 or later. It was found in agricultural field.

***P3b. Resource Attributes:**

***P4. Resources Present:** ☐ Building ☐ Structure ☐ Object ☒ Site ☐District ☐ Element of District ☒ Other (Isolates, etc.)

P5a. Photo:



P5b. Description of Photo:
ISO-1

***P6. Date Constructed/Age and Sources:** × Historic
Prehistoric Both

***P7. Owner and Address:**
1680 W Stowell Road, Santa Maria, CA

***P8. Recorded by:**
Reilly Murphy
Albion Environmental, 3563 Sueldo Street, Suites P, San Luis Obispo, CA.

***P9. Date Recorded:**
4/11/2025

***P10. Survey Type:**
Pedestrian survey

***P11. Report Citation:**
Murphy, R. 2025
Phase I Cultural Resource Inventory for 1680 W Stowell Road, Santa Maria, CA

***Attachments:** NONE × Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record Artifact Record Photograph Record Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

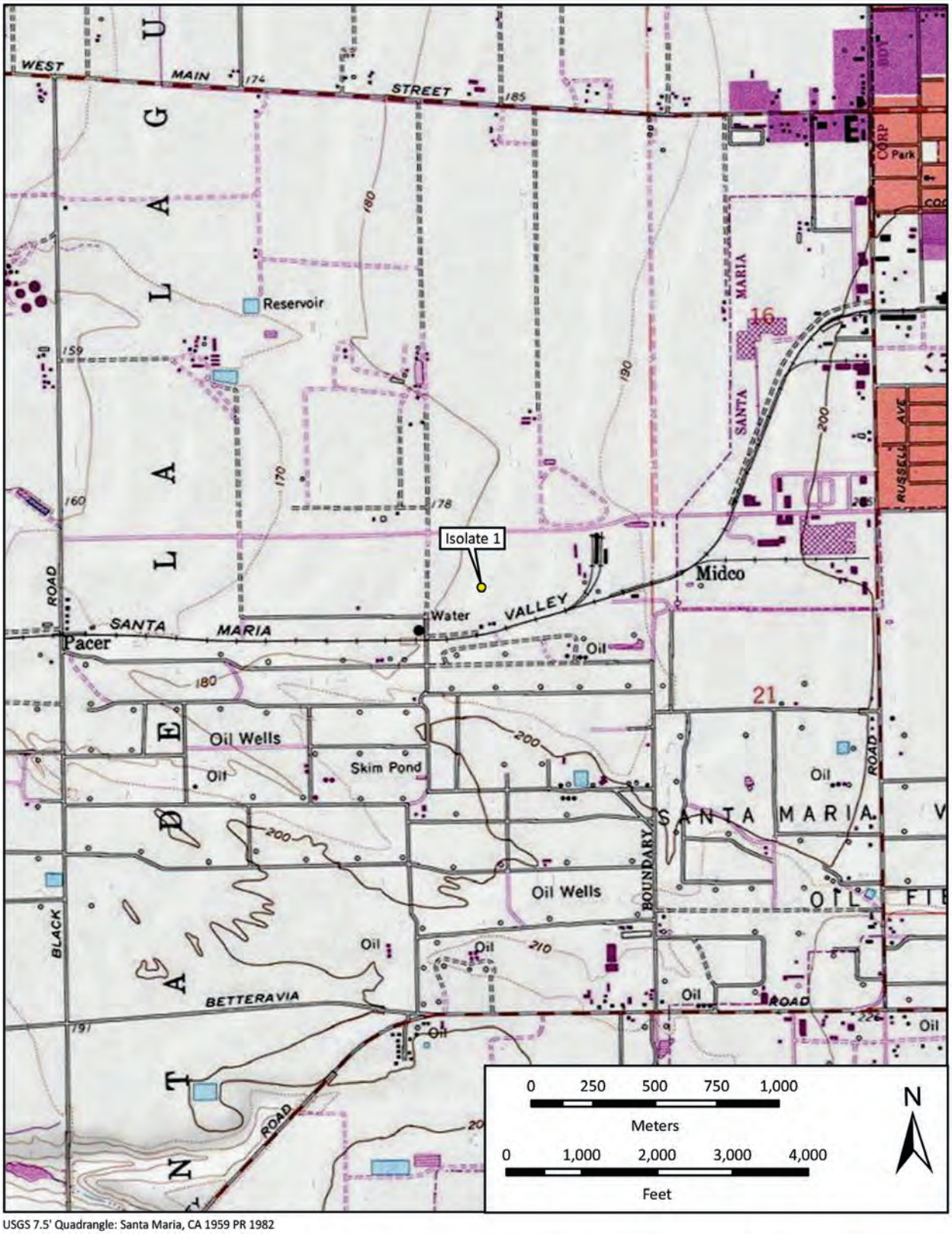
Primary #
HRI#
Trinomial

*Resource Name or #: Isolate 1

*Map Name:

*Scale: 1:24,000

*Date of Map: 1982



USGS 7.5' Quadrangle: Santa Maria, CA 1959 PR 1982

*Required information

State of California - Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code | Reviewer | Date:

*Resource Name or #: Isolate 2

P1. Other Identifier:

*P2. Location: × Not for Publication Unrestricted
and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*a. County: San Mateo

*b. USGS 7.5' Quad: Date: T R B.M. Mount Diablo

c. Address: 1680 W Stowell Road City: Santa Maria

d. UTM: 10S 731070.86 m E / 3868776.53 m N

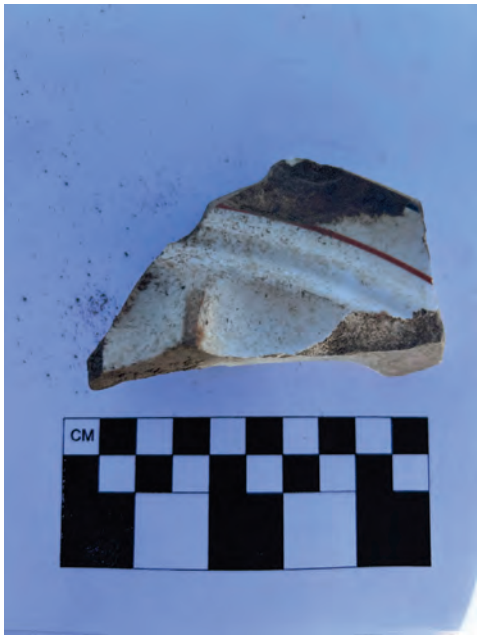
e. Other Locational Data:

*P3a. Description:
White improved earthenware with blue and red lines around the rim. The regularity of the colored lines suggest it was decal decorated, which places it post c. 1890.

*P3b. Resource Attributes:

*P4. Resources Present: ☐ Building ☐ Structure ☐ Object ☒ Site ☐District ☐ Element of District ☒ Other (Isolates, etc.)

P5a. Photo:



P5b. Description of Photo:
ISO-2

*P6. Date Constructed/Age and Sources: × Historic
Prehistoric Both

*P7. Owner and Address:
1680 W Stowell Road, Santa Maria, CA

*P8. Recorded by:
Reilly Murphy
Albion Environmental, 3563 Sueldo Street, Suites P, San Luis Obispo, CA.

*P9. Date Recorded:
4/11/2025

*P10. Survey Type:
Pedestrian survey

*P11. Report Citation:
Murphy, R. 2025
Phase I Cultural Resource Inventory for 1680 W Stowell Road, Santa Maria, CA

*Attachments: NONE × Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record Artifact Record Photograph Record Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

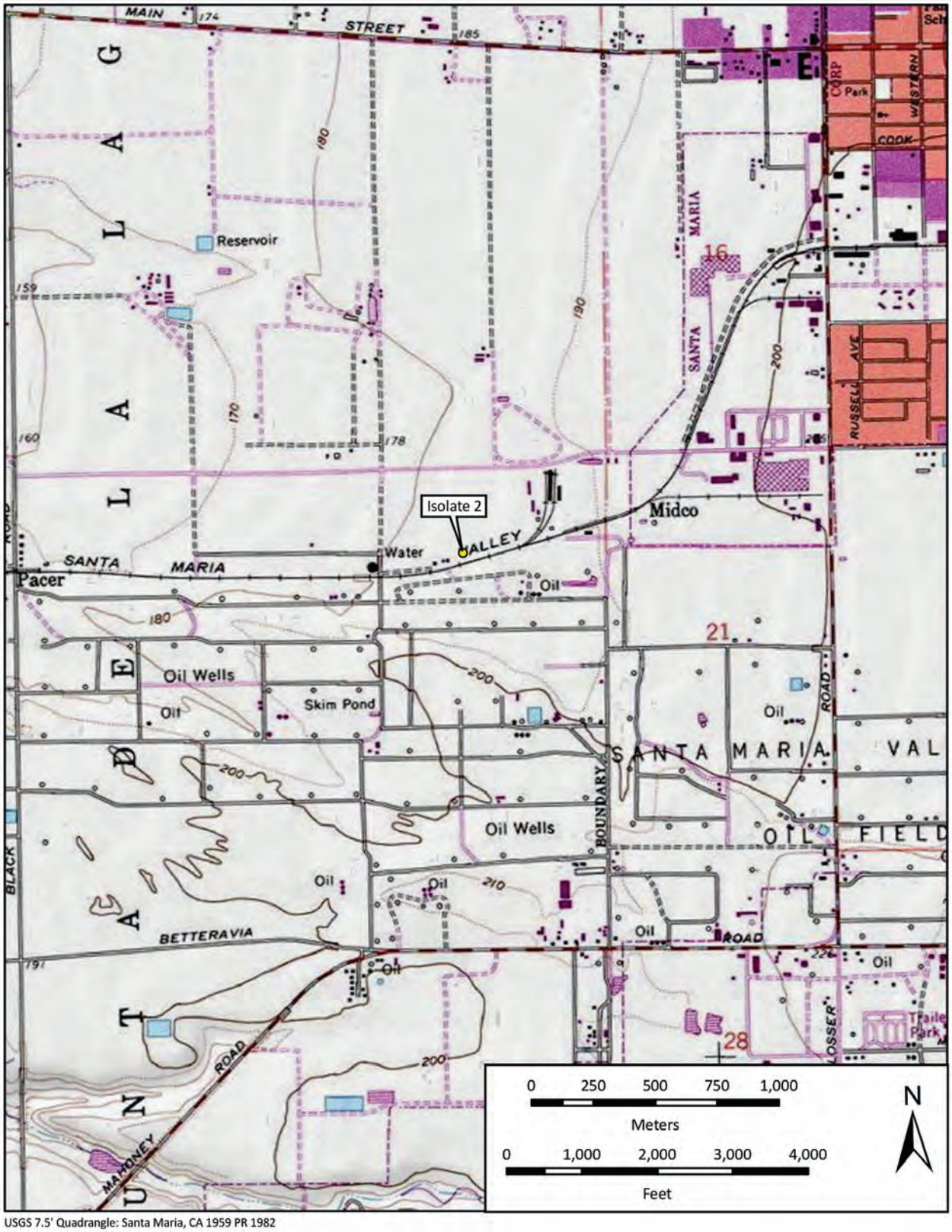
Primary #
HRI#
Trinomial

*Resource Name or #: Isolate 2

*Map Name:

*Scale: 1:24,000

*Date of Map: 1982



USGS 7.5' Quadrangle: Santa Maria, CA 1959 PR 1982

*Required information

Attachment 5

Noise Impact Analysis

NOISE IMPACT ANALYSIS

West Stowell Delivery Station, Santa Maria, CA Delivery Station

May 28, 2025

Prepared For:

Seefried Industrial Properties
Ben Ochoa, Development Manager
2321 Rosecrans Avenue, Suite 2220
El Segundo, CA 90245

NV5

3777 Long Beach Blvd., Annex Bldg.
Long Beach, CA 90807

1310724-3124023.00

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APPENDICES

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Appendix D: Traffic Count

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1.0 INTRODUCTION

1.1 NOISE IMPACT STUDY PURPOSE AND OBJECTIVES

This report is provided to support the City of Santa Maria's (City) environmental review process and supply information regarding potential effects of noise associated with the proposed West Stowell Delivery Station Project (proposed project) located within the West Stowell Specific Plan area within the City. This study evaluates short-term construction noise and long-term operational noise impacts from onsite stationary sources and mobile sources on the sensitive receptors located near the site and identifies any possible noise mitigation measures required for the proposed project.

1.2 PROJECT DESCRIPTION

The proposed project would develop a new 169,104 square-foot e-commerce delivery station, including 12,766 square feet (SF) of office space and 156,338 SF of warehouse space, as well as a 1,545-SF vehicle inspection area, a 4,993-SF fleet service center, and 906 SF of remote restrooms. The proposed project will be developed on an undeveloped parcel located at 1680 West Stowell Road in the City. The proposed project is located on an approximately 32-acre site currently used for agricultural purposes as shown in **Figure 1.** The project site is designated for Planned Development in the West Stowell Specific Plan and zoned Commercial Manufacturing/Agriculture Overlay (CM/AG).

The proposed project site will include a delivery station, a delivery van queueing area, and surface parking lots. The proposed project will also include sustainability features such as a solar-ready roof and electric vehicle charging stations. **Figure 2** provides details of the project site concept plan.

The proposed project includes line-haul truck loading docks south of the facility building, van loading and queuing to the east and west, and van parking bordering the roads to the west and east of the facility. Employee parking areas are located to the north of the facility. There are a total of 706 van parking spaces and 272 employee parking spaces. The facility will have a total of 12 line-haul truck loading docks. The site will be accessed via three entrances that will be built on the northwestern, northern, and northeastern parts of the facility bordering West Stowell Road. The northwestern entrance/exit will be for the line-haul trucks, while the northern and northeastern entrances will be for the vans and employee cars.

Line-haul trucks delivering goods from fulfillment/sorting centers will enter the project site using the northwestern driveway, on West Stowell Road, and travel south to the loading docks. Line-haul trucks will leave the site through the same driveway. Delivery vans and employee cars will enter and exit the site from the northern and northeastern driveway, also on West Stowell Road, and either park in the van parking lot, or drive towards the van staging and loading areas. Two van parking lots will be located to the east and west of the building. To the north of the building there will be parking spots reserved for employees. The line-haul truck loading docks will be located along the southern side of the warehouse building.

1.3 NEARBY LAND USES AND SENSITIVE RECEPTORS

Lands east of the project site are zoned General Manufacturing (M-2) and Small Lot Single Family Residential Zone (RSL-1) directly south of the M-2 zone. Agriculture use zones are located to the north and south of the project site. Lands south and west of the project site are zoned Commercial Manufacturing (CM) and Light Manufacturing (M-1). Directly south of the project site is the Santa Maria Valley Railroad track, and less than 9,000 feet south of the facility is the Santa Maria Public Airport. The proposed project will not use the Santa Maria Valley Railroad track for goods transport.

The nearest streets to the property are West Stowell Road to the north, Stowell Road to the south, A Street to the east, and E Street to the west.

According to the California Department of Transportation's *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, noise-sensitive receivers include residences, schools, hospitals, churches, and parks. The nearest sensitive receptor is a single-family home located on A Street located approximately 400 feet (0.08 miles) south of the project site. This single-family home appears to be unoccupied; however, it is conservatively assumed to be occupied for the noise analysis. Additional sensitive receptors are presented below and are shown in **Figure 1.**

- Santa Barbara Humane - Santa Maria Campus located approximately 1,000 feet (0.19 miles) northwest of the project site along West Stowell Road
- Residential neighborhood located approximately 1,400 feet (0.27 miles) southeast of the project site along South Fulton Court
- Single-family home located approximately 1,450 feet (0.27 miles) northwest of the project site along West Stowell Road
- Single-family home located approximately 1,500 feet (0.28 miles) north of the project site along West Stowell Road
- Single-family home located approximately 1,840 feet (0.35 miles) southeast of the project site along A Street

Figure 1. Project Location Map and Noise Sensitive Receptors

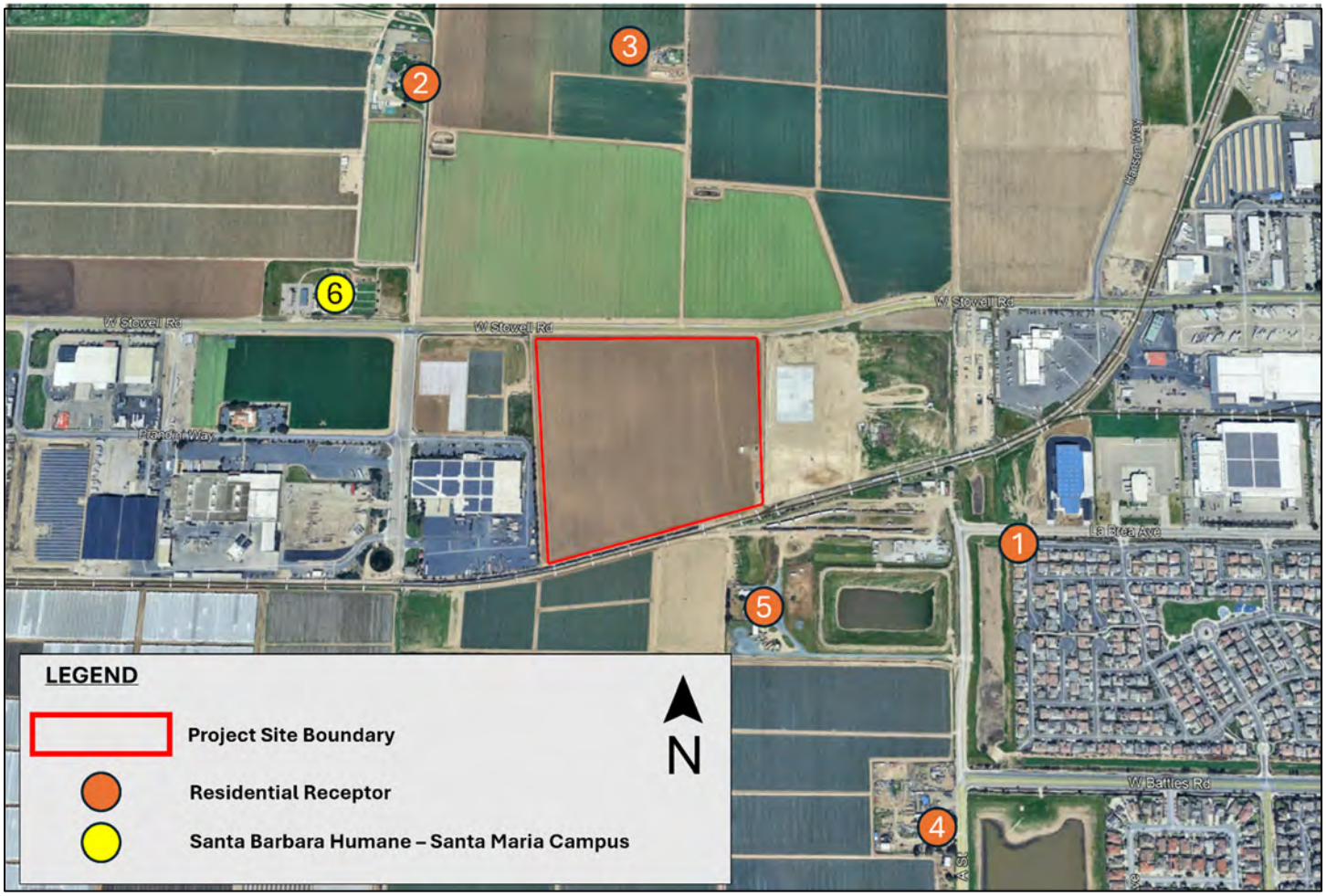
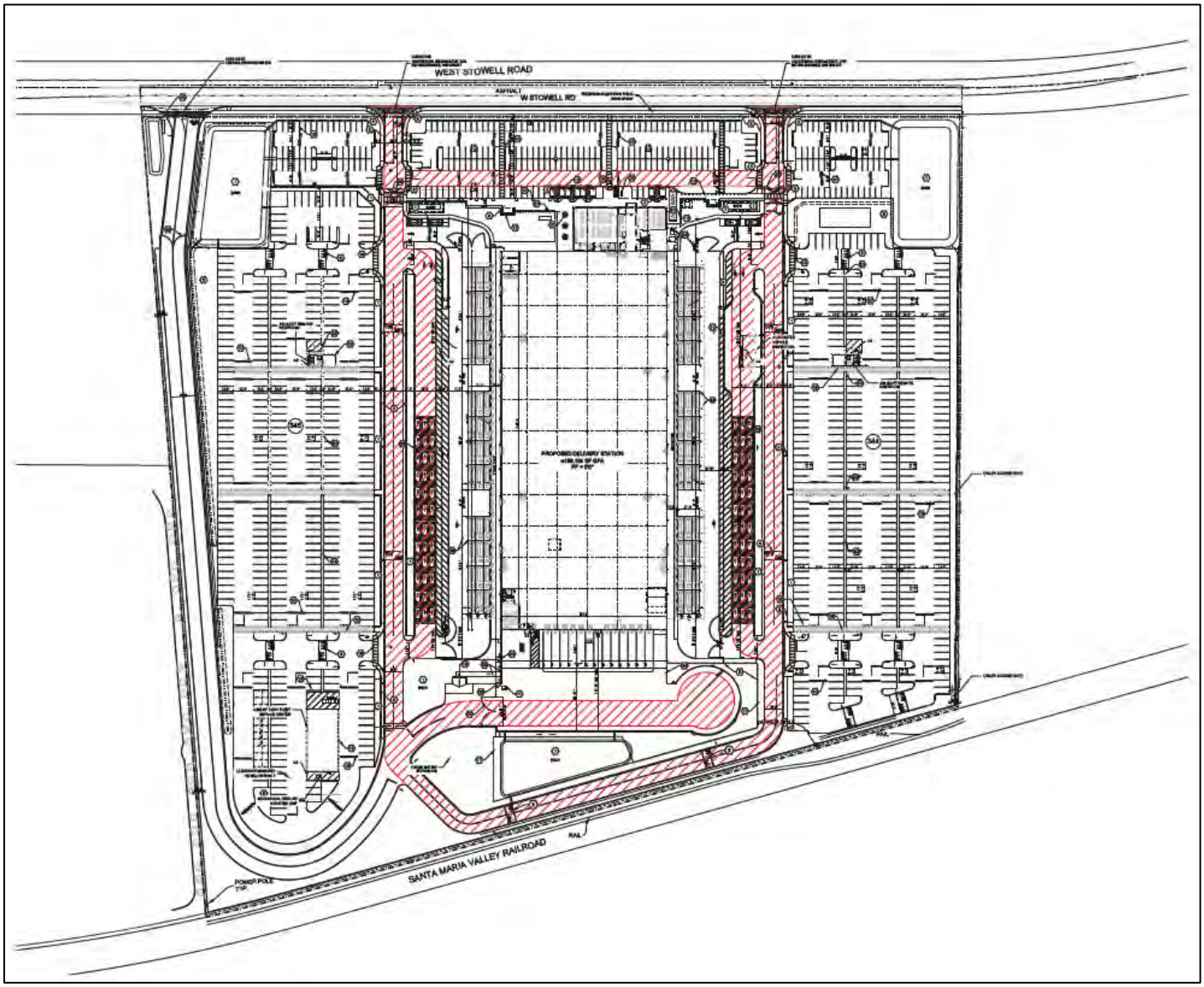


Figure 2. Site Concept Plan



2.0 FUNDAMENTALS OF NOISE

2.1 SOUND, NOISE AND ACOUSTICS

Sound is a mechanical radiant energy that is transmitted by longitudinal pressure waves in a material medium, such as air in the case of traffic and stationary noise, and is the objective cause for human hearing. Sound is technically described in terms of the loudness (amplitude) and frequency (pitch) of the sound. Noise is defined as an unwanted sound.

2.2 FREQUENCY

When sound travels through air, the atmospheric pressure varies periodically. The number of pressure variations per second is called the frequency of sound and is measured in Hertz (Hz) which is defined as cycles per second. Our hearing systems are not equally sensitive to all sound frequencies. Thus, not all frequencies are perceived as being equally loud at the same sound pressure level, and when calculating overall environmental noise ratings it is necessary to consider sounds at some frequencies as more impactful than those at other frequencies. Low-frequency sounds are low in pitch (bass sounding) and high-frequency sounds are high in pitch (squeak). The human ear can hear from a bass pitch starting at 20 Hz all the way to a high pitch of 20,000 Hz.

2.3 SOUND PRESSURE LEVELS AND DECIBELS

Sound pressure level (SPL or L_p) is a logarithmic measure of the effective pressure of a sound relative to a reference value. The sound pressure levels are measured in decibels (dB). The human ear is not equally sensitive to sound at all frequencies. The “A-weighted scale”, (dBA), reflects the normal hearing sensitivity range of the human ear. On this scale, the range of human hearing extends from approximately 3 to 140 dBA. **Figure 3** provides examples of A-weighted noise levels from common sounds.

Figure 3. A-Weighted Common Noise Level Scale

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet		
	100	
Gas lawnmower at 3 feet		
	90	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	70	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60	
		Large business office
Quiet urban daytime	50	Dishwasher in next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime		
	30	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20	
		Broadcast/recording studio
	10	
	0	

Source: California Department of Transportation; Technical Noise Supplement. September 2013.
Notes:
dBA = A-weighted decibels; mph = miles per hour

2.4 ADDITION OF DECIBELS

Because decibels are on a logarithmic scale, sound pressure levels cannot be combined or separated using simple addition or subtraction. When adding two or more noise levels, the approach is as follows:

- If the difference between the highest and next highest noise level is 0–1 dB, then add 3 dB to the higher level to provide the total noise level;
- If the difference between the highest and next highest noise level is 2–3 dB then add 2 dB to the higher level to give the total noise level;
- If the difference between the highest and next highest noise level is 4–9 dB then add 1 dB to the higher level to give the total noise level; and

- If the difference between the highest and next highest noise level is 10 dB and over, then the noise level is unchanged (i.e. the higher level is the total level).

2.5 HUMAN RESPONSE TO CHANGES IN NOISE LEVELS

In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, and it perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude. For purposes of this report as well as with most environmental documents, overall sound levels are determined by applying frequency weighted adjustments to spectral sound levels. The A-scale weighting scale is used to mimic human hearing response, so sound is reported in terms of A-weighted decibels (dBA). Typically, the human ear can barely perceive a change in noise level of 3 dB. A change in noise level of 5 dB is readily perceptible, and a change of 10 dB is perceived as being twice or half as loud.

2.6 SOUND PROPAGATION

Sound is transmitted in air by pressure variations from its source to the surroundings. Sound levels will decrease as the distance between the source and the receptor increases. While absorption by air is one of the factors attributing to the weakening of a sound during transmission, distance plays a more important role in noise reduction during transmission. Depending on the source of the sound, for every doubling of distance the level will be reduced between 3 and 6 dB. The reduction of sound is called attenuation.

Other factors for noise attenuation are ground absorption and shielding. Noise models use hard site (reflective surfaces) and soft site (absorptive surfaces) to help calculate predicted noise levels. Hard site conditions assume no excessive ground absorption between the noise source and the receptor. Soft site conditions such as grass, soft dirt or landscaping attenuate noise at a rate of an additional 1.5 dB per doubling of distance.

In order to break the line of sight, walls between a noise source and a receptor are often used for noise attenuation to reduce the noise levels at the receptor. Additional barriers such as buildings, hills and heavy vegetations can also reduce the noise levels. Typically, walls will reduce noise levels by 5-10 dB. As the height of a wall increases, the noise reduction increases.

2.7 MEASUREMENT OF SOUND

There are many ways to evaluate noise measured over periods of time. Equivalent continuous sound level (L_{eq}) is the total sound energy measured over a stated period of time. L_{max} is the maximum level with A-weighted frequency response and slow time constant. The Community Noise Equivalent Level (CNEL) is the LA_{eq} (equivalent noise level) over a 24-hour period with a penalty of 5 dB for noises occurring from 7:00 a.m. to 10:00 p.m. and a penalty of 10 dB for noises occurring from 10:00 p.m. to 7:00 a.m. The noise penalty is added to the noise events during the evening and nighttime hours when individuals are more sensitive to noise.

2.8 VIBRATION

Vibration is energy transmitted in waves through the ground, often referred to as groundborne vibration. Groundborne vibration consists of oscillatory waves that propagate from the source through the ground to adjacent structures. The frequency of a vibrating object describes how rapidly it is oscillating. The number of cycles per second of oscillation is the vibration frequency, which is described in terms of Hertz (Hz). The normal frequency range of most groundborne vibration that can be felt generally starts from a low frequency of less than 1Hz to a high of about 200Hz. Energy is lost

during the transfer of energy from one particle to another, and therefore the vibratory energy is reduced with increasing distance from the source of the vibration.

Vibration amplitudes are usually expressed in peak particle velocity (PPV) or root mean square (RMS) vibration velocity. The PPV and RMS velocity are normally described in inches per second (in/sec). The PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. In addition to the potential for building damage, the human body responds to vibration signals. However, unlike buildings, which are rigid, it takes some time for the human body to respond to vibration. In a sense, a building responds to the instantaneous movement while the human body responds to average vibration amplitude, which is measured as RMS. The averaging of the particle generally results in the RMS conservatively being equivalent to 71 percent of the PPV. Thus, human annoyance usually results in a more restrictive vibration limit than structural damage limits.

3.0 COMMUNITY NOISE STANDARDS

3.1 CITY OF SANTA MARIA GENERAL PLAN – NOISE ELEMENT

The City of Santa Maria General Plan's Noise Element (Noise Element) aims to limit the environmental noise impact to protect the residents and workers from exposure to excessive noise. This Noise Element establishes policies, objectives, and implementation programs to control and reduce noise impacts to acceptable levels. The Noise Element provides information on noise exposure, which can be used with respect to the Land Use Element to designate acceptable land uses in relation to existing and future noise levels.

- **Policy N.1.a – Overall Noise Control in Santa Maria:** Protect and enhance the quality of the city's noise environment by controlling noise at its source, along its transmission paths, and at the site of the ultimate receptor.
- **Policy N.1.b – Location of New Noise Generators:** Regulate the placement and construction of new noise generators, to avoid excessive interior and exterior noise level impacts on adjacent noise sensitive properties; and of new noise receptors (such as housing and schools), to minimize the negative effects of local noise generation.
- **Policy N.1.d – Explore New Measurements to Address Existing and Future Transportation Noise:** Explore possible strategies to control vehicular noise generation that would reduce noise impacts on existing noise-sensitive land uses (residential and schools) located within the 60+ dB CNEL contour.
- **Objective N.1.a – Existing Noise Levels:** To have mobile and stationary noise sources in compliance with the Santa Maria Noise Element and Noise Ordinance, and state and federal noise regulations.
- **Objective N.1.b:** To maintain and reduce noise to acceptable levels throughout the community.
- **Objective N.1.d – New Development Projects:** All new development projects will meet the acceptable exterior and interior noise level standards specified in **Table 1**: "Interior and Exterior Noise Standards."

Table 1. Range of Intensities Ambient Base Noise Levels (dBA, CNEL)

Land Use Categories		Standard (dBA CNEL)	
Categories	**Uses**	**Interior**	**Exterior**
Residential	Single-Family, Duplex, Multiple Family, Mobile Home	45	60[4]
Commercial	Retail, Restaurant, Professional, Offices	55	65[1,2]
Industrial	Manufacturing, Utilities, Warehousing, Agriculture	65	70[3]
Noise-Sensitive Land Uses	Motel, Hospital, School, Nursing Home, Church, Library, and other	45	60
Open Space	Passive Outdoor Recreation	-	65

Source: City of Santa Maria General Plan Noise Element, Table N-4
dBA = A-weighted decibel
CNEL = Community Noise Equivalent Level

Notes:
[1] The Commercial Exterior Noise Standard is a noise level of 65 dB CNEL or less, or which does not interfere with normal business activity.
[2] Where commercial development proposes outside activities such as patio dining, outside play and picnic areas, the noise standards shall not apply to those outdoor areas.
[3] The Industrial Exterior Noise Standard is a noise level of 70 dB CNEL or less or which does not interfere with normal business activity.
[4] Exception to allow elevated noise levels in outdoor living areas. Outdoor living areas such as patios and balconies may be incorporated into multifamily development projects ("Duplex" and "Multi Family", and mixed-use projects which incorporate these uses) in such areas which experience elevated noise levels. These noise levels may not exceed the "Normally Unacceptable." Community Noise Exposure levels (75 dB and above) specified in Figure 2 of the "Noise Element Guidelines" (Appendix C of the California General Plan Guidelines). Furthermore, prospective buyers and future occupants of dwelling shall be provided the following notice: This property is presently located in an urban area which periodically and regularly experiences elevated noise levels. Potential sources of this noise may be automobile traffic, railroad operations, flying aircraft, industrial/commercial uses and general human activity in an urban environment. You may wish to consider what noise level annoyances, if any, are associated with the property before you complete your purchase and/or rental agreement and determine where they are acceptable to you.

3.2 CITY OF SANTA MARIA MUNICIPAL CODE

The City of Santa Maria Municipal Code has declared that the policy of the City is to prohibit unnecessary, annoying, and excessive noises from all sources subject to its police power. The code states that it shall be the policy of the city to prohibit noises that constitute a nuisance regardless of level during certain time periods.

A violation will be given when the noise level exceeds the ambient noise level or the ambient base noise level, whichever is greater, as follows:

1. By any amount 30 minutes for any given hour, measured cumulatively;
2. By five dBA, 15 minutes for any given hour;
3. By 10 dBA, 5 minutes for any given hour;
4. By 20 dBA at any time.

Where two zones are in question, the ambient noise base level assigned for the most restrictive zones shall take priority. The ambient base noise levels are shown in **Table 2.**

Table 2. Range of Intensities Ambient Base Noise Levels (dBA, Leq)

Range of Intensities Ambient Base Noise Level								
	Duration							
	Ambient Base		Fifteen Minutes		Five Minutes		One Minute	
Zone	Day	Night	Day	Night	Day	Night	Day	Night
Residential	55	45	60	50	65	55	70	60
Commercial	65	60	70	65	75	70	80	75
Industrial	75	70	80	75	85	80	90	85

Notes:
dBA = A-weighted decibel; L_{eq} = equivalent sound level
Daytime: 7:00am to 10:00pm
Nighttime: 10:00pm to 7:00am
Source: SMMC Section 5-5.05

Penalty

After review of a complaint received by the Noise Control Officer, the owner/operator of a noise source shall be given one verbal or written notice and on the second verification of a complaint, shall be in violation of this chapter. Any person violating any of the provisions of this chapter is guilty of a misdemeanor and upon conviction thereof is punishable in accordance with this Code.

4.0 SIGNIFICANCE CRITERIA

To satisfy the requirements of the California Environmental Quality Act (CEQA), noise impacts are analyzed in accordance with CEQA Guidelines. Impacts are considered significant if the proposed project would result in:

- 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.
- Generation of excessive groundborne vibration or groundborne noise levels.
- 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.

CEQA does not define what noise level increase would be considered substantial. Typically, project-generated noise level increases of 3 dBA CNEL or greater would be considered significant where exterior noise levels would exceed the normally acceptable noise level standard (60 dBA CNEL for residential land uses). Where noise levels would remain at or below the normally acceptable noise level standard with the proposed project, noise level increases of 5 dBA CNEL or greater would be considered significant.

4.1 PROJECT SITE SIGNIFICANT THRESHOLD

The significance criteria for the proposed project are based on the City's General Plan Noise Element and the City's Municipal Code.

4.1.1 Operational Noise

- The General Plan Noise Element states that noise standards for industrial use interior must be below the 65 dBA CNEL threshold and below 70 dBA CNEL threshold for exterior noise.
- The Municipal Code states that a violation will be given when the noise level exceeds the ambient noise level or the ambient base noise level (Day = 55 dBA & Night = 45 dBA), whichever is greater.
- Noise increase of more than 5 dB for sensitive receptors in areas with existing exterior noise of less than 60 dBA CNEL and more than 3 dB when existing noise levels are 60 dBA CNEL or more.

4.1.2 Construction Noise

- Construction activities between the hours of 7:00 a.m. to 6:00 p.m. on weekdays and 8:00 a.m. to 5:00 p.m. on weekends, which is within the allowable construction hours set by the City of Santa Maria.
- The City of Santa Maria Municipal Code and the Santa Maria General Plan do not have a maximum numeric limit for noise levels related to construction activities at the sensitive receptors. However, the City of Santa Maria General Plan mentions that construction activities would not be considered a nuisance, provided they take place between 7:00 a.m. to 6:00 p.m., Monday through Friday, and 8:00 a.m. to 5:00 p.m. Saturday through Sunday. The Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment provides an eight-hour construction noise level threshold of 80 dBA L_{eq} during daytime at residential (noise-sensitive) uses, and 85 dBA during the daytime at commercial uses. Therefore, those thresholds were used to evaluate the need for mitigation measures during construction activities.

4.1.3 Vibration

The City of Santa Maria does not identify specific vibration level limits and instead will rely on the California Department of Transportation (Caltrans) guidelines on addressing vibration issues associated with the construction, operation, and maintenance of transportation projects (Caltrans 2020) as well as the FTA Transit Noise and Vibration Impact Assessment. Table 3 and Table 4 show the California Department of Transportation's criteria for building damage and human response to vibration sources.

Table 3.Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Transient Sources (PPV in/sec)	Continuous/Frequent Intermittent Sources (PPV in/sec)
Extremely fragile historic buildings	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5
Source: Caltrans 2020 **Notes:** PPV = peak particle velocity; in/sec = inches per second		

Table 4. Guideline Vibration Annoyance Potential Criteria

Human Response	Transient Sources (PPV in/sec)	Continuous/Frequent Intermittent Sources (PPV in/sec)
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4
Source: Caltrans 2020 **Notes:** PPV = peak particle velocity; in/sec = inches per second		

The structural threshold maximum for continuous/intermittent sources for modern industrial/commercial buildings is 0.50 in/sec peak particle velocity (PPV). For the purpose of assessing impacts to humans, vibrations would potentially be significant if vibration levels exceeded the distinctly perceptible vibration levels of 0.04 in/sec PPV.

5.0 EXISTING AMBIENT NOISE ENVIRONMENT

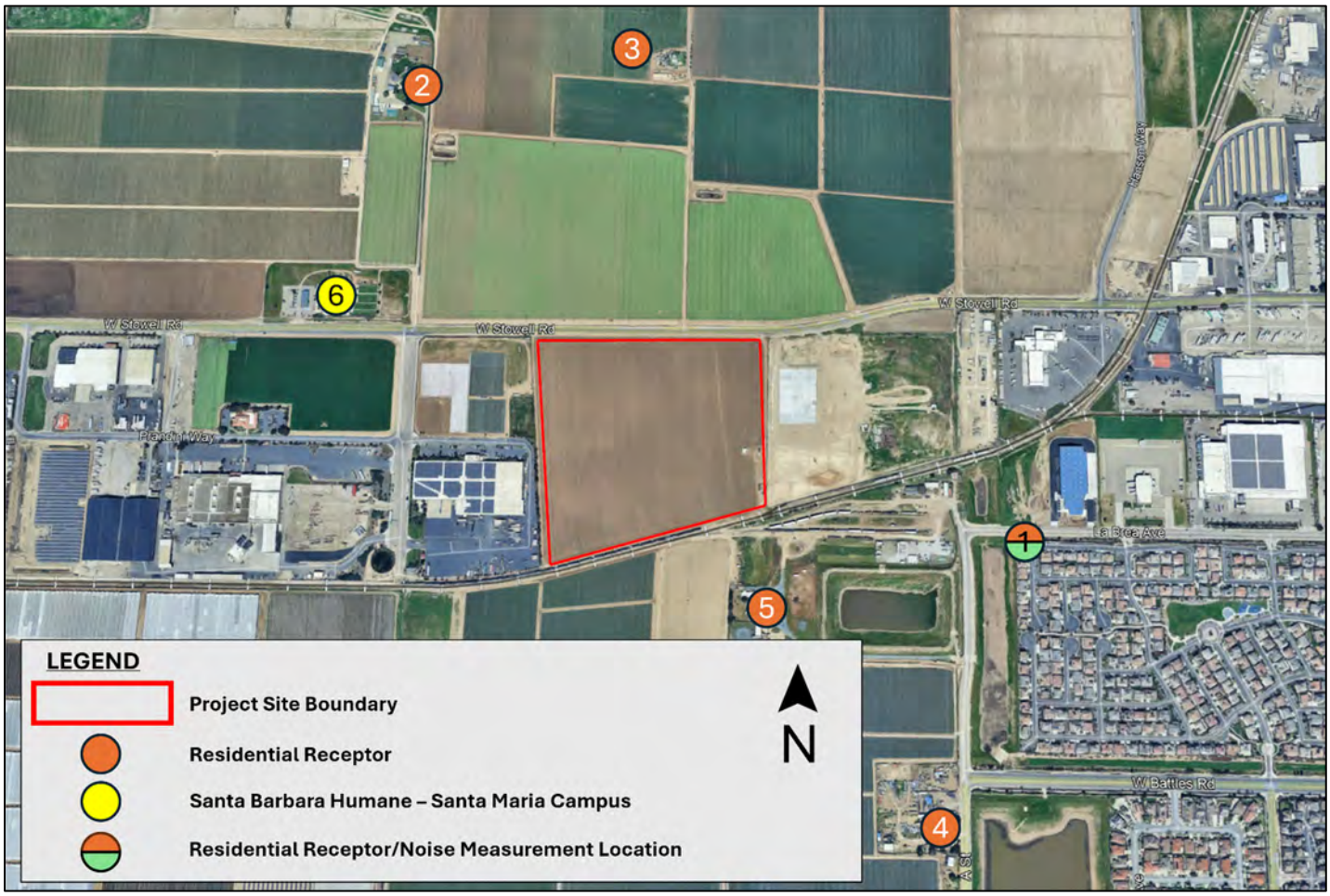
Ambient Noise or background levels are the all-encompassing noises associated with a given environment at a specific time, usually a composite of sound from many sources from many directions, near and far without any dominant sound. The primary existing noise sources are traffic noises from surrounding roads, residential activity, and animal noises.

NV5 collected ambient noise level measurements at a location near the project site as indicated in **Figure 4.** Short-term 15-minute measurements were made during the daytime, evening, and nighttime hours on May 23rd, 2024. All three samples were taken in the same location between the project site and the nearest sensitive receptor. The samples were taken immediately outside the residence to the east of the facility located at 1501 S Fulton Ct, Santa Maria, CA 93458 (Receptor

1). Sensitive Receptors 2, 3 (north of the site), & 5 (south of the site) are located on private property, and NV5 was unable to access the street or perform any noise sampling on or near the property. Sensitive Receptor 4 is located south of Sensitive Receptor 1, and Sensitive Receptor 4 is located furthest from the facility. Vehicles on the road will be the main noise source that affects Receptor 1 through 5 (residential receptors) and the receptors are located at a similar distance to the main road, West Stowell Road. Therefore, the ambient noise measurements taken for Receptor 1 would be representative of those receptors.

Receptor 6 is the Santa Barbara Humane - Santa Maria Campus located along West Stowell Road. It is zoned as a Public Facility. Noise measurements were not taken at the site. The City's noise ordinance provides ambient base noise levels for commercial use which will be used as ambient noise levels for that receptor.

Figure 4. Ambient Noise Measurement Location



All measurements were conducted using a Larson Davis 831 Sound Level Meter (SLM). The SLM was calibrated before and after each measurement of noise levels; the measurements were made using

the A-weighted scale, the SLM was placed 5 feet off the ground. A total of three 15-minute samples were taken and analyzed with L90, L_{eq} and L_{max}. The results from the ambient noise measurements are presented in **Table 5**.

Table 5. Summary of Short-Term Noise Measurements (dBA)

Sample Location	ID	Sample Date	Sample Time	Description	L_{eq} (dBA)	L90 (dBA)	LS_{max} (dBA)
1501 S Fulton Ct, Santa Maria, CA 93458	1	5/23/2024	4:05pm – 4:20pm	Noise was primarily coming from the vehicles driving on A Street & La Brea Avenue.	65.8	46.5	83.7
	2		8:22pm – 8:37pm	Noise sources were vehicles driving by and pedestrians.	56.8	51.1	73.7
	3		11:07pm - 11:22pm	During 15-minute sample only one car drove by. Wind created noise interference and fence rattling.	54.2	40.3	75.3

Notes:
dBA = A-weighted decibels
L_{eq} = Equivalent continuous level over a period of 15 minutes
LS_{max} = The maximum Sound Level with Slow Time weighting during the measurement period
L90 = A-weighted sound level of all sound associated with a given environment, exceeded 90 percent of the time. L90 refers to ambient noise level in this report.

6.0 IMPACTS ANALYSIS

6.1 OPERATIONAL NOISE IMPACTS

The potential noise impacts on the community would be associated with stationary sources operating on the project site. Motor vehicle noise on public streets is often considered as part of the ambient noise; when vehicles enter a private site, they are considered as part of the site's noise sources. The trucks and employee car activities onsite could affect the closest sensitive receptors. HVAC mechanical information was provided as an estimate for the facility and was included in the noise study along with an onsite fleet service station. Trash compactor information was not provided to include the noise sources as part of this noise study.

The impact evaluation of the project was performed using SoundPlan Essential 5.1, an environmental noise propagation computer program that was developed to assist with noise propagation calculations for major noise sources and projects. The program calculates the sound pressure level at a location utilizing the sound emission properties of the source(s) and environmental propagation factors (sound spreading due to distance, ground affects, barriers, as well as atmospheric attenuation). The program also includes a number of standardized methodologies that can be utilized to quantify the acoustic effect of these environmental factors. The specific standard employed by this program is that described in the ISO standard 9613 "Acoustics - Attenuation of sound during propagation outdoors". The modeled ambient temperature was 10 degrees Celsius (50 degrees Fahrenheit), and the assumed relative humidity (RH) was 70 percent. The ground absorption value utilized in the model was 0 (for hard ground), which is conservatively representative of the land at the site.

This study evaluates the acoustical impact of the proposed delivery facility on the adjacent sensitive receptors and compares it to the ambient noise levels and local noise standard to assess if any mitigation measure would be necessary to reduce the noise exposure to the community. Future community noise impacts were modeled using SoundPlan Essentials 5.1 acoustical modeling software. This study focuses on the daytime and nighttime noise levels in order to determine the acoustical impact of the site on the closest receptors.

6.1.1 Onsite Traffic Noise Sources

The main noise sources are vans, trucks, and employee car activity during the day and night. Based on the project related trip generation counts provided (Appendix B), which represent the maximum expected onsite traffic counts, the following are the noise sources on site:

6.1.1.1 Daytime (7 a.m. - 7 p.m.):

- Eight (8) line-haul trucks will enter the site between the hours of 7:00 a.m. and 7:00 p.m. & ten (10) line-haul trucks will leave the site between the hours of 7:00 a.m. and 7:00 p.m.
- Three hundred and forty-five (345) van drivers will enter the site in their personal vehicles between the hours of 7:00 a.m. and 7:00 p.m.
- Three hundred and forty-five (345) vans will leave the site between the hours of 7:00 a.m. and 7:00 p.m.

- Thirty-six (36) employee cars will enter the site between the hours of 7:00 a.m. and 7:00 p.m. & two hundred and thirty-eight (238) employee cars will leave the site between the hours of 7:00 a.m. and 7:00 p.m.
- Ninety-seven (97) private carrier vehicles will enter the site between the hours of 7:00 a.m. and 7:00 p.m. & ninety-seven (97) private carrier vehicles will leave the site between those hours.

6.1.1.2 Evening (7 p.m. - 10 p.m.):

- Six (6) line-haul trucks will enter the site between the hours of 7:00 p.m. and 10:00 p.m. & four (4) line-haul trucks will leave the site between the hours of 7:00 p.m. and 10:00 p.m.
- Three hundred and forty-five (345) vans will enter the site between the hours of 7:00 p.m. and 10:00 p.m.
- Three hundred and forty-five (345) van drivers will leave the site in their personal vehicles between the hours of 7:00 p.m. and 10:00 p.m.

6.1.1.3 Nighttime (10 p.m. - 7 a.m.):

- Twenty (20) line-haul trucks will enter the site between the hours of 10:00 p.m. and 7:00 a.m. & twenty (20) line-haul trucks will leave the site between the hours of 10:00 p.m. and 7:00 a.m.
- Two hundred and seven (207) employee cars will enter the site between the hours of 10:00 p.m. and 7:00 a.m. & five (5) employee cars will leave the site between the hours of 10:00 p.m. and 7:00 a.m.

Noise sources were entered into SoundPlan Essentials as octave band sound power levels based on reference noise levels measured by NV5 on July 21st, 2020, at a similar delivery station. NV5 collected sound pressure level measurements with a reference distance of 50 feet in order to represent the noise levels associated with the different noise sources. The measurements included:

- Sound pressure levels of one truck driving and parking at the loading docks. This data is used to represent the noise levels associated with a single truck entering the site or being active at the loading dock.
- Sound pressure levels of 20 vans at the queuing area and 20 vans at the loading area. This data is used to represent the noise levels associated with 40 vans in the van queuing and staging areas.

Trucks

One area source was placed on the south side of the warehouse building to represent truck activity at the truck loading dock. Each truck will be operating for up to 2 minutes at the loading dock. The truck activity was modeled using the total time, in minutes, that trucks are active at the loading docks during each time interval (daytime, evening, or night). The activity at the truck loading dock was calculated by taking the duration in minutes of each truck at the loading dock and multiplying it by the number of trucks present at the facility during that time interval. During the daytime (7:00 a.m. – 7:00 p.m.) the trucks will be active at the loading docks for a total of thirty-six minutes, in the evening (7:00 p.m. – 10:00 p.m.) the trucks will be active for a total of twenty minutes, and at nighttime (10:00 p.m. – 7:00 a.m.) the trucks will be active for a total of eighty minutes.

One line source was placed from the northwest side of the property extending along the western border to the south side of the property to represent the noise from trucks entering and exiting the site. Trucks traveling 5 miles per hour (mph), will take five minutes to access the loading docks from the truck entrance. Truck activity at the truck path was calculated by multiplying the duration of activity by the number of trucks during a time slice. During the daytime (7:00 a.m. – 7:00 p.m.) the trucks will be active on the truck path for a total of eighty-two minutes, during the evening (7:00 p.m. – 10:00 p.m.) the trucks will be active for a total of forty-six minutes, and during the nighttime (10:00 p.m. – 7:00 a.m.) the trucks will be active for a total of one hundred & eighty-two minutes.

Vans

According to the site plan this facility will have two van queuing and loading zones with one located on the west side and one zone located on the east side of the building. A total of two area sources were used in this sound model to represent the van loading zones at the proposed facility. One area source was placed on the west side of the building and one area source was placed on the right side of the building. Each area source has a capacity of 72 vans, 36 vans queuing and 36 vans loading. It will take about 15 minutes to load 72 vans. There is a maximum of 345 vans and 97 private carriers during the daytime each day. Private carrier vehicles which often are vans will be called vans for the remaining of this study as they are loading in the same area and with the same types of vehicles. Vans were estimated to be active at each queuing/loading zone for 46 minutes during the daytime. During the evening the vans will return from delivery routes and be parked overnight until the next day's dispatch cycle, so vans will not be loading in the evening or at night.

Parking Lots

The employee car parking was represented by a parking area on the north side of the proposed facility. The van parking was represented by two parking lots located to the east and west of the proposed facility. The facility will not have any line-haul truck parking onsite. The noise associated with parking of vehicles that are accounted for in the model includes engine ignition, vehicle doors opening and closing. The traffic volume of the parking lot is entered with the number of moves per parking bay (in and out are each considered a single move), the hour (the time slices day, evening, and night), and the number of parking bays. The model predicted the maximum noise levels produced by the cars, vans, and trucks activities using expected noise sources from cars, vans, and trucks.

Table 6 and **Table 7** list the sources that were considered in the analyses and **Figure 5** shows the locations of noise sources and the warehouse building.

Table 6. Source Sound Power Levels in Octave Band Format (dBA, re 10-12W)

Equipment /Source Name	Time of Day	Level (dBA)	Octave Band Centre Frequency (Hz), Sound Power Levels (dBA)								
			31	63	125	250	500	1,000	2,000	4,000	8,000
Truck Loading Dock	Day	91.3	35	58.7	73.2	82.1	83.9	83.9	85.3	83.2	80.8
	Evening	93.5	37.2	60.9	75.4	84.3	86.1	86.1	87.5	85.4	83
	Night	96.5	40.3	63.9	78.4	87.3	89.1	89.1	90.5	88.4	86
Truck Path	Day	94.8	38.6	62.2	76.8	85.7	87.5	87.5	88.9	86.8	84.4
	Evening	97.1	40.9	64.5	79	87.9	89.7	89.7	91.1	89	86.6
	Night	100.1	43.8	67.5	82	90.9	92.7	92.7	94.1	92	89.6
Van Loading Dock West	Day	84.8	-	66.5	71.9	73	73.5	79.8	79.8	76	70.5
	Evening	-	-	-	-	-	-	-	-	-	-
	Night	-	-	-	-	-	-	-	-	-	-
Van Staging/ Loading Dock East	Day	84.8	-	66.5	71.9	73	73.5	79.8	79.8	76	70.5
	Evening	-	-	-	-	-	-	-	-	-	-
	Night	-	-	-	-	-	-	-	-	-	-

Notes:
Re 10-12W = sound power levels are referenced to a standard power level of 10^{-12} watts

Table 7. Source Sound Power Levels – Parking Lots

Name	Parking Lot Type	Size	Movements per hour			Road Surface	Lw,ref (dBA)
			Day	Evening	Night		
Staff/Employee Parking	Visitors and staff	272 Parking bays	0.696	0.28	0.623	Asphaltic driving lanes	93.4
Van Parking West	Visitors and staff	353 Parking bays	0.418	0.627	0	Asphaltic driving lanes	94.8
Van Parking East	Visitors and staff	353 Parking bays	0.418	0.627	0	Asphaltic driving lanes	94.8

Notes:
Lw, ref = Sound Power Level reference from SoundPlan Essentials

6.1.2 Stationary Noise Sources

To assess the impacts created by the roof-top air conditioning units at the proposed delivery station building, data from the HVAC design criteria package was entered for each exhaust fan and roof top unit. The HVAC units were modelled to be running continuously. The service station was also accounted for in the sound model and the noise data for the service station was taken from SoundPlan Essential global library. The service station noise sources will be from the air compressor and the air impact wrench. **Table 8** summarizes the sound power for each of these sources.

Table 8. Source Sound Power Levels in Octave Band Format (dBA, re 10-12W) – Point Sources

Source Name	Reference	Level (dBA)	Octave Band Center Frequency (Hz), Sound Power Levels (dBA)							
			63	125	250	500	1,000	2,000	4,000	8,000
EF-1	Lw/unit	65.7	45.8	57.9	59.4	57.8	59.0	58.2	50.0	44.9
EF-2	Lw/unit	65.7	45.8	57.9	59.4	57.8	59.0	58.2	50.0	44.9
EF-3	Lw/unit	68.1	45.8	54.9	62.4	62.8	61.0	60.2	53.0	43.9
EF-4	Lw/unit	68.1	45.8	54.9	62.4	62.8	61.0	60.2	53.0	43.9
EF-5	Lw/unit	54.0	-	-	-	-	-	-	-	-
EF-6	Lw/unit	65.7	45.8	57.9	59.4	57.8	59.0	58.2	50.0	44.9
EF-7	Lw/unit	65.7	45.8	57.9	59.4	57.8	59.0	58.2	50.0	44.9
EF-8	Lw/unit	35.0	-	-	-	-	-	-	-	-
EF-FP	Lw/unit	69.0	-	-	-	-	-	-	-	-
RTU1	Lw/unit	87.2	53.8	69.9	75.4	81.8	83.0	80.2	74.0	65.9
RTU2	Lw/unit	81.2	52.8	68.9	70.4	75.8	77	72.2	68.0	56.9
RTU3	Lw/unit	92.0								
RTU4	Lw/unit	87.9	56.8	68.9	76.4	82.8	84.0	79.2	75.0	68.9
RTU5	Lw/unit	87.9	64.8	69.9	81.4	82.8	82.0	79.2	74.0	65.9
RTU6	Lw/unit	81.2	52.8	68.9	70.4	75.8	77	72.2	68.0	56.9
RTU7	Lw/unit	89.0	-	-	-	-	-	-	-	-
RTU8	Lw/unit	89.0	-	-	-	-	-	-	-	-
RTU9-17	Lw/unit	94.0	-	-	-	-	-	-	-	-
Air Compressor	Lw/unit	109.6	90.0	92.5	94.9	95.6	100.7	105.8	103.4	99.9
Air Impact Wrench	Lw/unit	100.9	90.8	89.5	88.5	91.5	94.5	94.5	92.5	88.5

Notes:
Lw = Sound Power Level
Re 10-12W = sound power levels are referenced to a standard power level of 10^{-12} watts

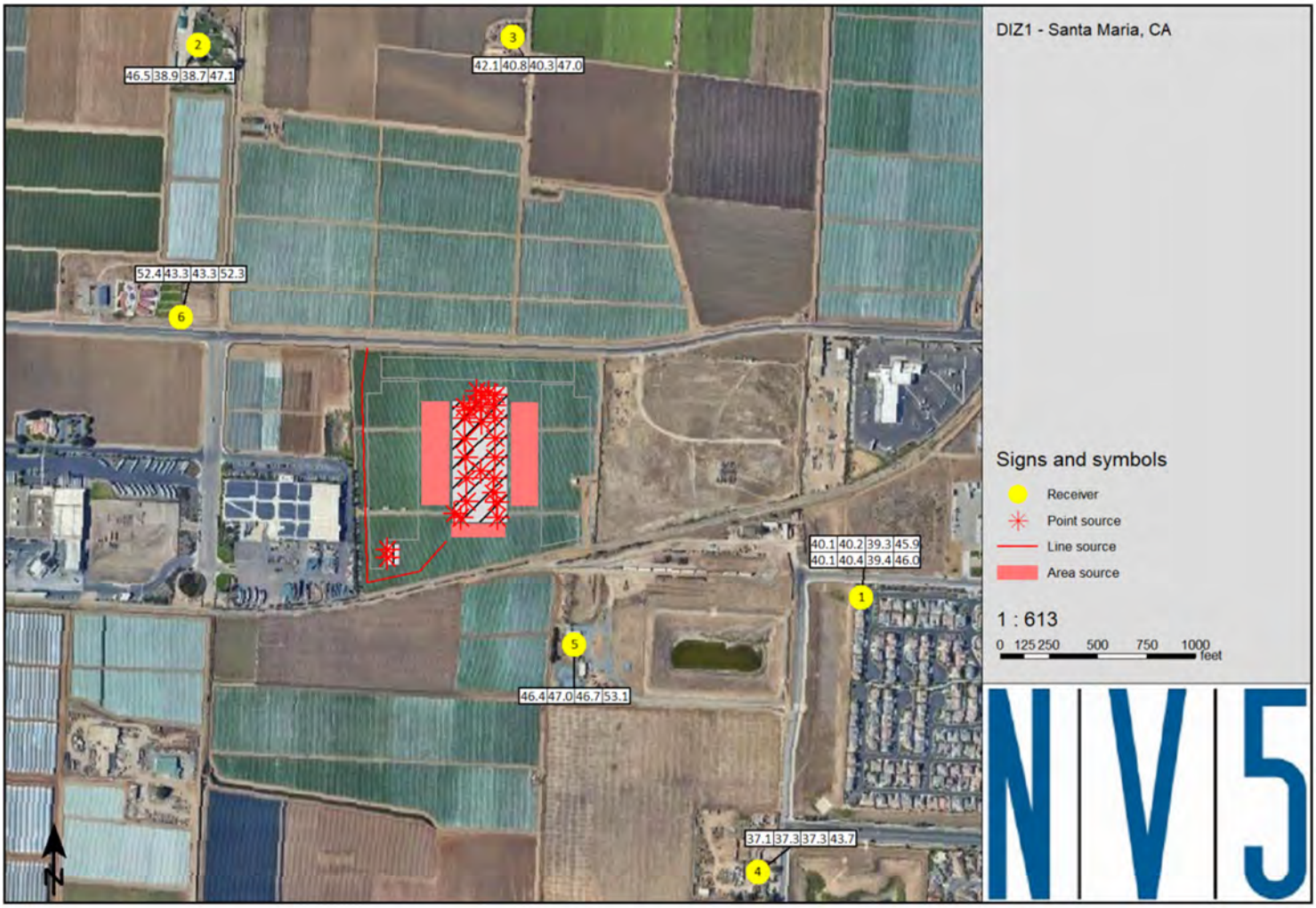
6.1.3 Operational Noise Impact Analysis

Sensitive receptors that may be affected by the proposed project are located to the north, south, and east. A total of six (6) receptors were modeled to evaluate the proposed project's operational noise impact. The locations of these receptors are denoted by yellow dots on **Figure 5. Figure 5** also shows the predicted noise level map at the sensitive receptor areas. **Figure 6** through **Figure 9** show the

noise level contours for daytime, evening, nighttime, and CNEL. Noise sensitive receptors analyzed are as follows:

- Receptor 1 is located at 1501 S Fulton Ct and is a two-story residential home.
- Receptor 2 is located at 1689 W Stowell Rd and is a single-story residential home.
- Receptor 3 is a single-story residential home located at 1677 W Stowell Rd.
- Receptor 4 is located on 1753 A St. and is also a single-story residential home. This home seems to be unoccupied; however, it was conservatively assumed it is occupied.
- Receptor 5 is located on 1599 A St. and is a single-story residential home.
- Receptor 6 is located at 1687 W Stowell Rd and is the Santa Barbara Humane – Santa Maria Campus.

Figure 5. Project Site, Operations Noise Level Projection



Operational noise levels are anticipated to range between 36.9 dBA and 52.4 dBA at the nearest residences during the day, between 37 dBA and 47 dBA during the evening, and between 36.9 and 46.7 dBA at night. **Table 9** displays the results of the noise level predictions during the day, evening, and night.

Table 9. Receptor Predicted Noise Levels

			Ambient Noise Levels (dBA)[1]			Predicted Noise Levels (dBA)			Predicted Noise Level Exceeded Ambient Noise Levels?		
No.	Receptor Name	Floor	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
1	1501 S Fulton Ct, Santa Maria, CA 93458	GF	65.8	56.8	54.2	40	40.4	39.3	No	No	No
1	1501 S Fulton Ct, Santa Maria, CA 93458	1	65.8	56.8	54.2	40	40.1	39.2	No	No	No
2	1689 W Stowell Rd, Santa Maria, CA 93458	GF	65.8	56.8	54.2	46.5	38.9	38.7	No	No	No
3	1677 W Stowell Rd, Santa Maria, CA 93458	GF	65.8	56.8	54.2	42.1	40.7	40.2	No	No	No
4	1753 A St, Santa Maria, CA 93458	GF	65.8	56.8	54.2	36.9	37	36.9	No	No	No
5	1599 A Street, Santa Maria, CA 93458	GF	65.8	56.8	54.2	46.4	47	46.7	No	No	No
6	Santa Barbara Humane 1687 W Stowell Rd, Santa Maria, CA 93458	GF	65	65	60	52.4	43.3	43.3	No	No	No

Notes:
[1] Ambient Noise Levels are based on the noise measurements taken by NV5 on May 23rd, 2024. The measurements were 15-min L_{eq} measurements. Ambient Noise Levels were used for Receptor 1 through 5 as they are greater than Ambient Base Noise Levels provided by the City in Table 2. Receptor 6 used the Ambient Base Noise Levels for Commercial Use provided by the City in Table 2.

The noise analysis evaluates the acoustical impacts of the proposed project on the nearest sensitive receptors. The City's Municipal Code establishes that noise levels that exceed the ambient noise levels or the ambient base noise level would constitute a violation. Ambient base noise levels are provided for each receiving property zone (residential, commercial, and industrial). For the residential receiving properties, the limits are 55 dBA during the daytime and 45 dBA at night. However, the ambient measurements collected by NV5 on May 23, 2024, show that the ambient noise levels are 65.8 dBA during the daytime and 54.2 dBA at night. The City's code states that it

must account for whichever value is greater, and in this case the measurements taken by NV5 are greater than the base ambient noise levels.

Backup alarms can also be a cause of disturbance. Line-haul trucks at the project site would utilize backup alarms during loading/unloading activities. Backup alarms produce a typical noise level of 97 dBA at 3.28 feet. Based on distance attenuation, the nearest receptor (Receptor 5) is located about 400 feet from the truck loading area, backup alarms noise levels would be approximately 55.3 dBA without any sound attenuation, which is lower than the ambient noise levels during the daytime and evening. The backup alarm noise levels do exceed ambient noise levels during the nighttime; however, it is by less than 5 dBA for a duration of less than fifteen minutes which is allowed in the Municipal Code and would not be perceptible to the human ear. Therefore, it is not expected that the residents would be sensitive to the distant back up alarms noise.

As stated previously, **Table 9** shows that the predicted noise levels at each of the sensitive receptors will be below the measured ambient noise levels for the daytime and nighttime ambient base noise levels stated in the Municipal Code.

The Noise Element states that all new development projects must meet the acceptable exterior and interior noise level standards. For industrial land uses, the standard CNEL is 65 dBA interior and 70 dBA exterior. As shown in **Figure 9,** the exterior noise levels at the project site boundary are below 70 dBA.

6.1.4 Operational Noise Levels Increase Analysis

The project operational noise level increases will be calculated by combining the project operational noise levels with the existing ambient noise levels measurements for the closest receptors potentially impacted by project operational noise sources. The difference between the combined project and ambient noise levels describes the project noise level increases to the existing ambient noise environment. The Community Noise Equivalent Level (CNEL) or also called Day-Evening-Night noise level (L_{den}) will be used to evaluate the increase in noise levels. As described in Section 2.7, the CNEL or L_{den} is the LA_{eq} (equivalent noise level) over a 24-hour period with a penalty of 5 dB for noises occurring from 7:00 a.m. to 10:00 p.m. and a penalty of 10 dB for noises occurring from 10:00 p.m. to 7:00 a.m. The term will be used interchangeably in this report.

Noise levels that would be experienced at the closest receptors when the project-source noise is added to the daytime, evening and nighttime ambient conditions are presented in **Table 10.** As indicated in **Table 10**, the project will generate an average daytime, evening, and nighttime operational noise level increases ranging from 0.0 to 0.1 dBA at the closest receptors. Project-related operational noise level increases will satisfy the operational noise level increase significance criteria presented in CEQA threshold section 3.4.1, the increases at the sensitive receiver locations will be less than significant. **Table 10** shows that all the sensitive receptors will have noise level increases of less than 1 dB CNEL. Based on this conservative analysis, the operational noise impact is expected to be less than significant.

Table 10. Receptor CNEL Noise Levels Increases

No.	Receptor Name	Floor	Ambient CNEL (dBA)	Predicted CNEL (dBA)	Combined CNEL (dBA)	CNEL Increase (dB)	Increase Threshold (dB)	Increase Below Threshold?
1	1501 S Fulton Ct, Santa Maria, CA 93458	GF	67.0	46.0	67.1	0.03	3	Yes
1	1501 S Fulton Ct, Santa Maria, CA 93458	1	67.0	45.9	67.1	0.03	3	Yes
2	1689 W Stowell Rd, Santa Maria, CA 93458	GF	67.0	47.1	67.1	0.04	3	Yes
3	1677 W Stowell Rd, Santa Maria, CA 93458	GF	67.0	47.0	67.1	0.04	3	Yes
4	1753 A St, Santa Maria, CA 93458	GF	67.0	43.7	67.1	0.02	3	Yes
5	1599 A Street, Santa Maria, CA 93458	GF	67.0	53.1	67.2	0.17	3	Yes
6	Santa Barbara Humane 1687 W Stowell Rd, Santa Maria, CA 93458	GF	71.5	52.3	71.5	0.05	3	Yes

Figure 6. Project Site, Operations Noise Level Contours (Daytime)

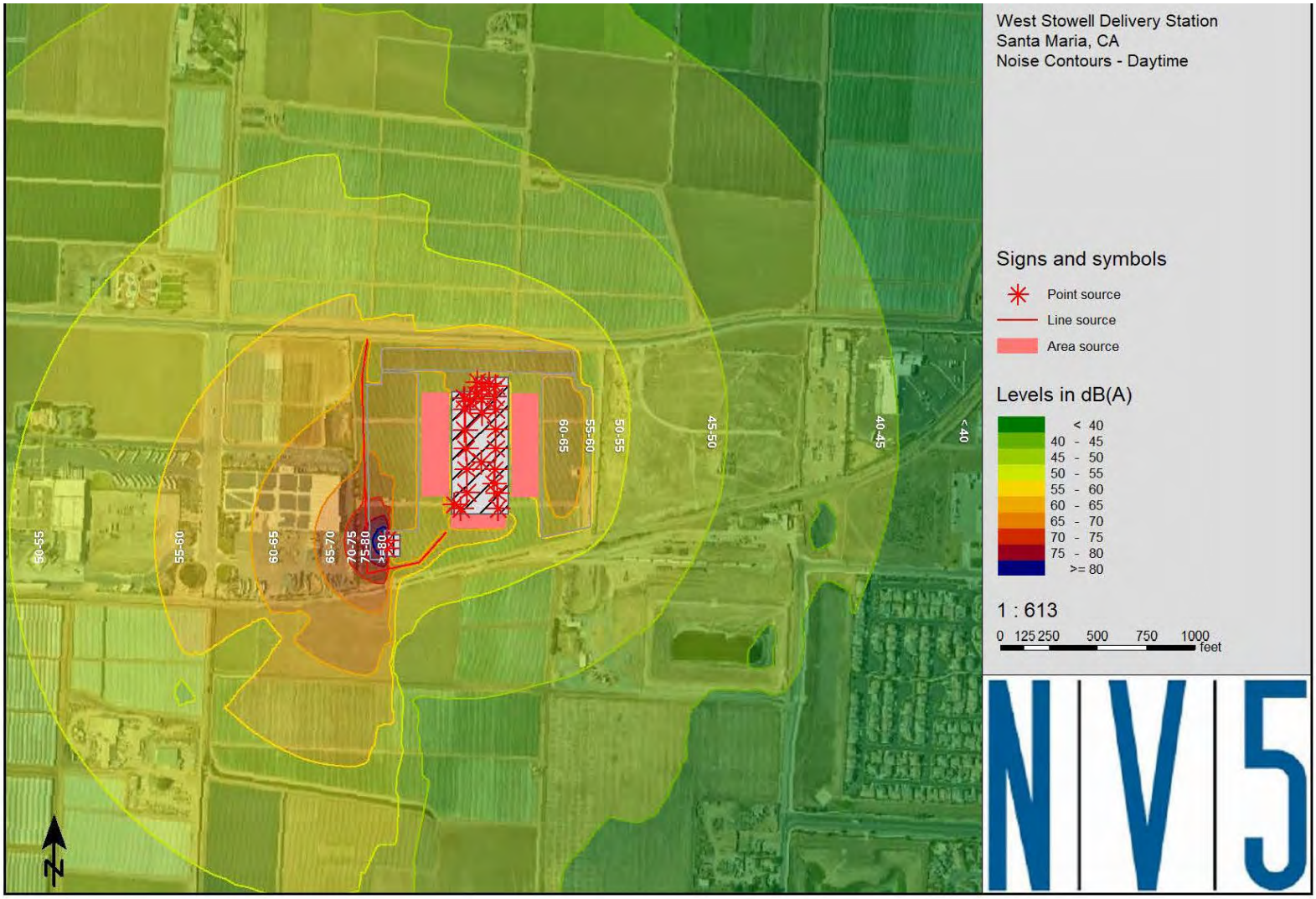


Figure 7. Project Site, Operations Noise Level Contours (Evening)

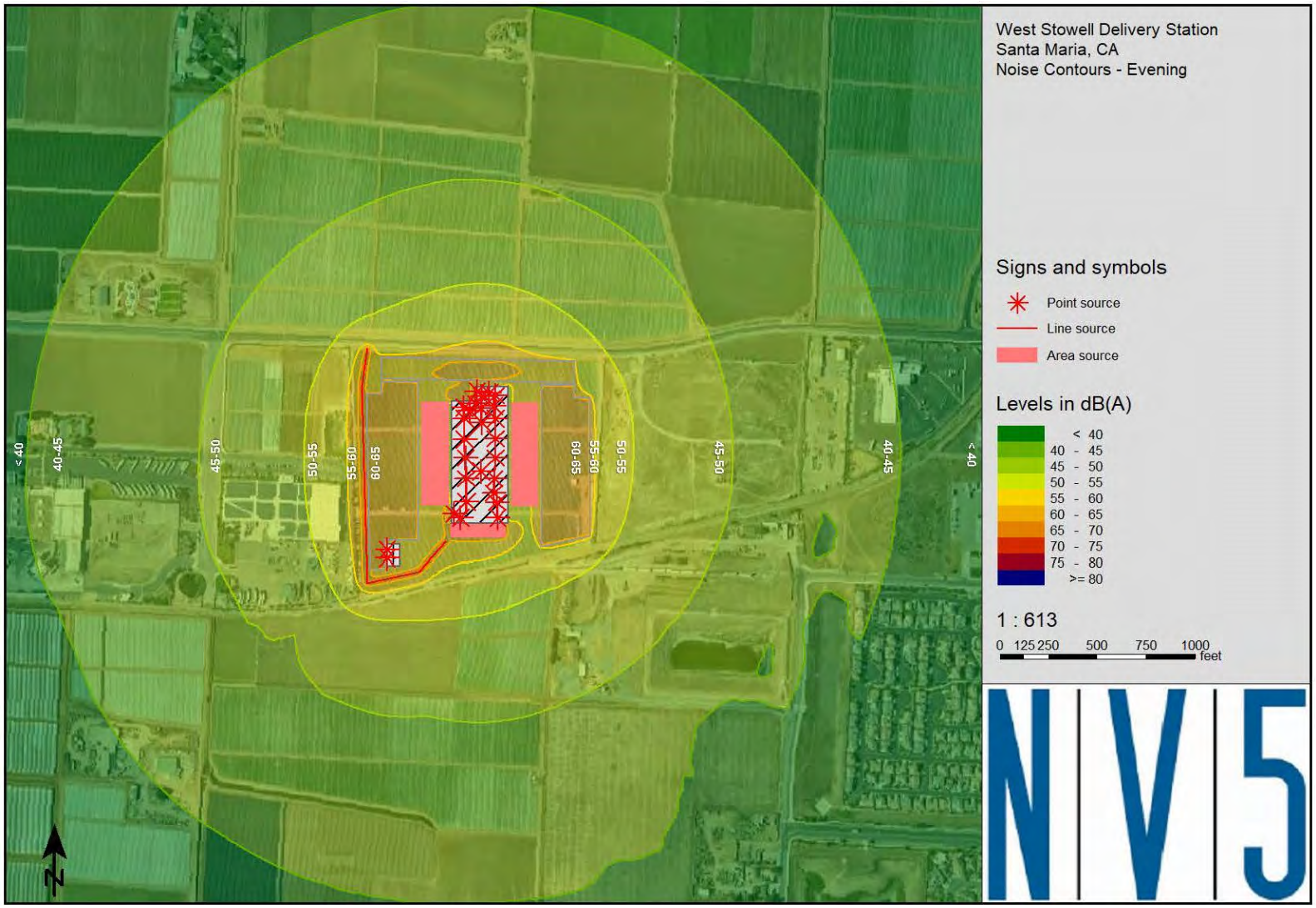


Figure 8. Project Site, Operations Noise Level Contours (Nighttime)

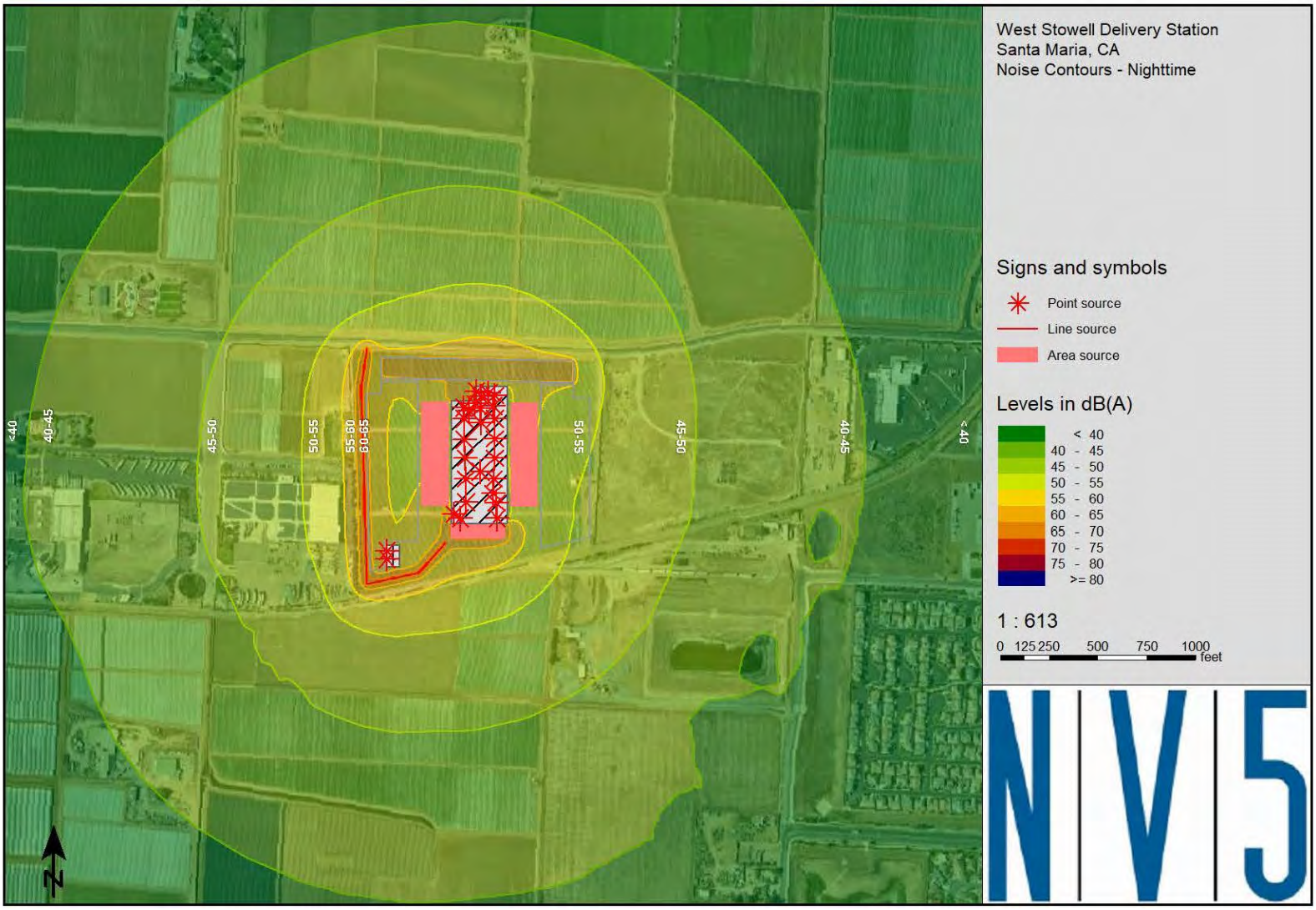
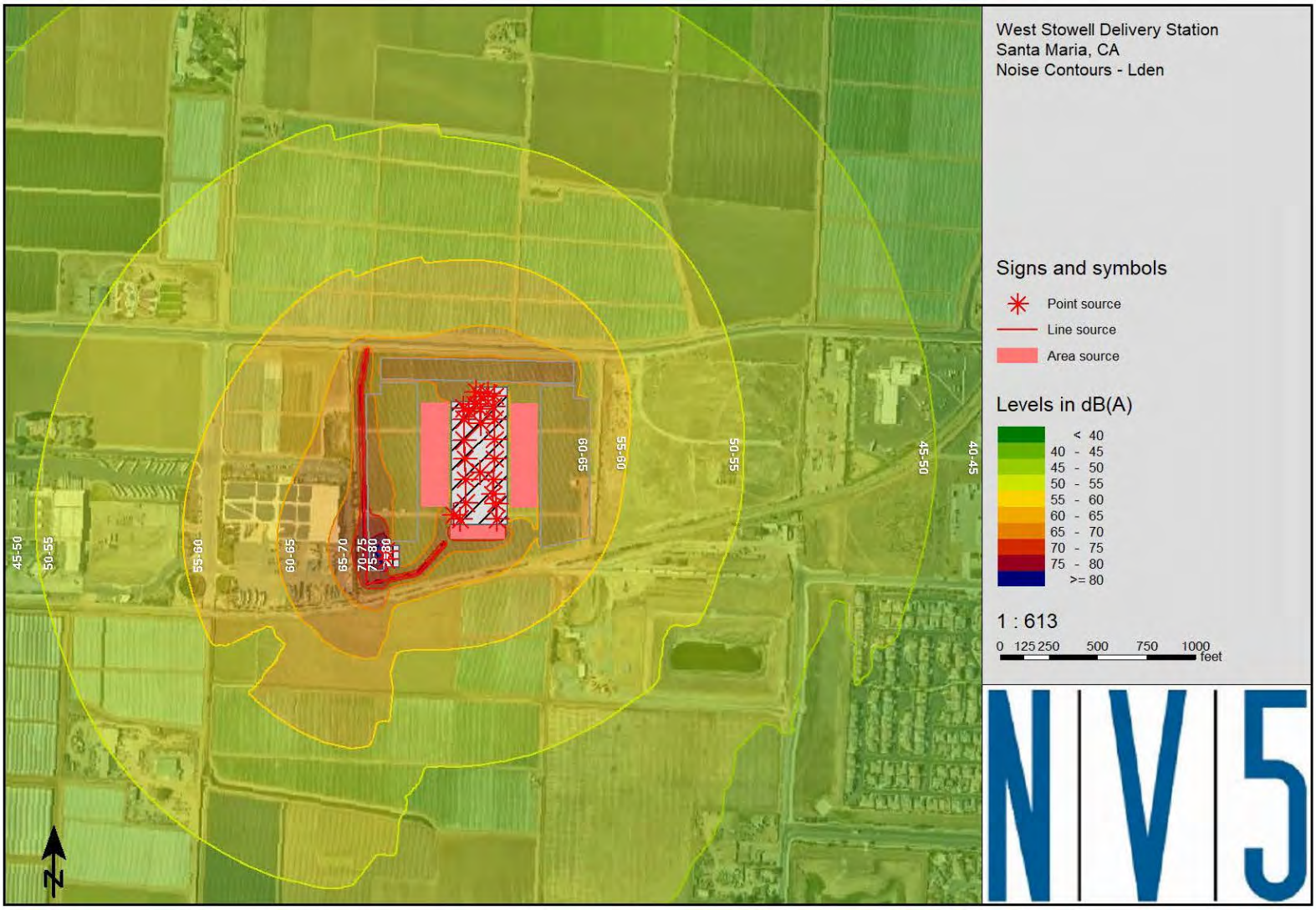


Figure 9. Project Site, Operations Noise Level Contours (CNEL)



6.1.5 Offsite Traffic Noise Impacts

Implementation of the proposed project would generate increased traffic volumes along nearby roadway segments. All traffic from the proposed project was assumed to travel along West Stowell Road. In general, a traffic noise increase of less than 3 dBA is barely perceptible to people, while a 5 dBA increase is readily noticeable (Caltrans, 2013). Generally, traffic volumes on project area roadways would have to approximately double for the resulting traffic noise levels to increase by 3 dBA. Therefore, permanent increases in ambient noise levels of less than 3 dBA are considered to be less than significant.

The anticipated noise levels were modeled using the Federal Highway Administration's (FHWA) Traffic Noise Model 3.2 (TNM 3.2). This software uses traffic volumes, vehicle mix, average speeds, roadway geometry, and other inputs to calculate the average noise levels along input roadway segments. The existing traffic volumes were taken by Quality Counts, LLC and are provided in Appendix D. Noise level measurements were collected for 24-hour volumes and classification counts on West Stowell Road, east of South E Street on April 18th, 2024. According to the traffic count data the proposed project is expected to generate a net increase of 2,128 average daily trips compared to existing conditions, which would result in noise increases on project area roadways.

The Average Daily Traffic (ADT) and anticipated noise level increase used in this study are presented in **Table 11.** Based on the traffic analysis conducted for the proposed project (NV5, 2024), the following scenarios were evaluated: Existing (2024) and Existing + Project (2025). Noise levels are presented as a CNEL, which is a 24-hour exposure calculated with a 5 dBA penalty applied to evening hours between 7:00pm – 10:00pm and a 10 dBA penalty applied to nighttime hours between 10:00pm – 7:00am. As shown in **Table 11**, the proposed project is not anticipated to double existing traffic counts or raise noise levels by more than 3 dBA. Therefore, offsite traffic noise impacts would be less than significant.

Table 11. Average Daily Traffic Volumes with Time of Day and Vehicle Splits

	Average Daily Trips		CNEL (dBA)	
Category	W. Stowell Rd EB	W. Stowell Rd WB	W. Stowell Rd EB	W. Stowell Rd WB
Existing (2024)	3,724	3,196	70.44	70.09
Existing + Project (2025)	4,788	4,260	72.89	72.8
Net Increase	**1,064**	**1,064**	**2.45**	**2.71**
Noise Increase Threshold (dBA)			3	3
Exceeds Thresholds?			No	No

Overall, the proposed project's operational noise 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 local general plan or noise ordinance, or applicable standards of other agencies. Therefore, proposed project impacts would be less than significant.

6.2 CONSTRUCION NOISE IMPACTS

Section 5-5.06 of the City of Santa Maria Municipal Code (SMMC) states that construction activities are restricted between the hours of 7:00 a.m. and 6:00 p.m. on weekdays and 8:00 a.m. and 5:00 p.m. on weekends.

SMMC Section 5-5.09 requires the acquisition of a construction noise permit from the Noise Control Officer for exterior construction work conducted within a residential zone or within 500 feet of a residential zone only if such activities exceed the noise standards set forth in SMMC Sections 5-5.03 and 5-5.05. The permit would cover short-term or occasional, non-routine operations.

Although the SMMC has established hours of construction in Section 5-5.06(e) and requirements for the acquisition of construction noise permits in Section 5-5.09, the City has not adopted a quantitative threshold for evaluating construction noise impacts. Therefore, this analysis relies on the reasonable criteria provided by the FTA for assessing construction noise impacts based on the potential for adverse community reaction in its Transit and Noise Vibration Impact Assessment Manual (FTA 2018). For residential uses, the daytime noise threshold is 80 dBA L_{eq} for an 8-hour period.

Noise impacts from the construction activities were evaluated by estimating the typical noise levels for each type of construction equipment using the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) and comparing the L_{eq} at the nearest sensitive receptors with the acceptable noise standards. Construction of the proposed project would be completed in five phases: site preparation, grading, building construction, paving and architectural coating. Typical construction equipment described below will be used for the proposed project. **Table 12** lists the equipment expected to be used during the construction phase.

Equipment usage was based on the expected equipment from the construction activities as shown in **Table 12**. Each type of construction equipment produces maximum noise levels (L_{max}) at a reference distance of 50 feet from the noise source.

Table 12. Maximum Noise Levels and Estimated Usage of Typical Construction Equipment

Type of Equipment	Estimated Usage (%)	L_{max} at 50 feet (dBA)
Air Compressors	40	77.7
Excavators	40	80.7
Cranes	16	80.6
Forklifts	40	85.0
Generators	50	80.6
Rubber Tired Dozers	40	81.7
Tractors/Loaders/ Backhoes	40	77.6
Graders	40	85.0
Welders	40	74.0
Air Compressors	40	77.7
Excavators	40	80.7
Cranes	16	80.6

Notes:
Estimated Usage (percent): Estimates the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.

Noise levels generated by construction equipment (or by any point source) decrease at a rate of approximately 6 dB per doubling of distance from the source. The closest residential receptor was used to complete this analysis:

- Sensitive receptor 5 is a single-family residential home at 1559 A Street, approximately 400 feet from the closest border of the site.

Using the RCNM, the noise levels were calculated for receptor 5 from the construction equipment, as presented in **Table 13.** As shown in **Table 13**, the predicted noise levels from construction activities will range from 55.6 dBA to 66.2 dBA. The City does not provide any noise level limits for construction noise levels. The noise levels are expected to be below the 80 dBA threshold from the Federal Transit Administration (FTA). All construction activities are expected to be below 80 dBA at the closest residential property. Therefore, construction noise impacts are expected to be less than significant during all construction phases.

Table 13. Predicated Construction Noise Levels at Nearest Sensitive Receptors

Phase	Expected Equipment	Daytime Ambient Noise Levels (L_{eq}; dBA)[1]	Predicted Noise Levels (L_{eq}; dBA)
			Sensitive Receptor 1 (400 ft)
Site Preparation	Rubber Tired Dozer, Backhoes, Other Equipment >5HP	55.0	65.7
Grading	Rubber Tired Dozer, Backhoes, Excavator, Graders	55.0	66.0
Building Construction	Cranes, Generators, Backhoes, Welders, Other Equipment >5HP	55.0	66.2
Paving	Paver, Roller	55.0	58.6
Architectural Coating	Air Compressors	55.0	55.6

Notes:
[1]Ambient Noise Levels are from City of Santa Maria's Municipal Code, Ambient Base Noise Levels.

6.3 VIBRATION

6.3.1 Short-Term Vibrational Impact

The quantitative methods provided by the Caltrans Transportation and Construction Vibration Guidance Manual (Caltrans 2020) and the Federal Transit Administration's Transit Noise and Vibration Impact Assessment Model (FTA 2018) are utilized in this analysis to determine whether vibration levels would exceed significance thresholds. These methodologies are reflective of the standard practice for analyzing vibration impacts on structures from continuous and intermittent sources from construction equipment.

The following criteria have been developed to evaluate the potential for damage potential from ground vibration induced by construction equipment. Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

The greatest vibratory sources during construction of the proposed project are dozers and loaded trucks. The closest structural building is a warehouse building located 80 feet west of property boundary. The structural threshold maximum for continuous/intermittent sources for modern industrial/commercial buildings is 0.50 in/sec peak particle velocity (PPV). The nearest sensitive receptor is a single-family residential home at 1559 A Street located approximately 400 feet southeast of the project site boundary. For the purpose of assessing impacts to humans, vibrations would potentially be significant if vibration levels exceeded the distinctly perceptible vibration levels of 0.04 in/sec PPV.

The proposed project does not include any substantial vibration sources associated with operation. Thus, construction activities have the greatest potential to generate ground borne vibration affecting nearby receivers. Vibration source amplitudes for construction equipment are provided below which are derived from Federal Transit Administration and Caltrans guidance documents. **Table 14** summarizes the vibration source amplitude level for various construction equipment. As shown in **Table 15**, ground-borne vibration levels during construction would not exceed the human annoyance or structural damage thresholds. Overall, the proposed project would not generate excessive groundborne vibration or groundborne noise levels during construction. Therefore, impacts would be less than significant.

Table 14. Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV at 25 ft (in/sec)
Vibratory roller	0.210
Large bulldozer	0.089
Caisson drilling	0.089
Loaded trucks	0.076
Jackhammer	0.035
Small bulldozer	0.003
Crack-and-seat operations	2.4
Notes: PPV = Peak Particle Velocity	

Table 15. Vibration Levels at Nearest Building

Equipment	Nearest Receptor Type	Nearest Receptor Distance (ft)	PPV_{ref}	PPV_x	Threshold (PPV, in/sec)	Exceeds Threshold?
Large Bulldozer	Residential	400	0.089	0.004	0.04	No
Loaded Truck		400	0.076	0.004	0.04	No
Large Bulldozer	Structural	80	0.089	0.02	0.50	No
Loaded Truck		80	0.076	0.02	0.50	No

Notes:
Calculated using the following formula:
$PPV_x = PPV_{ref} \times (25/D)^{1.1}$
Where: PPV_x= the peak particle velocity in in/sec of the equipment adjusted for the distance
PPV_{ref} = the reference vibration level in in/sec from Table 14 from the FTA *Transit Noise and Vibration Impact Assessment Guidelines*
D = the distance from the equipment to the receiver

6.3.2 Long-Term Vibrational Impact

The proposed project is not anticipated to have any significant sources of groundborne vibration, such as industrial machinery or heavy equipment. Any operational groundborne vibration related to the proposed project would be from vehicle traffic on nearby rounds. Road vehicles on paved roads typically do not produce vibrations levels noticeable to humans. Therefore, operations of the proposed project would not generate excessive groundborne vibration or groundborne noise levels, and impacts would be less than significant.

6.4 AIRPORT IMPACTS

The proposed project is located approximately 2.25 miles from the nearest runway of the Santa Maria Airport. Per the Airport Influence Area established by the Airport Land Use Commission, a part of the Santa Barbara County Association of Governments (SBCAG), the proposed project is within Review Area 2. The proposed project's location within Review Area 2 requires disclosure in real estate transactions and are a part of the overflight notification area. Per the Airport Noise Contour map generated by the SBCAG, the proposed project's location is outside of the noise impact area of the airport. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels, and impacts would be less than significant.

7.0 MITIGATION MEASURES

No mitigation measures are required for the proposed project.

8.0 REFERENCES

- California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, September 2013
- California Department of Transportation, Transportation and Construction Vibration Guidance Manual, April 2020
- Santa Maria General Plan, Noise Element adopted April 15, 2009.
- Santa Maria Municipal Code, Chapter 5.5.
- The City of Santa Maria's Environmental Procedures and Guidelines, November 3, 2020
- Federal Highway Administration, Roadway Noise Construction Model, Software Version 1.1.
- Federal Transit Administration, Transit Noise and Vibration Impact Assessment, September 2018.
- SoundPlan Essential 5.1, Noise Sources: Parking Noise, 2017.
- Federal Highway Administration, Traffic Noise Model, Software Version 3.2.
- Santa Barbara County Association of Governments – Airport Land Use Compatibility Plan, SB County Airport Noise Contours.
- Airport Background Data and Assumptions Report – Santa Maria Public Airport

APPENDIX A: AMBIENT NOISE MEASUREMENTS

NV5
ALTA ENVIRONMENTAL

Noise Measurement Field Data			
Project:	Sensitive Receptor Noise Monitoring	Project Number:	713124-3124023.00
Sample Name:	Sample 1	Date:	5/23/2024
Analyst:	Anuk Peliyagoda	Time:	4:05PM – 4:20PM
Location:	1501 South Fulton Court, Santa Maria, CA 93458		
Noise Sources:	Traffic from A Street and La Brea Avenue		
Comments:	Windy day caused some noise interference. However, majority of noise was made from ongoing traffic. Vehicles included sedan cars, trucks, and semi-trucks. During the 15 minute sample approximately 73 cars drove by.		

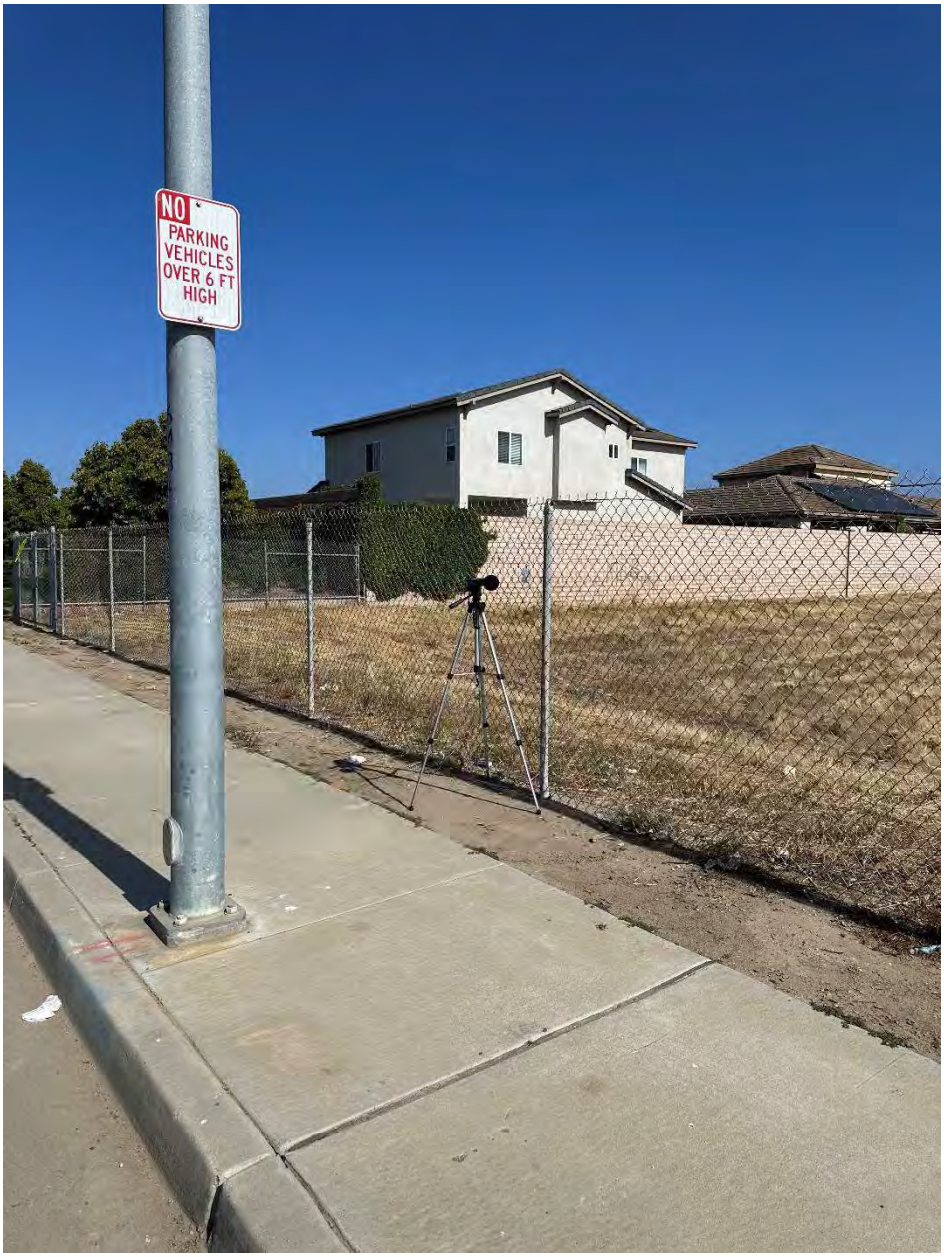
Results (dBA):		
Leq:	L90:	Ls(max):
65.8	46.5	83.7

Equipment		**Weather**	
Sound Level Meter:	SoundAdvisor™ Model 831C	Temperature (˚F):	64
Calibrator:	CAL200	Wind (MPH):	9
Response Time:	Slow	Sky:	Clear
Weighting:	A weighting	Barometric Pressure:	29.91 Hg
Microphone Height:	5’ feet	Humidity:	62%

Photos



NV5
ALTA
ENVIRONMENTAL



Noise Measurement Field Data			
Project:	Sensitive Receptor Noise Monitoring	Project Number:	713124-3124023.00
Sample Name:	Sample 2	Date:	5/23/2024
Analyst:	Anuk Peliyagoda	Time:	8:22PM – 8:37PM
Location:	1501 South Fulton Court, Santa Maria, CA 93458		
Noise Sources:	Light traffic from A Street and La Brea Avenue		
Comments:	Noise primarily came from vehicles with a total of 21 cars in 15minutes. Less wind than first sample, so less interference. A person walked by at 8:26 and was playing music from a phone, during this time 3 cars also drove by. There was also some noise from insects.		

Results (dBA):		
Leq:	L90:	Ls(max):
56.8	41.1	73.7

Equipment		**Weather**	
Sound Level Meter:	SoundAdvisor™ Model 831C	Temperature (˚F):	54
Calibrator:	CAL200	Wind (MPH):	5
Response Time:	Slow	Sky:	Clear
Weighting:	A weighting	Barometric Pressure:	29.94 Hg
Microphone Height:	5’ feet	Humidity:	80%

Photos





Noise Measurement Field Data			
Project:	Sensitive Receptor Noise Monitoring	Project Number:	713124-3124023.00
Sample Name:	Sample 3	Date:	5/23/2024
Analyst:	Anuk Peliyagoda	Time:	11:07PM – 11:22PM
Location:	1501 South Fulton Court, Santa Maria, CA 93458		
Noise Sources:	Car driving on road.		
Comments:	Wind increased and caused interference including fence rattling. Only one car drove by during the 15minute sample. Frogs croaking loudly.		

Results (dBA):		
Leq:	L90:	Ls(max):
54.2	40.3	75.3

Equipment		Weather	
Sound Level Meter:	Sound Advisor™ Model 831C	Temperature (˚F):	51
Calibrator:	CAL200	Wind (MPH):	3
Response Time:	Slow	Sky:	Clear
Weighting:	A weighting	Barometric Pressure:	29.96 Hg
Microphone Height:	5’ feet	Humidity:	87%

Photos





APPENDIX B: TRIP GENERATION COUNT

Santa Maria Delivery Facility

Time	Autos			Trucks			Vans			Total		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
0:00	0	0	0	1	1	2	0	0	0	1	1	2
0:30	0	0	0	1	1	2	0	0	0	1	1	2
1:00	160	0	160	1	1	2	0	0	0	161	1	162
1:30	0	0	0	1	1	2	0	0	0	1	1	2
2:00	0	0	0	1	1	2	0	0	0	1	1	2
2:30	0	0	0	1	1	2	0	0	0	1	1	2
3:00	0	0	0	1	1	2	0	0	0	1	1	2
3:30	0	0	0	1	1	2	0	0	0	1	1	2
4:00	0	0	0	1	2	3	0	0	0	1	2	3
4:30	0	0	0	2	1	3	0	0	0	2	1	3
5:00	0	0	0	1	2	3	0	0	0	1	2	3
5:30	0	0	0	2	1	3	0	0	0	2	1	3
6:00	0	0	0	1	1	2	0	0	0	1	1	2
6:30	0	0	0	1	1	2	0	0	0	1	1	2
7:00	0	0	0	1	1	2	0	0	0	1	1	2
7:30	0	0	0	1	1	2	0	0	0	1	1	2
8:00	12	0	12	0	1	1	0	0	0	12	1	13
8:30	0	0	0	0	1	1	0	0	0	0	1	1
9:00	0	0	0	0	1	1	0	0	0	0	1	1
9:30	144	0	144	0	1	1	0	0	0	144	1	145
10:00	72	47	119	0	0	0	0	72	72	72	119	191
10:30	129	0	129	0	0	0	0	72	72	129	72	201
11:00	0	0	0	0	0	0	0	144	144	0	144	144
11:30	0	0	0	0	0	0	0	57	57	0	57	57
12:00	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0	0	0	0	0
13:30	19	0	19	0	0	0	0	0	0	19	0	19
14:00	0	160	160	1	0	1	0	0	0	1	160	161
14:30	0	0	0	0	1	1	0	0	0	0	1	1
15:00	0	0	0	1	0	1	0	0	0	1	0	1
15:30	5	0	5	0	1	1	0	0	0	5	1	6
16:00	0	0	0	1	0	1	0	0	0	1	0	1
16:30	36	12	48	0	1	1	0	0	0	36	13	49
17:00	61	36	97	1	0	1	0	0	0	62	36	98
17:30	0	61	61	0	1	1	0	0	0	0	62	62
18:00	0	19	19	1	0	1	0	0	0	1	19	20
18:30	0	0	0	1	0	1	0	0	0	1	0	1
19:00	0	0	0	1	0	1	0	0	0	1	0	1
19:30	0	0	0	1	0	1	0	0	0	1	0	1
20:00	0	0	0	1	1	2	72	0	72	73	1	74
20:30	0	144	144	1	1	2	72	0	72	73	145	218
21:00	0	72	72	1	1	2	144	0	144	145	73	218
21:30	0	129	129	1	1	2	57	0	57	58	130	188
22:00	0	0	0	1	1	2	0	0	0	1	1	2
22:30	0	5	5	1	1	2	0	0	0	1	6	7
23:00	47	0	47	1	1	2	0	0	0	48	1	49
23:30	0	0	0	1	1	2	0	0	0	1	1	2
Total	**685**	**685**	**1370**	**34**	**34**	**68**	**345**	**345**	**690**	**1064**	**1064**	**2128**

APPENDIX C: SOUNDPLAN CONTRIBUTIONS

Contribution levels of the receivers

Source name		Traffic lane	Level Day	Evening	Night	Lden
			dB(A)			
Receptor 1 - 1501 S Fulton	GF		40.1	40.4	39.4	46.0
Air Compressor		-	22.7	-	-	19.7
Air Impact Wrench		-	24.7	-	-	21.7
Associate Parking Lot		-	30.2	26.3	29.7	35.9
EF1		-	1.3	1.3	1.3	7.7
EF2		-	-0.3	-0.3	-0.3	6.1
EF4		-	3.1	3.1	3.1	9.5
EF5		-	-13.5	-13.5	-13.5	-7.1
EF5		-	-13.6	-13.6	-13.6	-7.2
EF6		-	2.4	2.4	2.4	8.8
EF7		-	0.3	0.3	0.3	6.7
EF8		-	-30.9	-30.9	-30.9	-24.5
EF FP		-	2.3	2.3	2.3	8.7
RTU1		-	21.4	21.4	21.4	27.8
RTU2		-	15.3	15.3	15.3	21.7
RTU3		-	24.9	24.9	24.9	31.3
RTU4		-	21.5	21.5	21.5	27.9
RTU5		-	21.6	21.6	21.6	28.0
RTU6		-	19.0	19.0	19.0	25.4
RTU7		-	22.7	22.7	22.7	29.1
RTU8		-	22.5	22.5	22.5	28.9
RTU9		-	27.4	27.4	27.4	33.8
RTU10		-	27.2	27.2	27.2	33.6
RTU11		-	26.7	26.7	26.7	33.1
RTU12		-	26.5	26.5	26.5	32.9
RTU14		-	26.6	26.6	26.6	33.0
RTU15		-	26.9	26.9	26.9	33.3
RTU16		-	26.5	26.5	26.5	32.9
RTU17		-	27.0	27.0	27.0	33.3
Truck Loading Dock		-	26.4	28.7	31.7	37.4
Truck Path		-	25.8	28.1	31.1	36.8
Van Loading Dock West		-	8.9	-	-	5.8
Van Parking Lot East		-	33.5	35.2	-	34.6
Van Parking Lot West		-	26.3	28.1	-	27.4
Van Staging/Loading Dock East		-	21.1	-	-	18.1
Receptor 1 - 1501 S Fulton	1.Fl		40.0	40.2	39.3	45.9
Air Compressor		-	23.7	-	-	20.7
Air Impact Wrench		-	26.7	-	-	23.7
Associate Parking Lot		-	29.8	25.9	29.4	35.5
EF1		-	1.3	1.3	1.3	7.7
EF2		-	-0.3	-0.3	-0.3	6.1
EF4		-	3.2	3.2	3.2	9.6
EF5		-	-13.4	-13.4	-13.4	-7.0
EF5		-	-13.6	-13.6	-13.6	-7.2
EF6		-	2.4	2.4	2.4	8.8
EF7		-	0.3	0.3	0.3	6.7
EF8		-	-30.9	-30.9	-30.9	-24.5
EF FP		-	2.4	2.4	2.4	8.8
RTU1		-	21.5	21.5	21.5	27.9
RTU2		-	15.4	15.4	15.4	21.8
RTU3		-	24.9	24.9	24.9	31.3
RTU4		-	21.6	21.6	21.6	28.0
RTU5		-	21.6	21.6	21.6	28.0
RTU6		-	18.7	18.7	18.7	25.1
RTU7		-	22.8	22.8	22.8	29.2
RTU8		-	22.6	22.6	22.6	29.0
RTU9		-	27.5	27.5	27.5	33.9
RTU10		-	27.2	27.2	27.2	33.6
RTU11		-	26.8	26.8	26.8	33.2
RTU12		-	26.6	26.6	26.6	32.9
RTU14		-	26.7	26.7	26.7	33.1
RTU15		-	27.0	27.0	27.0	33.4
RTU16		-	26.6	26.6	26.6	33.0

Contribution levels of the receivers

Source name	Traffic lane	Level Day	Evening	Night	Lden
		dB(A)			
RTU17	-	27.0	27.0	27.0	33.4
Truck Loading Dock	-	26.0	28.2	31.3	37.0
Truck Path	-	25.5	27.8	30.7	36.5
Van Loading Dock West	-	10.4	-	-	7.4
Van Parking Lot East	-	33.0	34.7	-	34.1
Van Parking Lot West	-	26.0	27.8	-	27.1
Van Staging/Loading Dock East	-	20.7	-	-	17.7
Receptor 2 - 1689 W Stodell Rd GF		46.5	38.9	38.7	47.1
Air Compressor	-	38.9	-	-	35.9
Air Impact Wrench	-	44.6	-	-	41.6
Associate Parking Lot	-	32.0	28.0	31.5	37.7
EF1	-	-0.7	-0.7	-0.7	5.6
EF2	-	3.1	3.1	3.1	9.4
EF4	-	0.8	0.8	0.8	7.2
EF5	-	-13.9	-13.9	-13.9	-7.5
EF5	-	-13.8	-13.8	-13.8	-7.4
EF6	-	-2.6	-2.6	-2.6	3.8
EF7	-	-1.0	-1.0	-1.0	5.4
EF8	-	-35.2	-35.2	-35.2	-28.8
EF FP	-	-0.2	-0.2	-0.2	6.2
RTU1	-	18.9	18.9	18.9	25.3
RTU2	-	13.6	13.6	13.6	20.0
RTU3	-	23.3	23.3	23.3	29.7
RTU4	-	21.0	21.0	21.0	27.4
RTU5	-	21.7	21.7	21.7	28.1
RTU6	-	12.2	12.2	12.2	18.6
RTU7	-	19.5	19.5	19.5	25.9
RTU8	-	19.8	19.8	19.8	26.2
RTU9	-	25.2	25.2	25.2	31.6
RTU10	-	25.6	25.6	25.6	32.0
RTU11	-	26.0	26.0	26.0	32.4
RTU12	-	26.3	26.3	26.3	32.7
RTU14	-	26.2	26.2	26.2	32.6
RTU15	-	26.0	26.0	26.0	32.4
RTU16	-	25.9	25.9	25.9	32.3
RTU17	-	24.4	24.4	24.4	30.8
Truck Loading Dock	-	15.3	17.5	20.5	26.3
Truck Path	-	27.9	30.2	33.2	38.9
Van Loading Dock West	-	17.9	-	-	14.9
Van Parking Lot East	-	26.5	28.3	-	27.6
Van Parking Lot West	-	30.4	32.1	-	31.5
Van Staging/Loading Dock East	-	10.6	-	-	7.6
Receptor 3 - 1677 W Stodell Rd GF		42.1	40.8	40.3	47.0
Air Compressor	-	28.4	-	-	25.4
Air Impact Wrench	-	35.6	-	-	32.6
Associate Parking Lot	-	34.3	30.4	33.8	40.0
EF1	-	2.0	2.0	2.0	8.4
EF2	-	2.1	2.1	2.1	8.5
EF4	-	0.8	0.8	0.8	7.2
EF5	-	-11.9	-11.9	-11.9	-5.6
EF5	-	-11.9	-11.9	-11.9	-5.5
EF6	-	-1.1	-1.1	-1.1	5.3
EF7	-	0.6	0.6	0.6	7.0
EF8	-	-33.6	-33.6	-33.6	-27.3
EF FP	-	1.4	1.4	1.4	7.8
RTU1	-	19.5	19.5	19.5	25.9
RTU2	-	14.3	14.3	14.3	20.7
RTU3	-	24.8	24.8	24.8	31.2
RTU4	-	22.1	22.1	22.1	28.4
RTU5	-	23.9	23.9	23.9	30.3
RTU6	-	13.8	13.8	13.8	20.2
RTU7	-	21.2	21.2	21.2	27.6
RTU8	-	21.8	21.8	21.8	28.2

Contribution levels of the receivers

Source name	Traffic lane	Level Day	Evening	Night	Lden
		dB(A)			
RTU9	-	27.3	27.3	27.3	33.7
RTU10	-	27.9	27.9	27.9	34.3
RTU11	-	28.2	28.2	28.2	34.6
RTU12	-	28.6	28.6	28.6	35.0
RTU14	-	28.5	28.5	28.5	34.9
RTU15	-	28.5	28.5	28.5	34.9
RTU16	-	28.3	28.3	28.3	34.7
RTU17	-	25.4	25.4	25.4	31.8
Truck Loading Dock	-	13.4	15.6	18.6	24.3
Truck Path	-	28.0	30.2	33.2	38.9
Van Loading Dock West	-	18.0	-	-	15.0
Van Parking Lot East	-	31.0	32.8	-	32.1
Van Parking Lot West	-	30.8	32.5	-	31.9
Van Staging/Loading Dock East	-	18.7	-	-	15.7
Receptor 4 - 1753 A St GF		37.1	37.3	37.3	43.7
Air Compressor	-	21.0	-	-	18.0
Air Impact Wrench	-	24.9	-	-	21.9
Associate Parking Lot	-	23.7	19.8	23.3	29.4
EF1	-	-2.6	-2.6	-2.6	3.7
EF2	-	-2.7	-2.7	-2.7	3.7
EF4	-	4.6	4.6	4.6	11.0
EF5	-	-15.8	-15.8	-15.8	-9.4
EF5	-	-15.9	-15.9	-15.9	-9.5
EF6	-	-0.1	-0.1	-0.1	6.3
EF7	-	-2.3	-2.3	-2.3	4.1
EF8	-	-32.6	-32.6	-32.6	-26.3
EF FP	-	0.3	0.3	0.3	6.7
RTU1	-	20.5	20.5	20.5	26.9
RTU2	-	13.6	13.6	13.6	20.0
RTU3	-	22.9	22.9	22.9	29.3
RTU4	-	19.3	19.3	19.3	25.7
RTU5	-	19.4	19.4	19.4	25.8
RTU6	-	15.8	15.8	15.8	22.2
RTU7	-	20.6	20.6	20.6	27.0
RTU8	-	20.2	20.2	20.2	26.6
RTU9	-	24.9	24.9	24.9	31.3
RTU10	-	24.4	24.4	24.4	30.8
RTU11	-	24.2	24.2	24.2	30.6
RTU12	-	23.8	23.8	23.8	30.2
RTU14	-	23.9	23.9	23.9	30.3
RTU15	-	24.1	24.1	24.1	30.5
RTU16	-	23.9	23.9	23.9	30.3
RTU17	-	25.7	25.7	25.7	32.1
Truck Loading Dock	-	24.3	26.5	29.5	35.2
Truck Path	-	25.8	28.1	31.0	36.8
Van Loading Dock West	-	9.4	-	-	6.3
Van Parking Lot East	-	25.8	27.5	-	26.9
Van Parking Lot West	-	26.0	27.7	-	27.1
Van Staging/Loading Dock East	-	13.2	-	-	10.1
Receptor 5 - 1599 A Street GF		46.4	47.0	46.7	53.1
Air Compressor	-	30.0	-	-	27.0
Air Impact Wrench	-	32.1	-	-	29.1
Associate Parking Lot	-	32.7	28.8	32.3	38.4
EF1	-	4.1	4.1	4.1	10.5
EF2	-	3.5	3.5	3.5	9.9
EF4	-	12.6	12.6	12.6	19.0
EF5	-	-8.5	-8.5	-8.5	-2.1
EF5	-	-8.7	-8.7	-8.7	-2.3
EF6	-	7.4	7.4	7.4	13.8
EF7	-	4.2	4.2	4.2	10.6
EF8	-	-21.8	-21.8	-21.8	-15.4
EF FP	-	9.0	9.0	9.0	15.4
RTU1	-	28.7	28.7	28.7	35.1

Contribution levels of the receivers

Source name	Traffic lane	Level Day	Evening	Night	Lden
		dB(A)			
RTU2	-	21.2	21.2	21.2	27.6
RTU3	-	31.1	31.1	31.1	37.5
RTU4	-	26.3	26.3	26.3	32.7
RTU5	-	25.9	25.9	25.9	32.3
RTU6	-	23.7	23.7	23.7	30.1
RTU7	-	30.0	30.0	30.0	36.4
RTU8	-	29.1	29.1	29.1	35.5
RTU9	-	33.3	33.3	33.3	39.7
RTU10	-	32.4	32.4	32.4	38.8
RTU11	-	31.6	31.6	31.6	38.0
RTU12	-	31.0	31.0	31.0	37.4
RTU14	-	31.2	31.2	31.2	37.6
RTU15	-	31.6	31.6	31.6	38.0
RTU16	-	31.1	31.1	31.1	37.5
RTU17	-	35.4	35.4	35.4	41.8
Truck Loading Dock	-	37.2	39.4	42.4	48.2
Truck Path	-	34.2	36.5	39.5	45.2
Van Loading Dock West	-	16.0	-	-	13.0
Van Parking Lot East	-	39.3	41.1	-	40.4
Van Parking Lot West	-	34.2	36.0	-	35.3
Van Staging/Loading Dock East	-	26.7	-	-	23.7
Receptor 6 - Santa Barbara Humane 1687 W StGFell Rd		52.4	43.3	43.3	52.3
Air Compressor	-	44.3	-	-	41.3
Air Impact Wrench	-	51.0	-	-	48.0
Associate Parking Lot	-	35.5	31.5	35.0	41.2
EF1	-	2.3	2.3	2.3	8.7
EF2	-	4.8	4.8	4.8	11.2
EF4	-	5.5	5.5	5.5	11.9
EF5	-	-9.9	-9.9	-9.9	-3.5
EF5	-	-9.6	-9.6	-9.6	-3.3
EF6	-	1.0	1.0	1.0	7.4
EF7	-	2.0	2.0	2.0	8.4
EF8	-	-31.2	-31.2	-31.2	-24.8
EF FP	-	3.9	3.9	3.9	10.3
RTU1	-	23.4	23.4	23.4	29.8
RTU2	-	18.0	18.0	18.0	24.4
RTU3	-	27.7	27.7	27.7	34.1
RTU4	-	25.5	25.5	25.5	31.9
RTU5	-	25.9	25.9	25.9	32.3
RTU6	-	16.0	16.0	16.0	22.4
RTU7	-	23.4	23.4	23.4	29.8
RTU8	-	23.6	23.6	23.6	30.0
RTU9	-	28.8	28.8	28.8	35.2
RTU10	-	29.0	29.0	29.0	35.4
RTU11	-	29.8	29.8	29.8	36.2
RTU12	-	30.1	30.1	30.1	36.5
RTU14	-	29.9	29.9	29.9	36.3
RTU15	-	29.5	29.5	29.5	35.9
RTU16	-	29.4	29.4	29.4	35.8
RTU17	-	29.1	29.1	29.1	35.5
Truck Loading Dock	-	21.9	24.1	27.1	32.9
Truck Path	-	34.1	36.3	39.3	45.0
Van Loading Dock West	-	23.6	-	-	20.6
Van Parking Lot East	-	27.2	28.9	-	28.3
Van Parking Lot West	-	35.7	37.4	-	36.8
Van Staging/Loading Dock East	-	10.4	-	-	7.4

APPENDIX D: TRAFFIC COUNTS

Type of report: Tube Count - Volume Data

LOCATION: W Stowell Rd East of S E St
QC JOB #: 16559413
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Santa Maria, CA
DATE: Apr 18 2024 - Apr 18 2024

Start Time	Mon	Tue	Wed	Thu 18 Apr 24	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				13		13			13	
01:00 AM				17		17			17	
02:00 AM				5		5			5	
03:00 AM				5		5			5	
04:00 AM				13		13			13	
05:00 AM				30		30			30	
06:00 AM				85		85			85	
07:00 AM				159		159			159	
08:00 AM				131		131			131	
09:00 AM				141		141			141	
10:00 AM				190		190			190	
11:00 AM				**222**		**222**			**222**	
12:00 PM				222		222			222	
01:00 PM				265		265			265	
02:00 PM				423		423			423	
03:00 PM				**772**		**772**			**772**	
04:00 PM				454		454			454	
05:00 PM				197		197			197	
06:00 PM				114		114			114	
07:00 PM				88		88			88	
08:00 PM				68		68			68	
09:00 PM				57		57			57	
10:00 PM				25		25			25	
11:00 PM				28		28			28	
Day Total				3724		3724			3724	
% Weekday Average				100%						
% Week Average				100%		100%				
AM Peak Volume				11:00 AM 222		11:00 AM 222			11:00 AM 222	
PM Peak Volume				3:00 PM 772		3:00 PM 772			3:00 PM 772	

Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: W Stowell Rd East of S E St
SPECIFIC LOCATION:
CITY/STATE: Santa Maria, CA

Passenger | Medium Trucks | Heavy Trucks

QC JOB #: 16559413
DIRECTION: EB, WB
DATE: Apr 18 2024

Start Time	Motorcycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12:00 AM	0	7	4	1	1	0	0	0	9	0	0	0	0	22
01:00 AM	0	17	1	0	1	0	0	0	3	0	0	0	0	22
02:00 AM	0	4	1	0	0	1	0	0	3	0	0	0	0	9
03:00 AM	0	21	4	0	1	0	0	0	2	0	0	0	0	28
04:00 AM	0	42	13	0	1	0	0	1	3	0	0	0	0	60
05:00 AM	0	224	47	9	9	0	0	1	4	0	0	0	0	294
06:00 AM	**2**	**650**	**162**	35	43	3	0	3	6	0	2	2	0	**908**
07:00 AM	0	152	50	42	60	2	0	6	12	0	0	2	0	326
08:00 AM	1	115	60	31	55	**13**	0	6	12	0	0	2	0	295
09:00 AM	0	94	55	50	55	5	0	6	22	0	**3**	2	**1**	293
10:00 AM	1	123	58	**55**	**70**	5	**1**	**7**	16	0	1	2	0	339
11:00 AM	1	158	84	50	61	1	0	7	**24**	0	2	**6**	0	394
12:00 PM	4	160	78	55	58	**5**	0	**9**	26	0	1	**3**	0	399
01:00 PM	1	222	89	**62**	43	2	0	5	30	0	0	2	0	456
02:00 PM	2	317	119	45	65	4	0	7	29	0	1	2	0	591
03:00 PM	**6**	**566**	**172**	54	**103**	3	0	7	**31**	**1**	1	2	0	**946**
04:00 PM	0	302	147	33	79	0	0	7	25	0	0	0	0	593
05:00 PM	1	165	57	18	38	3	0	5	28	0	**2**	0	0	317
06:00 PM	2	97	28	9	18	1	0	2	30	0	1	0	0	188
07:00 PM	0	83	34	2	8	1	0	3	28	0	0	0	0	159
08:00 PM	0	42	25	0	9	2	0	2	28	0	0	0	0	108
09:00 PM	2	49	15	1	11	0	0	1	16	0	0	0	0	95
10:00 PM	1	12	7	0	0	1	0	1	11	0	0	0	0	33
11:00 PM	0	28	5	0	4	0	0	0	8	0	0	0	0	45
Day Total	24	3650	1315	552	793	52	1	86	406	1	14	25	1	6920
Percent	0.3%	52.7%	19%	8%	11.5%	0.8%	0%	1.2%	5.9%	0%	0.2%	0.4%	0%	
AM Peak	6:00 AM	6:00 AM	6:00 AM	10:00 AM	10:00 AM	8:00 AM	10:00 AM	10:00 AM	11:00 AM	12:00 AM	9:00 AM	11:00 AM	9:00 AM	6:00 AM
Volume	2	650	162	55	70	13	1	7	24	0	3	6	1	908
PM Peak	3:00 PM	3:00 PM	3:00 PM	1:00 PM	3:00 PM	12:00 PM	12:00 PM	12:00 PM	3:00 PM	3:00 PM	5:00 PM	12:00 PM	12:00 PM	3:00 PM
Volume	6	566	172	62	103	5	0	9	31	1	2	3	0	946

ADT 6920



Heavy %=1.2+5.9+.2+.4 = 7.7%

Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: W Stowell Rd East of S E St
SPECIFIC LOCATION:
CITY/STATE: Santa Maria, CA

QC JOB #: 16559413
DIRECTION: EB, WB
DATE: Apr 18 2024

Start Time	Motorcycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
Grand Total	24	3650	1315	552	793	52	1	86	406	1	14	25	1	6920
Percent	0.3%	52.7%	19%	8%	11.5%	0.8%	0%	1.2%	5.9%	0%	0.2%	0.4%	0%	

ADT 6920



Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Volume Data

LOCATION: W Stowell Rd East of S E St
QC JOB #: 16559413
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Santa Maria, CA
DATE: Apr 18 2024 - Apr 18 2024

Start Time	Mon	Tue	Wed	Thu 18 Apr 24	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				9		9			9	
01:00 AM				5		5			5	
02:00 AM				4		4			4	
03:00 AM				23		23			23	
04:00 AM				47		47			47	
05:00 AM				264		264			264	
06:00 AM				**823**		**823**			**823**	
07:00 AM				167		167			167	
08:00 AM				164		164			164	
09:00 AM				152		152			152	
10:00 AM				149		149			149	
11:00 AM				172		172			172	
12:00 PM				177		177			177	
01:00 PM				**191**		**191**			**191**	
02:00 PM				168		168			168	
03:00 PM				174		174			174	
04:00 PM				139		139			139	
05:00 PM				120		120			120	
06:00 PM				74		74			74	
07:00 PM				71		71			71	
08:00 PM				40		40			40	
09:00 PM				38		38			38	
10:00 PM				8		8			8	
11:00 PM				17		17			17	
Day Total				3196		3196			3196	
% Weekday Average				100%						
% Week Average				100%		100%				
AM Peak Volume				6:00 AM 823		6:00 AM 823			6:00 AM 823	
PM Peak Volume				1:00 PM 191		1:00 PM 191			1:00 PM 191	

Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

APPENDIX E: RCNM CONSTRUCTION MODEL

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 4/2/2025
Case Description: Architectural Coating

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
1599 A Street	Residential	65.8	56.8	54.2

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	400	0

Equipment	Calculated (dBA) *Lmax	Leq	Results Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Compressor (air)	59.6	55.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	59.6	55.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 4/2/2025
Case Description: Building Construction

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
1599 A Street	Residential	65.8	56.8	54.2

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	400	0
Backhoe	No	40		77.6	400	0
Generator	No	50		80.6	400	0
Welder / Torch	No	40		74	400	0
All Other Equipment > 5 HP	No	50	85		400	0

Results

		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane		62.5	54.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe		59.5	55.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator		62.6	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch		55.9	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP		66.9	63.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	66.9	66.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 4/2/2025
Case Desc Grading

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
1599 A Stre	Residential	65.8	56.8	54.2

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Backhoe	No	40		77.6	400	0
Dozer	No	40		81.7	400	0
Excavator	No	40		80.7	400	0
Grader	No	40	85		400	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	59.5	55.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	63.6	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	62.6	58.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	66.9	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	66.9	66	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 4/2/2025
Case Description: Paving

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
1599 A Street	Residential	65.8	56.8	54.2

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Roller	No	20		80	400	0
Paver	No	50		77.2	400	0

Equipment	Results Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Roller	61.9	54.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	59.2	56.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	61.9	58.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 4/2/2025
Case Description: Site Prep

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
1599 A Street	Residential	65.8	56.8	54.2

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	400	0
All Other Equipment > 5 HP	No	50	85		400	0
Dozer	No	40		81.7	400	0

Results

Equipment		Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Backhoe		59.5	55.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP		66.9	63.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		63.6	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	66.9	65.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

NV5

Attachment 6

Traffic Impact Study and VMT Analysis

TRAFFIC IMPACT STUDY FOR

W. STOWELL ROAD DELIVERY STATION

DATE:
May 28, 2025

LOCATION:
Santa Maria, CA

PREPARED FOR:
Ben Ochoa, Seefried Industrial Development



PREPARED BY:
NV5 Engineers & Consultants
15092 Avenue of Science, Suite 200
San Diego, CA 92128

nv5.com

Executive Summary

A new delivery station is planned for construction along W. Stowell Road in Santa Maria, California. The proposed site will include a 169,104 square-foot warehouse facility, a delivery van queueing area, and surface parking lots (the "Project"). The development will have 3 full access driveways off W. Stowell Road (D1, D2, and D3). The Project site is designated for Planned Development in the West Stowell Specific Plan and is zoned Commercial Manufacturing/Agriculture Overlay (CM/AG). The site will generate passenger cars, delivery vans, and truck traffic. A total of 2,128 daily trips will be generated by the site, with 15 occurring during the AM peak hour (13 entering, 2 exiting) and 147 occurring during the PM peak hour (98 entering, 49 exiting).

Capacity analysis for existing (2024), No-Build (2027), and Build (2027) Conditions were completed at the following intersections utilizing Synchro® 12:

1. W. Stowell Road & Hanson Way – Three-leg, stop control.
2. W. Stowell Road & S. Blosser Road – Four-leg, signal.
3. W. Stowell Road & Black Road - Three-leg, stop control.
4. W. Taylor Street & N. Blosser Road - Three-leg, stop control.
5. W. Stowell Road & Broadway - Four-leg, signal.
6. Main Street & Black Road - Three-leg, stop control.
7. W. Stowell Road & S Bradley Road - Four-leg, signal.
8. S. Bradley Road & I-101 SB Off/On Ramp/Columbia - Four-leg, signal.
9. W. Stowell Road & I-101 NB Off/On Ramp/Nicholson Four-leg, stop control.
10. W. Stowell Road & Access Driveway 1 - Three-leg, stop control.
11. W. Stowell Road & Access Driveway 2 - Three-leg, stop control.
12. W. Stowell Road & Access Driveway 3 - Three-leg, stop control.

The following are the segments included in the study:

A. W. Stowell Road from Black Road to Blosser Road.
B. Black Road from W. Stowell Road to Main Street.
C. Blosser Road from W. Stowell Road to Main Street.

A comparison of the 2024 Existing, 2027 No-Build, and 2027 Build traffic analysis results indicates that the proposed Project will have a slight impact on the overall intersection Level of Service (LOS) along nearby roads. All study area unsignalized intersections and driveways are expected to operate at an acceptable LOS, except for the intersections of Main Street and Black Road, and E Stowell Road/Nicholson Avenue/I-101 NB On Ramp. Four signalized intersections are experiencing LOS E or F during AM and/or PM peak hours under Existing, No-Build, and Build conditions. Improvements for these four existing signalized intersections include optimizing the corridor along W. Stowell Road in line with the planned roadway improvements, which will enhance the overall levels of service.

The intersection of E Stowell Road and Broadway will experience poor levels of service as other developments are completed. The City of Santa Maria and CalTrans are aware of the deficiency and have plans to mitigate it in the future. The Project traffic has the ability to avoid the intersection during times of congestion, with alternate paths available.

The intersection of W Stowell Road and S Blosser Road will be improved by adding a northbound right-turn lane as a condition of the Blosser Ranch development on the southeast corner.

The following improvements are proposed as part of the Project:

W. Stowell Road from S. Blosser Road to US 101

- Optimize traffic signal timing

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Introduction

A new delivery station is proposed for construction along W. Stowell Road located in Santa Maria, California. The proposed industrial building will consist of 169,104 square feet, and will operate as a distribution warehouse where goods are sorted and transferred from large tractor trailers to smaller van-sized vehicles for delivery to final users (the "Project"). Figure 1 indicates the approximate location of the Project site.

NV5 Inc., has been retained to prepare this Traffic Impact Study (TIS) to determine the amount of traffic expected to be added to the adjacent roadway network due to the Project, and identify any improvements necessary to minimize the effects of additional traffic. To complete this determination, NV5 has undertaken the following tasks:

- Conducted field inspections of the site and surrounding roadway network to obtain an existing inventory of the roadway geometry, traffic control, and surrounding land uses.
- Determined existing traffic conditions by performing intersection turning movement counts at key intersections in the vicinity of the proposed Project during the weekday morning and weekday evening peak hours.
- Estimated the amount of traffic to be generated by the proposed Project utilizing the trip generation data published by the Institute of Transportation Engineers (ITE), and available information on the intended operation of the site. Site generated trips were then assigned to the local roadway network based on existing travel patterns and the site's proposed use.
- Completed capacity analyses for Existing (2024), No-Build (2027), and Build (2027) Conditions throughout the study area.
- Identified potential improvements to improve traffic conditions, if necessary.

This report represents a summary of our findings and recommendations with regard to the proposed Project.

A.1. Project Overview

The site will include a newly developed 169,104 square-foot delivery station, to deliver merchandise from nearby and regional sort centers to local customers within approximately 125 square miles. The Project site is designated for Planned Development in the West Stowell Specific Plan and is zoned Commercial Manufacturing/Agriculture Overlay (CM/AG). The targeted build-out date for the new facility is 2027.

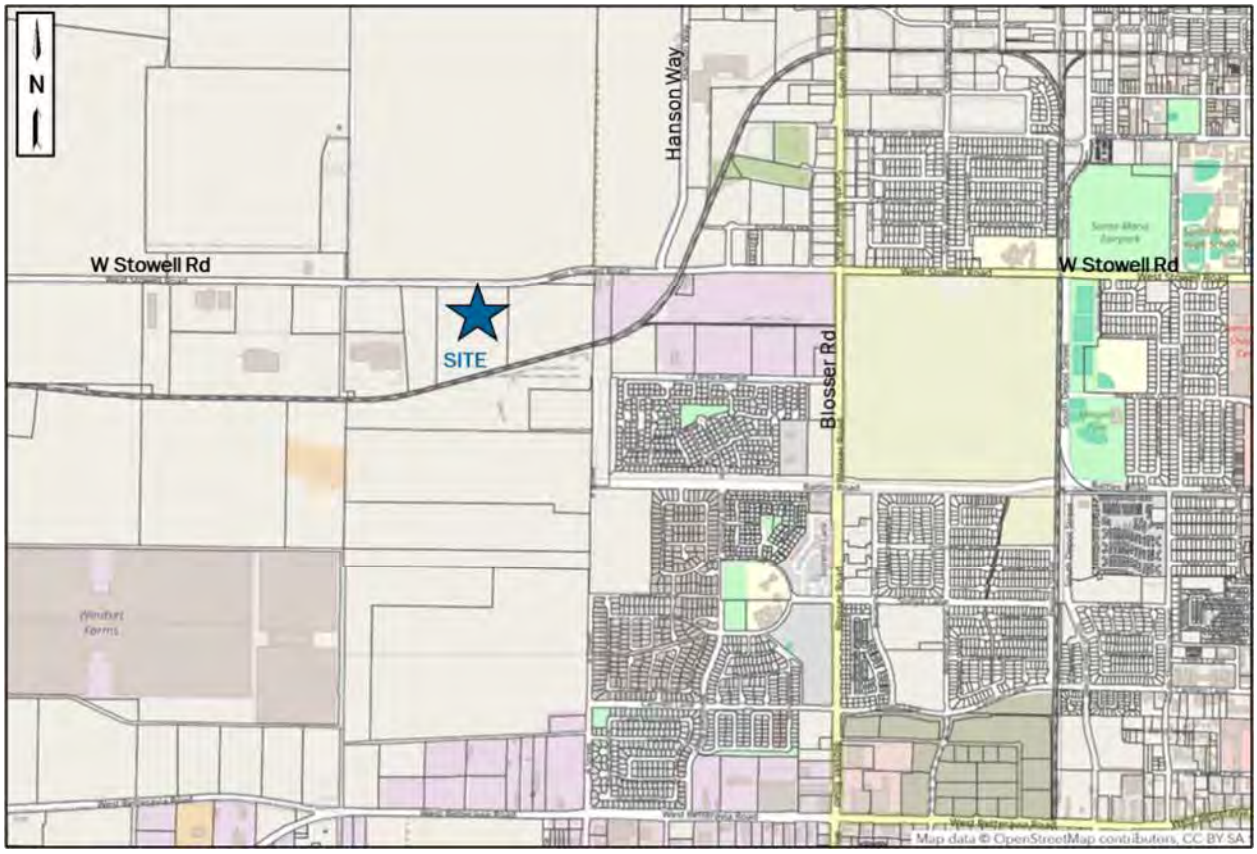
This TIS documents the effects that the proposed development may have on the surrounding existing and future roadway network. The study also documents major inputs and assumptions behind trip generation by the proposed development and details any recommended improvement measures or infrastructure improvements to reduce the impact of site traffic in the study area.

The scope of this study was based on the City of Santa Maria Public Work Department's Policies and Procedures for Transportation Impact Studies. The proposed scope was accepted by the City of Santa Maria's Engineering Division, and can be found in Appendix G.

A.2. Site Location & Study Area Boundaries

The site is located along the south side of W. Stowell Road on the west side of the City of Santa Maria, approximately 64 miles northwest of Santa Barbara. It is bounded on the south by a railroad and agricultural land. The delivery station is located just 3 miles west of U.S. Highway 101, and 3 miles north of the Santa Maria Airport. Access to U.S. Highway 101 is available via W. Stowell Road, and the Airport is a short commute down S. Blosser Road. Land use in the area is a mix of commercial, industrial, and residential properties. Figure 1 illustrates the site's location.

Figure 1. Vicinity Map



This study includes analysis of the Existing and Future Conditions at the following intersections:

1. W. Stowell Road & Hanson Way
2. W. Stowell Road & S. Blosser Road
3. W. Stowell Road & Black Road
4. W. Taylor Street & N. Blosser Road
5. W. Stowell Road & Broadway
6. Main Street & Black Road
7. W. Stowell Road & S Bradley Road
8. S. Bradley Road & I-101 SB Off/On Ramp/Columbia
9. W. Stowell Road & I-101 NB Off/On Ramp/Nicholson
10. W. Stowell Road & Access Driveway 1
11. W. Stowell Road & Access Driveway 2
12. W. Stowell Road & Access Driveway 3

Figure 2 illustrates the previously listed study intersections superimposed on existing aerial imagery. A detailed copy of the site development concept plan is provided in Appendix A.

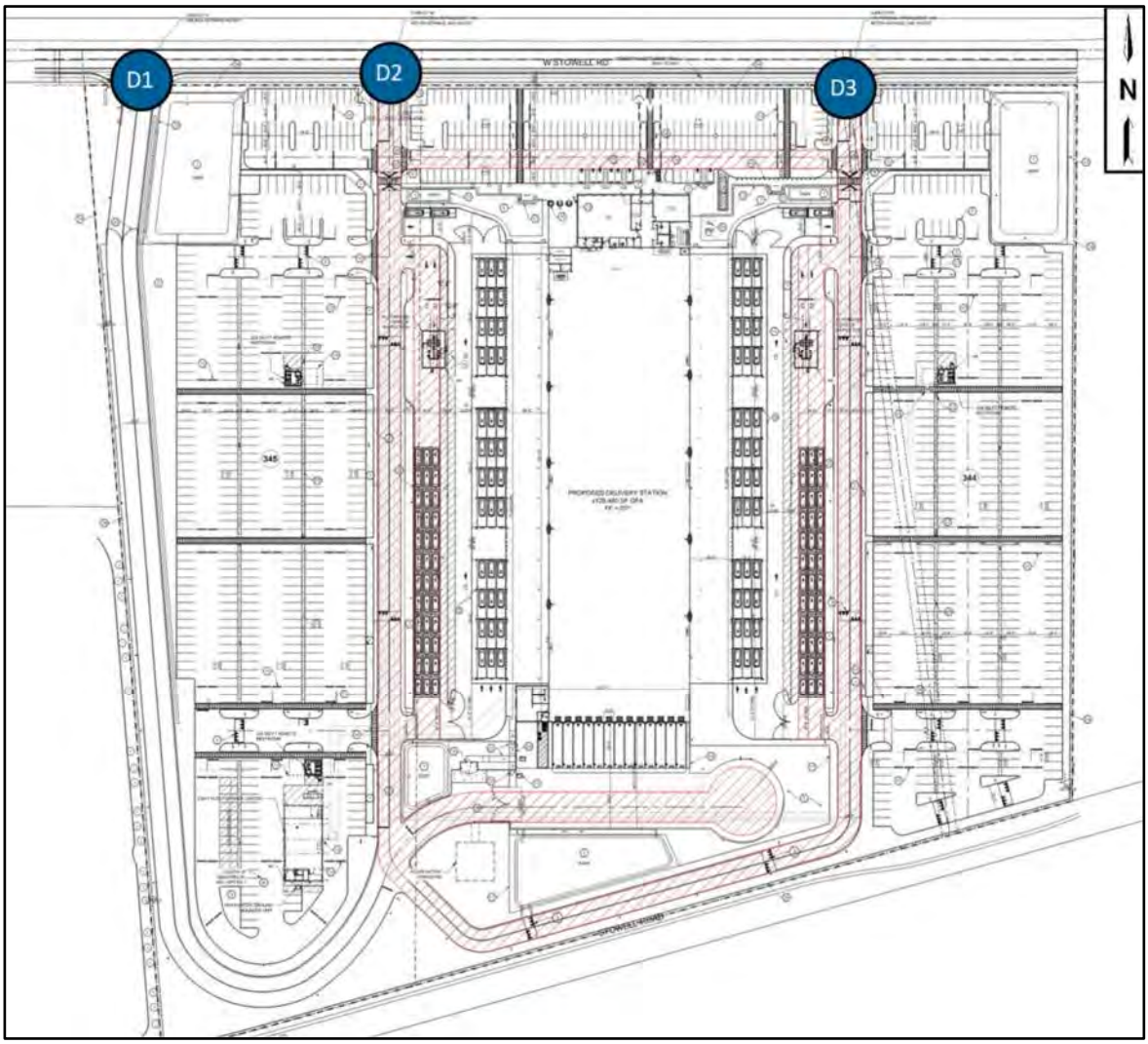
Figure 2. Site Location Aerial



A.3. Development Site Description

The site will be developed as a 169,104 square-foot delivery station. The targeted build-out for the new facility is 2027. The site has three driveway connections to the roadway network, and the parking for passenger cars, delivery vans, and trucks will encompass approximately 31.37 acres of the parcel. The delivery station will be served by D1, D2, and D3 along W. Stowell Road, as shown on the Site Plan in Figure 3.

Figure 3. Site Plan



All line-haul trucks will access the site at the westernmost driveway (D1), and all vans and employees will enter at the two eastern driveways (D2 and D3). Driveways D2 and D3 serve as internal site access providing circulation separation north and south of the facility to optimize queuing on-site, reduce conflict, and accommodate all required parking.

A.4. Existing Transportation Network

A review of the roadway network and intersections in the study area was conducted including field investigation (May 7th, 2024), traffic counts, and review of existing traffic signals and timings. The following is a summary of the existing transportation network in the nearby area.

The "SMRT" fixed route bus service serves Main Street and Broadway within the vicinity of the study area, one of the twelve routes in the system. There are no sidewalks or bicycle facilities along W. Stowell Road or any of the side streets within a half-mile of the proposed delivery station.

U.S. Highway 101 is a six-lane, median-divided interstate with a posted speed limit of 65 MPH. The highway features northbound and southbound ramps that divert to Stowell Road, leading to the proposed development. Additionally, U.S. Highway 101 provides connectivity to Highway 166, Highway 227, and Highway 135.

W. Stowell Road transitions from a two-lane to a four-lane median-divided roadway, and is classified as an urban secondary arterial with a posted speed limit of 55 MPH adjacent to the Project development, 40 MPH between Blosser Road and Depot Road, and 35 MPH from Depot Road to U.S. Highway 101. W. Stowell Road originates at Black Road and runs east to west that connects to U.S. Highway 101. Land uses along the W. Stowell roadway segment include commercial and residential single-family detached housing.

Broadway (State Route 135) is a four to six-lane divided freeway that serves as Santa Maria's primary route north-to-south link, connecting the city along the Pacific Coast. The four-lane section north of W. Stowell Road is posted at 30 MPH, and the six-lane section south of W. Stowell Road is posted at 40 MPH. The surrounding land uses along this thoroughfare consist of commercial areas, parks, and single-family detached housing.

Main Street (SR-166) is a two-lane median-divided primary arterial roadway. Main Street is also a part of State Route 166, which connects Santa Maria to the Guadalupe area west of the city with a posted speed limit of 55 MPH. The land uses along Main Street are almost exclusively industrial yards, with some undeveloped lots near Black Road.

Blosser Road is a four-lane divided arterial roadway with a posted speed limit of 40 MPH north of W. Stowell, 45 MPH between W. Stowell and Betteravia, and 55 MPH south of Betteravia. The roadway network is the primary route from the Project site to the Santa Maria Airport. The land uses along Blosser Road are mixed with commercial and residential developments, with minor vacant lots adjacent to the roadway.

Black Road is a two-lane undivided local roadway with a posted speed of 45 MPH. The land uses along the roadway are almost exclusively vacant, undeveloped parcels, including a water treatment plant. Black Road serves as the connecting link from Main Street to Betteravia Road.

Existing Traffic Conditions

A.5. Traffic Counts

Intersection turning movement counts (TMCs) at the six study intersections were collected on Thursday, April 18, 2024, while schools were in session. In addition to the turning movement counts, 24-hour traffic counts were taken on Stowell Road, east of E. Street, Black Road, North of Stowell Road, and Blosser Road, north of W. Cypress Street on Thursday, April 18, 2024. The AM peak hour was determined to be 7:30-8:30 AM and the PM peak hour was determined to be 4:00-5:00 PM for the intersections of W. Stowell Road & Hanson Way, W. Stowell Road & Blosser Road, and W. Stowell Road & Broadway. W. Stowell Road & Black Road and Main Street & Black Road had an AM Peak hour from 7:00-8:00 AM and PM Peak from 4:00-5:00 PM. Blosser Road & W. Taylor Street had an AM Peak hour from 7:45-8:45 AM and PM Peak from 4:30-5:30 PM. The following intersection traffic data is included in Appendix B. The resultant Existing Traffic Volumes are shown in Figure 4.

A.6. Existing Traffic Analysis Results

Analysis in each of the study's scenarios was performed using the traffic analysis software Synchro® 12. Average vehicular delays (in seconds) are calculated and reported as Levels of Service (LOS) as defined by the Highway Capacity Manual (HCM) 7th edition. Synchro® output reports are included in Appendix E. Signal phasing is reflective of signal timing plans provided by the City of Santa Maria, as well as Caltrans, and kept constant through Future Conditions. Site driveways are not shown in Existing and No-Build Conditions as they are currently not in use. Because traffic flow on urban arterials is most constrained at intersections, detailed traffic flow analyses focus on the operating conditions of critical intersections during peak travel periods. LOS A through F are used to rate intersection operations, with LOS A indicating very good operation, and LOS F indicating poor operation. The City of Santa Maria considers LOS D as the performance standard for intersections (maintain LOS D or better). LOS E is coded as orange, and LOS F is coded as red in the Tables provided. The results of the Existing capacity analysis are shown in Table 1, and include analysis of the volumes presented in Figure 4.

Figure 4. Existing (2024) Volumes

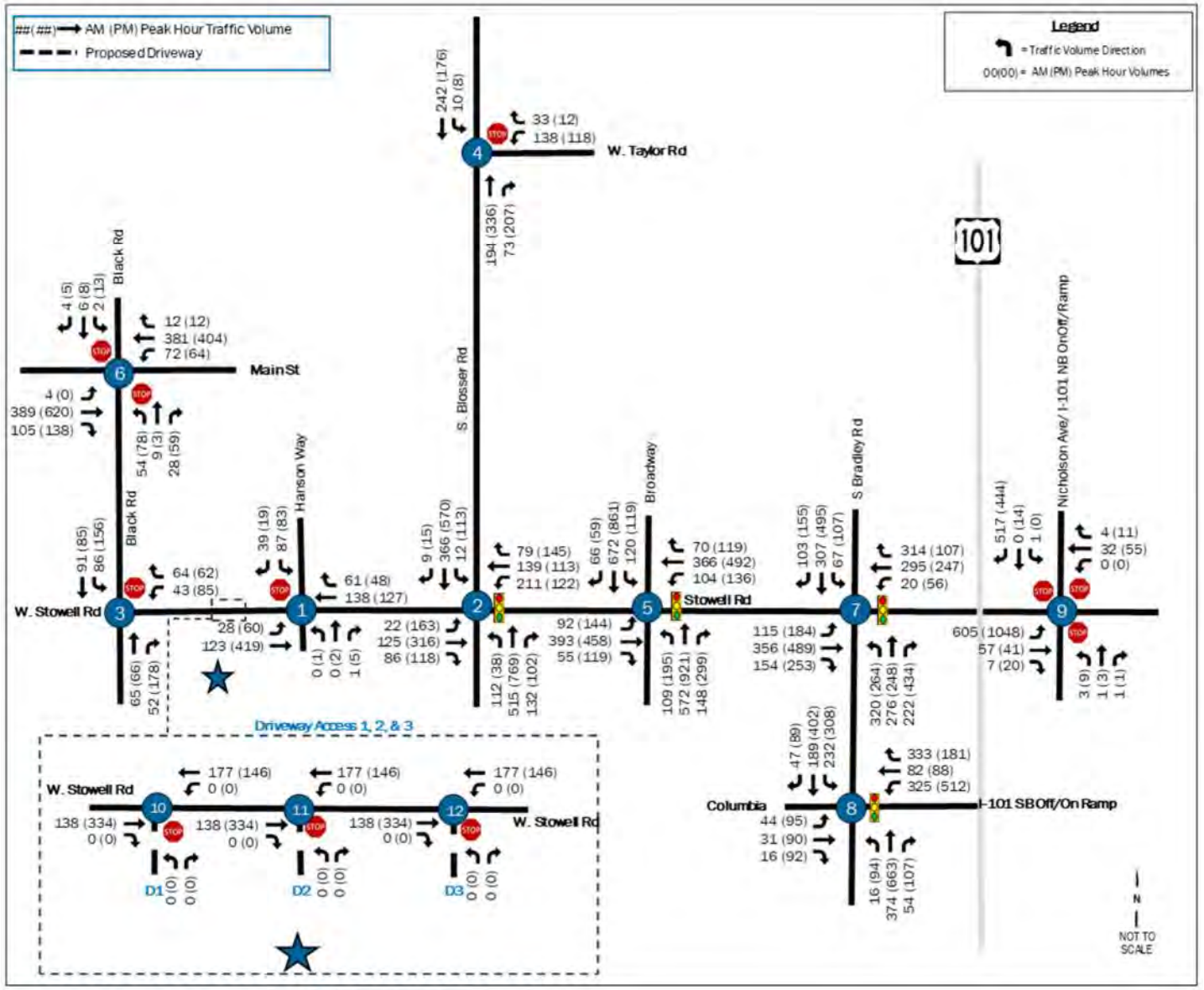


Table 1. Existing (2024) Intersection Capacity Analysis

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	W. Stowell Road / Hanson Way	Stop-Control	**OVERALL**	**A**	**3.6**	**A**	**2.8**
			EB	A	1.7	A	1.4
			WB	A	0.0	A	0.0
			NB	A	8.7	B	12.3
			SB	B	11.7	B	14.0
2	W. Stowell Road / S. Blosser Road	Signal	**OVERALL**	**D**	**35.1**	**D**	**37.2**
			EB	E	57.8	E	61.0
			WB	E	62.0	D	51.0
			NB	C	21.0	C	26.8
			SB	B	19.4	C	23.0
3	W. Stowell Road / Black Road	Stop-Control	**OVERALL**	**A**	**4.7**	**A**	**6.9**
			WB	B	11.1	C	20.4
			NB	A	0.0	A	0.0
			SB	A	3.8	A	5.6
4	W. Taylor St / N. Blosser Road	Stop-Control	**OVERALL**	**A**	**4.0**	**A**	**2.3**
			WB	C	15.7	B	14.8
			NB	A	0.0	A	0.0
			SB	A	0.3	A	0.4
5	W. Stowell Road / Broadway	Signal	**OVERALL**	**D**	**43.8**	**E**	**60.3**
			EB	D	47.5	D	58.3
			WB	D	47.4	E	62.1
			NB	D	39.4	E	64.0
			SB	D	43.4	D	55.4
6	Main Street / Black Road	Stop-Control	**OVERALL**	**A**	**4.0**	**A**	**7.8**
			EB	A	0.1	A	0.0
			WB	A	1.4	A	1.3
			NB	E	35.0	F	65.2
			SB	D	27.2	E	43.7
7	W. Stowell Road / S. Bradley Rd	Signal	**OVERALL**	**E**	**59.1**	**E**	**74.0**
			EB	B	16.4	C	21.2
			WB	D	42.3	C	34.2
			NB	F	106.7	F	151.8
			SB	E	55.6	E	63.0
8	S. Bradley Rd / Columbia/I-101 SB Off/On Ramp	Signal	**OVERALL**	**C**	**27.4**	**D**	**36.9**
			EB	C	29.7	D	35.9
			WB	C	25.4	C	30.7
			NB	C	29.5	D	47.1
			SB	C	28.4	C	32.2
9		Stop-Control	**OVERALL**	**A**	**8.7**	**D**	**43.4**
			EB	A	8.6	B	13.2

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp		WB	A	0.0	A	0.0
			NB	F	75.5	F	1599.4
			SB	F	91.0	F	1281.2

Based on the 2024 analysis results, the intersections at W Stowell & Broadway and W Stowell & Bradley exhibit an overall LOS of E or worse during AM and/or PM peak hours. Additionally, the following approaches at these intersections also display LOS E or worse:

- W Stowell Road & Blosser Road: Eastbound (EB) and Westbound (WB) approaches.
- W Stowell Road & Broadway: Westbound (WB) and Northbound (NB) approaches.
- Main Street & Black Road: Northbound (NB) and Southbound (SB) approaches.
- W Stowell Road & Bradley Road: Northbound (NB) and Southbound (SB) approaches.
- E Stowell Road/Nicholson Avenue/I-101 NB On Ramp: Northbound (NB) and Southbound (SB) approaches.

Table 2. Existing (2024) Queuing Analysis

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
					Existing	Existing
1	W. Stowell Road / Hanson Way	Stop-Control	EBL	-	2.5	5.0
			EBT	-	0.0	0.0
			WBR	130	0.0	0.0
			SBL	-	22.5	25.0
2	W. Stowell Road / S. Blosser Road	Signal	EBL	200	37.5	250.0
			EBT	-	142.5	290.0
			EBR	-	147.5	290.0
			WBL	200	340.0	180.0
			WBT	-	115.0	142.5
			WBR	-	115.0	192.5
			NBL	225	147.5	55.0
			NB	-	207.5	355.0
			NBR	200	207.5	357.5
			SBL	250	20.0	155.0
			SBT	-	132.5	207.5
			SBR	-	140.0	212.5
3	W. Stowell Road / Black Road	Stop-Control	WBL	-	15.0	55.0
			WBR	-	0.0	0.0
			NBTR	-	0.0	0.0

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
					Existing	Existing
			SBL	-	5.0	15.0
			SBT	-	0.0	0.0
4	W. Taylor St / N. Blosser Road	Stop-Control	WBL	-	42.5	27.5
			WBR	-	0.0	0.0
			NBTR	-	0.0	0.0
			SBL	175	0.0	0.0
			SBT	-	0.0	0.0
5	W. Stowell Road / Broadway	Signal	EBL	100	125.0	207.5
			EBT	-	267.5	370.0
			EBR	-	272.5	370.0
			WBL	150	142.5	197.5
			WB	-	262.5	402.5
			WBR	-	265.0	402.5
			NBL	225	147.5	287.5
			NB	-	295.0	587.5
			NBR	-	165.0	345.0
			SBL	125	150.0	152.5
			SB	-	395.0	545.0
			SBR	-	402.5	557.5
6	Main Street / Black Road	Stop-Control	EBL	400	0.0	0.0
			EBT	-	0.0	0.0
			EBR	480	0.0	0.0
			WBL	550	7.5	7.5
			WBTR	-	0.0	0.0
			NBTL	-	52.5	107.5
			NBR	400	5.0	12.5
			SBL	-	7.5	22.5
			SBTR	-	0.0	0.0
7	W. Stowell Road / S. Bradley Rd	Signal	EBL	175	150.0	220.0
			EBT	-	137.5	190.0
			EBR	200	117.5	132.5
			WBL	175	35.0	82.5
			WBT	-	360.0	182.5
			WBR	-	415.0	182.5
			NBL	250	407.5	170.0
			NBT	-	387.5	252.5
			NBR	240	275.0	1007.5
			SBL	215	120.0	142.5
			SBT	-	310.0	437.5
			SBR	-	310.0	432.5

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
					Existing	Existing
8	S. Bradley Rd / Columbia/I-101 SB Off/On Ramp	Signal	EBL	100	37.5	87.5
			EBT	-	17.5	82.5
			EBR	125	20.0	85.0
			WBL	-	130.0	227.5
			WBT	-	165.0	0.0
			WBR	-	255.0	140.0
			NBL	250	15.0	87.5
			NBT	-	177.5	370.0
			NBR	-	180.0	372.5
			SBL	210	225.0	335.0
			SBT	-	52.5	117.5
			SBR	240	25.0	50.0
9	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp	Stop-Control	EBL	-	67.5	192.5
			EBTR	-	0.0	0.0
			WBL	75	0.0	0.0
			WBTR	-	7.5	0.0
			NBTLR	-	7.5	70.0
			SBTL	-	2.5	72.5
			SBR	215	0.0	0.0

Queuing at the following intersections, highlighted in red in Table 2 above, has exceeded the provided storage length:

- W. Stowell Road / S. Blosser Road: The eastbound-left, westbound-left, and northbound-right movements have exceeded the provided storage length during the AM or PM peak periods.
- W. Stowell Road / S. Bradley Road: The eastbound-left, westbound-left, northbound-left, and southbound-left movements have exceeded the provided storage length during the AM or PM peak periods.
- S. Bradley Road / Columbia/I-101 SB Off/On Ramp: The southbound-left movement has exceeded the provided storage length during both the AM and PM peak periods.

Development Site Traffic

A.7. Trip Generation

Delivery stations are the last-mile connection between the tenant's fulfillment process and their customers. Packages are transported to delivery stations via line-haul (tractor trailer) trucks from fulfillment and/or sortation centers, and are further sorted by delivery routes, organized, and loaded into delivery vehicles. Delivery stations operate 24/7 to support delivery of packages to customer locations between approximately 10:00 AM and 9:00 PM. The operations, including delivery van departure and return windows, are designed to minimize traffic impacts by shifting primary trips outside of standard peak hours (7:00–9:00 AM, 4:00–6:00 PM) and avoiding rush hour periods. The first wave of delivery drivers arrives in their personal vehicles at the delivery station around 9:20 AM and begin queuing for loading. Starting at 9:55 AM and ending at 11:10 AM, up to 345 delivery vans will load and depart from the delivery station at a rate of up to 72 vans per 15 minutes to facilitate a regulated traffic flow into the surrounding area. The first wave of delivery vans leaves at 10:10 AM. The final wave of delivery vans (57) leaves the facility at 11:10 AM. Approximately 8-10 hours after dispatch, delivery routes are completed, and the vans return to the station between 7:10 PM and 9:10 PM. The drivers park all delivery vans onsite and depart using a personal vehicle or other mode of transport.

At the proposed delivery station, up to 34 line-haul trucks are expected to deliver packages to the delivery station each day. The line-haul trucks will primarily arrive at the site between the hours of 10:00 PM and 8:00 AM. Trucks enter the site via W. Stowell Road on the north side of the building. Once trucks are unloaded, the trucks continue to the next delivery station and do not return to the site. The customer packages are sorted by address groupings, assigned to the delivery routes, placed onto movable racks, and staged for dispatch.

It is anticipated that the delivery station will also use private carriers (primarily individual passenger vehicles) to deliver packages from this location. It is anticipated up to 97 passenger vehicles will enter the facility between 4:30 PM and 6:00 PM daily. Private carrier vehicles will load and depart every 15 minutes. They will not return to the station that same day. Table 3 shows the projected traffic volumes by vehicle type based upon the anticipated operations of the facility.

Table 3: Project Trip Generation - Traffic Volume by Vehicle Type

Traffic	Number of Vehicles	Daily Trips
Auto - Employees	588	1,176
Delivery Vans	345	690
Auto – Private carrier	97	194
Line-Haul Trucks	34	68
Total	**1,064**	**2,128**

Table 4: Project Trip Generation – Peak Hour Traffic Volume

Land Use	Code	Project Density		Total	Inbound	Outbound
Proposed: E-Commerce Delivery Station	User-Specified	588 employees/day	Daily	2,128	1,064	1,064
			AM	15	13	2
			PM	147	98	49

A.8. Adjustments to Trip Generation Rates

Due to the nature of the development, no adjustments for pass-by or internal capture were considered for trips generated by the Project.

A.9. Trip Distribution and Assignment

The proposed Project will encompass merchandise provided from nearby regional fulfillment and sort centers to local customers. The service area for deliveries is approximately 125 square miles of the Santa Maria vicinity. Figure 5 illustrates the Project's potential service area. The assignment and directional distribution of new Project trips on the transportation network are based on existing traffic patterns, evidenced by counts and typical traffic patterns in the area, as well as the Project's proposed use.

Figure 5: Trip Distribution Map (Cars/Vans)

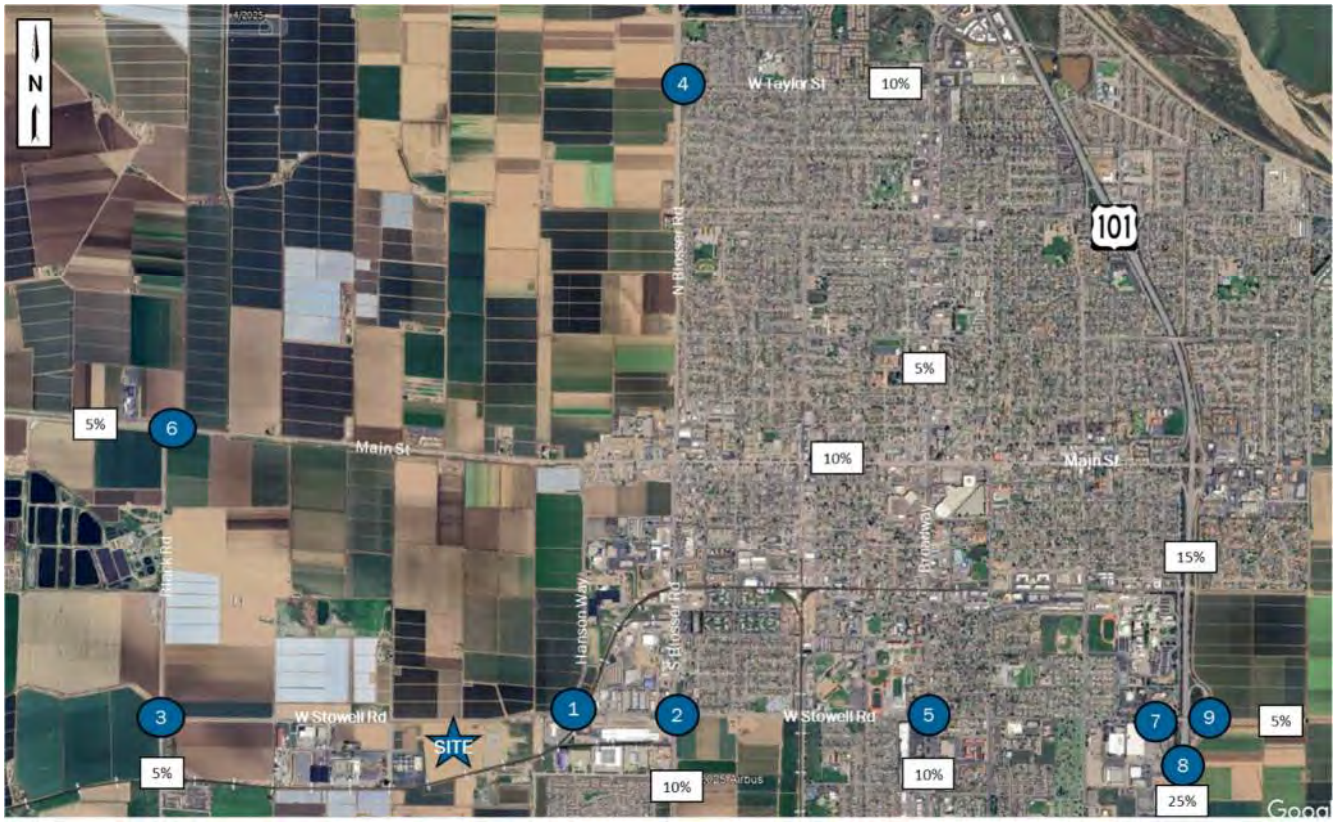


Figure 6: Trip Distribution Map (Trucks)

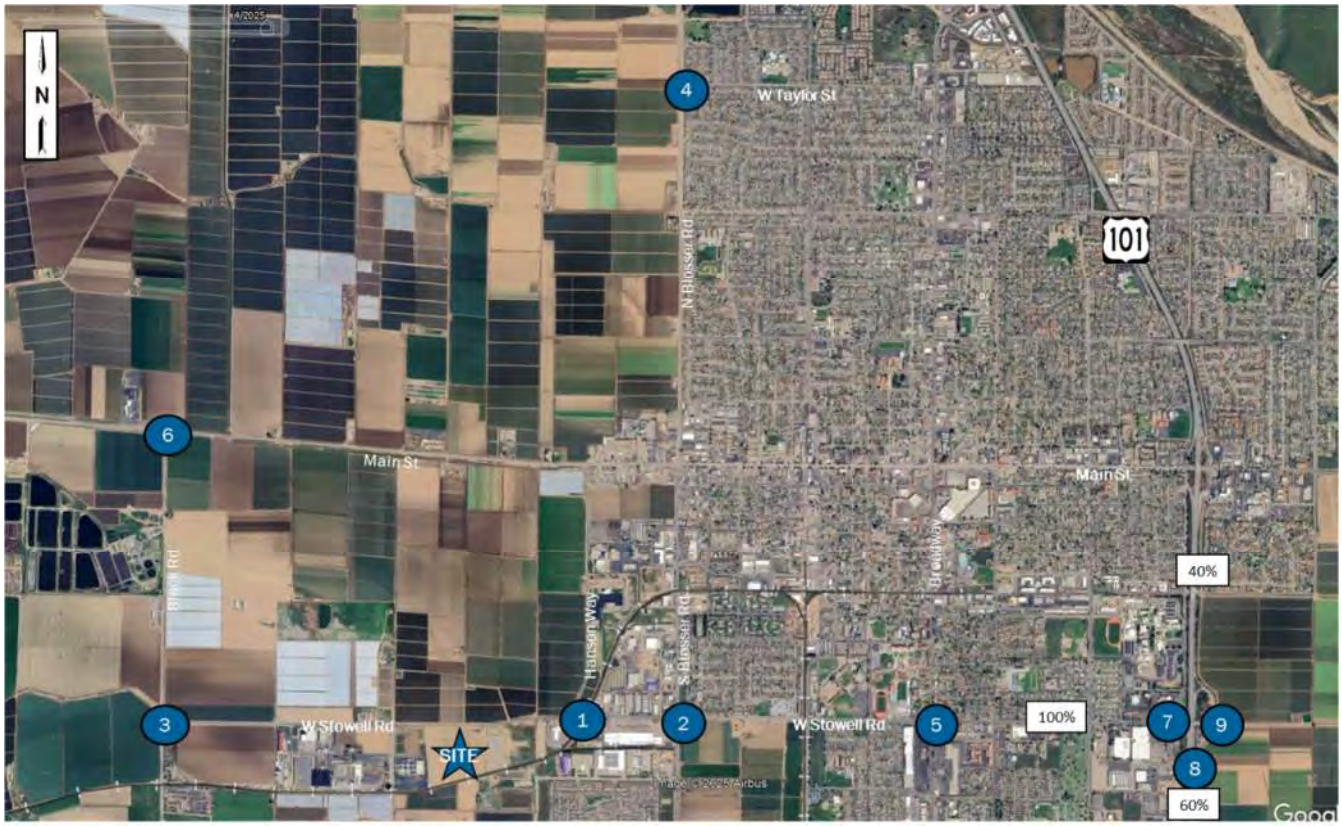


Figure 7. Trip Distribution Cars

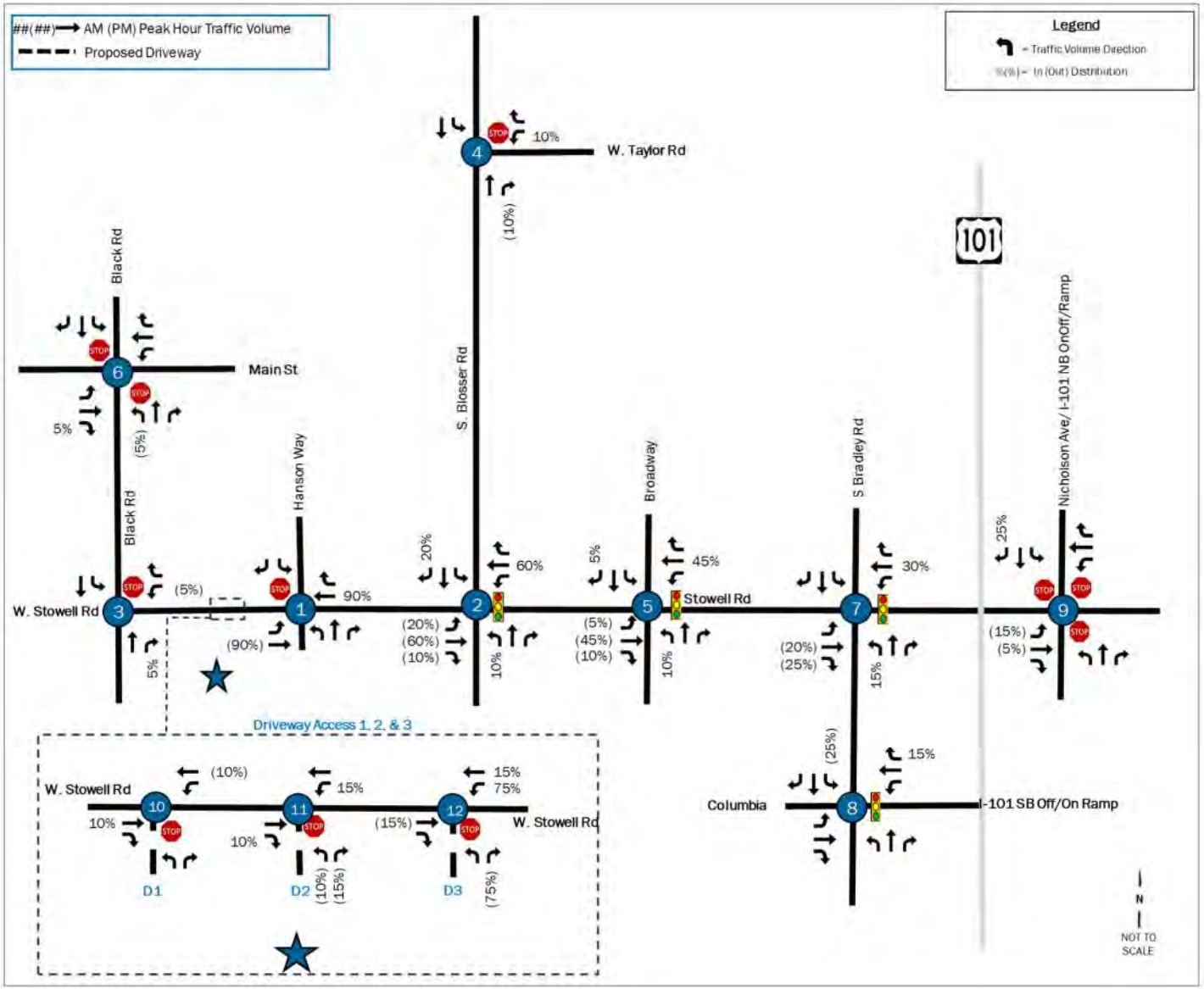


Figure 8. Trip Distribution Trucks

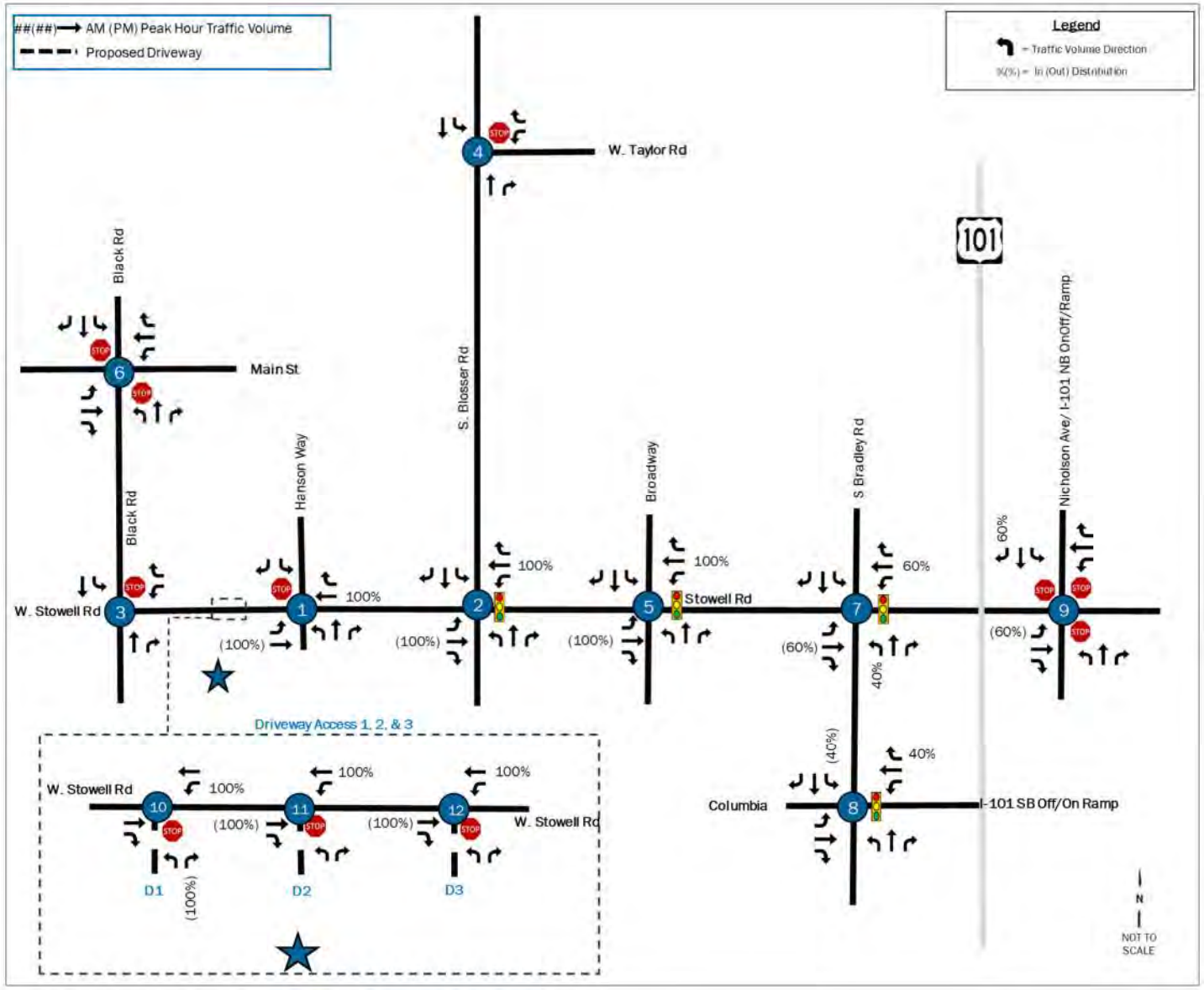


Figure 9. Trip Distribution Vans

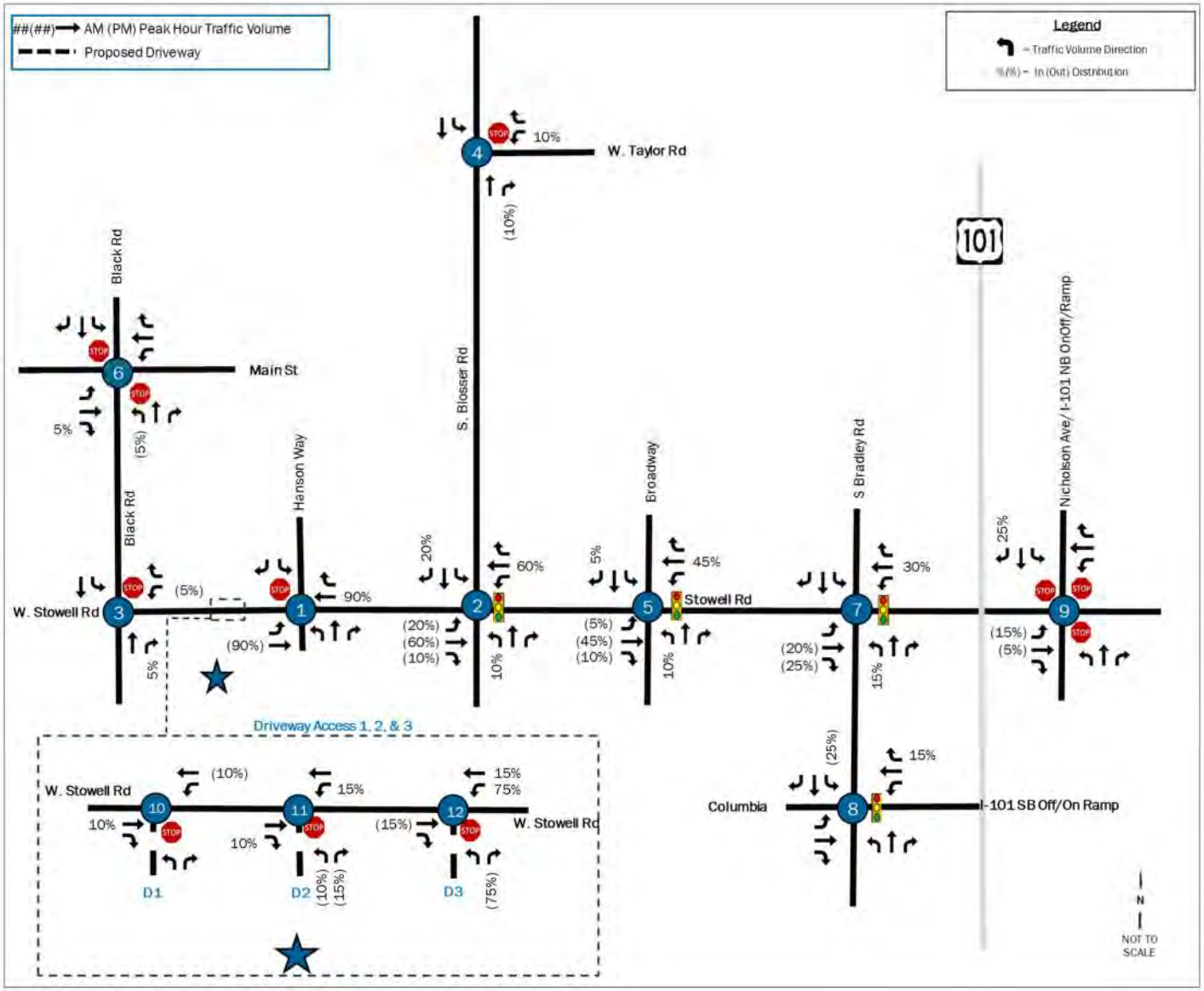
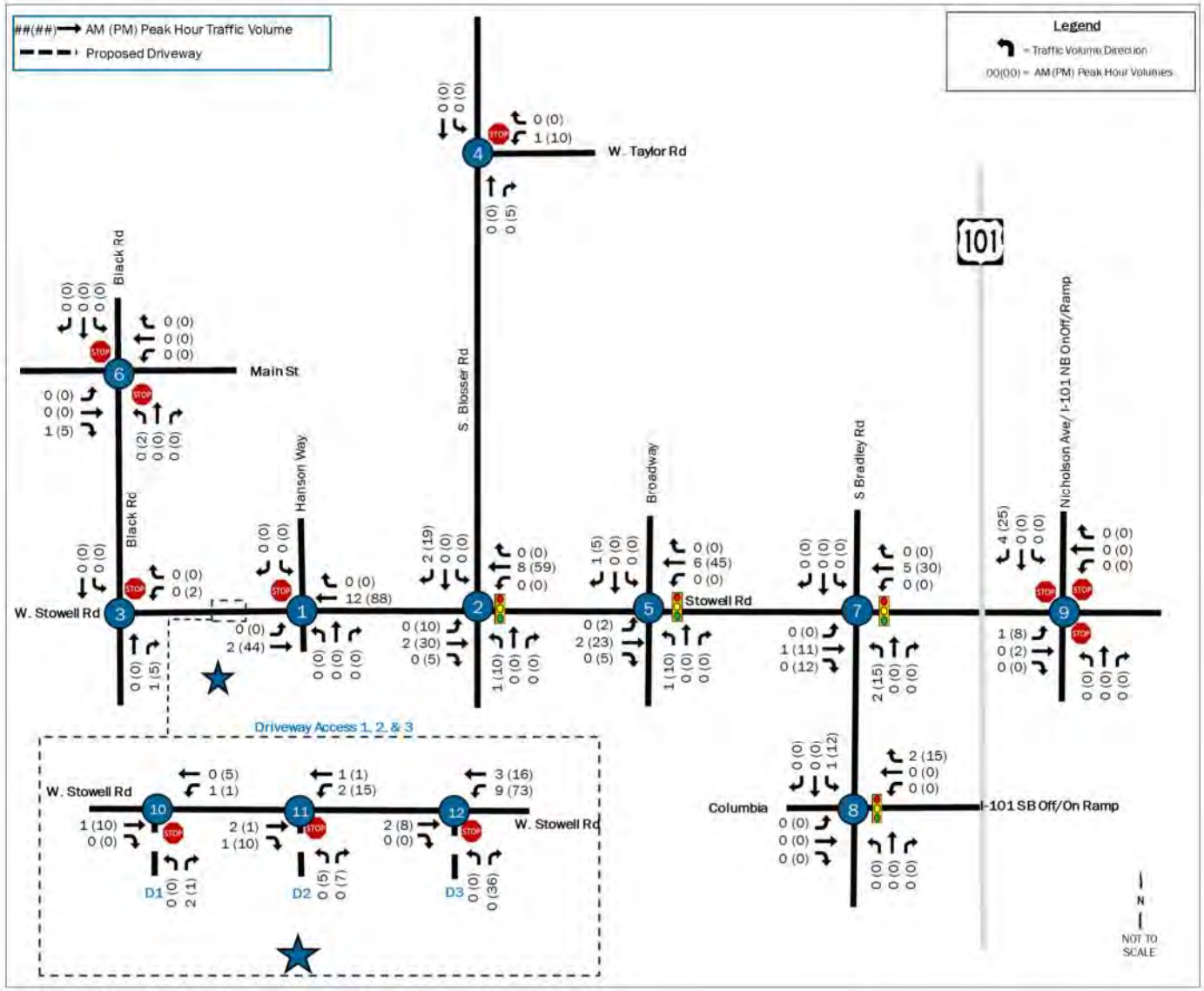


Figure 10. Project Site Trips (Cars, Vans, & Trucks)



Future Traffic Conditions

A.10. Background Growth

Analysis of the area's historic development pattern, changes in nearby traffic volumes, and the anticipated completion of the Project was used to determine a growth rate for the study area's traffic. Project build-out is anticipated no later than 2027. The study uses a growth rate of 2.0% per year from Existing Year 2024 to Opening Year 2027. The growth rate was derived from a Project scoping memorandum based on the traffic growth patterns for the Project vicinity area.

There are 11 known developments or programmed improvements within the vicinity of the study area that would be expected to alter traffic patterns or traffic growth in the area. These major city developments were obtained from the City of Santa Maria or estimated using ITE Trip Generation data. They have been included in the projected traffic volumes for the 2027 No-Build and Build scenarios. The adjacent projects circled below correspond to the City of Santa Maria Engineering Division's approved projects, as shown in the map in Figure 11.

Figure 11. Adjacent Developments



A.11. No-Build Traffic Analysis Results

The results of the 2027 No-Build traffic capacity analysis are shown in Table 5 and represent volumes as shown in Figure 12. Future No-Build traffic volumes are demonstrated before any trips generated by the Project have been added. The City of Santa Maria considers LOS D as the performance standard for intersections (maintain LOS D or better). LOS E is coded as orange, and LOS F is coded as red in the Tables provided.

Figure 12. No Build (2027) Volumes

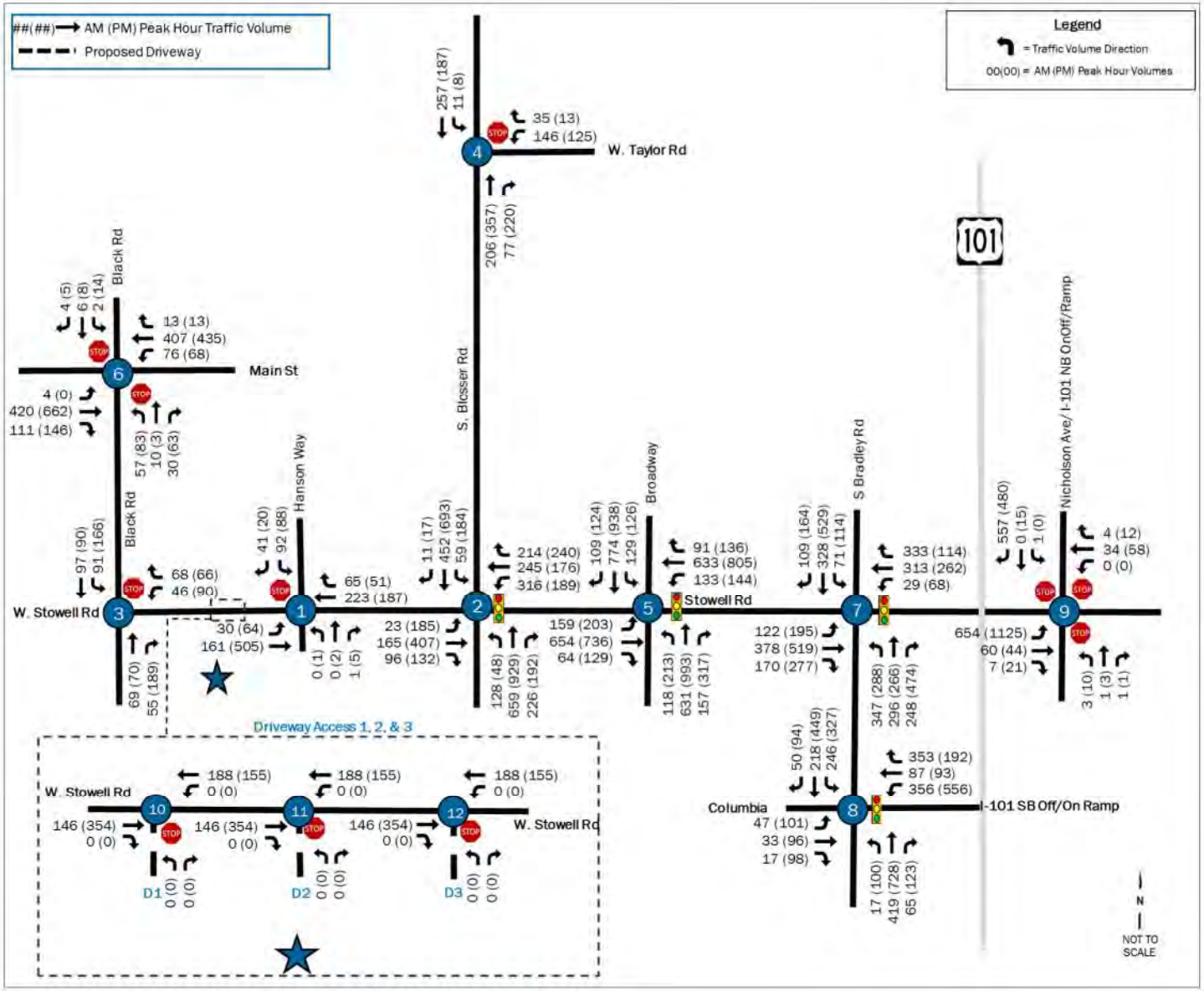


Table 5. No-Build (2027) Intersection Capacity Analysis

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	W. Stowell Road / Hanson Way	Stop-Control	**OVERALL**	**A**	**3.4**	**A**	**2.7**
			EB	A	1.6	A	1.4
			WB	A	0.0	A	0.0
			NB	A	8.9	B	13.4
			SB	B	13.2	C	15.9
2	W. Stowell Road / S. Blosser Road	Signal	**OVERALL**	**E**	**58.8**	**D**	**47.9**
			EB	E	56.6	E	67.7
			WB	F	128.5	E	60.7
			NB	C	23.5	D	40.9
			SB	C	25.2	C	32.3
3	W. Stowell Road / Black Road	Stop-Control	**OVERALL**	**A**	**4.7**	**A**	**7.5**
			WB	B	11.4	C	23.2
			NB	A	0.0	A	0.0
			SB	A	3.8	A	5.7
4	W. Taylor St / N. Blosser Road	Stop-Control	**OVERALL**	**A**	**4.3**	**A**	**2.4**
			WB	C	16.9	C	15.6
			NB	A	0.0	A	0.0
			SB	A	0.3	A	0.4
5	W. Stowell Road / Broadway	Signal	**OVERALL**	**E**	**66.8**	**F**	**118.5**
			EB	F	86.0	F	144.5
			WB	F	59.5	F	183.0
			NB	D	40.9	F	81.1
			SB	D	54.1	F	84.2
6	Main Street / Black Road	Stop-Control	**OVERALL**	**A**	**4.8**	**B**	**11.5**
			EB	A	0.1	A	0.0
			WB	A	1.5	A	1.4
			NB	E	44.6	F	100.7
			SB	D	30.6	F	54.7
7	W. Stowell Road / S. Bradley Rd	Signal	**OVERALL**	**E**	**64.6**	**F**	**84.1**
			EB	B	17.5	C	22.5
			WB	D	45.2	D	35.6
			NB	F	118.8	F	177.4
			SB	E	57.4	E	67.7
8	S. Bradley Rd / Columbia/I-101 SB Off/On Ramp	Signal	**OVERALL**	**C**	**32.6**	**D**	**47.3**
			EB	C	33.4	D	38.7
			WB	C	29.8	C	31.7
			NB	D	36.7	E	68.2
			SB	C	33.0	D	42.1
9		Stop-Control	**OVERALL**	**A**	**9.3**	**F**	**75.5**
			EB	A	9.0	B	15.4

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp		WB	A	0.0	A	0.0
			NB	F	101.6	F	2984.1
			SB	F	120.9	F	2474.6

Based on the 2027 No Build analysis results, the intersections at W Stowell & Blosser, W Stowell & Broadway, W Stowell & Bradley, and E Stowell Rd/Nicholson Ave/I-101 NB On Ramp exhibit an overall LOS of E or worse during AM and/or PM peak hours. Additionally, the following approaches at these intersections also display LOS E or worse:

- W Stowell Road & Blosser Road: Eastbound (EB) and Westbound (WB) approaches.
- W Stowell Road & Broadway: Eastbound (EB), Westbound (WB), Northbound (NB), and Southbound (SB) approaches.
- Main Street & Black Road: Northbound (NB) and Southbound (SB) approaches.
- W Stowell Road & Bradley Road: Northbound (NB) and Southbound (SB) approaches.
- S. Bradley Rd & Columbia/I-101 SB Off/On Ramp: Northbound (NB) approach during the PM peak hour only.
- E Stowell Road/Nicholson Avenue/I-101 NB On Ramp: Northbound (NB) and Southbound (SB) approaches.

Table 6. Existing (2024) vs. No-Build (2027) Queuing Analysis

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)			
					AM		PM	
					Existing	No-Build	Existing	No-Build
1	W. Stowell Road / Hanson Way	Stop-Control	EBL	-	2.5	2.5	5.0	5.0
			EBT	-	0.0	0.0	0.0	0.0
			WBR	130	0.0	0.0	0.0	0.0
			SBL	-	22.5	27.5	25.0	30.0
2	W. Stowell Road / S. Blosser Road	Signal	EBL	200	37.5	40.0	250.0	287.5
			EBT	-	142.5	177.5	290.0	370.0
			EBR	-	147.5	180.0	290.0	370.0
			WBL	200	340.0	792.5	180.0	295.0
			WBT	-	115.0	252.5	142.5	207.5
			WBR	-	115.0	242.5	192.5	332.5
			NBL	225	147.5	177.5	55.0	70.0
			NB	-	207.5	232.5	355.0	482.5
			NBR	200	207.5	167.5	357.5	197.5
			SBL	250	20.0	82.5	155.0	255.0
			SBT	-	132.5	185.0	207.5	297.5
			SBR	-	140.0	190.0	212.5	307.5

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)			
					AM		PM	
					Existing	No-Build	Existing	No-Build
3	W. Stowell Road / Black Road	Stop-Control	WBL	-	15.0	17.5	55.0	67.5
			WBR	-	0.0	0.0	0.0	0.0
			NBTR	-	0.0	0.0	0.0	0.0
			SBL	-	5.0	5.0	15.0	15.0
			SBT	-	0.0	0.0	0.0	0.0
4	W. Taylor St / N. Blosser Road	Stop-Control	WBL	-	42.5	50.0	27.5	30.0
			WBR	-	0.0	0.0	0.0	0.0
			NBTR	-	0.0	0.0	0.0	0.0
			SBL	175	0.0	0.0	0.0	0.0
			SBT	-	0.0	0.0	0.0	0.0
5	W. Stowell Road / Broadway	Signal	EBL	100	125.0	230.0	207.5	320.0
			EBT	-	267.5	535.0	370.0	837.5
			EBR	-	272.5	545.0	370.0	837.5
			WBL	150	142.5	192.5	197.5	207.5
			WB	-	262.5	552.5	402.5	1022.5
			WBR	-	265.0	560.0	402.5	1022.5
			NBL	225	147.5	162.5	287.5	332.5
			NB	-	295.0	330.0	587.5	712.5
			NBR	-	165.0	175.0	345.0	372.5
			SBL	125	150.0	165.0	152.5	160.0
			SB	-	395.0	520.0	545.0	762.5
			SBR	-	402.5	525.0	557.5	770.0
6	Main Street / Black Road	Stop-Control	EBL	400	0.0	0.0	0.0	0.0
			EBT	-	0.0	0.0	0.0	0.0
			EBR	480	0.0	0.0	0.0	0.0
			WBL	550	7.5	7.5	7.5	7.5
			WBTR	-	0.0	0.0	0.0	0.0
			NBTL	-	52.5	70.0	107.5	142.5
			NBR	400	5.0	5.0	12.5	15.0
			SBL	-	7.5	7.5	22.5	27.5
			SBTR	-	0.0	0.0	0.0	0.0
7	W. Stowell Road / S. Bradley Rd	Signal	EBL	175	150.0	162.5	220.0	237.5
			EBT	-	137.5	155.0	190.0	205.0
			EBR	200	117.5	137.5	132.5	155.0
			WBL	175	35.0	50.0	82.5	105.0
			WBT	-	360.0	385.0	182.5	195.0
			WBR	-	415.0	455.0	182.5	195.0
			NBL	250	407.5	470.0	170.0	175.0
			NBT	-	387.5	415.0	252.5	252.5
			NBR	240	275.0	312.5	1007.5	1157.5

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)			
					AM		PM	
					Existing	No-Build	Existing	No-Build
			SBL	215	120.0	132.5	142.5	152.5
			SBT	-	310.0	332.5	437.5	480.0
			SBR	-	310.0	332.5	432.5	475.0
8	S. Bradley Rd / Columbia/I-101 SB Off/On Ramp	Signal	EBL	100	37.5	45.0	87.5	97.5
			EBT	-	17.5	22.5	82.5	90.0
			EBR	125	20.0	22.5	85.0	102.5
			WBL	-	130.0	160.0	227.5	252.5
			WBT	-	165.0	202.5	0.0	0.0
			WBR	-	255.0	317.5	140.0	155.0
			NBL	250	15.0	17.5	87.5	97.5
			NBT	-	177.5	232.5	370.0	500.0
			NBR	-	180.0	235.0	372.5	500.0
			SBL	210	225.0	275.0	335.0	427.5
			SBT	-	52.5	67.5	117.5	142.5
			SBR	240	25.0	30.0	50.0	55.0
9	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp	Stop-Control	EBL	-	67.5	80.0	192.5	245.0
			EBTR	-	0.0	0.0	0.0	0.0
			WBL	75	0.0	0.0	0.0	0.0
			WBTR	-	7.5	0.0	0.0	0.0
			NBTLR	-	7.5	12.5	70.0	80.0
			SBTL	-	2.5	2.5	72.5	82.5
			SBR	215	0.0	0.0	0.0	0.0

Queuing at the following intersections, highlighted in red in Table 6 above, has exceeded the provided storage length:

- W. Stowell Road / S. Blosser Road: The eastbound-left, westbound-left, northbound-right, and southbound-left movements have exceeded the provided storage length during the AM or PM peak periods.
- W. Stowell Road / Broadway: The eastbound-left, westbound-left, northbound-left, and southbound-left movements have exceeded the provided storage length during the AM or PM peak periods.
- W. Stowell Road / Bradley Road: The eastbound-left, northbound-left, and northbound-right movements have exceeded the provided storage length during the AM or PM peak periods.
- S. Bradley Road / Columbia/I-101 SB Off/On Ramp: The southbound-left movement has exceeded the provided storage length during both the AM and PM peak periods.

A.12. Future Traffic with Proposed Development

Peak hour site traffic volumes were distributed to study area roadways based on the trip distribution percentages discussed in Section C.3. These volumes were added to No-Build (2027) volumes to determine operating conditions in the Build scenario.

A.13. Build Traffic Analysis Results

The results of the Build (2027) traffic capacity analysis are shown in Table 5. Figure 12 illustrates the Build traffic volumes. The segment capacity analysis was completed using HCS 7, and results are shown in Table 6. The City of Santa Maria considers LOS D as the performance standard for intersections (maintain LOS D or better). LOS E is coded as orange, and LOS F is coded as red in the Tables provided.

Figure 13. Build (2027) Volumes

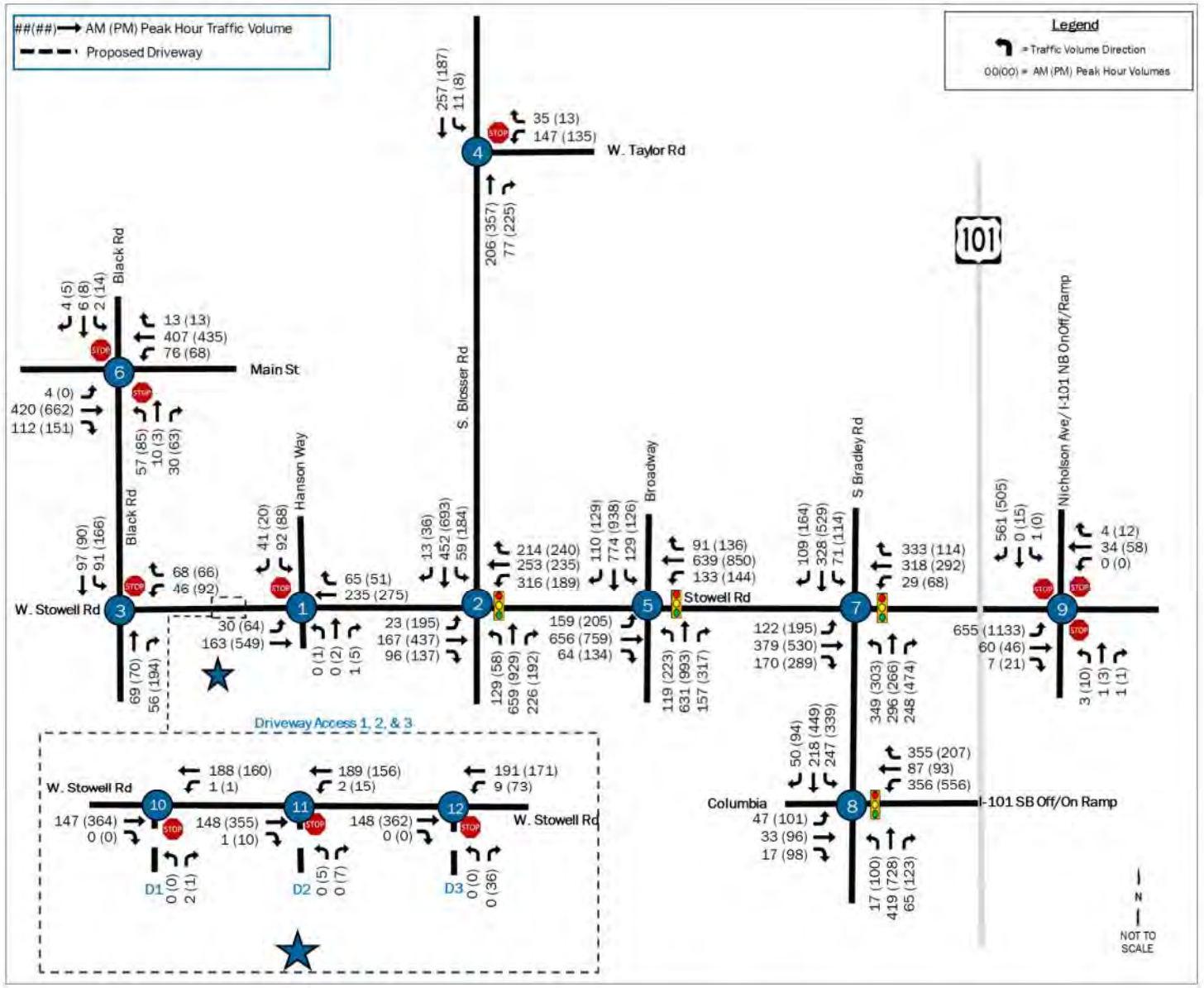


Table 7. Build (2027) Intersection Capacity Analysis

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	W. Stowell Road / Hanson Way	Stop-Control	**OVERALL**	**A**	**3.3**	**A**	**2.7**
			EB	A	1.6	A	1.5
			WB	A	0.0	A	0.0
			NB	A	8.9	B	14.3
			SB	B	13.4	C	18.0
2	W. Stowell Road / S. Blosser Road	Signal	**OVERALL**	**E**	**58.8**	**D**	**50.2**
			EB	E	56.4	E	71.1
			WB	F	127.8	E	61.3
			NB	C	23.6	D	43.0
			SB	C	25.3	C	33.8
3	W. Stowell Road / Black Road	Stop-Control	**OVERALL**	**A**	**4.7**	**A**	**7.7**
			WB	B	11.4	C	23.8
			NB	A	0.0	A	0.0
			SB	A	3.9	A	5.7
4	W. Taylor St / N. Blosser Road	Stop-Control	**OVERALL**	**A**	**4.3**	**A**	**2.6**
			WB	C	17.0	C	16.0
			NB	A	0.0	A	0.0
			SB	A	0.3	A	0.4
5	W. Stowell Road / Broadway	Signal	**OVERALL**	**E**	**67.6**	**F**	**128.1**
			EB	F	86.9	F	157.9
			WB	F	91.7	F	206.3
			NB	D	40.9	F	82.1
			SB	D	54.2	F	85.7
6	Main Street / Black Road	Stop-Control	**OVERALL**	**A**	**4.8**	**B**	**12.0**
			EB	A	0.1	A	0.0
			WB	A	1.5	A	1.4
			NB	E	44.6	F	105.5
			SB	D	30.6	F	54.9
7	W. Stowell Road / S. Bradley Rd	Signal	**OVERALL**	**E**	**65.0**	**F**	**84.3**
			EB	B	17.5	C	22.5
			WB	D	45.4	D	35.8
			NB	F	120.0	F	179.3
			SB	**E**	**57.4**	**E**	**67.7**
8	S. Bradley Rd / Columbia/I-101 SB Off/On Ramp	Signal	**OVERALL**	**C**	**33.0**	**D**	**48.6**
			EB	C	33.7	D	38.7
			WB	C	30.2	C	31.8
			NB	D	37.2	E	68.2
			SB	C	33.5	D	46.6
9		Stop-Control	**OVERALL**	**A**	**9.3**	**F**	**79.5**

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp		EB	A	9.0	B	15.7
			WB	A	0.0	A	0.0
			NB	F	102.2	F	3196.1
			SB	F	121.6	F	2645.5
10	W. Stowell Road / Site Access 1	Stop-Control	**OVERALL**	**A**	**0.1**	**A**	**0.0**
			EB	A	0.0	A	0.0
			WB	A	0.0	A	0.1
			NB	A	9.1	B	10.5
11	W. Stowell Road / Site Access 2	Stop-Control	**OVERALL**	**A**	**0.0**	**A**	**0.1**
			EB	A	0.0	A	0.0
			WB	A	7.5	A	0.7
			NB	A	0.0	B	11.6
12	W. Stowell Road / Site Access 3	Stop-Control	**OVERALL**	**A**	**0.0**	**A**	**1.6**
			EB	A	0.0	A	0.0
			WB	A	7.6	A	8.3
			NB	A	0.0	A	10.8

Based on the 2027 Build analysis results, the intersections at W Stowell & Blosser, W Stowell & Broadway, W Stowell & Bradley, and E Stowell Rd/Nicholson Ave/I-101 NB On Ramp exhibit an overall LOS of E or worse during AM and/or PM peak hours. Additionally, the following approaches at these intersections also display LOS E or worse:

- W Stowell Road & Blosser Road: Eastbound (EB) and Westbound (WB) approaches.
- W Stowell Road & Broadway: Eastbound (EB), Westbound (WB), Northbound (NB), and Southbound (SB) approaches.
- Main Street & Black Road: Northbound (NB) and Southbound (SB) approaches. Due to the proposed development contributing 0 vehicles in the AM and 2 vehicles in the PM, for both NB and SB approaches, mitigations are not recommended.
- W Stowell Road & Bradley Road: Northbound (NB) and Southbound (SB) approaches.
- S. Bradley Rd & Columbia/I-101 SB Off/On Ramp: Northbound (NB) approach during the PM peak hour only.
- E Stowell Road/Nicholson Avenue/I-101 NB On Ramp: Northbound (NB) and Southbound (SB) approaches. Due to the Project only contributing to the “free” movements at this intersection, mitigations are not recommended.

Table 8. No-Build (2027) vs. Build (2027) Queuing Analysis

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)			
					AM		PM	
					No-Build	Build	No-Build	Build
1	W. Stowell Road / Hanson Way	Stop-Control	EBL	-	2.5	2.5	5.0	5.0
			EBT	-	0.0	0.0	0.0	0.0
			WBR	130	0.0	0.0	0.0	0.0
			SBL	-	27.5	27.5	30.0	35.0
2	W. Stowell Road / S. Blosser Road	Signal	EBL	200	40.0	40.0	287.5	302.5
			EBT	-	177.5	177.5	370.0	402.5
			EBR	-	180.0	182.5	370.0	400.0
			WBL	200	792.5	792.5	295.0	295.0
			WBT	-	252.5	257.5	207.5	287.5
			WBR	-	242.5	247.5	332.5	330.0
			NBL	225	177.5	180.0	70.0	82.5
			NB	-	232.5	232.5	482.5	495.0
			NBR	200	167.5	167.5	197.5	200.0
			SBL	250	82.5	82.5	255.0	255.0
			SBT	-	185.0	185.0	297.5	317.5
			SBR	-	190.0	192.5	307.5	325.0
3	W. Stowell Road / Black Road	Stop-Control	WBL	-	17.5	17.5	67.5	72.5
			WBR	-	0.0	0.0	0.0	0.0
			NBTR	-	0.0	0.0	0.0	0.0
			SBL	-	5.0	5.0	15.0	17.5
			SBT	-	0.0	0.0	0.0	0.0
4	W. Taylor St / N. Blosser Road	Stop-Control	WBL	-	50.0	50.0	30.0	35.0
			WBR	-	0.0	0.0	0.0	0.0
			NBTR	-	0.0	0.0	0.0	0.0
			SBL	175	0.0	0.0	0.0	0.0
			SBT	-	0.0	0.0	0.0	0.0
5	W. Stowell Road / Broadway	Signal	EBL	100	230.0	237.5	320.0	325.0
			EBT	-	535.0	540.0	837.5	905.0
			EBR	-	545.0	550.0	837.5	905.0
			WBL	150	192.5	192.5	207.5	207.5
			WB	-	552.5	565.0	1022.5	1132.5
			WBR	-	560.0	570.0	1022.5	1135.0
			NBL	225	162.5	162.5	332.5	357.5
			NB	-	330.0	330.0	712.5	712.5
			NBR	-	175.0	175.0	372.5	372.5
			SBL	125	165.0	165.0	160.0	160.0
			SB	-	520.0	522.5	762.5	772.5
			SBR	-	525.0	525.0	770.0	780.0
6			EBL	400	0.0	0.0	0.0	0.0

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)			
					AM		PM	
					No-Build	Build	No-Build	Build
	Main Street / Black Road	Stop-Control	EBT	-	0.0	0.0	0.0	0.0
			EBR	480	0.0	0.0	0.0	0.0
			WBL	550	7.5	7.5	7.5	7.5
			WBTR	-	0.0	0.0	0.0	0.0
			NBTL	-	70.0	70.0	142.5	147.5
			NBR	400	5.0	5.0	15.0	15.0
			SBL	-	7.5	7.5	27.5	27.5
			SBTR	-	0.0	0.0	0.0	0.0
7	W. Stowell Road / S. Bradley Rd	Signal	EBL	175	162.5	162.5	237.5	237.5
			EBT	-	155.0	155.0	205.0	210.0
			EBR	200	137.5	137.5	155.0	165.0
			WBL	175	50.0	50.0	105.0	105.0
			WBT	-	385.0	395.0	195.0	210.0
			WBR	-	455.0	455.0	195.0	207.5
			NBL	250	470.0	475.0	175.0	200.0
			NBT	-	415.0	415.0	252.5	252.5
			NBR	240	312.5	312.5	1157.5	1160.0
			SBL	215	132.5	132.5	152.5	152.5
			SBT	-	332.5	332.5	480.0	480.0
			SBR	-	332.5	332.5	475.0	475.0
8	S. Bradley Rd / Columbia/I-101 SB Off/On Ramp	Signal	EBL	100	45.0	45.0	97.5	97.5
			EBT	-	22.5	22.5	90.0	90.0
			EBR	125	22.5	25.0	102.5	102.5
			WBL	-	160.0	162.5	252.5	252.5
			WBT	-	202.5	205.0	0.0	0.0
			WBR	-	317.5	325.0	155.0	167.5
			NBL	250	17.5	17.5	97.5	97.5
			NBT	-	232.5	232.5	500.0	500.0
			NBR	-	235.0	237.5	500.0	500.0
			SBL	210	275.0	280.0	427.5	467.5
			SBT	-	67.5	70.0	142.5	142.5
			SBR	240	30.0	30.0	55.0	55.0
9	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp	Stop-Control	EBL	-	80.0	80.0	245.0	252.5
			EBTR	-	0.0	0.0	0.0	0.0
			WBL	75	0.0	0.0	0.0	0.0
			WBTR	-	0.0	0.0	0.0	0.0
			NBTLR	-	12.5	12.5	80.0	80.0
			SBTL	-	2.5	2.5	82.5	82.5
			SBR	215	0.0	0.0	0.0	0.0

Queuing at the following intersections, highlighted in red in Table 8 above, has exceeded the provided storage length:

- W. Stowell Road / S. Blosser Road: The eastbound-left, westbound-left, and southbound-left movements have exceeded the provided storage length during the AM or PM peak periods.
- W. Stowell Road / Broadway: The eastbound-left, westbound-left, northbound-left, and southbound-left movements have exceeded the provided storage length during the AM or PM peak periods.
- W. Stowell Road / Bradley Road: The eastbound-left, northbound-left, and northbound-right movements have exceeded the provided storage length during the AM or PM peak periods.
- S. Bradley Road / Columbia/I-101 SB Off/On Ramp: The southbound-left movement has exceeded the provided storage length during both the AM and PM peak periods.

Table 9: HCS7 Street Segment Analysis

ID	Street Segment	Direction	AM/PM	LOS		Deficiency
				Existing	Build	
A	W. Stowell Road from Black Road to Blosser Road	EB	AM	A	A	No
		WB	AM	D	D	No
		EB	PM	D	D	No
		WB	PM	A	A	No
B	Black Road from W. Stowell Road to Main Street	NB	AM	A	A	No
		SB	AM	A	A	No
		NB	PM	A	A	No
		SB	PM	B	B	No
C	Blosser Road from W. Stowell Road to Main Street	NB	AM	A	A	No
		SB	AM	A	A	No
		NB	PM	A	A	No
		SB	PM	A	A	No

All segment evaluations operate at an acceptable LOS D or better for Existing and Build scenarios, as indicated in Table 9.

Site Access, Parking, and Circulation

Access to the site is proposed via three unsignalized driveways. Driveways 1, 2, and 3 are situated along W. Stowell Road. Driveway 1 serves as the primary access point for line-haul trucks, providing entry to the delivery vehicle staging and loading areas. All truck drivers will also exit via Driveway 1. Vans and employee vehicles will enter and depart from Driveways 2 and 3, the most eastern driveways for the proposed site. Employees will park in a lot north of the facility, accessible from Driveways 2 and 3. All three driveways are designed to allow unsignalized, full movement access to W. Stowell Road. Analysis of the site's driveways indicates that each driveway will operate at LOS B or better for all approach movements.

Parking for passenger cars and delivery vans will be available on-site. Drivers' personal vehicle parking is available north of the building and accessible from Driveways 2 and 3. Overnight van parking, in addition to the personal vehicle parking stalls, is located to the east and west of the facility, and is also available via Driveways 2 and 3. A site plan is provided in Figure 3 and in Appendix A.

Improvement Analyses

A.14. Improvements to Accommodate Background Traffic and Site Traffic

The intersections of W. Stowell Road and S. Blosser Road, W. Stowell Road and Broadway, and W. Stowell Road and S. Bradley Road should be re-timed to improve Build conditions. Table 10 shows the resultant capacity with the improvements from signal optimization. Although unsatisfactory levels of service were observed at these signalized intersections, optimizing the signals along the W. Stowell corridor will enhance traffic operations in line with the future roadway improvements identified in Section A.15. Signalized study intersections can be optimized for a maximum decrease in overall delay of 3 to 40 seconds for the three intersections listed below. Corridor signal reevaluations should include all signalized intersections along W. Stowell Road from U.S. Highway 101 to S. Blosser Road.

Table 10: 2027 Build Mitigated; Signal Optimization

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
2	W. Stowell Road / S. Blosser Road	Signal	**OVERALL**	**D**	**37.5**	**D**	**53.3**
			EB	E	67.8	F	81.3
			WB	D	41.6	E	68.8
			NB	C	29.2	D	39.8
			SB	C	30.9	D	35.8
5	W. Stowell Road / Broadway	Signal	**OVERALL**	**D**	**52.5**	**F**	**88.0**
			EB	D	53.5	F	94.4
			WB	E	63.4	F	139.8
			NB	D	38.7	D	48.9
			SB	D	54.5	F	83.2
7	W. Stowell Road / S. Bradley Rd	Signal	**OVERALL**	**D**	**42.8**	**E**	**63.0**
			EB	C	20.6	C	24.8
			WB	D	53.7	D	38.1
			NB	D	47.6	F	119.3
			SB	D	48.9	D	52.8

A.15. Planned Alternative Improvements

Previous development initiatives and proposed city projects have incorporated improvements aimed at enhancing traffic flow. These are listed below:

Intersection of W. Stowell Road and S. Blosser Road: Planned improvements include the addition of a northbound-right deceleration lane. This improvement was not analyzed for the existing 2024 analysis but was analyzed for the 2027 No Build and Build Analysis.

Intersection of W. Stowell Road and Broadway: The installation of southbound-right and westbound-right deceleration lanes are planned as part of long-term regional improvements. These plans are anticipated by the City of Santa Maria and Caltrans; however, the expected completion date is currently unknown. The results below suggest that these intersection improvements will help mitigate the existing and growing traffic congestion. With these improvements and signal optimizations, the following anticipated results are indicated below:

Table 11: 2027 Build Mitigated; Signal Optimization and Deceleration Lanes Added

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
5	W. Stowell Road / Broadway	Signal	**OVERALL**	**D**	**45.7**	**E**	**64.0**
			EB	E	56.9	F	80.3
			WB	D	46.3	E	74.4
			NB	D	37.0	D	47.5
			SB	D	42.5	E	60.3

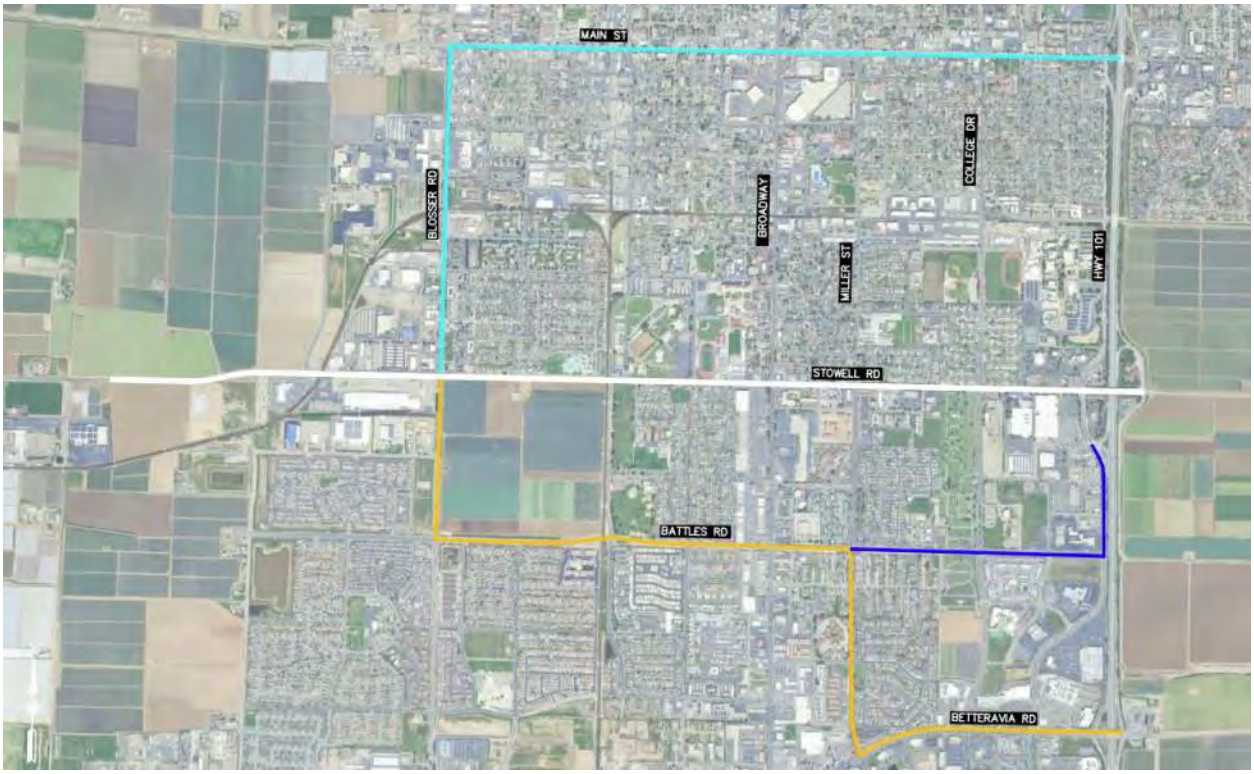
Intersection of E Stowell Rd and Nicholson Ave/I-101 NB On Ramp: The City has identified the intersection as needing enhanced traffic control, which may include a traffic signal or a roundabout. However, due to the proposed Project only adding minimal traffic to the "free" movements, there are no recommendations attributed to the proposed development. The City will construct the necessary traffic control measures when traffic conditions warrant it.

Alternative Routes

If congestion persists along Stowell Road, alternative routes are available. Other arterial roadways may have sufficient capacity to handle Project traffic during both AM and PM peak periods. The figure below illustrates these alternative routes. The white line represents the Stowell Road path, while the blue, cyan, and orange lines indicate alternative paths that can be taken if Stowell Road remains congested. To ensure effective use of these alternatives, project-related vehicles will be directed through a combination of strategies, including:

- GPS Navigation Updates: Coordination with major navigation platforms (e.g., Google Maps, Waze) to reflect real-time traffic conditions and suggest optimal routes.
- Driver Communication: For fleet or employee traffic, route guidance can be provided through internal communication channels or dispatch instructions.

Figure 14. Alternate Route Map



Conclusions and Recommendations

The Project site located along W. Stowell Road in Santa Maria, CA is proposed to be developed as a newly constructed delivery station. The 169,104 square-foot facility is expected to generate a net total of 2,128 daily trips, with 15 occurring during the AM peak hours (13 inbound, 2 outbound) and 147 occurring during the PM peak hours (98 inbound, 49 outbound). Analysis results indicate that the transportation network can adequately accommodate increases in traffic associated with the proposed Project.

A.16. Key Findings

A comparison of the 2024 Existing, 2027 No-Build, and 2027 Build traffic analysis results indicates that the proposed Project will have a slight impact on the overall intersection LOS along nearby roads. All study area unsignalized intersections and driveways are expected to operate at an acceptable LOS, except for the intersections of Main Street and Black Road, and E Stowell Road/Nicholson Avenue/I-101 NB On Ramp. Four signalized intersections are experiencing LOS E or F during AM and/or PM peak hours under Existing, No-Build, and Build conditions. Proposed improvements related to the Project for these four existing signalized intersections include optimizing the corridor along W. Stowell Road, which will enhance the overall LOS.

The City of Santa Maria and CalTrans have identified the intersection of E Stowell Road and Broadway as needing improvements. The intersection is space-constrained, so any improvements will require significant right-of-way to make any improvements. Since the problems are existing, or will be exacerbated by other previously approved developments, no improvements other than traffic signal optimization are proposed to accommodate the Project.

A.17. Mitigation Measures

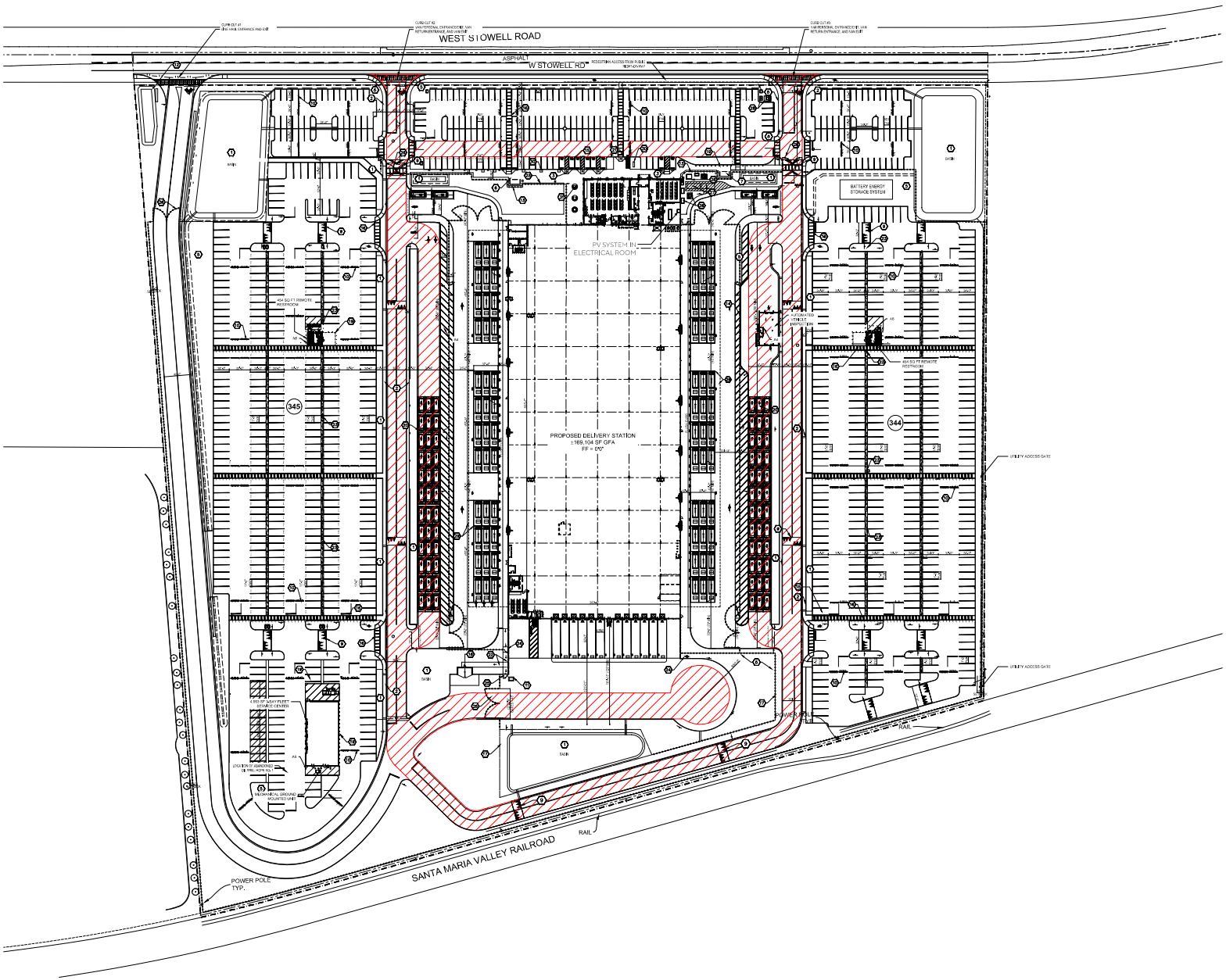
The following improvements are proposed as part of the Project:

W. Stowell Road from S. Blosser Road to US 101

- Optimize traffic signal timing

APPENDICES

Appendix A – Site Plan



KEYNOTES

1	STORMWATER MANAGEMENT AS REQUIRED BY CODE	21	EMPLOYEE MUSTER AREA SIGNAGE PER SIGNAGE AND STRIPING PLAN
2	CONCRETE SIDEWALK	22	BIKE RACKS
3	ACCESSIBLE CURB RAMP	23	5' WIDE CONCRETE SIDEWALK (5% MAX SLOPE) WITH GUARDRAILS AND LANDINGS AS REQUIRED
4	RIDE SHARE DROP-OFF		
5	LANDSCAPE	23	TRASH CAN ON CONCRETE PAD
6	PREFABRICATED SMOKING SHELTER	24	RETAINING WALL WITH GUARD RAIL, AS REQUIRED, PER STRUCTURAL PLANS
7	RIDE-SHARE SHELTER	25	5' WIDE MAIN GATE WITH LOCKING HARDWARE
8	WHEEL STOP	26	PAIR OF 8'-0"H GALVANIZED MANUAL SWING GATES WITH DROP ROD AND LOCKING HARDWARE. IS REQUIRED, PROVIDE GATE WITH RUBBER ROLLERS OR TIRED. IN-GROUND TRACK SYSTEMS ARE NOT ALLOWED
9	SPEED HUMP / PEDESTRIAN TABLE		
10	SPEED BUMP		
11	4'x6' TRUCK YARD SPILL KIT SHED (BY TENANT) ON 6'X8' CONCRETE PAD		
12	SIGNAGE PER SIGNAGE AND STRIPING PLAN		
13	PEDESTRIAN BARRIER FENCE PER SITE DETAILS	27	EMERGENCY MOBILE GENERATOR PARKING
14	STRIPED TRAFFIC SEPARATION WITH JERSEY BARRIERS (OR EQUAL)	28	ELECTRICAL EQUIPMENT WITH BOLLARD PROTECTION PER ELECTRICAL PLANS
15	ACCESSIBLE PARKING STALL	29	BUILDING CANOPY AND COLUMNS PER ARCHITECTURAL PLAN
16	STRIPED PEDESTRIAN ACCESS	30	BENCH
17	YARD PERIMETER SECURITY FENCE	31	OUTDOOR BREAK AREA
18	TRASH ENCLOSURE	32	LOADING ZONE SECURITY FENCE
19	BOLLARDS PER SITE PLAN ENLARGEMENTS AND SITE DETAILS	33	42" HIGH CABLE RAILING FENCE
		34	8' HIGH BLACK TUBULAR FENCE

LEGEND:

- 42" HIGH CABLE RAILING FENCE
- 8' HIGH BLACK TUBULAR FENCE
- PROPERTY LINE
- 30'-0" (TYPICAL) WIDE FIRE LANE (HATCHED), 24'-0" AT NORTH ELEVATION, EXTENT OF FIRE LANE CONTINUOUS CURB PAINTED RED & MARKED WITH "FIRE LANE NO PARKING" PER THE FIRE DEPARTMENT HAVING JURISDICTION

REQUIRED PARKING

WAREHOUSE	157,507 SF	1 PER 1,040 SF	151	STALLS
OFFICE	11,597 SF	1 PER 260 SF	45	STALLS
TOTALS	169,104 SF		196	STALLS REQUIRED

PROPOSED PARKING

STANDARD STALLS (9' x 19')	210	STALLS
EV CAPABLE STALLS*	54	STALLS
HANDICAP STALLS	8	STALLS
TOTAL PARKING PROVIDED	272	STALLS

*ELECTRONIC VEHICLE CHARGING STATIONS (EVCS) 25% OF OVERALL EV CAPABLE STALLS 14 STALLS

DELIVERY VAN PARKING

VAN STALLS (11' x 27')	504 STALLS
EVCS VAN STALLS (11' X 27')	202 STALLS
TOTAL DELIVERY VAN PARKING	706 STALLS

SEMI TRUCK PARKING

DOCK POSITIONS (53') 12 STALLS

HEIGHT LIMIT

MAXIMUM: 40'-0" PER SANTA MARIA ZONING
PROPOSED: *MAXIMUM HEIGHT OF ±45'-0"

*REQUEST FOR A MODIFICATION TO THE MAX BUILDING HEIGHT.

SEEFRIED INDUSTRIAL PROPERTIES

DISTRIBUTION CENTER

Santa Maria, CA

SITE PLAN

0 60' 120'

AO Architecture. Design. Relationships.

A1

Scale 1" = 60'-0"
Job No. 2024-0141
Date 2025-04-16

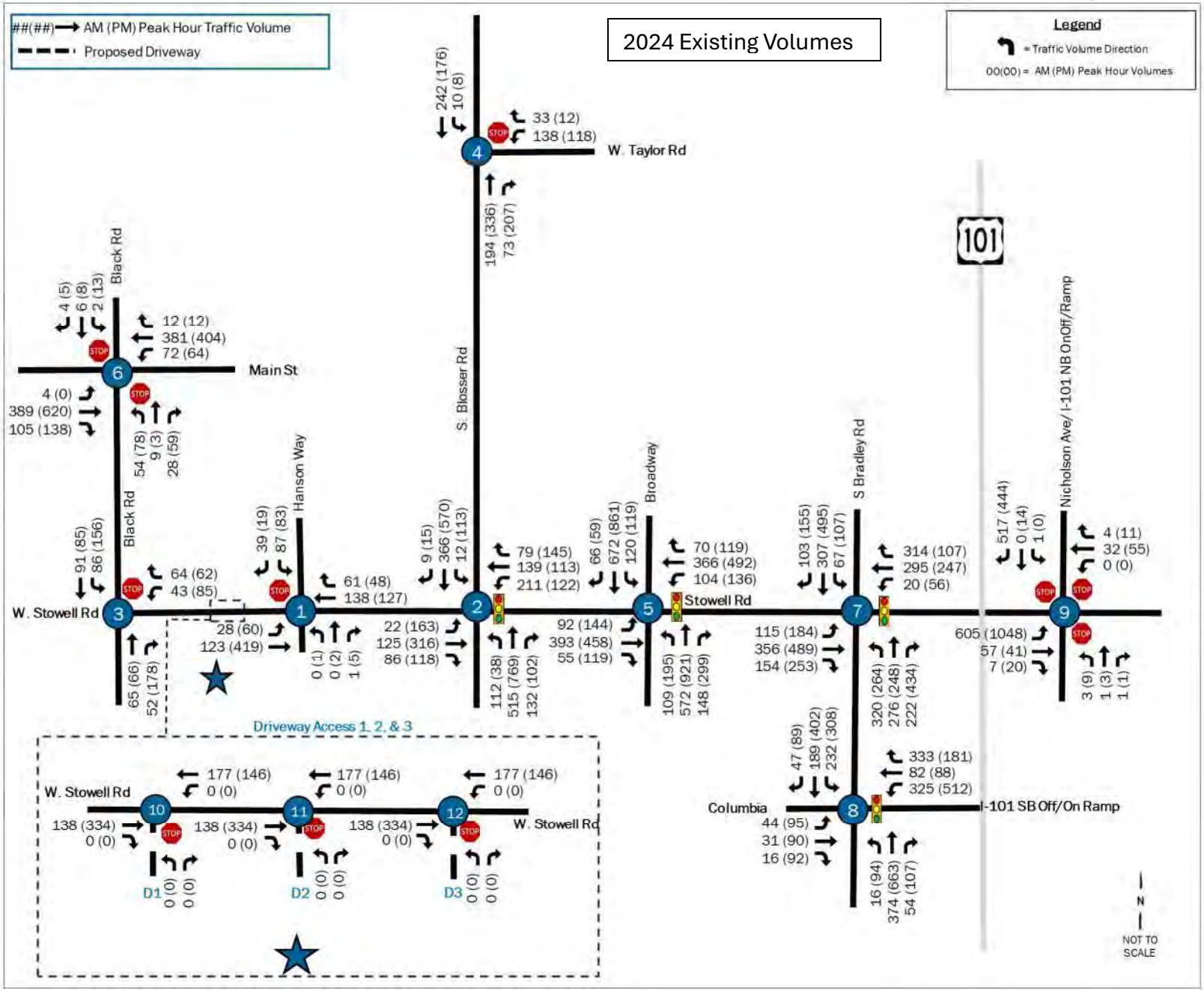
Appendix B – Site Traffic Schedule

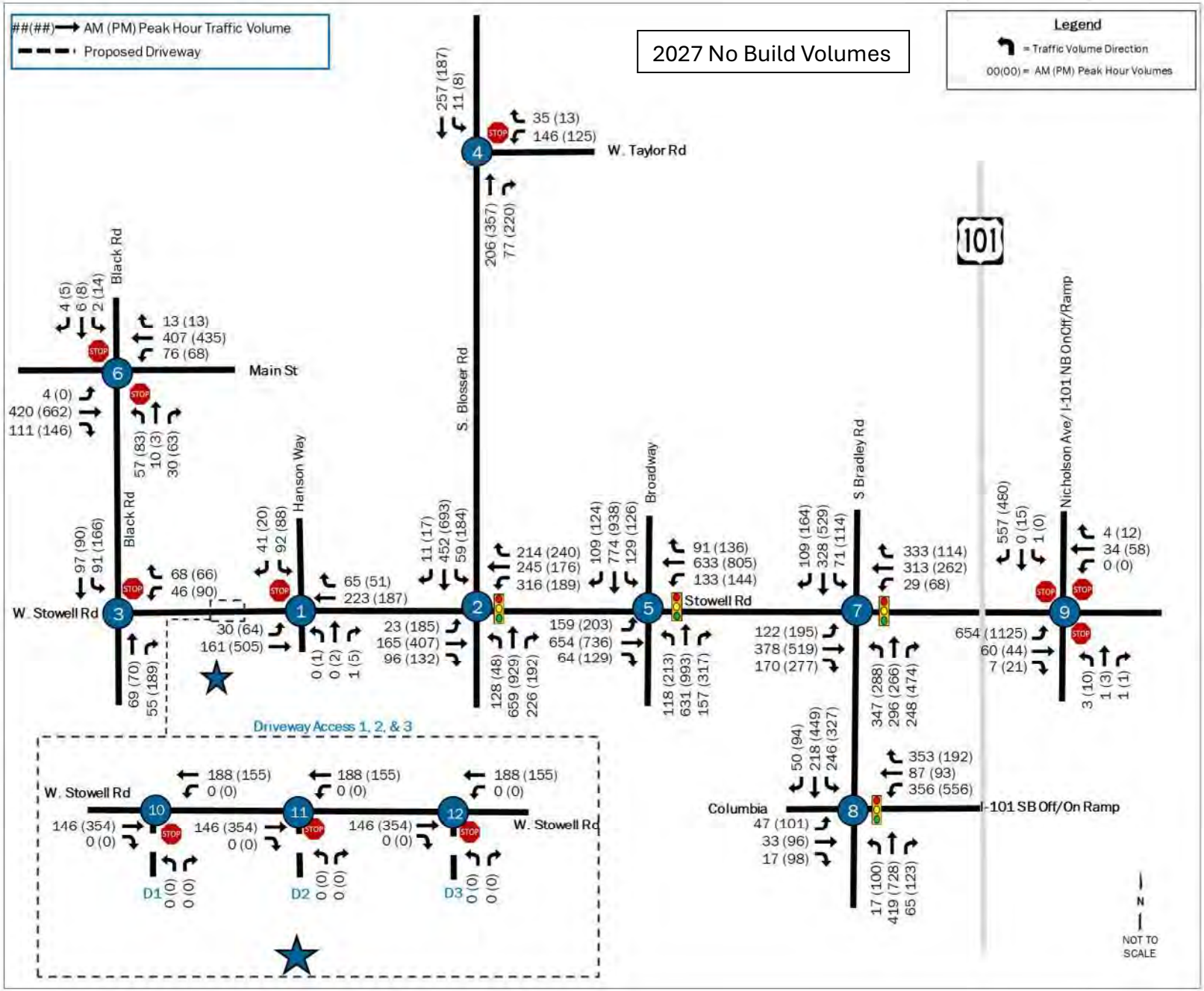
Santa Maria Delivery Facility

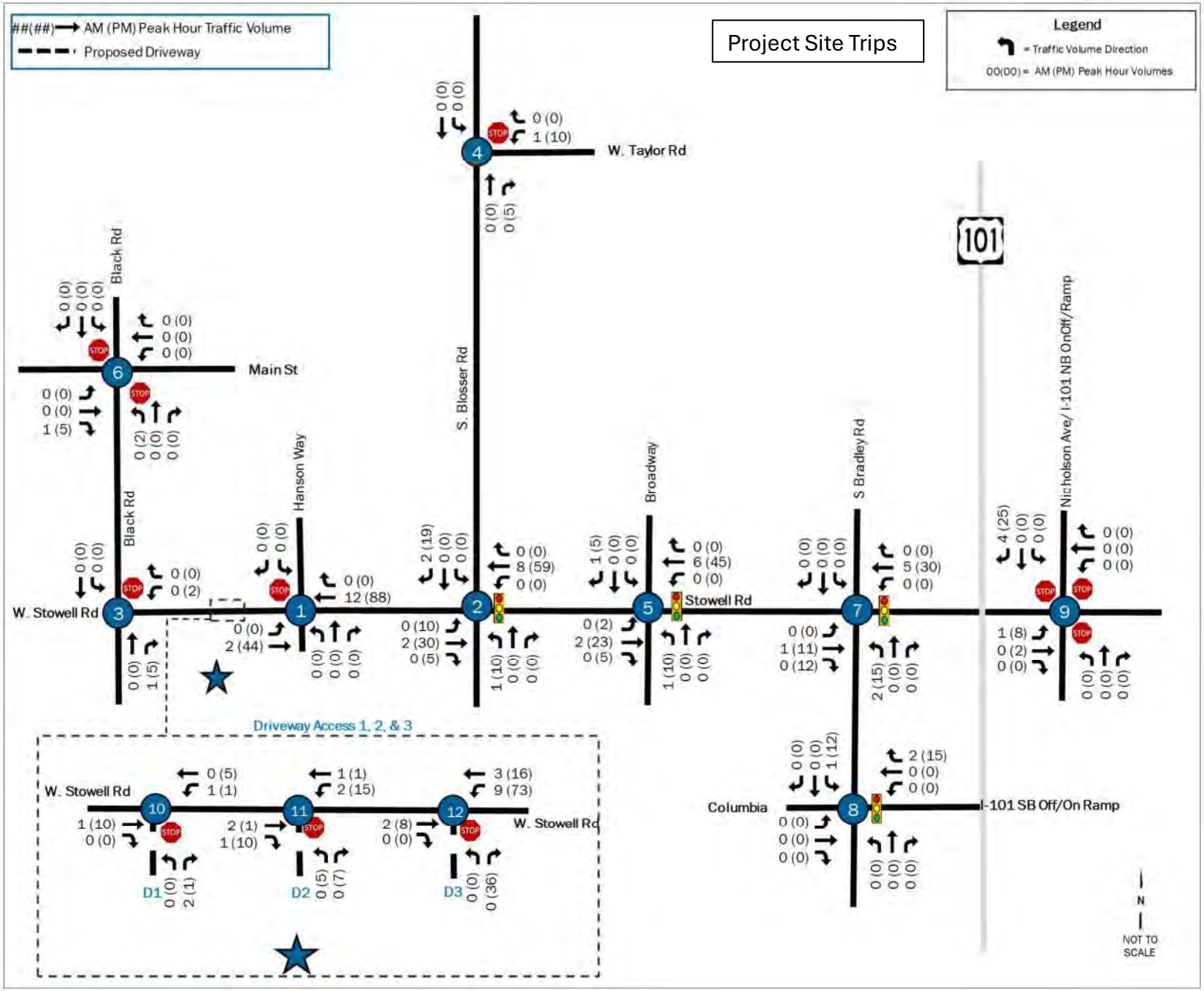
Time	Autos			Trucks			Vans			Total		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
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0:30	0	0	0	1	1	2	0	0	0	1	1	2
1:00	160	0	160	1	1	2	0	0	0	161	1	162
1:30	0	0	0	1	1	2	0	0	0	1	1	2
2:00	0	0	0	1	1	2	0	0	0	1	1	2
2:30	0	0	0	1	1	2	0	0	0	1	1	2
3:00	0	0	0	1	1	2	0	0	0	1	1	2
3:30	0	0	0	1	1	2	0	0	0	1	1	2
4:00	0	0	0	1	2	3	0	0	0	1	2	3
4:30	0	0	0	2	1	3	0	0	0	2	1	3
5:00	0	0	0	1	2	3	0	0	0	1	2	3
5:30	0	0	0	2	1	3	0	0	0	2	1	3
6:00	0	0	0	1	1	2	0	0	0	1	1	2
6:30	0	0	0	1	1	2	0	0	0	1	1	2
7:00	0	0	0	1	1	2	0	0	0	1	1	2
7:30	0	0	0	1	1	2	0	0	0	1	1	2
8:00	12	0	12	0	1	1	0	0	0	12	1	13
8:30	0	0	0	0	1	1	0	0	0	0	1	1
9:00	0	0	0	0	1	1	0	0	0	0	1	1
9:30	144	0	144	0	1	1	0	0	0	144	1	145
10:00	72	47	119	0	0	0	0	72	72	72	119	191
10:30	129	0	129	0	0	0	0	72	72	129	72	201
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14:30	0	0	0	0	1	1	0	0	0	0	1	1
15:00	0	0	0	1	0	1	0	0	0	1	0	1
15:30	5	0	5	0	1	1	0	0	0	5	1	6
16:00	0	0	0	1	0	1	0	0	0	1	0	1
16:30	36	12	48	0	1	1	0	0	0	36	13	49
17:00	61	36	97	1	0	1	0	0	0	62	36	98
17:30	0	61	61	0	1	1	0	0	0	0	62	62
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18:30	0	0	0	1	0	1	0	0	0	1	0	1
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19:30	0	0	0	1	0	1	0	0	0	1	0	1
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23:00	47	0	47	1	1	2	0	0	0	48	1	49
23:30	0	0	0	1	1	2	0	0	0	1	1	2
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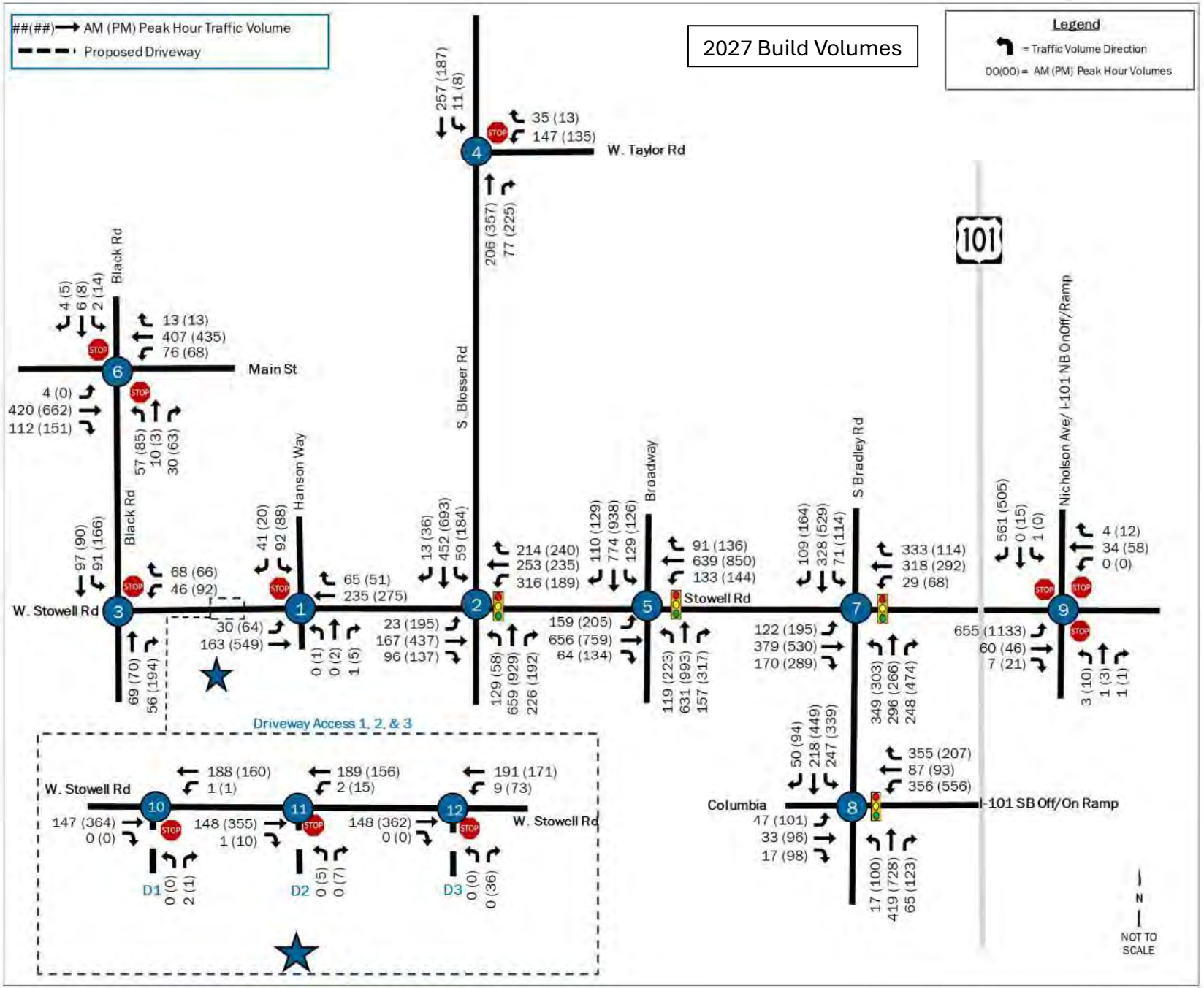
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Operations:	8:30	16:00	12	Assoc.	2%
Managers Shift:	23:30	10:00	47	Assoc.	8%
PFSD Shift:	14:00	18:00	19	Assoc.	3%
RTS Shift:	16:00	22:30	5	Assoc.	1%
Drivers:	5:40	22:45	345	Drivers	59%

Appendix C – Figures


##(##) AM (PM) Peak Hour Traffic Volume
Proposed Driveway
2024 Existing Volumes
Legend
= Traffic Volume Direction
00(00) = AM (PM) Peak Hour Volumes
W. Taylor Rd
S. Blosser Rd
Black Rd
Main St
Hanson Way
Broadway
Stowell Rd
S Bradley Rd
Nicholson Ave/ I-101 NB On/Off Ramp
W. Stowell Rd
Columbia
I-101 SB Off/On Ramp
Driveway Access 1, 2, & 3
D1
D2
D3
101
N
NOT TO SCALE


##(##) AM (PM) Peak Hour Traffic Volume
Proposed Driveway
2027 No Build Volumes
Legend
= Traffic Volume Direction
00(00) = AM (PM) Peak Hour Volumes
W. Taylor Rd
S. Blosser Rd
Black Rd
Main St
Hanson Way
Broadway
Stowell Rd
S Bradley Rd
Nicholson Ave/ I-101 NB On/Off Ramp
W. Stowell Rd
Columbia
I-101 SB Off/On Ramp
101
Driveway Access 1, 2, & 3
D1
D2
D3
NOT TO SCALE


##(##) AM (PM) Peak Hour Traffic Volume
Proposed Driveway
Project Site Trips
Legend
= Traffic Volume Direction
00(00) = AM (PM) Peak Hour Volumes
W. Taylor Rd
S. Blosser Rd
Black Rd
Main St
Hanson Way
Broadway
S Bradley Rd
Nicholson Ave/ I-101 NB On/Off Ramp
101
W. Stowell Rd
Stowell Rd
Columbia
I-101 SB Off/On Ramp
Driveway Access 1, 2, & 3
D1
D2
D3
N
NOT TO SCALE


##(##) AM (PM) Peak Hour Traffic Volume
Proposed Driveway
2027 Build Volumes
Legend
= Traffic Volume Direction
00(00) = AM (PM) Peak Hour Volumes
W. Taylor Rd
S. Blosser Rd
Black Rd
Main St
Hanson Way
Broadway
Stowell Rd
S Bradley Rd
Nicholson Ave/ I-101 NB On/Off Ramp
W. Stowell Rd
Columbia
I-101 SB Off/On Ramp
101
Driveway Access 1, 2, & 3
D1
D2
D3
N
NOT TO SCALE

Appendix D – Traffic Counts

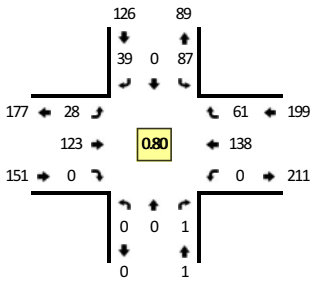
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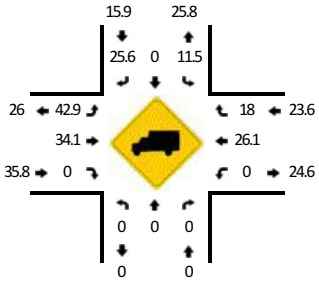
Method for determining peak hour: Total Entering Volume

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CITY/STATE: Santa Maria, CA

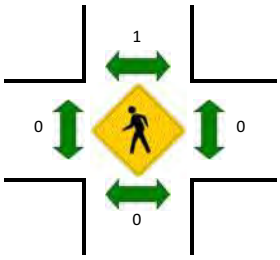
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DATE: Thu, Apr 18 2024

Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

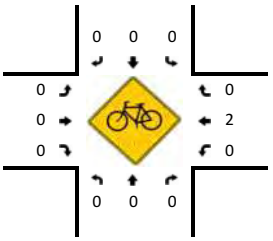


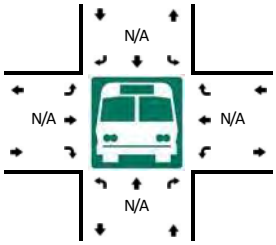


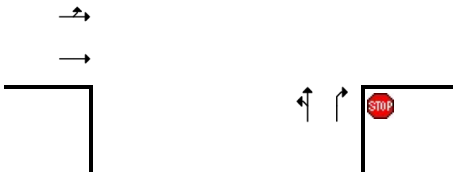
TRUE DATA TO IMPROVE MOBILITY

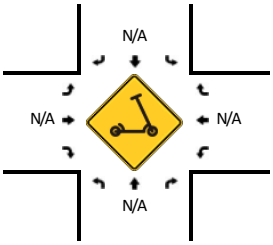












15-Min Count Period Beginning At	Hanson Wy (Northbound)				Hanson Wy (Southbound)				W Stowell Rd (Eastbound)				W Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	8	0	11	0	4	33	0	0	0	50	8	0	114	
7:15 AM	0	0	0	0	12	0	13	1	7	37	0	0	0	24	6	0	100	
7:30 AM	0	0	0	0	18	0	10	0	8	30	0	0	0	31	12	0	109	
7:45 AM	0	0	0	0	32	0	10	0	6	42	0	0	0	39	21	0	150	473
8:00 AM	0	0	1	0	17	0	9	0	5	21	0	0	0	38	15	0	106	465
8:15 AM	0	0	0	0	20	0	10	0	9	30	0	0	0	30	13	0	112	477
8:30 AM	0	0	2	0	23	0	10	0	4	24	0	0	0	30	13	0	106	474
8:45 AM	0	0	1	0	12	0	14	0	5	32	0	0	0	29	17	0	110	434

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	128	0	40	0	24	168	0	0	0	156	84	0	600
Heavy Trucks	0	0	0		16	0	8		8	36	0		0	24	28		120
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

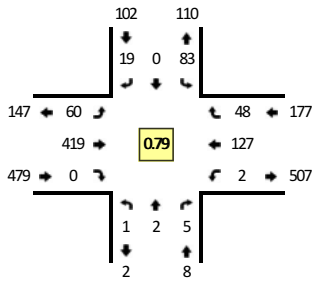
Report generated on 4/29/2024 3:11 PM

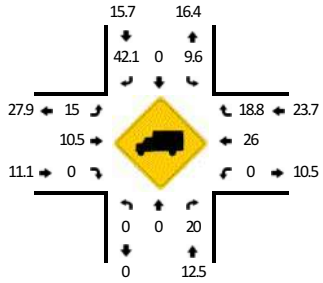
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

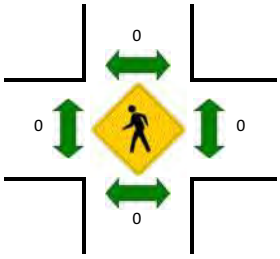
LOCATION: Hanson Wy -- W Stowell Rd | **QC JOB #:** 16559402
CITY/STATE: Santa Maria, CA | **DATE:** Thu, Apr 18 2024

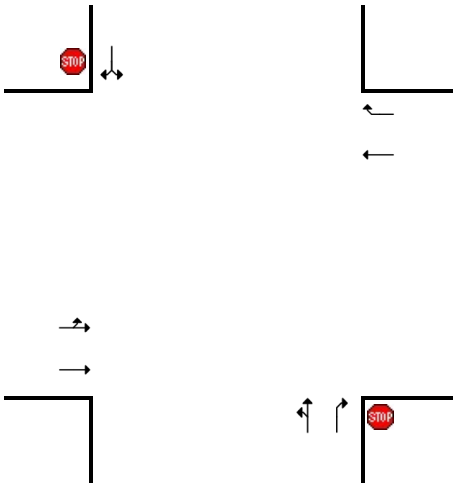
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

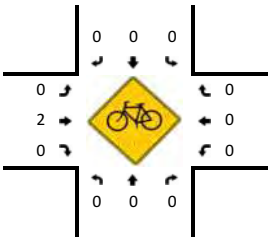


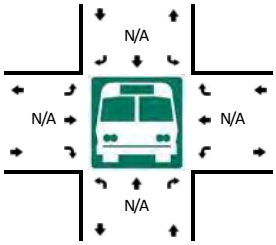


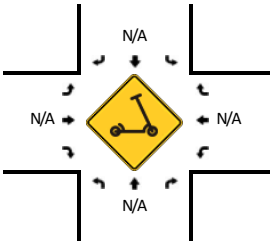
TRUE DATA TO IMPROVE MOBILITY











15-Min Count Period Beginning At	Hanson Wy (Northbound)				Hanson Wy (Southbound)				W Stowell Rd (Eastbound)				W Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	1	3	0	24	0	3	0	22	138	0	0	1	37	13	0	243	
4:15 PM	0	1	0	0	18	0	6	0	15	105	0	0	0	32	10	0	187	
4:30 PM	0	0	0	0	22	0	6	0	13	111	0	0	0	28	16	0	196	
4:45 PM	0	0	2	0	19	0	4	0	10	65	0	0	1	30	9	0	140	766
5:00 PM	0	0	0	0	21	0	2	0	20	75	0	0	0	29	15	0	162	685
5:15 PM	0	0	0	0	16	0	4	0	8	45	0	0	0	27	15	0	115	613
5:30 PM	0	0	0	0	11	0	2	0	6	42	0	0	0	32	11	0	104	521
5:45 PM	0	0	0	0	16	0	5	0	4	24	0	0	0	20	10	0	79	460

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	4	12	0	96	0	12	0	88	552	0	0	4	148	52	0	972
Heavy Trucks	0	0	4		8	0	4		8	76	0		0	24	16		140
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 4/29/2024 3:11 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

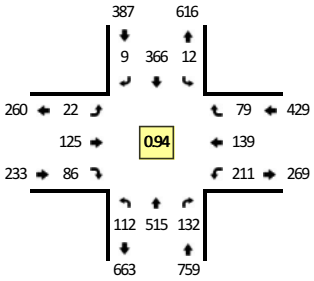
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

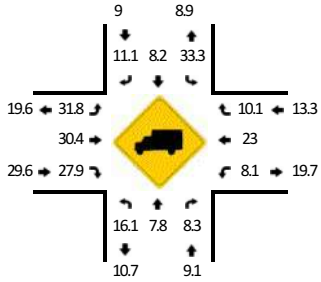
LOCATION: S Blosser Rd -- W Stowell Rd
CITY/STATE: Santa Maria, CA

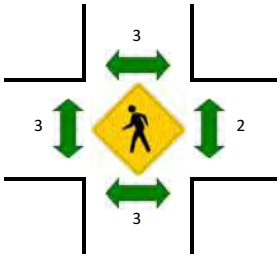
QC JOB #: 16559403
DATE: Thu, Apr 18 2024

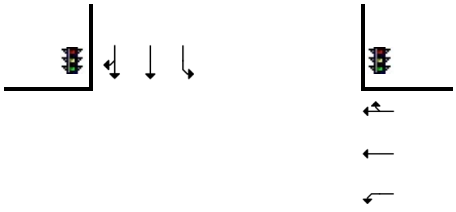
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

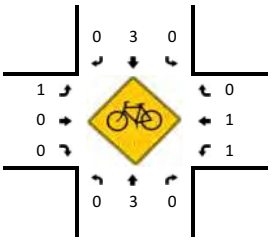


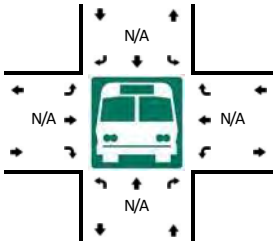


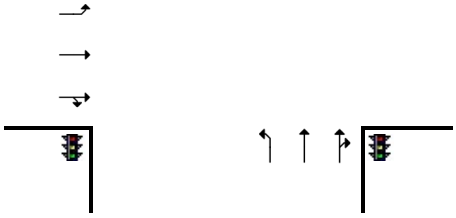


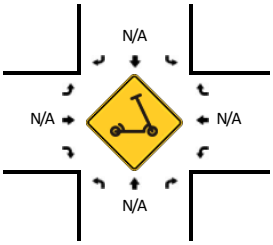












15-Min Count Period Beginning At	S Blosser Rd (Northbound)				S Blosser Rd (Southbound)				W Stowell Rd (Eastbound)				W Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	24	87	20	0	3	95	8	0	5	31	6	0	22	39	12	0	352	
7:15 AM	18	126	28	0	7	105	6	0	4	29	7	0	24	19	17	0	390	
7:30 AM	30	104	29	0	9	124	4	0	4	35	13	0	34	30	14	0	430	
7:45 AM	35	126	33	0	1	79	0	0	7	36	29	0	67	37	29	0	479	1651
8:00 AM	27	143	37	0	0	82	1	0	5	28	24	0	65	39	18	0	469	1768
8:15 AM	20	142	33	0	2	81	4	0	6	26	20	0	45	33	18	0	430	1808
8:30 AM	24	113	16	0	3	81	3	0	4	24	23	0	31	35	16	0	373	1751
8:45 AM	22	105	12	0	3	86	4	0	10	17	21	0	21	32	21	0	354	1626

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	140	504	132	0	4	316	0	0	28	144	116	0	268	148	116	0	1916
Heavy Trucks	20	32	12		4	24	0		12	24	40		16	32	8		224
Buses																	
Pedestrians		0				4				0				0			4
Bicycles	0	0	0		0	4	0		0	0	0		4	4	0		12
Scooters																	

Comments:

Report generated on 4/29/2024 3:11 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

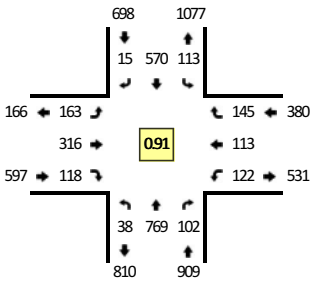
Type of peak hour being reported: Intersection Peak

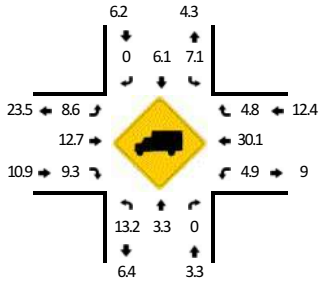
Method for determining peak hour: Total Entering Volume

LOCATION: S Blosser Rd -- W Stowell Rd
CITY/STATE: Santa Maria, CA

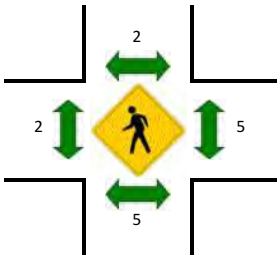
QC JOB #: 16559404
DATE: Thu, Apr 18 2024

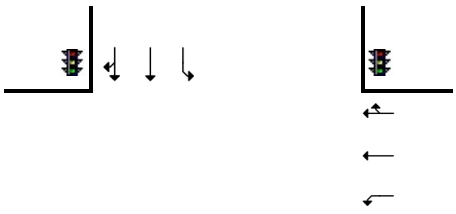
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

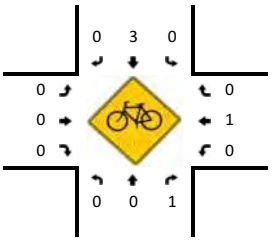


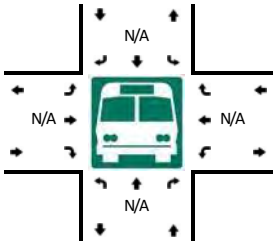


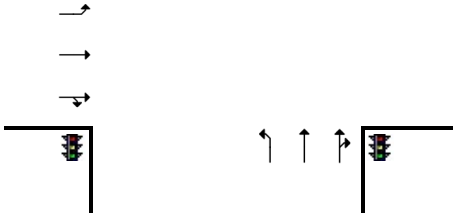
TRUE DATA TO IMPROVE MOBILITY

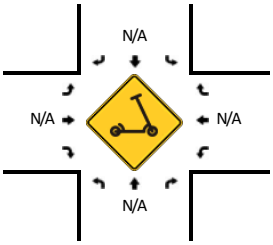












15-Min Count Period Beginning At	S Blosser Rd (Northbound)				S Blosser Rd (Southbound)				W Stowell Rd (Eastbound)				W Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	17	187	32	0	26	128	3	0	56	108	44	0	31	40	38	0	710	
4:15 PM	10	173	30	0	33	138	3	0	39	78	20	0	33	24	44	0	625	
4:30 PM	6	203	18	0	26	149	5	0	36	83	30	0	28	20	30	0	634	
4:45 PM	5	206	22	0	28	155	4	0	32	47	24	0	30	29	33	0	615	2584
5:00 PM	13	210	29	0	33	172	3	0	15	53	37	0	40	31	34	0	670	2544
5:15 PM	12	197	24	0	23	190	4	0	11	37	24	0	50	32	23	0	627	2546
5:30 PM	15	152	20	0	31	152	6	0	13	23	20	0	47	22	34	0	535	2447
5:45 PM	9	186	20	0	28	166	2	0	6	36	19	0	39	22	15	0	548	2380

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	68	748	128	0	104	512	12	0	224	432	176	0	124	160	152	0	2840
Heavy Trucks	8	28	0		12	24	0		28	44	20		4	44	16		228
Buses																	
Pedestrians		8				0				0				8			16
Bicycles	0	0	0		0	8	0		0	0	0		0	4	0		12
Scooters																	

Comments:

Report generated on 4/29/2024 3:11 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

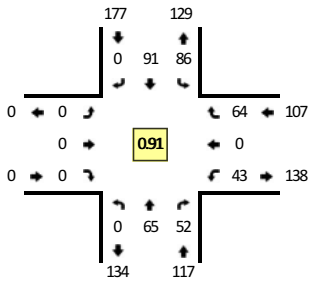
Type of peak hour being reported: Intersection Peak

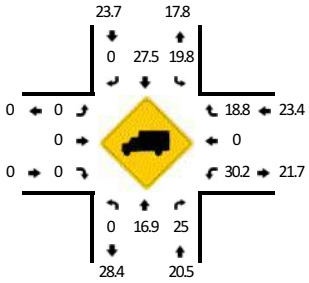
Method for determining peak hour: Total Entering Volume

LOCATION: Black Rd -- W Stowell Rd
CITY/STATE: Santa Maria, CA

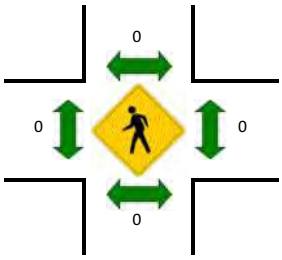
QC JOB #: 16559405
DATE: Thu, Apr 18 2024

Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:00 AM -- 7:15 AM

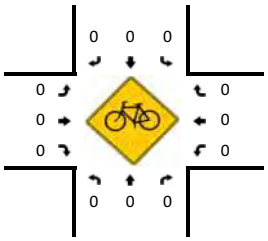


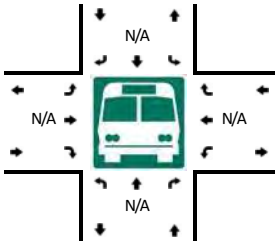


TRUE DATA TO IMPROVE MOBILITY

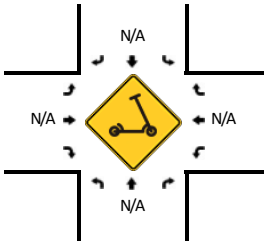












15-Min Count Period Beginning At	Black Rd (Northbound)				Black Rd (Southbound)				W Stowell Rd (Eastbound)				W Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	15	10	0	18	26	0	0	0	0	0	0	14	0	27	0	110	
7:15 AM	0	20	14	0	19	20	0	0	0	0	0	0	6	0	16	0	95	
7:30 AM	0	17	9	0	21	26	0	0	0	0	0	0	10	0	10	0	93	
7:45 AM	0	13	19	0	28	19	0	0	0	0	0	0	13	0	11	0	103	401
8:00 AM	0	14	6	0	11	23	0	0	0	0	0	0	17	0	11	0	82	373
8:15 AM	0	16	20	0	11	16	0	0	0	0	0	0	14	0	11	0	88	366
8:30 AM	0	27	14	0	20	8	0	0	0	0	0	0	12	0	10	0	91	364
8:45 AM	0	17	15	0	17	20	0	0	0	0	0	0	10	0	10	0	89	350

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	60	40	0	72	104	0	0	0	0	0	0	56	0	108	0	440
Heavy Trucks	0	8	8		32	36	0		0	0	0		8	0	8		100
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 4/29/2024 3:11 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

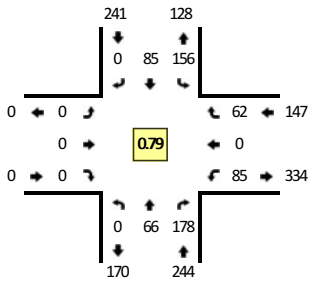
Type of peak hour being reported: Intersection Peak

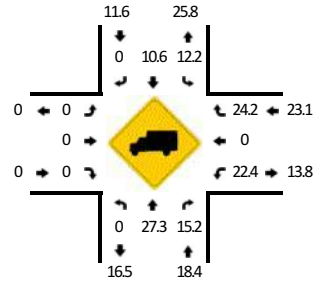
Method for determining peak hour: Total Entering Volume

LOCATION: Black Rd -- W Stowell Rd
CITY/STATE: Santa Maria, CA

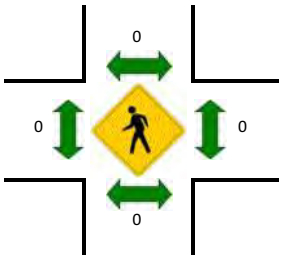
QC JOB #: 16559406
DATE: Thu, Apr 18 2024

Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

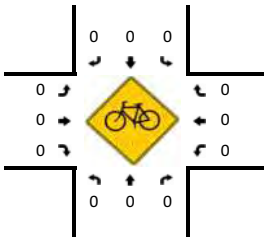


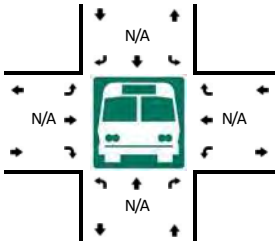




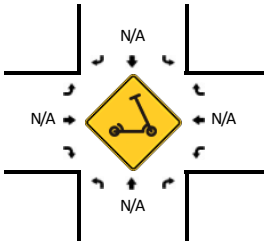












15-Min Count Period Beginning At	Black Rd (Northbound)				Black Rd (Southbound)				W Stowell Rd (Eastbound)				W Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	17	59	0	71	20	0	0	0	0	0	0	24	0	8	0	199	
4:15 PM	0	16	49	0	33	20	0	0	0	0	0	0	24	0	10	0	152	
4:30 PM	0	18	35	0	32	23	0	0	0	0	0	0	21	0	25	0	154	
4:45 PM	0	15	35	0	20	22	0	0	0	0	0	0	16	0	19	0	127	632
5:00 PM	0	20	29	0	24	15	0	0	0	0	0	0	12	0	19	0	119	552
5:15 PM	0	13	13	0	18	16	0	0	0	0	0	0	8	0	16	0	84	484
5:30 PM	0	12	12	0	6	15	0	0	0	0	0	0	17	0	16	0	78	408
5:45 PM	0	12	5	0	9	10	0	0	0	0	0	0	12	0	9	0	57	338

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	68	236	0	284	80	0	0	0	0	0	0	96	0	32	0	796
Heavy Trucks	0	20	20		36	12	0		0	0	0		12	0	4		104
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

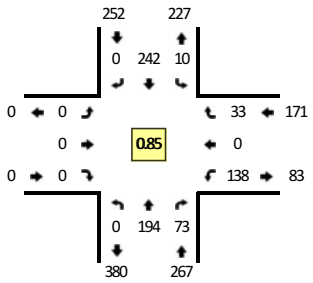
Report generated on 4/29/2024 3:11 PM

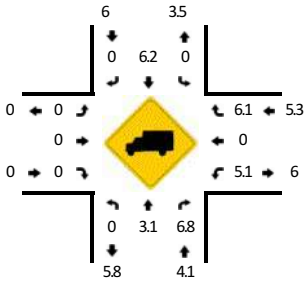
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

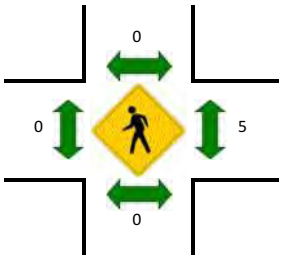
LOCATION: N Blosser Rd -- W Taylor St | **QC JOB #:** 16559407
CITY/STATE: Santa Maria, CA | **DATE:** Thu, Apr 18 2024

Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

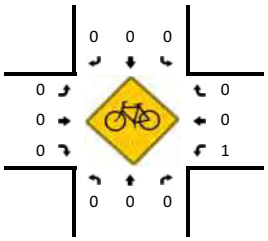


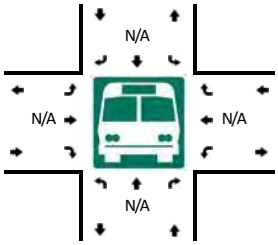


TRUE DATA TO IMPROVE MOBILITY

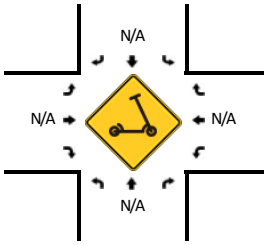












15-Min Count Period Beginning At	N Blosser Rd (Northbound)				N Blosser Rd (Southbound)				W Taylor St (Eastbound)				W Taylor St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	18	20	0	0	29	0	0	0	0	0	0	21	0	0	0	88	
7:15 AM	0	28	18	0	0	54	0	0	0	0	0	0	36	0	2	0	138	
7:30 AM	0	30	18	0	0	73	0	0	0	0	0	0	33	0	3	0	157	
7:45 AM	0	54	17	0	1	82	0	0	0	0	0	0	44	0	5	0	203	586
8:00 AM	0	35	16	0	3	60	0	0	0	0	0	0	43	0	4	0	161	659
8:15 AM	0	49	22	0	2	41	0	0	0	0	0	0	31	0	7	0	152	673
8:30 AM	0	56	18	0	4	59	0	0	0	0	0	0	20	0	17	0	174	690
8:45 AM	0	27	7	0	5	37	0	0	0	0	0	0	20	0	2	0	98	585

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	216	68	0	4	328	0	0	0	0	0	0	176	0	20	0	812
Heavy Trucks	0	4	4		0	8	0		0	0	0		4	0	8		28
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		4	0	0		4
Scooters																	

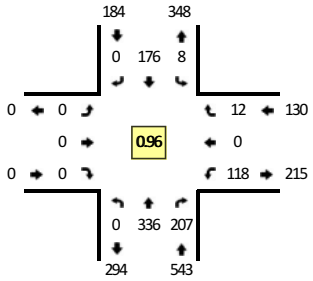
Comments:

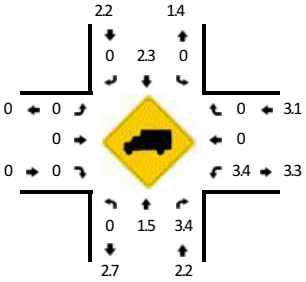
Report generated on 4/29/2024 3:11 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

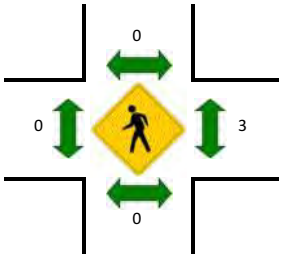
LOCATION: N Blosser Rd -- W Taylor St | **QC JOB #:** 16559408
CITY/STATE: Santa Maria, CA | **DATE:** Thu, Apr 18 2024

Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

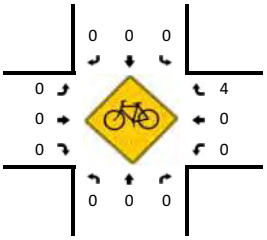


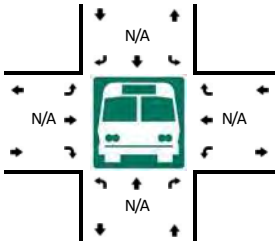


TRUE DATA TO IMPROVE MOBILITY

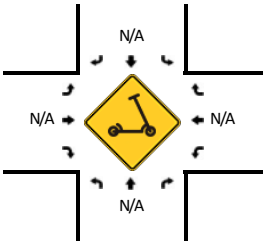












15-Min Count Period Beginning At	N Blosser Rd (Northbound)				N Blosser Rd (Southbound)				W Taylor St (Eastbound)				W Taylor St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	53	42	0	5	31	0	0	0	0	0	0	24	0	4	0	159	
4:15 PM	0	61	42	0	3	37	0	0	0	0	0	0	43	0	5	0	191	
4:30 PM	0	80	55	0	3	53	0	0	0	0	0	0	31	0	2	0	224	
4:45 PM	0	76	45	0	2	45	0	0	0	0	0	0	27	0	4	0	199	773
5:00 PM	0	96	54	0	1	42	0	0	0	0	0	0	25	0	3	0	221	835
5:15 PM	0	84	53	0	2	36	0	0	0	0	0	0	35	0	3	0	213	857
5:30 PM	0	73	46	0	4	51	0	0	0	0	0	0	27	0	2	0	203	836
5:45 PM	0	66	27	0	5	43	0	0	0	0	0	0	27	0	8	0	176	813

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	320	220	0	12	212	0	0	0	0	0	0	124	0	8	0	896
Heavy Trucks	0	8	12		0	8	0		0	0	0		8	0	0		36
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	8		8
Scooters																	

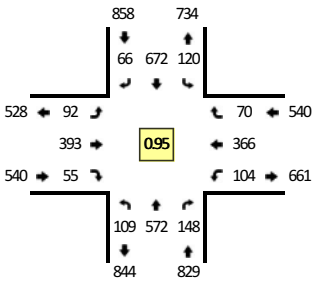
Comments:

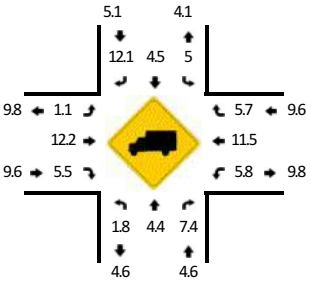
Report generated on 4/29/2024 3:11 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

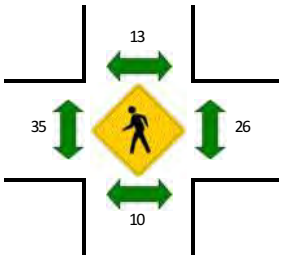
LOCATION: S Broadway -- Stowell Rd | **QC JOB #:** 16559409
CITY/STATE: Santa Maria, CA | **DATE:** Thu, Apr 18 2024

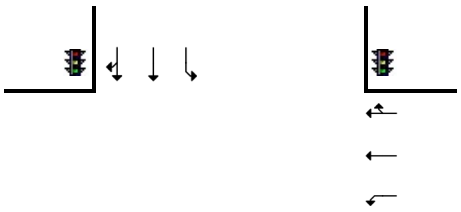
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

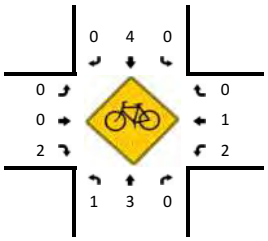


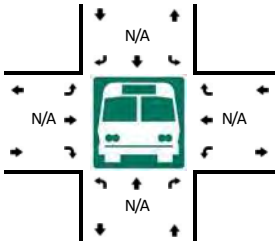


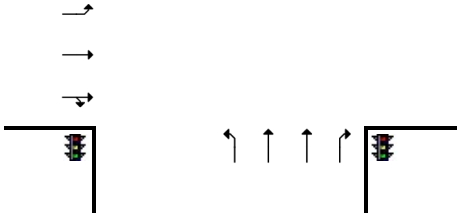
TRUE DATA TO IMPROVE MOBILITY

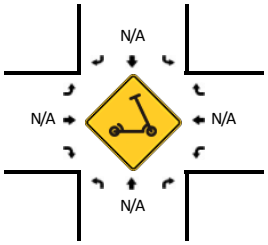












15-Min Count Period Beginning At	S Broadway (Northbound)				S Broadway (Southbound)				Stowell Rd (Eastbound)				Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	19	75	23	1	20	70	11	0	9	83	10	0	15	67	9	0	412	
7:15 AM	14	92	32	3	16	95	14	0	8	81	8	0	14	54	16	0	447	
7:30 AM	15	121	37	2	26	125	21	0	10	110	10	0	26	99	8	0	610	
7:45 AM	20	161	41	2	32	169	15	0	26	101	12	0	33	94	22	0	728	2197
8:00 AM	28	141	34	4	27	184	10	0	27	93	16	0	32	79	26	0	701	2486
8:15 AM	33	149	36	5	35	194	20	0	29	89	17	0	13	94	14	0	728	2767
8:30 AM	16	121	33	2	23	148	12	0	20	82	21	0	23	45	15	0	561	2718
8:45 AM	22	141	36	2	15	148	5	0	18	57	20	0	21	50	9	0	544	2534

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	80	644	164	8	128	676	60	0	104	404	48	0	132	376	88	0	2912
Heavy Trucks	8	32	0		0	40	0		4	40	0		16	32	4		176
Buses																	
Pedestrians		16				0				44				0			60
Bicycles	0	4	0		0	0	0		0	0	0		4	4	0		12
Scooters																	

Comments:

Report generated on 4/29/2024 3:11 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

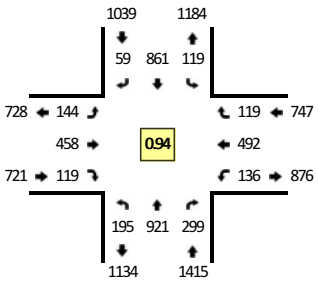
Type of peak hour being reported: Intersection Peak

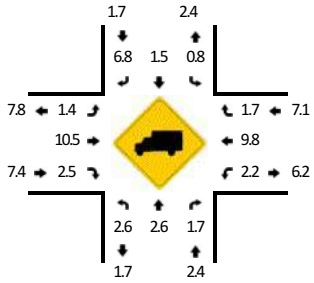
Method for determining peak hour: Total Entering Volume

LOCATION: S Broadway -- Stowell Rd
CITY/STATE: Santa Maria, CA

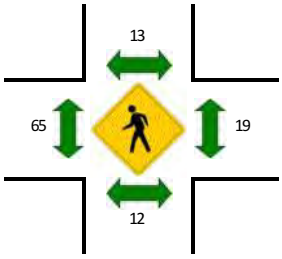
QC JOB #: 16559410
DATE: Thu, Apr 18 2024

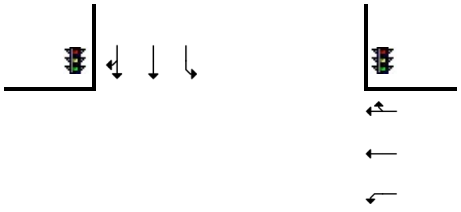
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:15 PM -- 4:30 PM

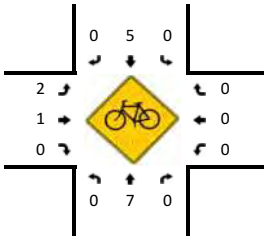


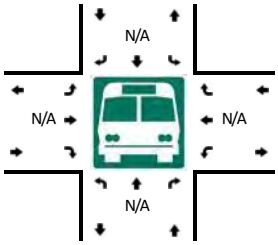


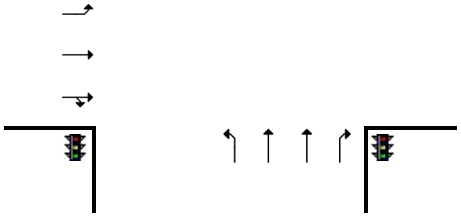
TRUE DATA TO IMPROVE MOBILITY

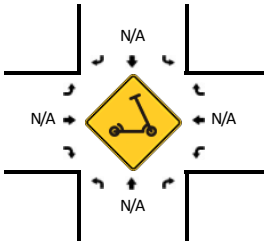












15-Min Count Period Beginning At	S Broadway (Northbound)				S Broadway (Southbound)				Stowell Rd (Eastbound)				Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	47	244	81	3	31	210	16	0	45	94	37	0	33	107	24	0	972	
4:15 PM	43	223	89	4	35	228	16	0	40	141	31	0	39	127	30	0	1046	
4:30 PM	42	235	81	6	32	233	16	0	31	120	31	0	31	115	29	0	1002	
4:45 PM	45	219	48	5	21	190	11	0	28	103	20	0	33	143	36	0	902	3922
5:00 PM	31	247	81	8	31	220	17	0	34	105	25	0	36	98	28	0	961	3911
5:15 PM	31	232	69	7	31	213	13	0	37	110	27	0	43	102	23	0	938	3803
5:30 PM	38	213	64	3	25	196	18	0	29	110	20	0	22	113	26	0	877	3678
5:45 PM	23	187	63	4	21	207	21	0	30	82	28	0	25	77	30	0	798	3574

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	172	892	356	16	140	912	64	0	160	564	124	0	156	508	120	0	4184
Heavy Trucks	0	12	4		0	12	0		0	52	0		4	44	0		128
Buses																	
Pedestrians		16				12				44				8			80
Bicycles	0	12	0		0	8	0		0	0	0		0	0	0		20
Scooters																	

Comments:

Report generated on 4/29/2024 3:11 PM

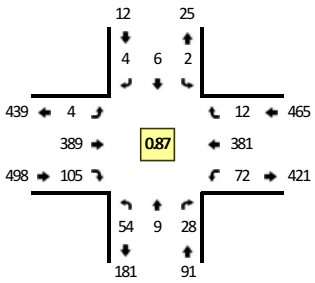
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

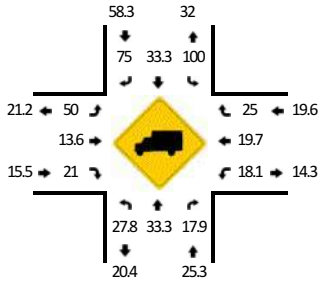
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Main St Produce Dwy/Black Rd -- W Main St
CITY/STATE: Santa Barbara, CA

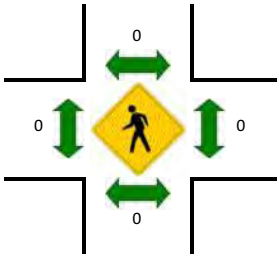
QC JOB #: 16559411
DATE: Thu, Apr 18 2024

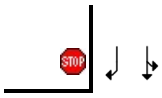
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

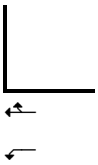


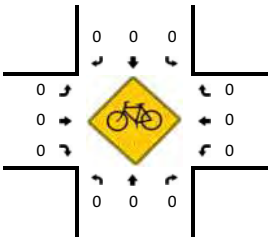


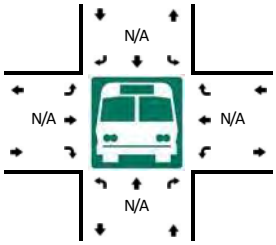
TRUE DATA TO IMPROVE MOBILITY

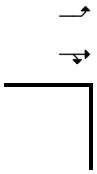


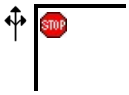


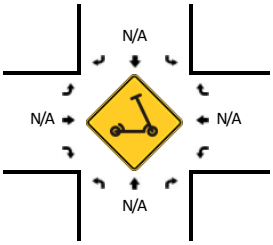












15-Min Count Period Beginning At	Main St Produce Dwy/Black Rd (Northbound)				Main St Produce Dwy/Black Rd (Southbound)				W Main St (Eastbound)				W Main St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	13	2	7	0	0	1	1	0	1	66	22	0	22	95	1	2	233	
7:15 AM	12	3	5	0	0	2	0	0	1	90	26	0	18	101	2	0	260	
7:30 AM	14	2	7	0	0	3	1	0	1	107	29	0	15	84	3	0	266	
7:45 AM	15	2	9	0	2	0	2	0	1	126	28	0	15	101	6	0	307	1066
8:00 AM	12	4	7	0	1	2	4	0	1	63	21	0	16	79	3	0	213	1046
8:15 AM	19	2	9	0	0	4	1	0	3	84	11	0	9	72	2	0	216	1002
8:30 AM	20	1	18	0	2	0	1	0	3	79	20	0	6	59	3	0	212	948
8:45 AM	17	4	9	0	1	0	0	0	2	69	24	0	13	76	6	0	221	862

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	60	8	36	0	8	0	8	0	4	504	112	0	60	404	24	0	1228
Heavy Trucks	20	4	8		8	0	4		0	64	28		12	80	4		232
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

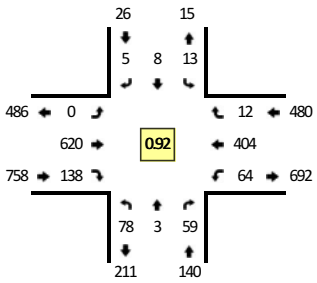
Report generated on 4/29/2024 3:11 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

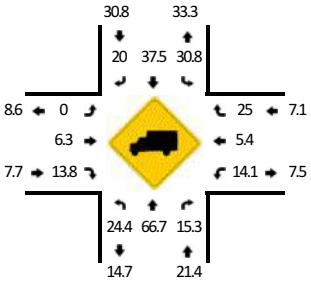
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

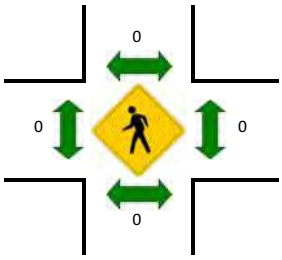
LOCATION: Main St Produce Dwy/Black Rd -- W Main St | **QC JOB #:** 16559412
CITY/STATE: Santa Barbara, CA | **DATE:** Thu, Apr 18 2024

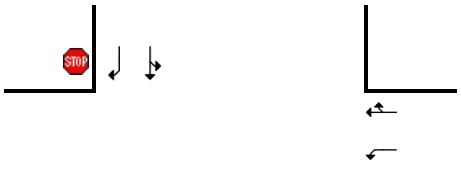
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

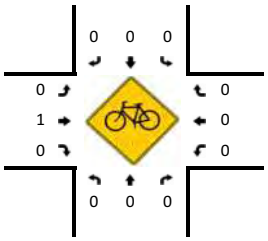


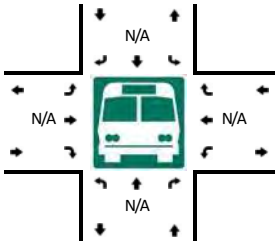




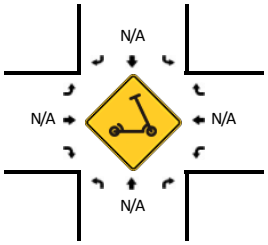












15-Min Count Period Beginning At	Main St Produce Dwy/Black Rd (Northbound)				Main St Produce Dwy/Black Rd (Southbound)				W Main St (Eastbound)				W Main St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	15	2	14	0	1	4	1	0	0	143	55	0	26	96	2	0	359	
4:15 PM	11	0	17	0	1	2	0	0	0	143	32	0	17	110	3	0	336	
4:30 PM	22	0	20	0	4	0	2	0	0	176	27	0	12	113	5	0	381	
4:45 PM	29	1	8	1	7	2	2	0	0	158	24	0	9	85	2	0	328	1404
5:00 PM	24	2	15	0	3	1	1	0	0	138	27	0	7	112	2	0	332	1377
5:15 PM	25	0	8	0	3	2	0	0	0	143	19	0	10	122	1	1	334	1375
5:30 PM	14	2	11	0	0	1	2	0	0	103	11	0	10	116	1	0	271	1265
5:45 PM	12	0	8	0	2	2	0	0	0	110	11	0	6	76	2	1	230	1167

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	88	0	80	0	16	0	8	0	0	704	108	0	48	452	20	0	1524
Heavy Trucks	32	0	28		8	0	0		0	52	20		0	24	8		172
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 4/29/2024 3:11 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: S College Dr -- E Stowell Rd

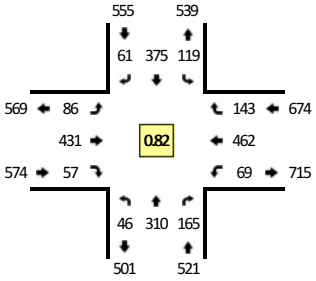
CITY/STATE: Santa Maria, CA

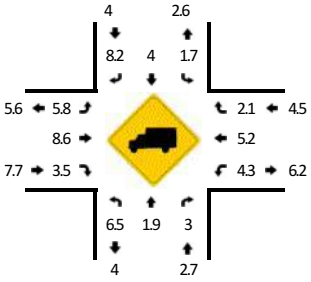
QC JOB #: 16809811

DATE: Wed, Oct 30 2024

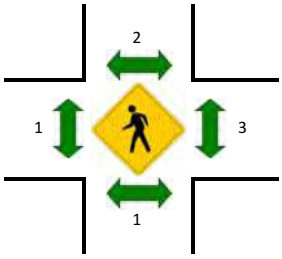
Peak-Hour: 7:25 AM -- 8:25 AM

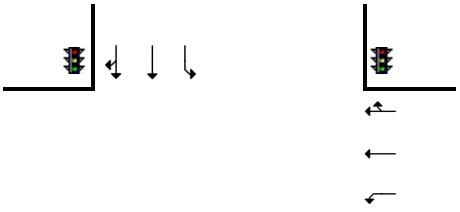
Peak 15-Min: 7:45 AM -- 8:00 AM

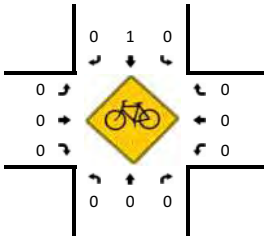


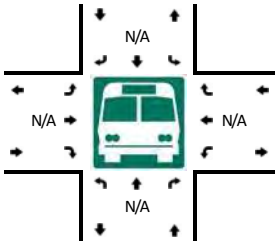


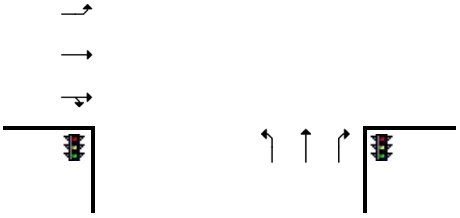
TRUE DATA TO IMPROVE MOBILITY

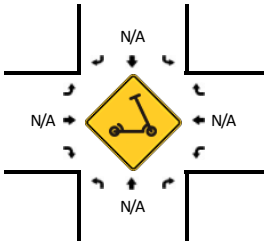












5-Min Count Period Beginning At	S College Dr (Northbound)				S College Dr (Southbound)				E Stowell Rd (Eastbound)				E Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 AM	0	3	0	0	0	3	1	0	0	9	0	0	0	4	0	0	20	
5:05 AM	0	6	0	0	1	1	0	0	0	17	0	0	0	5	0	0	30	
5:10 AM	2	0	2	0	1	1	0	0	1	12	0	0	0	8	0	0	27	
5:15 AM	0	2	6	0	2	5	0	0	0	11	1	0	0	4	0	0	31	
5:20 AM	0	1	1	0	4	6	3	0	1	21	0	0	0	4	0	0	41	
5:25 AM	0	1	3	0	2	6	1	0	0	32	0	0	1	7	1	0	54	
5:30 AM	0	2	2	0	3	6	4	0	2	22	2	0	3	3	2	0	51	
5:35 AM	0	0	2	0	2	8	3	0	0	26	1	0	0	6	1	0	49	
5:40 AM	2	5	4	0	3	12	3	0	0	21	2	0	0	12	0	0	64	
5:45 AM	2	6	6	0	3	9	6	0	4	35	2	0	1	13	1	0	88	
5:50 AM	1	5	3	0	11	15	9	0	1	40	3	0	4	14	0	0	106	
5:55 AM	2	4	6	0	10	16	7	0	3	32	3	0	1	11	0	0	95	656
6:00 AM	4	4	8	0	12	13	3	0	1	41	2	0	4	10	0	0	102	738
6:05 AM	4	4	8	0	10	13	2	0	3	41	1	0	3	10	0	0	99	807
6:10 AM	0	6	8	0	7	12	3	0	1	76	2	0	2	21	1	0	139	919
6:15 AM	3	3	5	0	8	16	8	0	0	55	2	0	0	19	4	0	123	1011
6:20 AM	0	8	11	0	10	14	2	0	4	49	1	0	1	10	2	0	112	1082
6:25 AM	4	10	10	0	14	12	4	0	4	51	1	0	3	10	0	0	123	1151
6:30 AM	2	2	1	0	13	12	4	0	2	48	4	0	1	23	1	0	113	1213
6:35 AM	1	3	9	0	4	21	4	0	1	60	5	0	2	22	1	0	133	1297
6:40 AM	1	8	14	0	8	17	3	0	1	50	3	0	1	19	2	0	127	1360
6:45 AM	0	11	11	0	9	21	5	0	1	42	1	0	1	16	1	0	119	1391
6:50 AM	1	8	3	0	9	15	3	0	1	54	0	0	4	22	3	0	123	1408
6:55 AM	0	8	1	0	9	17	6	0	2	22	2	0	3	21	3	0	94	1407
7:00 AM	2	11	9	0	10	15	2	0	3	41	2	0	1	23	4	0	123	1428
7:05 AM	1	12	7	0	6	16	6	0	3	33	4	0	1	18	5	0	112	1441
7:10 AM	4	4	9	0	7	17	1	0	0	29	4	0	3	28	3	0	109	1411
7:15 AM	2	9	12	0	4	11	6	0	0	32	9	0	4	23	5	0	117	1405
7:20 AM	1	14	10	0	11	21	2	0	10	41	7	0	2	24	3	0	146	1439
7:25 AM	1	10	14	0	11	27	1	0	2	33	7	0	5	29	11	0	151	1467
7:30 AM	5	20	10	0	10	15	6	0	1	49	9	0	3	31	9	0	168	1522
7:35 AM	3	18	16	0	6	29	4	0	8	42	7	0	4	35	11	0	183	1572
7:40 AM	5	28	12	0	6	28	6	0	8	35	0	0	8	50	14	0	200	1645
7:45 AM	4	37	14	0	9	38	3	0	4	40	7	0	4	44	16	0	220	1746
7:50 AM	6	35	14	0	12	31	2	0	13	44	5	0	7	63	10	0	242	1865
7:55 AM	5	35	24	0	8	45	7	0	11	38	8	0	10	43	13	0	247	2018
8:00 AM	5	33	15	0	17	45	7	0	3	28	2	0	7	45	12	0	219	2114
8:05 AM	1	28	12	0	6	28	9	0	10	37	2	0	6	30	17	0	186	2188

5-Min Count Period Beginning At	S College Dr (Northbound)				S College Dr (Southbound)				E Stowell Rd (Eastbound)				E Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:10 AM	4	22	11	0	10	39	5	0	3	29	3	0	4	31	12	0	173	2252
8:15 AM	3	25	13	0	13	31	6	0	13	31	4	0	3	23	10	0	175	2310
8:20 AM	4	19	10	0	11	19	5	0	10	25	3	0	8	38	8	0	160	2324
8:25 AM	2	22	10	0	10	24	6	0	5	33	2	0	4	22	6	0	146	2319
8:30 AM	2	17	8	0	6	20	4	0	8	27	6	0	8	34	4	0	144	2295
8:35 AM	3	22	12	0	5	17	5	0	3	30	11	0	5	20	10	0	143	2255
8:40 AM	3	28	9	0	3	21	2	0	10	31	4	0	3	25	7	0	146	2201
8:45 AM	1	23	9	0	8	26	4	0	8	30	7	0	7	31	10	0	164	2145
8:50 AM	4	26	8	0	3	27	4	0	6	23	7	0	5	31	4	0	148	2051
8:55 AM	2	21	6	0	6	15	3	0	8	29	12	0	3	22	9	0	136	1940
9:00 AM	5	23	15	0	6	18	4	0	4	27	5	0	6	19	5	0	137	1858
9:05 AM	3	16	9	0	5	27	5	0	4	25	6	0	6	20	5	0	131	1803
9:10 AM	3	24	18	0	4	16	2	0	9	22	11	0	3	27	3	0	142	1772
9:15 AM	2	25	11	0	4	13	3	0	9	30	3	0	8	28	3	0	139	1736
9:20 AM	3	20	9	0	6	18	2	0	8	26	1	0	6	23	10	0	132	1708
9:25 AM	2	25	14	0	6	19	5	0	6	34	11	0	5	30	7	0	164	1726
9:30 AM	3	31	17	0	3	24	5	0	5	30	8	0	8	19	7	0	160	1742
9:35 AM	4	26	5	0	5	15	6	0	9	16	7	0	3	13	7	0	116	1715
9:40 AM	5	24	8	0	9	25	1	0	3	36	7	0	0	22	8	0	148	1717
9:45 AM	1	23	6	0	2	19	2	0	5	29	9	0	5	18	7	0	126	1679
9:50 AM	4	18	6	0	5	14	5	0	3	28	14	0	7	37	6	0	147	1678
9:55 AM	7	18	8	0	9	24	4	0	4	25	4	0	4	26	5	0	138	1680
10:00 AM	2	14	7	0	2	19	3	0	5	30	6	0	3	22	6	0	119	1662
10:05 AM	6	19	7	0	5	14	7	0	4	20	4	0	3	27	6	0	122	1653
10:10 AM	4	16	5	0	6	21	4	0	6	33	6	0	4	20	3	0	128	1639
10:15 AM	3	16	7	0	2	28	5	0	5	35	11	0	6	21	7	0	146	1646
10:20 AM	2	28	8	0	8	33	2	0	4	32	13	0	6	24	3	0	163	1677
10:25 AM	1	16	8	0	5	22	3	0	6	34	13	0	6	21	7	0	142	1655
10:30 AM	3	39	12	0	8	25	5	0	2	24	8	0	2	9	7	0	144	1639
10:35 AM	2	19	7	0	3	22	2	0	8	24	5	0	5	30	3	0	130	1653
10:40 AM	4	25	8	0	6	26	0	0	2	25	11	0	12	32	8	0	159	1664
10:45 AM	3	24	10	0	2	32	3	0	6	45	10	0	5	26	14	0	180	1718
10:50 AM	3	37	10	0	9	27	5	0	4	14	7	0	10	26	8	0	160	1731
10:55 AM	3	16	6	0	3	29	4	0	7	35	12	0	7	37	3	0	162	1755

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	60	428	208	0	116	456	48	0	112	488	80	0	84	600	156	0	2836
Heavy Trucks	8	8	12		0	4	0		4	40	8		0	24	8		116
Buses																	
Pedestrians		4				0				0				4			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/7/2024 4:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: S College Dr -- E Stowell Rd

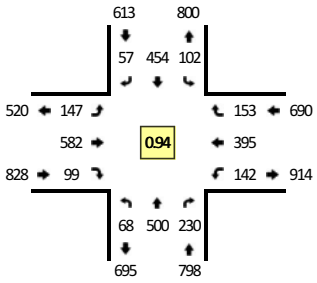
QC JOB #: 16809812

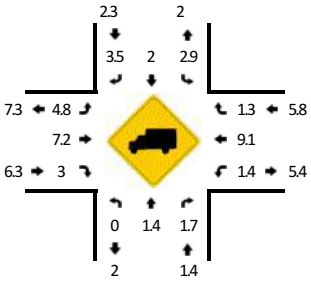
CITY/STATE: Santa Maria, CA

DATE: Tue, Oct 29 2024

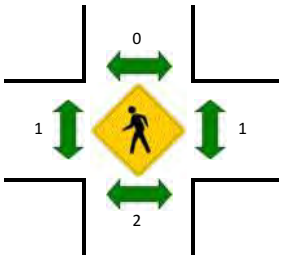
Peak-Hour: 4:25 PM -- 5:25 PM

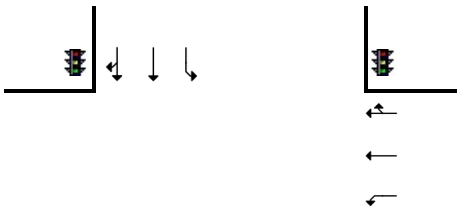
Peak 15-Min: 5:05 PM -- 5:20 PM

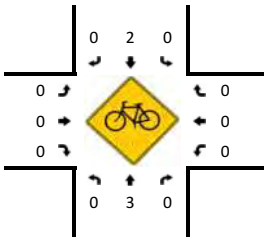


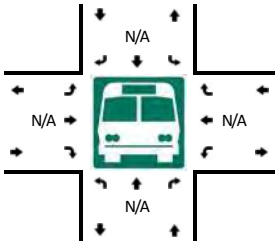


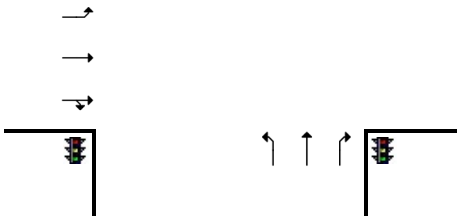
TRUE DATA TO IMPROVE MOBILITY

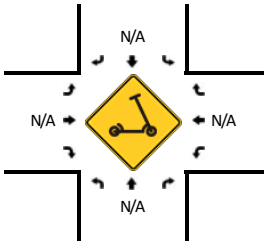












5-Min Count Period Beginning At	S College Dr (Northbound)				S College Dr (Southbound)				E Stowell Rd (Eastbound)				E Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	3	25	14	0	5	20	4	0	5	36	9	0	8	35	9	0	173	
2:05 PM	7	22	7	0	8	28	6	0	8	42	5	0	7	24	16	0	180	
2:10 PM	3	37	6	0	3	14	9	0	7	30	6	0	7	42	10	0	174	
2:15 PM	2	27	9	0	1	34	5	0	8	33	8	0	6	31	8	0	172	
2:20 PM	8	26	5	0	5	21	5	0	5	38	7	0	8	24	9	0	161	
2:25 PM	1	27	4	0	5	23	1	0	6	42	7	0	8	29	13	0	166	
2:30 PM	8	24	12	0	3	34	1	0	10	25	12	0	6	17	12	0	164	
2:35 PM	6	23	9	0	3	24	6	0	15	52	5	0	9	35	8	0	195	
2:40 PM	1	31	8	0	4	33	7	0	13	53	14	0	8	45	18	0	235	
2:45 PM	3	33	10	0	8	28	6	0	8	41	8	0	8	35	10	0	198	
2:50 PM	4	30	11	0	12	32	6	0	16	52	10	0	8	31	11	0	223	
2:55 PM	7	35	15	0	11	33	6	0	8	39	3	0	8	51	14	0	230	2271
3:00 PM	4	41	7	0	7	18	4	0	12	54	4	0	14	39	9	0	213	2311
3:05 PM	1	25	17	0	11	35	2	0	9	49	7	0	12	33	10	0	211	2342
3:10 PM	2	29	7	0	9	37	3	0	12	43	8	0	12	24	12	0	198	2366
3:15 PM	5	33	19	0	8	37	10	0	12	37	11	0	13	30	8	0	223	2417
3:20 PM	7	30	16	0	9	19	1	0	10	43	7	0	6	33	7	0	188	2444
3:25 PM	11	38	14	0	13	26	1	0	10	34	4	0	6	27	14	0	198	2476
3:30 PM	7	34	17	0	9	26	5	0	6	49	12	0	6	28	15	0	214	2526
3:35 PM	11	49	15	0	5	35	6	0	6	44	6	0	6	37	14	0	234	2565
3:40 PM	3	33	17	0	6	24	2	0	17	44	6	0	17	42	12	0	223	2553
3:45 PM	1	34	16	0	9	37	4	0	2	42	7	0	9	53	12	0	226	2581
3:50 PM	3	35	7	0	6	29	2	0	11	37	6	0	8	41	19	0	204	2562
3:55 PM	5	35	20	0	12	35	5	0	6	36	7	0	10	34	16	0	221	2553
4:00 PM	7	24	14	0	5	36	5	0	10	51	10	0	10	46	9	0	227	2567
4:05 PM	7	37	14	0	5	37	11	0	11	42	13	0	12	35	18	0	242	2598
4:10 PM	10	40	16	0	10	35	4	0	7	56	7	0	12	19	22	0	238	2638
4:15 PM	2	34	18	0	9	36	7	0	15	26	14	0	12	35	19	0	227	2642
4:20 PM	7	30	12	0	9	40	5	0	11	42	13	0	3	35	17	0	224	2678
4:25 PM	6	36	16	0	12	33	5	0	5	48	5	0	17	39	11	0	233	2713
4:30 PM	6	31	19	0	8	38	3	0	14	43	6	0	9	35	18	0	230	2729
4:35 PM	5	40	23	0	17	49	7	0	11	48	6	0	19	34	11	0	270	2765
4:40 PM	4	49	23	0	8	41	4	0	6	47	8	0	11	41	13	0	255	2797
4:45 PM	4	47	15	0	12	39	4	0	13	48	9	0	14	33	8	0	246	2817
4:50 PM	5	35	10	0	4	18	5	0	19	48	13	0	10	31	9	0	207	2820
4:55 PM	5	49	25	0	4	46	5	0	12	39	5	0	18	32	9	0	249	2848
5:00 PM	4	45	15	0	8	30	3	0	12	50	15	0	6	13	14	0	215	2836
5:05 PM	8	45	28	0	12	47	5	0	7	57	9	0	9	34	12	0	273	2867

5-Min Count Period Beginning At	S College Dr (Northbound)				S College Dr (Southbound)				E Stowell Rd (Eastbound)				E Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:10 PM	10	35	21	0	7	31	4	0	21	67	9	0	8	36	23	0	272	2901
5:15 PM	3	38	15	0	7	43	3	0	17	50	6	0	13	29	11	0	235	2909
5:20 PM	8	50	20	0	3	39	9	0	10	37	8	0	8	38	14	0	244	2929
5:25 PM	4	35	15	0	6	26	5	0	8	49	5	0	6	28	14	0	201	2897
5:30 PM	4	46	12	0	7	33	6	0	7	40	10	0	4	27	16	0	212	2879
5:35 PM	8	33	14	0	12	27	7	0	12	46	10	0	7	20	15	0	211	2820
5:40 PM	8	36	11	0	7	35	6	0	14	50	3	0	5	38	11	0	224	2789
5:45 PM	7	35	9	0	11	24	8	0	8	33	5	0	7	34	9	0	190	2733
5:50 PM	4	35	17	0	4	22	1	0	12	34	5	0	7	29	14	0	184	2710
5:55 PM	6	46	4	0	4	24	2	0	1	34	6	0	0	28	18	0	173	2634

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	84	472	256	0	104	484	48	0	180	696	96	0	120	396	184	0	3120
Heavy Trucks	0	8	0		4	8	4		8	32	4		0	32	4		104
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	4	0		0	0	0		0	0	0		0	0	0		4
Scooters																	

Comments:

Report generated on 11/7/2024 4:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: S Bradley Rd -- E Stowell Rd

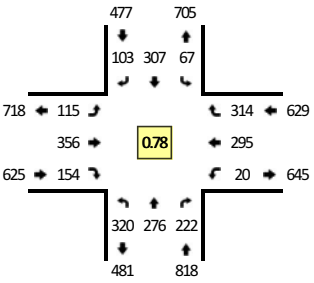
CITY/STATE: Santa Maria, CA

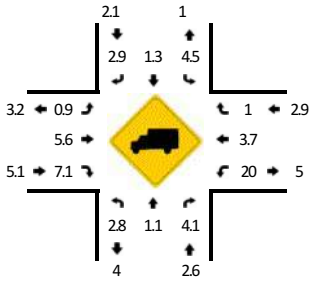
QC JOB #: 16809813

DATE: Wed, Oct 30 2024

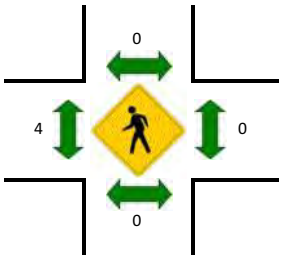
Peak-Hour: 7:25 AM -- 8:25 AM

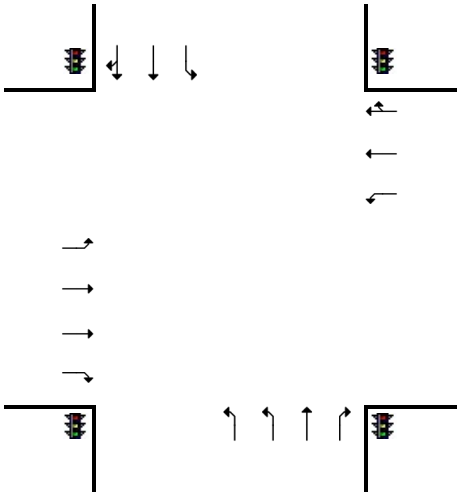
Peak 15-Min: 7:45 AM -- 8:00 AM

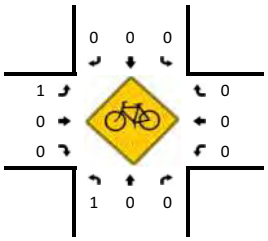


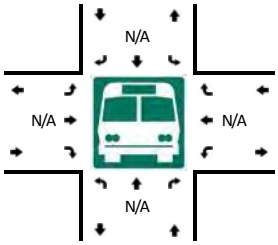


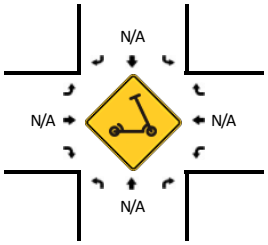
TRUE DATA TO IMPROVE MOBILITY











5-Min Count Period Beginning At	S Bradley Rd (Northbound)				S Bradley Rd (Southbound)				E Stowell Rd (Eastbound)				E Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 AM	4	1	3	0	2	1	0	0	0	6	4	0	1	0	0	0	22	
5:05 AM	3	1	6	0	1	2	0	0	0	11	5	0	0	2	0	0	31	
5:10 AM	0	0	3	0	0	4	2	0	0	9	4	0	0	5	0	0	27	
5:15 AM	3	1	6	0	2	4	0	0	1	12	4	0	0	2	0	0	35	
5:20 AM	4	1	3	0	0	3	0	0	0	17	7	0	0	0	1	0	36	
5:25 AM	6	3	8	0	1	9	3	0	1	17	3	0	1	0	0	0	52	
5:30 AM	5	1	9	0	1	10	0	0	1	11	5	0	1	1	0	0	45	
5:35 AM	6	2	9	0	2	7	2	0	2	15	6	0	1	1	0	0	53	
5:40 AM	8	1	7	0	5	6	0	0	2	18	4	0	0	2	1	0	54	
5:45 AM	6	2	12	0	2	11	4	0	1	28	6	0	0	3	1	0	76	
5:50 AM	10	2	7	0	4	8	7	0	1	25	7	0	0	3	1	0	75	
5:55 AM	6	2	10	0	3	10	3	0	2	25	16	0	1	5	1	0	84	590
6:00 AM	8	0	11	0	8	11	6	0	1	35	18	0	0	7	0	0	105	673
6:05 AM	4	2	13	0	5	14	7	0	2	34	18	0	0	4	2	0	105	747
6:10 AM	12	3	17	0	8	19	7	0	1	35	22	0	2	6	0	0	132	852
6:15 AM	10	3	17	0	9	21	1	0	0	49	24	0	1	10	0	0	145	962
6:20 AM	7	6	19	0	6	15	4	0	4	35	28	0	0	3	1	0	128	1054
6:25 AM	5	4	13	0	11	9	5	0	2	48	16	0	1	9	1	0	124	1126
6:30 AM	6	5	27	0	8	16	5	0	4	24	22	0	1	6	3	0	127	1208
6:35 AM	14	4	20	0	4	14	5	0	7	44	15	0	0	10	2	0	139	1294
6:40 AM	14	2	15	0	3	9	4	0	10	37	11	0	0	5	2	0	112	1352
6:45 AM	12	4	20	0	6	17	4	0	3	31	16	0	4	6	4	0	127	1403
6:50 AM	10	8	16	0	4	12	8	0	4	42	17	0	0	11	3	0	135	1463
6:55 AM	15	7	12	0	3	10	7	0	4	17	11	0	3	9	2	0	100	1479
7:00 AM	14	5	19	0	6	11	4	0	2	38	9	0	1	6	5	0	120	1494
7:05 AM	13	7	18	0	4	11	2	0	4	31	18	0	0	9	4	0	121	1510
7:10 AM	13	9	20	0	5	18	8	0	5	27	6	0	1	11	1	0	124	1502
7:15 AM	11	9	17	0	2	7	9	0	1	27	10	0	1	16	4	0	114	1471
7:20 AM	11	8	11	0	7	17	7	0	4	41	13	0	0	14	5	0	138	1481
7:25 AM	22	10	18	0	6	22	5	0	3	34	14	0	2	20	8	0	164	1521
7:30 AM	27	10	23	0	6	21	5	0	7	51	19	0	2	17	7	0	195	1589
7:35 AM	33	21	14	0	8	20	11	0	7	30	15	0	1	23	9	0	192	1642
7:40 AM	29	24	29	0	4	29	10	0	9	29	14	0	0	21	32	0	230	1760
7:45 AM	32	31	22	0	6	24	10	0	13	26	17	0	4	32	37	0	254	1887
7:50 AM	42	25	20	0	8	30	13	0	9	34	5	0	3	38	57	0	284	2036
7:55 AM	32	56	15	0	2	30	6	0	12	29	13	0	3	33	52	0	283	2219
8:00 AM	19	29	14	0	6	31	6	0	18	24	9	0	2	26	28	0	212	2311
8:05 AM	20	25	18	0	2	27	11	0	6	27	9	0	0	33	35	0	213	2403

5-Min Count Period Beginning At	S Bradley Rd (Northbound)				S Bradley Rd (Southbound)				E Stowell Rd (Eastbound)				E Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:10 AM	22	25	14	0	5	27	7	0	12	26	16	0	2	16	22	0	194	2473
8:15 AM	22	10	15	0	9	24	13	0	11	24	13	0	1	19	11	0	172	2531
8:20 AM	20	10	20	0	5	22	6	0	8	22	10	0	0	17	16	0	156	2549
8:25 AM	12	15	15	0	5	17	9	0	6	24	15	0	3	11	10	0	142	2527
8:30 AM	21	14	11	0	2	14	12	0	4	23	9	0	4	22	8	0	144	2476
8:35 AM	11	10	10	0	6	17	11	0	7	27	9	0	6	18	17	0	149	2433
8:40 AM	12	13	21	0	6	21	3	0	7	26	12	0	3	23	14	0	161	2364
8:45 AM	18	8	17	0	7	14	11	0	6	16	11	0	1	15	13	0	137	2247
8:50 AM	20	15	14	0	2	19	6	0	6	20	9	0	5	20	15	0	151	2114
8:55 AM	20	11	18	0	4	11	8	0	4	20	13	0	3	13	12	0	137	1968
9:00 AM	10	11	6	0	9	18	12	0	7	26	9	0	3	14	6	0	131	1887
9:05 AM	13	14	17	0	5	25	13	0	12	23	9	0	1	13	20	0	165	1839
9:10 AM	13	10	11	0	6	20	11	0	12	24	5	0	0	24	28	0	164	1809
9:15 AM	9	17	14	0	4	19	10	0	9	17	12	0	0	22	39	0	172	1809
9:20 AM	14	23	12	0	10	29	9	0	8	17	9	0	3	14	51	0	199	1852
9:25 AM	13	22	14	0	8	40	8	0	6	17	11	0	2	14	32	0	187	1897
9:30 AM	11	13	13	0	6	30	9	0	10	22	15	0	2	11	18	0	160	1913
9:35 AM	13	14	15	0	5	24	9	0	5	15	7	0	0	12	16	0	135	1899
9:40 AM	9	9	18	0	3	21	6	0	6	20	22	0	3	16	6	0	139	1877
9:45 AM	12	8	15	0	5	15	3	0	3	13	15	0	3	15	8	0	115	1855
9:50 AM	15	13	14	0	2	27	15	0	9	20	12	0	4	17	7	0	155	1859
9:55 AM	15	8	20	0	2	19	6	0	4	20	14	0	1	10	9	0	128	1850
10:00 AM	15	14	11	0	1	23	6	0	7	16	7	0	1	22	10	0	133	1852
10:05 AM	10	12	17	0	3	23	4	0	6	8	14	0	4	9	12	0	122	1809
10:10 AM	14	15	16	0	5	22	6	0	5	16	12	0	1	10	6	0	128	1773
10:15 AM	14	5	12	0	2	15	7	0	12	22	19	0	2	14	13	0	137	1738
10:20 AM	10	14	17	0	6	14	7	0	8	24	14	0	1	18	6	0	139	1678
10:25 AM	9	12	13	0	5	22	11	0	8	23	17	0	2	14	10	0	146	1637
10:30 AM	9	12	22	0	6	24	6	0	0	23	13	0	1	17	8	0	141	1618
10:35 AM	13	21	15	0	6	37	9	0	2	20	6	0	2	8	5	0	144	1627
10:40 AM	21	19	18	0	4	28	13	0	7	19	10	0	0	12	9	0	160	1648
10:45 AM	15	22	21	0	2	35	12	0	8	17	15	0	6	17	21	0	191	1724
10:50 AM	16	14	13	0	5	38	15	0	7	15	16	0	4	12	17	0	172	1741
10:55 AM	16	20	28	0	9	36	17	0	8	15	14	0	2	13	11	0	189	1802

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	424	448	228	0	64	336	116	0	136	356	140	0	40	412	584	0	3284
Heavy Trucks	4	4	8		0	0	0		0	28	0		4	24	8		80
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/7/2024 4:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: S Bradley Rd -- E Stowell Rd

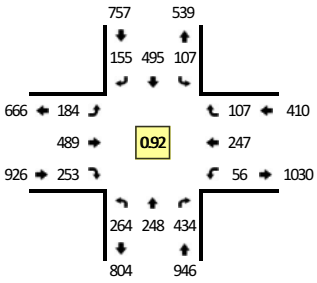
CITY/STATE: Santa Maria, CA

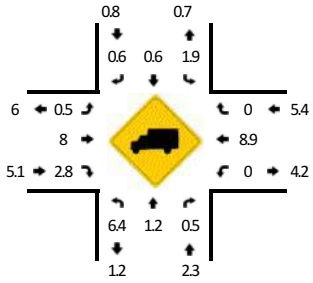
QC JOB #: 16809814

DATE: Tue, Oct 29 2024

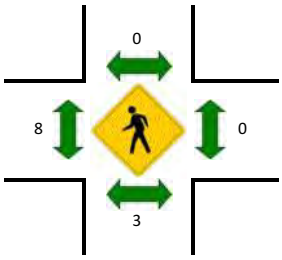
Peak-Hour: 4:25 PM -- 5:25 PM

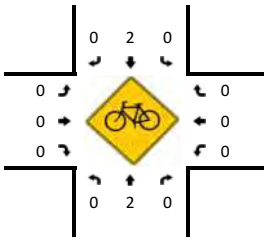
Peak 15-Min: 5:05 PM -- 5:20 PM

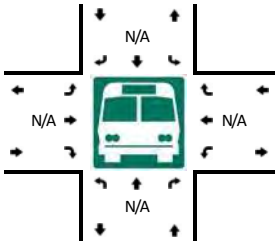


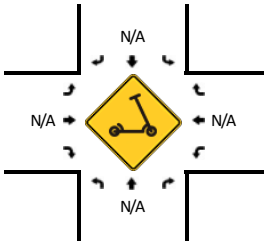


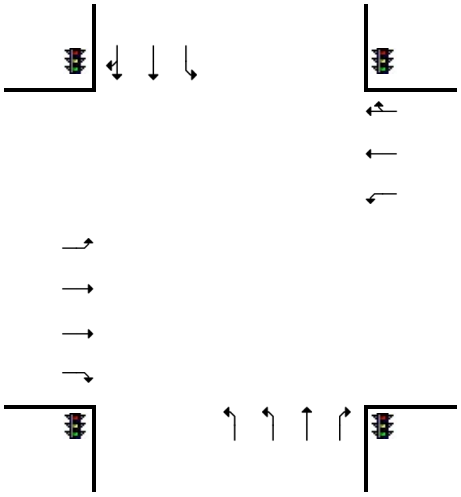
TRUE DATA TO IMPROVE MOBILITY











5-Min Count Period Beginning At	S Bradley Rd (Northbound)				S Bradley Rd (Southbound)				E Stowell Rd (Eastbound)				E Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	16	20	24	0	8	41	10	0	18	25	15	0	6	12	14	0	209	
2:05 PM	19	24	31	0	10	33	15	0	13	30	17	0	4	16	7	0	219	
2:10 PM	23	18	34	0	10	53	20	0	6	21	9	0	6	16	6	0	222	
2:15 PM	13	24	29	0	7	38	13	0	9	20	14	0	4	17	9	0	197	
2:20 PM	18	19	35	0	6	35	15	0	9	24	14	0	8	11	4	0	198	
2:25 PM	26	22	33	0	5	21	11	0	14	30	15	0	4	19	6	0	206	
2:30 PM	14	13	29	0	3	29	6	0	15	23	9	0	5	20	7	0	173	
2:35 PM	15	11	28	0	8	28	14	0	3	35	21	0	3	30	3	0	199	
2:40 PM	25	22	21	0	6	21	7	0	11	39	24	0	9	30	7	0	222	
2:45 PM	20	27	33	0	10	29	8	0	7	26	13	0	3	30	5	0	211	
2:50 PM	29	12	34	0	6	29	8	0	10	32	23	0	8	32	5	0	228	
2:55 PM	28	12	23	0	3	35	8	0	19	38	22	0	5	35	7	0	235	2519
3:00 PM	14	19	42	0	9	34	18	0	16	33	12	0	4	23	1	0	225	2535
3:05 PM	17	24	38	0	5	58	15	0	10	32	18	0	5	24	12	0	258	2574
3:10 PM	20	22	29	0	6	51	15	0	12	48	26	0	9	17	7	0	262	2614
3:15 PM	20	20	40	0	12	40	13	0	11	33	25	0	4	19	5	0	242	2659
3:20 PM	24	22	32	0	11	46	9	0	8	32	19	0	8	22	7	0	240	2701
3:25 PM	23	9	24	0	8	32	11	0	12	31	26	0	12	24	15	0	227	2722
3:30 PM	17	24	32	0	9	40	6	0	7	35	13	0	9	26	14	0	232	2781
3:35 PM	21	17	36	0	10	38	12	0	17	39	14	0	3	35	9	0	251	2833
3:40 PM	29	18	37	0	5	43	9	0	18	41	17	0	8	39	8	0	272	2883
3:45 PM	23	28	33	0	10	42	17	0	15	22	17	0	5	39	7	0	258	2930
3:50 PM	25	17	28	0	6	39	11	0	11	35	10	0	9	28	22	0	241	2943
3:55 PM	21	22	26	0	5	29	13	0	16	32	12	0	7	22	8	0	213	2921
4:00 PM	31	16	29	0	9	34	9	0	7	36	16	0	7	43	9	0	246	2942
4:05 PM	22	23	30	0	10	40	13	0	13	29	16	0	5	31	12	0	244	2928
4:10 PM	24	21	29	0	10	33	15	0	6	37	20	0	4	20	12	0	231	2897
4:15 PM	21	21	26	0	7	30	8	0	18	48	18	0	7	32	8	0	244	2899
4:20 PM	22	18	31	0	11	42	8	0	14	40	18	0	7	21	6	0	238	2897
4:25 PM	18	22	45	0	6	52	19	0	14	36	11	0	4	21	6	0	254	2924
4:30 PM	13	18	21	0	6	39	15	0	14	41	19	0	5	21	11	0	223	2915
4:35 PM	26	16	35	0	12	43	18	0	15	36	22	0	6	22	8	0	259	2923
4:40 PM	23	24	37	0	13	46	13	0	12	56	25	0	6	23	7	0	285	2936
4:45 PM	27	20	33	0	5	34	15	0	15	42	19	0	4	20	11	0	245	2923
4:50 PM	17	23	29	0	14	36	11	0	13	34	17	0	3	25	12	0	234	2916
4:55 PM	29	19	33	0	9	39	10	0	17	36	25	0	2	17	10	0	246	2949
5:00 PM	12	18	34	0	10	47	11	0	14	24	23	0	11	5	5	0	214	2917
5:05 PM	27	23	44	0	6	44	14	0	16	42	29	0	5	17	7	0	274	2947

5-Min Count Period Beginning At	S Bradley Rd (Northbound)				S Bradley Rd (Southbound)				E Stowell Rd (Eastbound)				E Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:10 PM	36	20	38	0	12	38	10	0	10	60	27	0	2	27	7	0	287	3003
5:15 PM	21	22	40	0	7	38	10	0	25	50	17	0	3	22	7	0	262	3021
5:20 PM	15	23	45	0	7	39	9	0	19	32	19	0	5	27	16	0	256	3039
5:25 PM	22	21	31	0	6	39	6	0	10	37	17	0	6	7	13	0	215	3000
5:30 PM	32	24	35	0	11	36	5	0	11	30	19	0	5	21	8	0	237	3014
5:35 PM	24	21	27	0	10	23	13	0	16	35	14	0	11	20	8	0	222	2977
5:40 PM	14	28	45	0	4	33	13	0	15	30	9	0	6	24	6	0	227	2919
5:45 PM	29	20	39	0	9	24	10	0	7	47	16	0	10	15	9	0	235	2909
5:50 PM	22	22	22	0	10	23	8	0	9	37	15	0	1	21	13	0	203	2878
5:55 PM	22	23	28	0	13	26	7	0	10	32	11	0	7	29	20	0	228	2860

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	336	260	488	0	100	480	136	0	204	608	292	0	40	264	84	0	3292
Heavy Trucks	4	0	0		0	4	0		0	28	8		0	28	0		72
Buses																	
Pedestrians		0				0				12				0			12
Bicycles	0	4	0		0	4	0		0	0	0		0	0	0		8
Scooters																	

Comments:

Report generated on 11/7/2024 4:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: S Bradley Rd -- Columbia Dr/US 101 SB Ramps

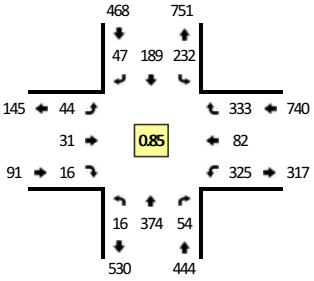
QC JOB #: 16809815

CITY/STATE: Santa Maria, CA

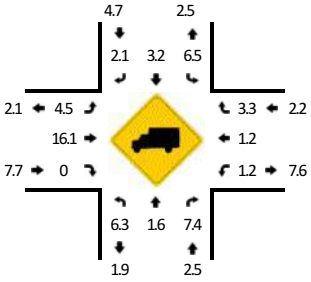
DATE: Wed, Oct 30 2024

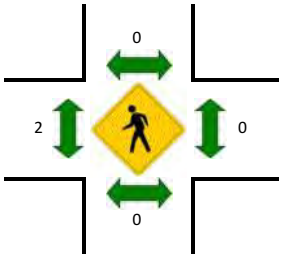
Peak-Hour: 7:25 AM -- 8:25 AM

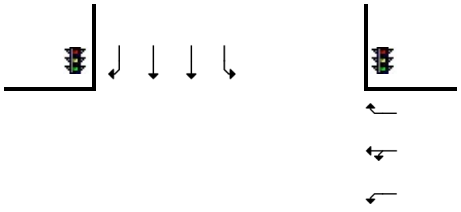
Peak 15-Min: 7:45 AM -- 8:00 AM

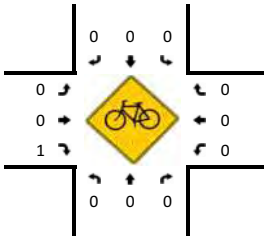


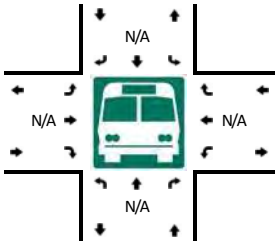


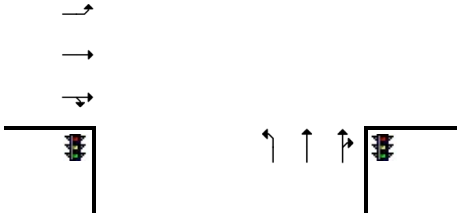


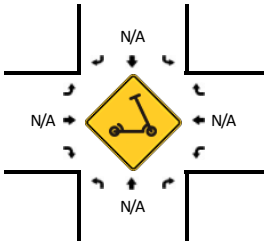












5-Min Count Period Beginning At	S Bradley Rd (Northbound)				S Bradley Rd (Southbound)				Columbia Dr/US 101 SB Ramps (Eastbound)				Columbia Dr/US 101 SB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 AM	0	2	0	0	8	2	1	0	0	1	0	0	2	0	6	0	22	
5:05 AM	0	5	0	0	5	1	0	0	1	0	0	0	5	2	3	0	22	
5:10 AM	2	3	0	0	4	2	1	0	0	0	0	0	4	1	0	0	17	
5:15 AM	0	6	0	0	4	3	2	0	0	0	0	0	4	0	4	0	23	
5:20 AM	1	5	0	0	8	2	0	0	0	1	0	0	7	1	10	0	35	
5:25 AM	1	4	0	0	10	5	2	0	3	0	0	0	6	1	8	0	40	
5:30 AM	0	8	2	0	12	1	2	0	3	1	0	0	3	3	6	0	41	
5:35 AM	1	10	1	0	11	4	0	0	0	2	0	0	7	3	6	0	45	
5:40 AM	0	3	4	0	14	6	0	0	2	0	0	0	7	6	10	0	52	
5:45 AM	2	14	3	0	10	4	3	0	0	2	0	0	12	5	5	0	60	
5:50 AM	0	10	4	0	18	3	0	0	3	0	1	0	10	0	11	0	60	
5:55 AM	0	11	2	0	18	5	3	0	0	1	0	0	19	6	12	0	77	494
6:00 AM	3	7	1	0	21	4	0	0	1	1	1	0	8	2	8	0	57	529
6:05 AM	0	16	1	0	32	7	0	0	0	2	0	0	7	2	5	0	72	579
6:10 AM	0	18	1	0	23	7	1	0	3	2	0	0	6	1	9	0	71	633
6:15 AM	1	19	1	0	38	6	0	0	0	2	0	0	7	5	16	0	95	705
6:20 AM	0	14	4	0	39	9	2	0	4	5	0	0	17	3	16	0	113	783
6:25 AM	0	24	4	0	26	1	0	0	2	1	1	0	15	5	5	0	84	827
6:30 AM	1	26	2	0	37	4	2	0	1	4	0	0	14	1	9	0	101	887
6:35 AM	2	15	5	0	17	5	3	0	0	0	0	0	13	2	20	0	82	924
6:40 AM	1	6	2	0	19	6	5	0	5	3	0	0	14	2	13	0	76	948
6:45 AM	2	21	2	0	21	7	5	0	0	3	1	0	11	4	15	0	92	980
6:50 AM	2	17	1	0	21	6	3	0	4	1	1	0	19	1	16	0	92	1012
6:55 AM	1	18	6	0	10	9	3	0	0	1	1	0	22	2	9	0	82	1017
7:00 AM	1	22	2	0	17	2	0	0	4	0	0	0	20	5	11	0	84	1044
7:05 AM	1	24	4	0	20	8	2	0	2	2	0	0	18	5	10	0	96	1068
7:10 AM	1	26	8	0	13	7	0	0	5	1	0	0	19	5	9	0	94	1091
7:15 AM	2	22	6	0	14	6	1	0	0	0	0	0	22	8	9	0	90	1086
7:20 AM	1	22	4	0	16	11	3	0	1	3	1	0	14	3	10	0	89	1062
7:25 AM	3	31	6	0	17	13	5	0	3	1	0	0	26	5	19	0	129	1107
7:30 AM	0	26	5	0	23	13	5	0	2	2	1	0	40	7	16	0	140	1146
7:35 AM	3	32	6	0	19	10	4	0	6	3	3	0	25	6	28	0	145	1209
7:40 AM	1	50	3	0	26	13	4	0	3	6	2	0	24	8	26	0	166	1299
7:45 AM	1	25	5	0	15	26	5	0	10	3	1	0	32	6	41	0	170	1377
7:50 AM	1	25	1	0	12	15	4	0	4	2	1	0	35	11	52	0	163	1448
7:55 AM	2	43	5	0	29	20	0	0	5	4	1	0	24	6	40	0	179	1545
8:00 AM	1	26	2	0	15	15	3	0	2	1	0	0	40	9	28	0	142	1603
8:05 AM	0	29	0	0	18	20	5	0	1	0	0	0	18	6	27	0	124	1631

5-Min Count Period Beginning At	S Bradley Rd (Northbound)				S Bradley Rd (Southbound)				Columbia Dr/US 101 SB Ramps (Eastbound)				Columbia Dr/US 101 SB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:10 AM	2	34	7	0	14	20	5	0	2	3	1	0	17	10	21	0	136	1673
8:15 AM	2	30	5	0	22	11	4	0	3	5	2	0	16	4	17	0	121	1704
8:20 AM	0	23	9	0	22	13	3	0	3	1	4	0	28	4	18	0	128	1743
8:25 AM	6	27	2	0	16	11	5	0	3	2	3	0	16	7	16	0	114	1728
8:30 AM	2	27	6	0	8	15	3	0	2	4	3	0	18	5	9	0	102	1690
8:35 AM	1	31	3	0	4	18	5	0	2	2	3	0	19	4	7	0	99	1644
8:40 AM	5	22	1	0	11	12	8	0	6	2	0	0	22	6	12	0	107	1585
8:45 AM	3	29	4	0	10	10	3	0	6	2	0	0	17	8	14	0	106	1521
8:50 AM	3	23	6	0	13	11	9	0	2	2	1	0	23	14	24	0	131	1489
8:55 AM	8	29	4	0	8	15	5	0	7	4	1	0	23	9	11	0	124	1434
9:00 AM	4	16	5	0	8	8	8	0	1	0	3	0	19	4	9	0	85	1377
9:05 AM	4	25	2	0	10	19	5	0	3	2	2	0	13	6	10	0	101	1354
9:10 AM	6	17	2	0	12	15	2	0	7	3	1	0	24	2	17	0	108	1326
9:15 AM	4	20	3	0	13	14	1	0	7	3	3	0	12	2	14	0	96	1301
9:20 AM	9	28	1	0	14	18	6	0	3	2	3	0	17	7	15	0	123	1296
9:25 AM	5	25	5	0	19	22	5	0	4	7	4	0	16	2	17	0	131	1313
9:30 AM	5	16	5	0	19	21	9	0	6	3	6	0	18	3	11	0	122	1333
9:35 AM	2	21	4	0	6	22	8	0	10	2	2	0	22	6	10	0	115	1349
9:40 AM	5	23	3	0	13	19	8	0	3	3	7	0	19	1	6	0	110	1352
9:45 AM	5	23	2	0	11	19	4	0	6	0	2	0	20	6	8	0	106	1352
9:50 AM	5	19	4	0	8	10	5	0	4	3	3	0	35	7	14	0	117	1338
9:55 AM	7	32	5	0	15	26	2	0	5	1	5	0	19	4	11	0	132	1346
10:00 AM	8	29	2	0	8	17	2	0	6	2	7	0	18	3	8	0	110	1371
10:05 AM	7	17	1	0	17	15	7	0	4	2	3	0	28	4	10	0	115	1385
10:10 AM	1	35	4	0	8	22	5	0	6	2	5	0	26	6	8	0	128	1405
10:15 AM	6	18	7	0	14	14	5	0	3	6	9	0	23	10	4	0	119	1428
10:20 AM	4	28	5	0	11	11	9	0	7	2	4	0	22	8	8	0	119	1424
10:25 AM	6	20	5	0	15	18	5	0	3	3	2	0	29	2	8	0	116	1409
10:30 AM	4	35	7	0	7	17	1	0	10	10	3	0	25	4	11	0	134	1421
10:35 AM	4	30	7	0	20	34	3	0	5	5	4	0	21	4	10	0	147	1453
10:40 AM	8	35	12	0	8	26	2	0	5	5	1	0	29	3	14	0	148	1491
10:45 AM	11	42	3	0	10	25	3	0	5	2	4	0	23	4	13	0	145	1530
10:50 AM	8	36	6	0	17	39	7	0	2	5	2	0	26	5	11	0	164	1577
10:55 AM	4	38	10	0	27	24	4	0	9	4	2	0	21	3	11	0	157	1602

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	372	44	0	224	244	36	0	76	36	12	0	364	92	532	0	2048
Heavy Trucks	4	0	0		12	8	0		4	16	0		8	0	8		60
Buses																	
Pedestrians		0				0				4				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/7/2024 4:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: S Bradley Rd -- Columbia Dr/US 101 SB Ramps

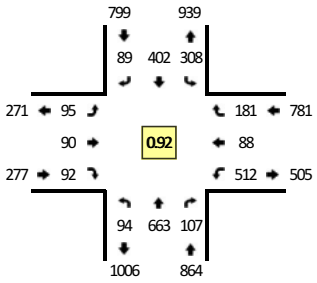
CITY/STATE: Santa Maria, CA

QC JOB #: 16809816

DATE: Tue, Oct 29 2024

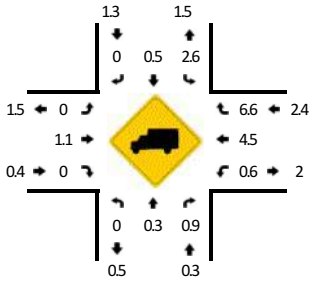
Peak-Hour: 4:30 PM -- 5:30 PM

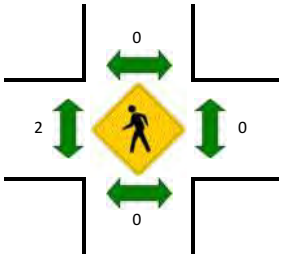
Peak 15-Min: 5:05 PM -- 5:20 PM

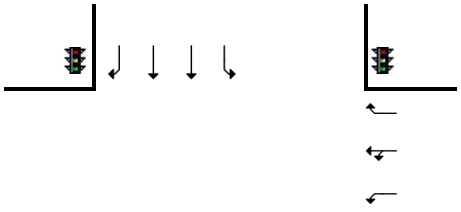


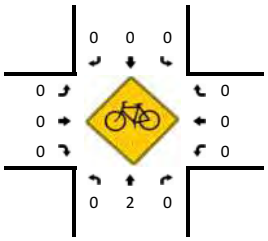


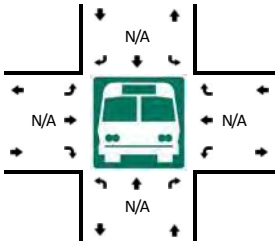
TRUE DATA TO IMPROVE MOBILITY

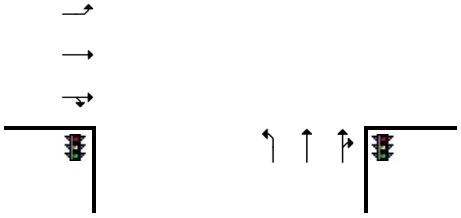


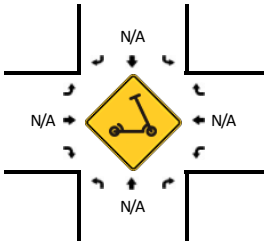












5-Min Count Period Beginning At	S Bradley Rd (Northbound)				S Bradley Rd (Southbound)				Columbia Dr/US 101 SB Ramps (Eastbound)				Columbia Dr/US 101 SB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	11	47	4	0	17	35	7	0	13	5	7	0	27	11	14	0	198	
2:05 PM	6	52	8	0	30	26	3	0	8	4	13	0	22	5	14	0	191	
2:10 PM	9	49	5	0	32	28	2	0	4	7	13	0	30	2	13	0	194	
2:15 PM	9	38	6	0	17	26	6	0	10	8	6	0	45	7	14	0	192	
2:20 PM	4	61	5	0	25	28	3	0	11	8	12	0	35	3	13	0	208	
2:25 PM	5	48	8	0	13	20	9	0	3	3	7	0	36	8	20	0	180	
2:30 PM	8	40	9	0	21	20	4	0	6	2	2	0	27	5	7	0	151	
2:35 PM	6	44	11	0	11	26	5	0	6	5	7	0	43	4	11	0	179	
2:40 PM	2	53	7	0	23	29	8	0	5	9	11	0	21	8	11	0	187	
2:45 PM	9	51	15	0	26	16	2	0	12	5	6	0	23	2	9	0	176	
2:50 PM	11	39	7	0	28	32	5	0	5	5	22	0	52	7	21	0	234	
2:55 PM	6	56	11	0	20	34	3	0	6	8	5	0	32	5	18	0	204	2294
3:00 PM	12	62	9	0	17	33	9	0	3	1	6	0	50	4	7	0	213	2309
3:05 PM	6	38	18	0	18	32	4	0	7	11	6	0	43	3	14	0	200	2318
3:10 PM	6	71	6	0	33	56	8	0	6	3	5	0	27	6	8	0	235	2359
3:15 PM	8	48	9	0	24	27	11	0	1	5	12	0	32	7	18	0	202	2369
3:20 PM	5	63	14	0	19	46	7	0	7	5	7	0	27	5	6	0	211	2372
3:25 PM	4	39	7	0	24	31	7	0	6	4	15	0	49	3	16	0	205	2397
3:30 PM	11	58	12	0	37	36	9	0	9	6	4	0	27	6	9	0	224	2470
3:35 PM	10	43	4	0	14	34	5	0	12	6	5	0	37	5	22	0	197	2488
3:40 PM	4	52	11	0	19	24	10	0	9	7	15	0	46	3	18	0	218	2519
3:45 PM	12	34	0	0	21	26	3	0	10	5	5	0	48	6	17	0	187	2530
3:50 PM	5	58	9	0	19	43	12	0	10	12	8	0	32	4	12	0	224	2520
3:55 PM	4	31	10	0	20	15	3	0	2	9	4	0	52	9	17	0	176	2492
4:00 PM	10	59	16	0	18	37	6	0	8	2	10	0	39	4	16	0	225	2504
4:05 PM	8	39	9	0	27	16	9	0	6	8	9	0	56	8	10	0	205	2509
4:10 PM	5	51	8	0	29	41	4	0	8	9	5	0	27	9	7	0	203	2477
4:15 PM	8	55	11	0	22	27	7	0	5	16	6	0	40	10	7	0	214	2489
4:20 PM	9	37	9	0	22	24	5	0	5	10	3	0	48	9	14	0	195	2473
4:25 PM	2	54	10	0	12	51	5	0	6	8	5	0	32	5	12	0	202	2470
4:30 PM	8	30	3	0	28	29	13	0	5	6	7	0	49	12	13	0	203	2449
4:35 PM	8	76	13	0	24	34	9	0	11	4	5	0	27	3	14	0	228	2480
4:40 PM	6	47	7	0	27	29	8	0	5	10	3	0	50	6	16	0	214	2476
4:45 PM	6	53	8	0	34	26	8	0	5	8	5	0	40	16	16	0	225	2514
4:50 PM	7	64	10	0	15	39	6	0	11	8	11	0	46	4	12	0	233	2523
4:55 PM	9	47	9	0	23	37	5	0	5	6	10	0	48	8	17	0	224	2571
5:00 PM	6	56	11	0	24	35	5	0	11	12	8	0	36	5	9	0	218	2564
5:05 PM	7	58	5	0	27	25	7	0	7	6	5	0	56	8	19	0	230	2589

5-Min Count Period Beginning At	S Bradley Rd (Northbound)				S Bradley Rd (Southbound)				Columbia Dr/US 101 SB Ramps (Eastbound)				Columbia Dr/US 101 SB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:10 PM	9	52	8	0	32	39	7	0	9	8	16	0	43	6	22	0	251	2637
5:15 PM	11	76	15	0	26	45	6	0	10	5	9	0	39	6	14	0	262	2685
5:20 PM	8	47	10	0	20	26	5	0	7	14	6	0	42	9	17	0	211	2701
5:25 PM	9	57	8	0	28	38	10	0	9	3	7	0	36	5	12	0	222	2721
5:30 PM	1	56	3	0	19	21	7	0	14	10	3	0	36	4	20	0	194	2712
5:35 PM	3	62	10	0	21	25	8	0	4	7	8	0	29	6	9	0	192	2676
5:40 PM	12	61	5	0	15	29	7	0	6	6	5	0	45	3	17	0	211	2673
5:45 PM	1	40	8	0	13	19	3	0	8	4	5	0	42	8	20	0	171	2619
5:50 PM	8	44	7	0	19	27	6	0	8	9	5	0	39	9	7	0	188	2574
5:55 PM	3	46	9	0	10	16	10	0	8	2	5	0	30	9	13	0	161	2511

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	108	744	112	0	340	436	80	0	104	76	120	0	552	80	220	0	2972
Heavy Trucks	0	0	0		8	4	0		0	0	0		4	8	0		24
Buses																	
Pedestrians		0				0				4				0			4
Bicycles	0	4	0		0	0	0		0	0	0		0	0	0		4
Scooters																	

Comments:

Report generated on 11/7/2024 4:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

P1= Projected volum
P_0= Current Volume
e= Constant
r= Growth Rate=
t= Time=

$P_1=P_oe^{rt}$

		2.0%	2.0%	
		1	1	
		1	2	
Year A	2023	1,110	1,132	vpd
Year B	2024	1,132	1,155	vpd

Approach	AM 2023	AM 2024
SBL	1	1
SBT	0	0
SBR	507	517
NBL	3	3
NBT	1	1
NBR	1	1
EBL	593	605
EBT	56	57
EBR	7	7
WBL	0	0
WBT	31	32
WBR	4	4

P1= Projected volum
P_0= Current Volume
e= Constant
r= Growth Rate=
t= Time=

$P_1=P_oe^{rt}$

		2.0%	2.0%	
		1	1	
		1	2	
Year A	2023	1,500	467	vpd
Year B	2024	1,530	477	vpd

Approach	PM 2023	PM 2024
SBL	0	0
SBT	14	14
SBR	435	444
NBL	9	9
NBT	3	3
NBR	1	1
EBL	1027	1048
EBT	40	41
EBR	20	20
WBL	0	0
WBT	54	55
WBR	11	11

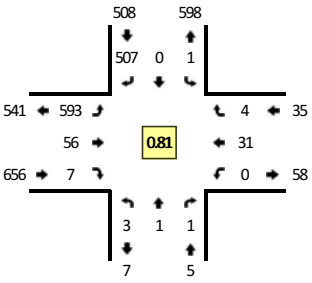
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

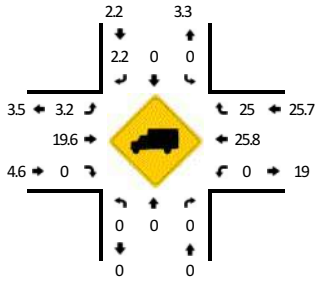
LOCATION: US 101 NB Ramps/Nicholson Ave -- E Stowell Rd
CITY/STATE: Santa Maria, CA

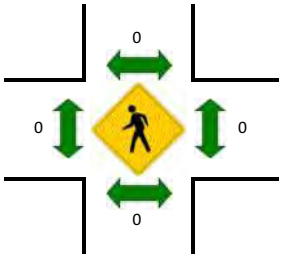
QC JOB #: 16382913
DATE: Thu, Nov 9 2023

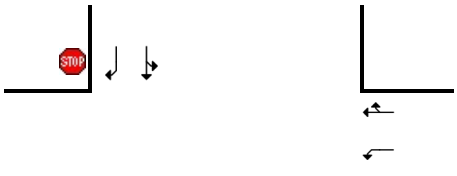
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

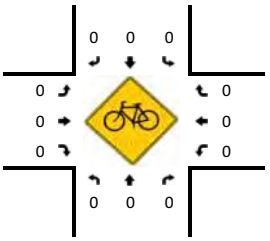


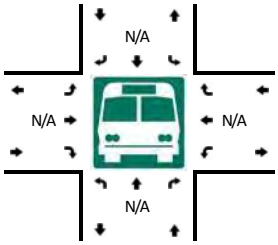




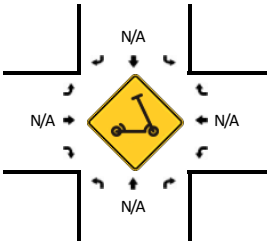












R* = RTOR

15-Min Count Period Beginning At	US 101 NB Ramps/Nicholson Ave (Northbound)					US 101 NB Ramps/Nicholson Ave (Southbound)					E Stowell Rd (Eastbound)					E Stowell Rd (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	0	0	0	0	0	1	0	52	0	0	126	9	0	0	0	0	2	2	0	0	192	
7:15 AM	0	0	0	0	0	0	0	66	0	0	158	11	0	0	0	1	5	3	0	0	244	
7:30 AM	1	0	0	0	0	0	0	117	0	0	162	7	2	0	0	0	8	1	0	0	298	
7:45 AM	1	0	1	0	0	0	0	171	0	0	162	21	2	0	0	0	11	1	0	0	370	1104
8:00 AM	1	0	0	0	0	0	0	121	0	0	130	13	3	0	0	0	6	1	0	0	275	1187
8:15 AM	0	1	0	0	0	1	0	98	0	0	139	15	0	0	0	0	6	1	0	0	261	1204
8:30 AM	1	0	0	0	0	0	0	101	0	0	117	8	0	0	0	0	4	1	0	0	232	1138
8:45 AM	0	0	0	0	0	2	0	85	0	0	106	8	2	0	0	0	13	2	0	0	218	986

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	4	0	4	0	0	0	0	684	0	0	648	84	8	0	0	0	44	4	0	0	1480
Heavy Trucks	0	0	0			0	0	12			20	20	0			0	8	0			60
Buses																					
Pedestrians		0					0					0					0				0
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0
Scooters																					

Comments:

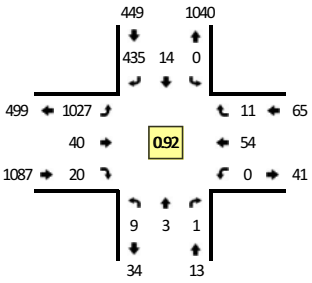
Report generated on 4/10/2025 7:12 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

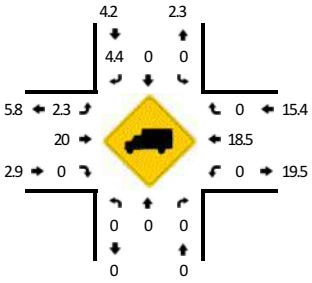
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

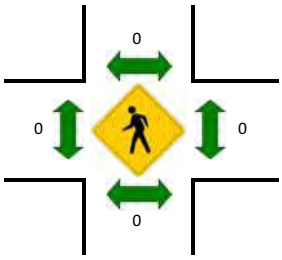
LOCATION: US 101 NB Ramps/Nicholson Ave -- E Stowell Rd | **QC JOB #:** 16382914
CITY/STATE: Santa Maria, CA | **DATE:** Thu, Nov 9 2023

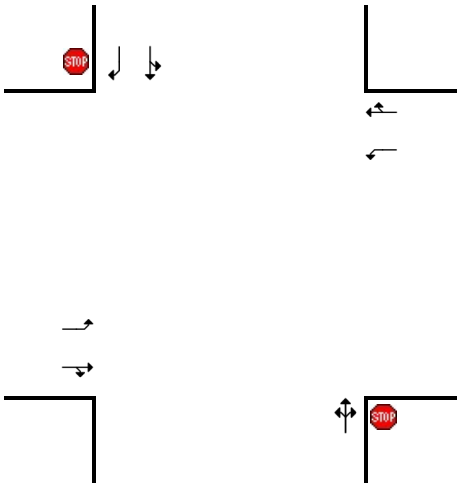
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

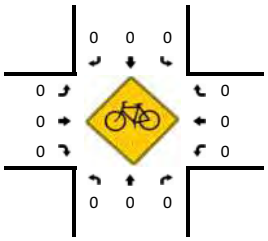


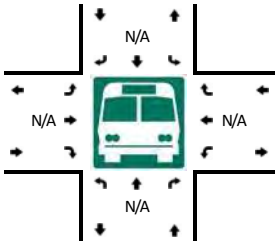
TRUE DATA TO IMPROVE MOBILITY

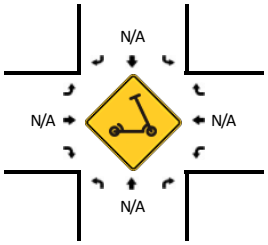












R* = RTOR

15-Min Count Period Beginning At	US 101 NB Ramps/Nicholson Ave (Northbound)					US 101 NB Ramps/Nicholson Ave (Southbound)					E Stowell Rd (Eastbound)					E Stowell Rd (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	3	1	0	0	0	0	0	115	0	0	215	9	1	0	0	0	26	3	0	0	373	
4:15 PM	2	0	1	0	0	0	1	122	0	0	221	11	2	1	0	0	14	1	0	0	376	
4:30 PM	3	1	0	0	0	0	0	88	0	0	281	12	5	0	0	0	12	7	0	0	409	
4:45 PM	0	0	0	0	0	0	11	113	0	0	231	8	9	0	0	0	17	2	0	0	391	1549
5:00 PM	4	2	0	0	0	0	2	112	0	0	293	9	4	0	0	0	11	1	0	0	438	1614
5:15 PM	2	2	0	0	0	0	5	84	0	0	241	9	11	0	0	0	13	1	0	0	368	1606
5:30 PM	5	3	0	0	0	0	2	104	0	0	214	6	9	0	0	0	5	1	0	0	349	1546
5:45 PM	12	2	0	0	0	0	4	81	0	0	202	2	12	0	0	0	8	1	0	0	324	1479

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	16	8	0	0	0	0	8	448	0	0	1172	36	16	0	0	0	44	4	0	0	1752
Heavy Trucks	0	0	0			0	0	16			36	4	0			0	12	0			68
Buses																					
Pedestrians		0					0					0					0				0
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0
Scooters																					

Comments:

Report generated on 4/10/2025 7:12 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Appendix E – Synchro Reports

2024 EXISTING								2027 NO BUILD								2027 BUILD								2027 MITIGATED (SIGNAL OPTIMIZATION ONLY)							
ID	Intersection	Control	Movement	AM		PM		ID	Intersection	Control	Movement	AM		PM		ID	Intersection	Control	Movement	AM		PM		ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay					LOS	Delay	LOS	Delay					LOS	Delay	LOS	Delay					LOS	Delay	LOS	Delay
1	W. Stowell Road / Hanson Way	Stop-Control	**OVERALL**	**A**	**3.6**	**A**	**2.8**	1	W. Stowell Road / Hanson Way	Stop-Control	**OVERALL**	**A**	**3.4**	**A**	**2.7**	1	W. Stowell Road / Hanson Way	Stop-Control	**OVERALL**	**A**	**3.3**	**A**	**2.7**								
			EB	A	1.7	A	1.4				EB	A	1.6	A	1.4				EB	A	1.6	A	1.5								
			WB	A	0.0	A	0.0				WB	A	0.0	A	0.0				WB	A	0.0	A	0.0								
			NB	A	8.7	B	12.3				NB	A	8.9	B	13.4				NB	A	8.9	B	14.3								
			SB	B	11.7	B	14.0				SB	B	13.2	C	15.9				SB	B	13.4	C	18.0								
2	W. Stowell Road / S. Blosser Road	Signal	**OVERALL**	**D**	**35.1**	**D**	**37.2**	2	W. Stowell Road / S. Blosser Road	Signal	**OVERALL**	**E**	**58.8**	**D**	**47.9**	2	W. Stowell Road / S. Blosser Road	Signal	**OVERALL**	**E**	**58.8**	**D**	**50.2**	2	W. Stowell Road / S. Blosser Road	Signal	**OVERALL**	**D**	**37.5**	**D**	**53.3**
			EB	E	57.8	E	61.0				EB	E	56.6	E	67.7				EB	E	56.4	E	71.1				EB	E	67.8	F	81.3
			WB	E	62.0	D	51.0				WB	F	128.5	E	60.7				WB	F	127.8	E	61.3				WB	D	41.6	E	68.8
			NB	C	21.0	C	26.8				NB	C	23.5	D	40.9				NB	C	23.6	D	43.0				NB	C	29.2	D	39.8
			SB	B	19.4	C	23.0				SB	C	25.2	C	32.3				SB	C	25.3	C	33.8				SB	C	30.9	D	35.8
3	W. Stowell Road / Black Road	Stop-Control	**OVERALL**	**A**	**4.7**	**A**	**6.9**	3	W. Stowell Road / Black Road	Stop-Control	**OVERALL**	**A**	**4.7**	**A**	**7.5**	3	W. Stowell Road / Black Road	Stop-Control	**OVERALL**	**A**	**4.7**	**A**	**7.7**								
			WB	B	11.1	C	20.4				WB	B	11.4	C	23.2				WB	B	11.4	C	23.8								
			NB	A	0.0	A	0.0				NB	A	0.0	A	0.0				NB	A	0.0	A	0.0								
			SB	A	3.8	A	5.6				SB	A	3.8	A	5.7				SB	A	3.9	A	5.7								
4	W. Taylor St / N. Blosser Road	Stop-Control	**OVERALL**	**A**	**4.0**	**A**	**2.3**	4	W. Taylor St / N. Blosser Road	Stop-Control	**OVERALL**	**A**	**4.3**	**A**	**2.4**	4	W. Taylor St / N. Blosser Road	Stop-Control	**OVERALL**	**A**	**4.3**	**A**	**2.6**								
			WB	C	15.7	B	14.8				WB	C	16.9	C	15.6				WB	C	17.0	C	16.0								
			NB	A	0.0	A	0.0				NB	A	0.0	A	0.0				NB	A	0.0	A	0.0								
			SB	A	0.3	A	0.4				SB	A	0.3	A	0.4				SB	A	0.3	A	0.4								
5	W. Stowell Road / Broadway	Signal	**OVERALL**	**D**	**43.8**	**E**	**60.3**	5	W. Stowell Road / Broadway	Signal	**OVERALL**	**E**	**66.8**	**F**	**118.5**	5	W. Stowell Road / Broadway	Signal	**OVERALL**	**E**	**67.6**	**F**	**128.1**	5	W. Stowell Road / Broadway	Signal	**OVERALL**	**D**	**52.5**	**F**	**88.0**
			EB	D	47.5	D	58.3				EB	F	86.0	F	144.5				EB	F	86.9	F	157.9				EB	D	53.5	F	94.4
			WB	D	47.4	E	62.1				WB	F	59.5	F	183.0				WB	F	91.7	F	206.3				WB	E	63.4	F	139.8
			NB	D	39.4	E	64.0				NB	D	40.9	F	81.1				NB	D	40.9	F	82.1				NB	D	38.7	D	48.9
			SB	D	43.4	D	55.4				SB	D	54.1	F	84.2				SB	D	54.2	F	85.7				SB	D	54.5	F	83.2
6	Main Street / Black Road	Stop-Control	**OVERALL**	**A**	**4.0**	**A**	**7.8**	6	Main Street / Black Road	Stop-Control	**OVERALL**	**A**	**4.8**	**B**	**11.5**	6	Main Street / Black Road	Stop-Control	**OVERALL**	**A**	**4.8**	**B**	**12.0**								
			EB	A	0.1	A	0.0				EB	A	0.1	A	0.0				EB	A	0.1	A	0.0								
			WB	A	1.4	A	1.3				WB	A	1.5	A	1.4				WB	A	1.5	A	1.4								
			NB	E	35.0	F	65.2				NB	E	44.6	F	100.7				NB	E	44.6	F	105.5								
			SB	D	27.2	E	43.7				SB	D	30.6	F	54.7				SB	D	30.6	F	54.9								
7	W. Stowell Road / S. Bradley Rd	Signal	**OVERALL**	**E**	**59.1**	**E**	**74.0**	7	W. Stowell Road / S. Bradley Rd	Signal	**OVERALL**	**E**	**64.6**	**F**	**84.1**	7	W. Stowell Road / S. Bradley Rd	Signal	**OVERALL**	**E**	**65.0**	**F**	**84.3**	7	W. Stowell Road / S. Bradley Rd	Signal	**OVERALL**	**D**	**42.8**	**E**	**63.0**
			EB	B	16.4	C	21.2				EB	B	17.5	C	22.5				EB	B	17.5	C	22.5				EB	C	20.6	C	24.8
			WB	D	42.3	C	34.2				WB	D	45.2	D	35.6				WB	D	45.4	D	35.8				WB	D	53.7	D	38.1
			NB	F	106.7	F	151.8				NB	F	118.8	F	177.4				NB	F	120.0	F	179.3				NB	D	47.6	F	119.3
			SB	E	55.6	E	63.0				SB	E	57.4	E	67.7				SB	**E**	**57.4**	**E**	**67.7**				SB	D	48.9	D	52.8
8	S. Bradley Rd / Columbia/I-101 SB Off/On Ramp	Signal	**OVERALL**	**C**	**27.4**	**D**	**36.9**	8	S. Bradley Rd / Columbia/I-101 SB Off/On Ramp	Signal	**OVERALL**	**C**	**32.6**	**D**	**47.3**	8	S. Bradley Rd / Columbia/I-101 SB Off/On Ramp	Signal	**OVERALL**	**C**	**33.0**	**D**	**48.6**								
			EB	C	29.7	D	35.9				EB	C	33.4	D	38.7				EB	C	33.7	D	38.7								
			WB	C	25.4	C	30.7				WB	C	29.8	C	31.7				WB	C	30.2	C	31.8								
			NB	C	29.5	D	47.1				NB	D	36.7	E	68.2				NB	D	37.2	E	68.2								
			SB	C	28.4	C	32.2				SB	C	33.0	D	42.1				SB	C	33.5	D	46.6								
9	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp	Stop-Control	**OVERALL**	**A**	**8.7**	**D**	**43.4**	9	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp	Stop-Control	**OVERALL**	**A**	**9.3**	**F**	**75.5**	9	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp	Stop-Control	**OVERALL**	**A**	**9.3**	**F**	**79.5**	9	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp	Stop-Control	**OVERALL**				
			EB	A	8.6	B	13.2				EB	A	9.0	B	15.4				EB	A	9.0	B	15.7				EB				
			WB	A	0.0	A	0.0				WB	A	0.0	A	0.0				WB	A	0.0	A	0.0				WB				
			NB	F	75.5	F	1599.4				NB	F	101.6	F	2984.1				NB	F	102.2	F	3196.1				NB				
			SB	F	91.0	F	1281.2				SB	F	120.9	F	2474.6				SB	F	121.6	F	2645.5				SB				
																10	W. Stowell Road / Site Access 1	Stop-Control	**OVERALL**	**A**	**0.1**	**A**	**0.0**								
																			EB	A	0.0	A	0.0								
																			WB	A	0.0	A	0.1								
																			NB	A	9.1	B	10.5								
																11	W. Stowell Road / Site Access 2	Stop-Control	**OVERALL**	**A**	**0.0**	**A**	**0.1**								
																			EB	A	0.0	A	0.0								
																			WB	A	7.5	A	0.7								
																			NB	A	0.0	B	11.6								
																12	W. Stowell Road / Site Access 3	Stop-Control	**OVERALL**	**A**	**0.0**	**A**	**1.6**								
																			EB	A	0.0	A	0.0								
																			WB	A	7.6	A	8.3								
																			NB	A	0.0	A	10.8								

Appendix E.1 – 2024 Existing Conditions

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	123	0	0	138	61	0	0	1	87	0	39
Future Vol, veh/h	28	123	0	0	138	61	0	0	1	87	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	130	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	92	92	80	80	92	92	92	80	92	80
Heavy Vehicles, %	36	36	2	2	24	24	2	2	2	16	2	16
Mvmt Flow	35	154	0	0	173	76	0	0	1	109	0	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	249	0	-	-	-	0	396	473	77	319	-	173
Stage 1	-	-	-	-	-	-	224	224	-	173	-	-
Stage 2	-	-	-	-	-	-	173	249	-	147	-	-
Critical Hdwy	4.64	-	-	-	-	-	7.33	6.53	6.93	7.54	-	6.44
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.34	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.74	-	-
Follow-up Hdwy	2.542	-	-	-	-	-	3.519	4.019	3.319	3.652	-	3.452
Pot Cap-1 Maneuver	1121	-	0	0	-	-	551	489	969	591	0	831
Stage 1	-	-	0	0	-	-	759	718	-	793	0	-
Stage 2	-	-	0	0	-	-	829	700	-	806	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1121	-	-	-	-	-	501	473	969	571	-	831
Mov Cap-2 Maneuver	-	-	-	-	-	-	566	526	-	619	-	-
Stage 1	-	-	-	-	-	-	734	694	-	793	-	-
Stage 2	-	-	-	-	-	-	780	700	-	779	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.69	0	8.72	11.99
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	969	668	-	-	-	672
HCM Lane V/C Ratio	0.001	0.031	-	-	-	0.234
HCM Control Delay (s/veh)	8.7	8.3	0.2	-	-	12
HCM Lane LOS	A	A	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	-	0.9



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	125	86	211	139	79	112	515	132	12	366	9
Future Volume (veh/h)	22	125	86	211	139	79	112	515	132	12	366	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1455	1455	1455	1707	1707	1707	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	23	133	91	224	148	84	119	548	140	13	389	10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	30	30	30	13	13	13	9	9	9	9	9	9
Cap, veh/h	25	181	116	237	487	262	145	1454	370	20	1587	41
Arrive On Green	0.02	0.11	0.11	0.15	0.24	0.24	0.09	0.55	0.55	0.01	0.47	0.47
Sat Flow, veh/h	1386	1617	1035	1626	2037	1095	1682	2649	674	1682	3344	86
Grp Volume(v), veh/h	23	112	112	224	116	116	119	346	342	13	195	204
Grp Sat Flow(s),veh/h/ln	1386	1383	1269	1626	1622	1510	1682	1678	1645	1682	1678	1751
Q Serve(g_s), s	1.8	8.6	9.4	15.0	6.5	7.0	7.7	12.9	13.0	0.8	7.6	7.6
Cycle Q Clear(g_c), s	1.8	8.6	9.4	15.0	6.5	7.0	7.7	12.9	13.0	0.8	7.6	7.6
Prop In Lane	1.00		0.82	1.00		0.72	1.00		0.41	1.00		0.05
Lane Grp Cap(c), veh/h	25	155	142	237	388	361	145	921	903	20	797	831
V/C Ratio(X)	0.90	0.72	0.78	0.95	0.30	0.32	0.82	0.38	0.38	0.65	0.24	0.25
Avail Cap(c_a), veh/h	202	302	277	237	388	361	245	921	903	321	797	831
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	53.9	47.2	47.5	46.6	34.3	34.5	49.4	14.1	14.1	54.1	17.2	17.2
Incr Delay (d2), s/veh	31.1	6.3	9.1	43.5	0.4	0.5	4.4	1.2	1.2	12.3	0.7	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(95%),veh/ln	1.5	5.7	5.9	13.6	4.6	4.6	5.9	8.3	8.3	0.8	5.3	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	85.0	53.5	56.6	90.1	34.7	35.0	53.8	15.3	15.3	66.4	17.9	17.9
LnGrp LOS	F	D	E	F	C	C	D	B	B	E	B	B
Approach Vol, veh/h		247			456			807			412	
Approach Delay, s/veh		57.8			62.0			21.0			19.4	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	66.4	20.0	18.3	13.5	58.2	6.0	32.3
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	24.0	16.0	34.0	16.0	24.0
Max Q Clear Time (g_c+I1), s	2.8	15.0	17.0	11.4	9.7	9.6	3.8	9.0
Green Ext Time (p_c), s	0.0	3.3	0.0	0.9	0.1	2.2	0.0	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	35.1
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	43	64	65	52	86	91
Future Vol, veh/h	43	64	65	52	86	91
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	91	91	91	91	91	91
Heavy Vehicles, %	23	23	21	21	24	24
Mvmt Flow	47	70	71	57	95	100

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	389	100	0	0	129	0
Stage 1	100	-	-	-	-	-
Stage 2	289	-	-	-	-	-
Critical Hdwy	6.63	6.43	-	-	4.34	-
Critical Hdwy Stg 1	5.63	-	-	-	-	-
Critical Hdwy Stg 2	5.63	-	-	-	-	-
Follow-up Hdwy	3.707	3.507	-	-	2.416	-
Pot Cap-1 Maneuver	576	901	-	-	1332	-
Stage 1	874	-	-	-	-	-
Stage 2	715	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	532	901	-	-	1332	-
Mov Cap-2 Maneuver	532	-	-	-	-	-
Stage 1	874	-	-	-	-	-
Stage 2	661	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	11.13	0	3.84
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	705	875	-
HCM Lane V/C Ratio	-	-	0.167	0.071	-
HCM Control Delay (s/veh)	-	-	11.1	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0.2	-

Intersection	
Int Delay, s/veh	4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	138	33	194	73	10	242
Future Vol, veh/h	138	33	194	73	10	242
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	-	-	0	175	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	5	5	4	4	6	6
Mvmt Flow	162	39	228	86	12	285

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	536	228	0	0	314	0
Stage 1	228	-	-	-	-	-
Stage 2	308	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.16	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.254	-
Pot Cap-1 Maneuver	500	804	-	-	1224	-
Stage 1	803	-	-	-	-	-
Stage 2	738	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	495	804	-	-	1224	-
Mov Cap-2 Maneuver	495	-	-	-	-	-
Stage 1	803	-	-	-	-	-
Stage 2	731	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	15.73	0	0.32
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	535	1224	-
HCM Lane V/C Ratio	-	-	0.376	0.01	-
HCM Control Delay (s/veh)	-	-	15.7	8	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1.7	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	393	55	104	366	70	109	572	148	120	672	66
Future Volume (veh/h)	92	393	55	104	366	70	109	572	148	120	672	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1752	1752	1752	1752	1752	1752	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	97	414	58	109	385	74	115	602	156	126	707	69
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	10	10	10	5	5	5	5	5	5
Cap, veh/h	238	655	91	238	623	119	248	960	428	326	969	95
Arrive On Green	0.14	0.22	0.22	0.14	0.22	0.22	0.14	0.28	0.28	0.19	0.30	0.30
Sat Flow, veh/h	1668	2934	408	1668	2789	531	1739	3469	1547	1739	3193	311
Grp Volume(v), veh/h	97	234	238	109	228	231	115	602	156	126	384	392
Grp Sat Flow(s),veh/h/ln	1668	1664	1678	1668	1664	1656	1739	1735	1547	1739	1735	1770
Q Serve(g_s), s	5.9	14.2	14.4	6.7	13.8	14.1	6.8	17.0	9.1	7.1	22.2	22.2
Cycle Q Clear(g_c), s	5.9	14.2	14.4	6.7	13.8	14.1	6.8	17.0	9.1	7.1	22.2	22.2
Prop In Lane	1.00		0.24	1.00		0.32	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	238	371	375	238	371	370	248	960	428	326	527	537
V/C Ratio(X)	0.41	0.63	0.64	0.46	0.61	0.62	0.46	0.63	0.36	0.39	0.73	0.73
Avail Cap(c_a), veh/h	238	371	375	238	371	370	248	960	428	326	527	537
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	43.7	39.3	39.4	44.0	39.2	39.3	44.1	35.4	32.6	39.9	34.9	34.9
Incr Delay (d2), s/veh	5.1	7.8	8.0	6.2	7.4	7.7	6.1	3.1	2.4	3.4	8.6	8.5
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(95%),veh/ln	5.0	10.7	10.9	5.7	10.5	10.6	5.9	11.8	6.6	6.0	15.8	16.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.8	47.2	47.4	50.2	46.6	47.0	50.1	38.5	35.0	43.3	43.5	43.4
LnGrp LOS	D	D	D	D	D	D	D	D	C	D	D	D
Approach Vol, veh/h		569			568			873			902	
Approach Delay, s/veh		47.5			47.4			39.4			43.4	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	37.0	20.0	30.0	22.0	40.0	20.0	30.0
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	6.0	* 6	4.0	5.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	25.0	16.0	* 34	16.0	25.0
Max Q Clear Time (g_c+I1), s	9.1	19.0	8.7	16.4	8.8	24.2	7.9	16.1
Green Ext Time (p_c), s	0.0	1.2	0.0	0.5	0.0	1.4	0.0	0.5

Intersection Summary	
HCM 7th Control Delay, s/veh	43.8
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	389	105	72	381	12	54	9	28	2	6	4
Future Vol, veh/h	4	389	105	72	381	12	54	9	28	2	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	480	550	-	-	-	-	400	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	15	15	15	20	20	20	25	25	25	58	58	58
Mvmt Flow	5	447	121	83	438	14	62	10	32	2	7	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	452	0	0	568	0	0	1063	1074	447	1072	1187	445
Stage 1	-	-	-	-	-	-	456	456	-	610	610	-
Stage 2	-	-	-	-	-	-	607	617	-	461	577	-
Critical Hdwy	4.25	-	-	4.3	-	-	7.35	6.75	6.45	7.68	7.08	6.78
Critical Hdwy Stg 1	-	-	-	-	-	-	6.35	5.75	-	6.68	6.08	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.35	5.75	-	6.68	6.08	-
Follow-up Hdwy	2.335	-	-	2.38	-	-	3.725	4.225	3.525	4.022	4.522	3.822
Pot Cap-1 Maneuver	1043	-	-	921	-	-	182	200	566	156	148	511
Stage 1	-	-	-	-	-	-	542	531	-	398	407	-
Stage 2	-	-	-	-	-	-	446	447	-	487	422	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1043	-	-	921	-	-	156	181	566	126	134	511
Mov Cap-2 Maneuver	-	-	-	-	-	-	156	181	-	126	134	-
Stage 1	-	-	-	-	-	-	540	529	-	362	370	-
Stage 2	-	-	-	-	-	-	395	407	-	448	420	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.07	1.44	35.02	27.23
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	159	566	1043	-	-	921	-	-	176
HCM Lane V/C Ratio	0.456	0.057	0.004	-	-	0.09	-	-	0.078
HCM Control Delay (s/veh)	45.4	11.7	8.5	-	-	9.3	-	-	27.2
HCM Lane LOS	E	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	2.1	0.2	0	-	-	0.3	-	-	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	356	154	20	295	314	320	276	222	67	307	103
Future Volume (veh/h)	115	356	154	20	295	314	320	276	222	67	307	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1856	1856	1856	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	147	456	197	26	378	403	410	354	285	86	394	132
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	5	5	5	3	3	3	3	3	3	2	2	2
Cap, veh/h	408	1825	814	59	572	510	324	393	333	114	476	158
Arrive On Green	0.23	0.53	0.53	0.03	0.32	0.32	0.09	0.21	0.21	0.06	0.18	0.18
Sat Flow, veh/h	1739	3469	1547	1767	1763	1572	3428	1856	1572	1781	2623	868
Grp Volume(v), veh/h	147	456	197	26	378	403	410	354	285	86	265	261
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1767	1763	1572	1714	1856	1572	1781	1777	1714
Q Serve(g_s), s	7.8	7.9	4.8	1.6	20.3	25.6	10.4	20.4	16.3	5.2	15.8	16.1
Cycle Q Clear(g_c), s	7.8	7.9	4.8	1.6	20.3	25.6	10.4	20.4	16.3	5.2	15.8	16.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.51
Lane Grp Cap(c), veh/h	408	1825	814	59	572	510	324	393	333	114	322	311
V/C Ratio(X)	0.36	0.25	0.24	0.44	0.66	0.79	1.26	0.90	0.85	0.75	0.82	0.84
Avail Cap(c_a), veh/h	408	1825	814	252	572	510	324	423	359	168	405	391
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	0.70	0.70	0.70	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	14.2	5.6	52.2	31.9	33.7	49.8	42.2	30.2	50.6	43.3	43.5
Incr Delay (d2), s/veh	0.5	0.3	0.7	5.1	5.9	11.8	135.5	15.8	12.6	10.3	10.5	12.2
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(95%),veh/ln	6.0	5.5	4.7	1.4	14.4	16.6	16.3	15.5	11.0	4.8	12.4	12.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.7	14.6	6.3	57.2	37.8	45.5	185.3	58.0	42.9	61.0	53.8	55.7
LnGrp LOS	D	B	A	E	D	D	F	E	D	E	D	E
Approach Vol, veh/h		800			807			1049			612	
Approach Delay, s/veh		16.4			42.3			103.7			55.6	
Approach LOS		B			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	62.2	15.0	24.9	30.1	40.0	11.6	28.2
Change Period (Y+Rc), s	4.3	4.3	4.6	4.9	4.3	4.3	4.6	4.9
Max Green Setting (Gmax), s	15.7	40.7	10.4	25.1	20.7	35.7	10.4	25.1
Max Q Clear Time (g_c+I1), s	3.6	9.9	12.4	18.1	9.8	27.6	7.2	22.4
Green Ext Time (p_c), s	0.0	3.9	0.0	1.8	0.3	3.1	0.0	0.9

Intersection Summary	
HCM 7th Control Delay, s/veh	58.1
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	31	16	325	82	333	16	374	54	232	189	47
Future Volume (veh/h)	44	31	16	325	82	333	16	374	54	232	189	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1781	1781	1781	1870	1870	1870	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	52	36	19	239	296	392	19	440	64	273	222	55
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	8	8	8	2	2	2	3	3	3	5	5	5
Cap, veh/h	150	195	95	492	517	438	55	542	78	315	1130	504
Arrive On Green	0.09	0.09	0.09	0.28	0.28	0.28	0.03	0.18	0.18	0.18	0.33	0.33
Sat Flow, veh/h	1697	2204	1077	1781	1870	1585	1767	3091	447	1739	3469	1547
Grp Volume(v), veh/h	52	27	28	239	296	392	19	250	254	273	222	55
Grp Sat Flow(s),veh/h/ln	1697	1692	1588	1781	1870	1585	1767	1763	1775	1739	1735	1547
Q Serve(g_s), s	2.0	1.0	1.1	7.7	9.4	16.4	0.7	9.4	9.5	10.5	3.2	1.7
Cycle Q Clear(g_c), s	2.0	1.0	1.1	7.7	9.4	16.4	0.7	9.4	9.5	10.5	3.2	1.7
Prop In Lane	1.00		0.68	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	150	150	140	492	517	438	55	309	311	315	1130	504
V/C Ratio(X)	0.35	0.18	0.20	0.49	0.57	0.89	0.35	0.81	0.82	0.87	0.20	0.11
Avail Cap(c_a), veh/h	236	236	221	765	803	681	277	532	536	399	1298	579
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	29.5	29.1	29.2	20.8	21.4	24.0	32.7	27.3	27.4	27.4	16.7	16.3
Incr Delay (d2), s/veh	0.5	0.2	0.3	0.3	0.4	6.7	1.4	1.9	2.0	12.8	0.0	0.0
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(95%),veh/ln	1.5	0.7	0.8	5.2	6.6	10.2	0.6	7.1	7.2	9.0	2.1	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.1	29.3	29.4	21.1	21.8	30.7	34.1	29.2	29.4	40.2	16.8	16.3
LnGrp LOS	C	C	C	C	C	C	C	C	C	D	B	B
Approach Vol, veh/h		107			927			523			550	
Approach Delay, s/veh		29.7			25.4			29.5			28.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.7	16.3		11.5	6.3	26.6		24.5				
Change Period (Y+Rc), s	4.2	4.2		5.4	4.2	4.2		5.4				
Max Green Setting (Gmax), s	15.8	20.8		9.6	10.8	25.8		29.6				
Max Q Clear Time (g_c+I1), s	12.5	11.5		4.0	2.7	5.2		18.4				
Green Ext Time (p_c), s	0.1	0.6		0.1	0.0	0.4		0.7				

Intersection Summary	
HCM 7th Control Delay, s/veh	27.4
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	605	57	7	0	32	4	3	1	1	1	0	517
Future Vol, veh/h	605	57	7	0	32	4	3	1	1	1	0	517
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	-	75	-	-	-	-	-	-	-	215
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	5	5	5	26	26	26	0	0	0	2	2	2
Mvmt Flow	747	70	9	0	40	5	4	1	1	1	0	638

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	44	0	0	79	0	0	1608	1613	75	1607	1615	-
Stage 1	-	-	-	-	-	-	1569	1569	-	42	42	-
Stage 2	-	-	-	-	-	-	40	44	-	1565	1573	-
Critical Hdwy	4.15	-	-	4.36	-	-	7.1	6.5	6.2	7.12	6.52	-
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.434	-	-	3.5	4	3.3	3.518	4.018	-
Pot Cap-1 Maneuver	1545	-	-	1380	-	-	85	105	992	85	104	0
Stage 1	-	-	-	-	-	-	141	173	-	973	860	0
Stage 2	-	-	-	-	-	-	981	862	-	140	170	0
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1545	-	-	1380	-	-	44	54	992	43	54	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	44	54	-	43	54	-
Stage 1	-	-	-	-	-	-	73	89	-	973	860	-
Stage 2	-	-	-	-	-	-	981	862	-	71	88	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	8.58	0	75.49	90.99
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	57	1545	-	-	1380	-	-	43	-
HCM Lane V/C Ratio	0.108	0.484	-	-	-	-	-	0.029	-
HCM Control Delay (s/veh)	75.5	9.5	-	-	0	-	-	91	0
HCM Lane LOS	F	A	-	-	A	-	-	F	A
HCM 95th %tile Q(veh)	0.3	2.7	-	-	0	-	-	0.1	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	419	0	0	127	48	1	2	5	83	0	19
Future Vol, veh/h	60	419	0	0	127	48	1	2	5	83	0	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	130	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	92	92	79	79	92	92	92	79	92	79
Heavy Vehicles, %	11	11	2	2	24	24	2	2	2	16	2	16
Mvmt Flow	76	530	0	0	161	61	1	2	5	105	0	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	222	0	-	-	-	0	843	904	265	579	-	161
Stage 1	-	-	-	-	-	-	682	682	-	161	-	-
Stage 2	-	-	-	-	-	-	161	222	-	418	-	-
Critical Hdwy	4.265	-	-	-	-	-	7.33	6.53	6.93	7.54	-	6.44
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.34	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.74	-	-
Follow-up Hdwy	2.3045	-	-	-	-	-	3.519	4.019	3.319	3.652	-	3.452
Pot Cap-1 Maneuver	1289	-	0	0	-	-	270	276	734	388	0	844
Stage 1	-	-	0	0	-	-	407	449	-	805	0	-
Stage 2	-	-	0	0	-	-	841	719	-	553	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1289	-	-	-	-	-	244	257	734	356	-	844
Mov Cap-2 Maneuver	-	-	-	-	-	-	319	338	-	429	-	-
Stage 1	-	-	-	-	-	-	379	418	-	805	-	-
Stage 2	-	-	-	-	-	-	817	719	-	508	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.37	0	12.26	15.47
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	504	451	-	-	-	472
HCM Lane V/C Ratio	0.017	0.059	-	-	-	0.274
HCM Control Delay (s/veh)	12.3	8	0.4	-	-	15.5
HCM Lane LOS	B	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.2	-	-	-	1.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	316	118	122	113	145	38	769	102	113	570	15
Future Volume (veh/h)	163	316	118	122	113	145	38	769	102	113	570	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1737	1737	1737	1722	1722	1722	1856	1856	1856	1811	1811	1811
Adj Flow Rate, veh/h	179	347	130	134	124	159	42	845	112	124	626	16
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	11	11	11	12	12	12	3	3	3	6	6	6
Cap, veh/h	206	415	153	160	243	217	58	1431	190	151	1756	45
Arrive On Green	0.12	0.18	0.18	0.10	0.15	0.15	0.03	0.46	0.46	0.09	0.51	0.51
Sat Flow, veh/h	1654	2361	870	1640	1636	1459	1767	3129	415	1725	3428	88
Grp Volume(v), veh/h	179	241	236	134	124	159	42	476	481	124	314	328
Grp Sat Flow(s),veh/h/ln	1654	1650	1580	1640	1636	1459	1767	1763	1781	1725	1721	1795
Q Serve(g_s), s	11.7	15.5	15.9	8.8	7.7	11.4	2.6	22.1	22.1	7.8	12.0	12.0
Cycle Q Clear(g_c), s	11.7	15.5	15.9	8.8	7.7	11.4	2.6	22.1	22.1	7.8	12.0	12.0
Prop In Lane	1.00		0.55	1.00		1.00	1.00		0.23	1.00		0.05
Lane Grp Cap(c), veh/h	206	290	278	160	243	217	58	806	814	151	881	920
V/C Ratio(X)	0.87	0.83	0.85	0.84	0.51	0.73	0.72	0.59	0.59	0.82	0.36	0.36
Avail Cap(c_a), veh/h	241	360	345	239	357	318	257	806	814	329	881	920
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	47.3	43.8	43.9	48.8	43.1	44.7	52.7	22.2	22.2	49.3	16.0	16.0
Incr Delay (d2), s/veh	22.4	12.6	15.2	9.9	1.6	4.7	6.2	3.2	3.1	4.1	1.1	1.1
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(95%),veh/ln	10.0	11.6	11.6	7.2	5.7	7.7	2.2	14.2	14.3	6.2	8.3	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	69.7	56.3	59.2	58.7	44.8	49.5	58.9	25.4	25.3	53.4	17.1	17.1
LnGrp LOS	E	E	E	E	D	D	E	C	C	D	B	B
Approach Vol, veh/h		656			417			999			766	
Approach Delay, s/veh		61.0			51.0			26.8			23.0	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	56.3	14.7	25.3	7.6	62.3	17.7	22.4
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	24.0	16.0	34.0	16.0	24.0
Max Q Clear Time (g_c+I1), s	9.8	24.1	10.8	17.9	4.6	14.0	13.7	13.4
Green Ext Time (p_c), s	0.1	2.4	0.1	1.4	0.0	3.6	0.1	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	37.2
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	6.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	85	62	66	178	156	85
Future Vol, veh/h	85	62	66	178	156	85
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	79	79	79	79	79	79
Heavy Vehicles, %	23	23	18	18	12	12
Mvmt Flow	108	78	84	225	197	108

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	699	196	0	0	309	0
Stage 1	196	-	-	-	-	-
Stage 2	503	-	-	-	-	-
Critical Hdwy	6.63	6.43	-	-	4.22	-
Critical Hdwy Stg 1	5.63	-	-	-	-	-
Critical Hdwy Stg 2	5.63	-	-	-	-	-
Follow-up Hdwy	3.707	3.507	-	-	2.308	-
Pot Cap-1 Maneuver	376	794	-	-	1197	-
Stage 1	789	-	-	-	-	-
Stage 2	567	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	310	794	-	-	1197	-
Mov Cap-2 Maneuver	310	-	-	-	-	-
Stage 1	789	-	-	-	-	-
Stage 2	467	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	20.38	0	5.57
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	417	1126	-
HCM Lane V/C Ratio	-	-	0.446	0.165	-
HCM Control Delay (s/veh)	-	-	20.4	8.6	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	2.2	0.6	-

Intersection	
Int Delay, s/veh	2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	118	12	336	207	8	176
Future Vol, veh/h	118	12	336	207	8	176
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	-	-	0	175	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	2	2	2	2
Mvmt Flow	123	13	350	216	8	183

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	550	350	0	0	566	0
Stage 1	350	-	-	-	-	-
Stage 2	200	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.12	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.218	-
Pot Cap-1 Maneuver	494	691	-	-	1006	-
Stage 1	711	-	-	-	-	-
Stage 2	831	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	490	691	-	-	1006	-
Mov Cap-2 Maneuver	490	-	-	-	-	-
Stage 1	711	-	-	-	-	-
Stage 2	824	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	14.75	0	0.37
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	504	1006	-
HCM Lane V/C Ratio	-	-	0.269	0.008	-
HCM Control Delay (s/veh)	-	-	14.8	8.6	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1.1	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	458	119	136	492	119	195	921	299	119	861	59
Future Volume (veh/h)	144	458	119	136	492	119	195	921	299	119	861	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1796	1796	1796	1796	1796	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	153	487	127	145	523	127	207	980	318	127	916	63
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	244	599	155	244	608	147	254	984	439	334	1024	70
Arrive On Green	0.14	0.22	0.22	0.14	0.22	0.22	0.14	0.28	0.28	0.19	0.30	0.30
Sat Flow, veh/h	1711	2682	695	1711	2725	659	1781	3554	1585	1781	3373	232
Grp Volume(v), veh/h	153	309	305	145	327	323	207	980	318	127	482	497
Grp Sat Flow(s),veh/h/ln	1711	1706	1671	1711	1706	1678	1781	1777	1585	1781	1777	1829
Q Serve(g_s), s	9.4	19.2	19.4	8.9	20.6	20.8	12.6	30.8	20.3	7.0	29.1	29.1
Cycle Q Clear(g_c), s	9.4	19.2	19.4	8.9	20.6	20.8	12.6	30.8	20.3	7.0	29.1	29.1
Prop In Lane	1.00		0.42	1.00		0.39	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	244	381	373	244	381	374	254	984	439	334	539	555
V/C Ratio(X)	0.63	0.81	0.82	0.59	0.86	0.86	0.81	1.00	0.72	0.38	0.89	0.89
Avail Cap(c_a), veh/h	244	381	373	244	381	374	254	984	439	334	539	555
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	45.2	41.3	41.3	45.0	41.8	41.9	46.6	40.4	36.6	39.8	37.3	37.3
Incr Delay (d2), s/veh	11.5	16.9	17.8	10.2	21.3	22.3	24.0	27.8	10.0	3.3	19.9	19.5
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(95%),veh/ln	8.3	14.8	14.8	7.9	16.1	16.1	11.5	23.5	13.8	6.1	21.8	22.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.7	58.1	59.2	55.1	63.1	64.2	70.5	68.3	46.6	43.1	57.2	56.8
LnGrp LOS	E	E	E	E	E	E	E	E	D	D	E	E
Approach Vol, veh/h		767			795			1505			1106	
Approach Delay, s/veh		58.3			62.1			64.0			55.4	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	37.0	20.0	30.0	22.0	40.0	20.0	30.0
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	6.0	* 6	4.0	5.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	25.0	16.0	* 34	16.0	25.0
Max Q Clear Time (g_c+I1), s	9.0	32.8	10.9	21.4	14.6	31.1	11.4	22.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	0.9	0.0	0.3

Intersection Summary	
HCM 7th Control Delay, s/veh	60.3
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	620	138	64	404	12	78	3	59	13	8	5
Future Vol, veh/h	0	620	138	64	404	12	78	3	59	13	8	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	480	550	-	-	-	-	400	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	8	8	8	7	7	7	21	21	21	31	31	31
Mvmt Flow	0	674	150	70	439	13	85	3	64	14	9	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	452	0	0	824	0	0	1257	1265	674	1260	1409	446
Stage 1	-	-	-	-	-	-	674	674	-	585	585	-
Stage 2	-	-	-	-	-	-	583	591	-	676	824	-
Critical Hdwy	4.18	-	-	4.17	-	-	7.31	6.71	6.41	7.41	6.81	6.51
Critical Hdwy Stg 1	-	-	-	-	-	-	6.31	5.71	-	6.41	5.81	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.31	5.71	-	6.41	5.81	-
Follow-up Hdwy	2.272	-	-	2.263	-	-	3.689	4.189	3.489	3.779	4.279	3.579
Pot Cap-1 Maneuver	1077	-	-	785	-	-	135	155	423	128	121	556
Stage 1	-	-	-	-	-	-	415	426	-	450	454	-
Stage 2	-	-	-	-	-	-	467	465	-	399	349	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1077	-	-	785	-	-	113	142	423	97	110	556
Mov Cap-2 Maneuver	-	-	-	-	-	-	113	142	-	97	110	-
Stage 1	-	-	-	-	-	-	415	426	-	410	414	-
Stage 2	-	-	-	-	-	-	412	424	-	336	349	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	1.34	65.22	43.74
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	114	423	1077	-	-	785	-	-	121
HCM Lane V/C Ratio	0.772	0.152	-	-	-	0.089	-	-	0.234
HCM Control Delay (s/veh)	101.8	15	0	-	-	10	-	-	43.7
HCM Lane LOS	F	C	A	-	-	B	-	-	E
HCM 95th %tile Q(veh)	4.3	0.5	0	-	-	0.3	-	-	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	489	253	56	247	107	264	248	434	107	495	155
Future Volume (veh/h)	184	489	253	56	247	107	264	248	434	107	495	155
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	200	532	275	61	268	116	287	270	472	116	538	168
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, %	5	5	5	5	5	5	2	2	2	1	1	1
Cap, veh/h	341	1627	726	89	772	325	327	369	312	212	593	184
Arrive On Green	0.20	0.47	0.47	0.05	0.32	0.32	0.09	0.20	0.20	0.12	0.22	0.22
Sat Flow, veh/h	1739	3469	1547	1739	2378	1002	3456	1870	1585	1795	2689	836
Grp Volume(v), veh/h	200	532	275	61	194	190	287	270	472	116	358	348
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1739	1735	1646	1728	1870	1585	1795	1791	1735
Q Serve(g_s), s	11.5	10.6	8.5	3.8	9.3	9.7	9.0	14.9	18.0	6.7	21.4	21.6
Cycle Q Clear(g_c), s	11.5	10.6	8.5	3.8	9.3	9.7	9.0	14.9	18.0	6.7	21.4	21.6
Prop In Lane	1.00		1.00	1.00		0.61	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	341	1627	726	89	563	534	327	369	312	212	395	383
V/C Ratio(X)	0.59	0.33	0.38	0.68	0.34	0.36	0.88	0.73	1.51	0.55	0.91	0.91
Avail Cap(c_a), veh/h	341	1627	726	248	563	534	327	427	362	212	409	396
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	0.47	0.47	0.47	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	18.3	8.5	51.3	28.2	28.4	49.2	41.4	30.6	45.7	41.8	41.8
Incr Delay (d2), s/veh	2.6	0.5	1.5	8.8	1.7	1.9	12.4	2.6	237.7	2.9	22.8	24.3
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(95%),veh/ln	8.8	7.6	5.3	3.3	7.3	7.3	6.8	10.1	40.3	5.7	17.5	17.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.8	18.9	10.0	60.1	29.9	30.2	61.5	44.1	268.3	48.7	64.6	66.1
LnGrp LOS	D	B	A	E	C	C	E	D	F	D	E	E
Approach Vol, veh/h		1007			445			1029			822	
Approach Delay, s/veh		21.2			34.2			151.8			63.0	
Approach LOS		C			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	55.9	15.0	29.2	25.8	40.0	17.6	26.6
Change Period (Y+Rc), s	4.3	4.3	4.6	4.9	4.3	4.3	4.6	4.9
Max Green Setting (Gmax), s	15.7	40.7	10.4	25.1	20.7	35.7	10.4	25.1
Max Q Clear Time (g_c+I1), s	5.8	12.6	11.0	23.6	13.5	11.7	8.7	20.0
Green Ext Time (p_c), s	0.1	4.8	0.0	0.7	0.3	2.2	0.0	1.6

Intersection Summary	
HCM 7th Control Delay, s/veh	74.0
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	90	92	512	88	181	94	663	107	308	402	89
Future Volume (veh/h)	95	90	92	512	88	181	94	663	107	308	402	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1885	1885	1885	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	103	98	100	626	0	197	102	721	116	335	437	97
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, %	1	1	1	2	2	2	1	1	1	1	1	1
Cap, veh/h	162	161	144	720	0	321	144	791	127	366	1360	606
Arrive On Green	0.09	0.09	0.09	0.20	0.00	0.20	0.08	0.26	0.26	0.20	0.38	0.38
Sat Flow, veh/h	1795	1791	1598	3563	0	1585	1795	3090	497	1795	3582	1598
Grp Volume(v), veh/h	103	98	100	626	0	197	102	418	419	335	437	97
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1781	0	1585	1795	1791	1796	1795	1791	1598
Q Serve(g_s), s	4.3	4.1	4.7	13.2	0.0	8.8	4.3	17.5	17.6	14.2	6.7	3.1
Cycle Q Clear(g_c), s	4.3	4.1	4.7	13.2	0.0	8.8	4.3	17.5	17.6	14.2	6.7	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	162	161	144	720	0	321	144	459	460	366	1360	606
V/C Ratio(X)	0.64	0.61	0.69	0.87	0.00	0.61	0.71	0.91	0.91	0.92	0.32	0.16
Avail Cap(c_a), veh/h	222	222	198	1361	0	605	250	481	482	366	1360	606
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	33.9	34.2	29.9	0.0	28.2	34.8	28.0	28.0	30.2	17.0	15.9
Incr Delay (d2), s/veh	1.5	1.4	2.5	1.3	0.0	0.7	2.4	20.3	20.4	26.5	0.1	0.0
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(95%),veh/ln	3.5	3.3	3.4	9.1	0.0	5.6	3.5	14.8	14.9	13.4	4.7	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.6	35.3	36.7	31.2	0.0	28.9	37.1	48.2	48.3	56.7	17.0	15.9
LnGrp LOS	D	D	D	C		C	D	D	D	E	B	B
Approach Vol, veh/h		301			823			939			869	
Approach Delay, s/veh		35.9			30.7			47.1			32.2	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	24.0		12.4	10.4	33.6		21.1				
Change Period (Y+Rc), s	4.2	4.2		5.4	4.2	4.2		5.4				
Max Green Setting (Gmax), s	5.8	20.8		9.6	10.8	25.8		29.6				
Max Q Clear Time (g_c+I1), s	6.3	19.6		6.7	6.3	8.7		15.2				
Green Ext Time (p_c), s	0.0	0.3		0.2	0.0	0.7		0.5				

Intersection Summary	
HCM 7th Control Delay, s/veh	36.9
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	43.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1048	41	20	0	55	11	9	3	1	0	14	444
Future Vol, veh/h	1048	41	20	0	55	11	9	3	1	0	14	444
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	-	75	-	-	-	-	-	-	-	215
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	15	15	15	0	0	0	4	4	4
Mvmt Flow	1139	45	22	0	60	12	10	3	1	0	15	483

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	72	0	0	66	0	0	2401	2405	55	2390	2410	-
Stage 1	-	-	-	-	-	-	2334	2334	-	66	66	-
Stage 2	-	-	-	-	-	-	67	72	-	2324	2345	-
Critical Hdwy	4.13	-	-	4.25	-	-	7.1	6.5	6.2	7.14	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.14	5.54	-
Follow-up Hdwy	2.227	-	-	2.335	-	-	3.5	4	3.3	3.536	4.036	-
Pot Cap-1 Maneuver	1522	-	-	1457	-	-	23	34	1017	23	32	0
Stage 1	-	-	-	-	-	-	50	71	-	940	836	0
Stage 2	-	-	-	-	-	-	948	839	-	49	68	0
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1522	-	-	1457	-	-	~ 6	8	1017	5	~ 8	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 6	8	-	5	~ 8	-
Stage 1	-	-	-	-	-	-	13	18	-	940	836	-
Stage 2	-	-	-	-	-	-	931	839	-	10	17	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	13.24	0	$ 1499.4	$ 1281.15
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	7	1522	-	-	1457	-	-	8	-
HCM Lane V/C Ratio	2.053	0.748	-	-	-	-	-	1.867	-
HCM Control Delay (s/veh)	$ 1499.4	14	-	-	0	-	-	$ 1281.1	0
HCM Lane LOS	F	B	-	-	A	-	-	F	A
HCM 95th %tile Q(veh)	2.8	7.7	-	-	0	-	-	2.9	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Appendix E.2 – 2027 No-Build Conditions

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	161	0	0	223	65	0	0	1	92	0	41
Future Vol, veh/h	30	161	0	0	223	65	0	0	1	92	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	130	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	92	92	80	80	92	92	92	80	92	80
Heavy Vehicles, %	36	36	2	2	24	24	2	2	2	16	2	16
Mvmt Flow	38	201	0	0	279	81	0	0	1	115	0	51

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	360	0	-	-	-	0	555	636	101	454	-	279
Stage 1	-	-	-	-	-	-	276	276	-	279	-	-
Stage 2	-	-	-	-	-	-	279	360	-	176	-	-
Critical Hdwy	4.64	-	-	-	-	-	7.33	6.53	6.93	7.54	-	6.44
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.34	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.74	-	-
Follow-up Hdwy	2.542	-	-	-	-	-	3.519	4.019	3.319	3.652	-	3.452
Pot Cap-1 Maneuver	1008	-	0	0	-	-	428	395	936	475	0	722
Stage 1	-	-	0	0	-	-	707	681	-	693	0	-
Stage 2	-	-	0	0	-	-	727	626	-	775	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1008	-	-	-	-	-	382	379	936	456	-	722
Mov Cap-2 Maneuver	-	-	-	-	-	-	474	454	-	535	-	-
Stage 1	-	-	-	-	-	-	679	654	-	693	-	-
Stage 2	-	-	-	-	-	-	675	626	-	743	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.58	0	8.85	13.66
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	936	565	-	-	-	581
HCM Lane V/C Ratio	0.001	0.037	-	-	-	0.286
HCM Control Delay (s/veh)	8.9	8.7	0.2	-	-	13.7
HCM Lane LOS	A	A	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	-	1.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	165	96	316	245	214	128	659	226	59	452	11
Future Volume (veh/h)	23	165	96	316	245	214	128	659	226	59	452	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1455	1455	1455	1707	1707	1707	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	24	176	102	336	261	228	136	701	240	63	481	12
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	30	30	30	13	13	13	9	9	9	9	9	9
Cap, veh/h	26	228	126	237	433	364	163	1654	738	80	1484	37
Arrive On Green	0.02	0.13	0.13	0.15	0.26	0.26	0.10	0.49	0.49	0.05	0.44	0.44
Sat Flow, veh/h	1386	1719	948	1626	1670	1407	1682	3357	1497	1682	3346	83
Grp Volume(v), veh/h	24	140	138	336	253	236	136	701	240	63	241	252
Grp Sat Flow(s),veh/h/ln	1386	1383	1285	1626	1622	1454	1682	1678	1497	1682	1678	1752
Q Serve(g_s), s	1.9	10.7	11.5	16.0	15.1	15.8	8.7	14.7	10.7	4.1	10.3	10.3
Cycle Q Clear(g_c), s	1.9	10.7	11.5	16.0	15.1	15.8	8.7	14.7	10.7	4.1	10.3	10.3
Prop In Lane	1.00		0.74	1.00		0.97	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	26	183	170	237	420	377	163	1654	738	80	744	777
V/C Ratio(X)	0.92	0.76	0.81	1.42	0.60	0.63	0.84	0.42	0.33	0.79	0.32	0.32
Avail Cap(c_a), veh/h	202	302	280	237	420	377	245	1654	738	321	744	777
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	53.9	46.0	46.4	47.0	35.8	36.0	48.8	17.9	16.9	51.8	19.9	19.9
Incr Delay (d2), s/veh	32.4	6.5	8.9	212.2	2.4	3.2	9.2	0.8	1.2	6.3	1.2	1.1
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(95%),veh/ln	1.6	7.1	7.2	31.7	10.1	9.7	7.1	9.3	6.7	3.3	7.4	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	86.3	52.5	55.3	259.2	38.2	39.3	58.0	18.7	18.0	58.1	21.0	21.0
LnGrp LOS	F	D	E	F	D	D	E	B	B	E	C	C
Approach Vol, veh/h		302			825			1077			556	
Approach Delay, s/veh		56.5			128.5			23.5			25.2	
Approach LOS		E			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	60.2	20.0	20.6	14.6	54.8	6.1	34.5
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	24.0	16.0	34.0	16.0	24.0
Max Q Clear Time (g_c+I1), s	6.1	16.7	18.0	13.5	10.7	12.3	3.9	17.8
Green Ext Time (p_c), s	0.0	4.2	0.0	1.1	0.1	2.7	0.0	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	58.8
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	46	68	69	55	91	97
Future Vol, veh/h	46	68	69	55	91	97
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	91	91	91	91	91	91
Heavy Vehicles, %	23	23	21	21	24	24
Mvmt Flow	51	75	76	60	100	107

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	413	106	0	0	136	0
Stage 1	106	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Critical Hdwy	6.63	6.43	-	-	4.34	-
Critical Hdwy Stg 1	5.63	-	-	-	-	-
Critical Hdwy Stg 2	5.63	-	-	-	-	-
Follow-up Hdwy	3.707	3.507	-	-	2.416	-
Pot Cap-1 Maneuver	558	894	-	-	1323	-
Stage 1	868	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	513	894	-	-	1323	-
Mov Cap-2 Maneuver	513	-	-	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	645	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	11.4	0	3.84
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	688	871	-
HCM Lane V/C Ratio	-	-	0.182	0.076	-
HCM Control Delay (s/veh)	-	-	11.4	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.2	-

Intersection	
Int Delay, s/veh	4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	146	35	206	77	11	257
Future Vol, veh/h	146	35	206	77	11	257
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	-	-	0	175	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	5	5	4	4	6	6
Mvmt Flow	172	41	242	91	13	302

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	571	242	0	0	333	0
Stage 1	242	-	-	-	-	-
Stage 2	328	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.16	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.254	-
Pot Cap-1 Maneuver	478	789	-	-	1204	-
Stage 1	791	-	-	-	-	-
Stage 2	723	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	472	789	-	-	1204	-
Mov Cap-2 Maneuver	472	-	-	-	-	-
Stage 1	791	-	-	-	-	-
Stage 2	715	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	16.94	0	0.33
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	512	1204	-
HCM Lane V/C Ratio	-	-	0.416	0.011	-
HCM Control Delay (s/veh)	-	-	16.9	8	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	2	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	654	64	133	633	91	118	631	157	129	774	109
Future Volume (veh/h)	159	654	64	133	633	91	118	631	157	129	774	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1752	1752	1752	1752	1752	1752	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	167	688	67	140	666	96	124	664	165	136	815	115
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	10	10	10	5	5	5	5	5	5
Cap, veh/h	238	684	67	238	652	94	248	960	428	326	927	131
Arrive On Green	0.14	0.22	0.22	0.14	0.22	0.22	0.14	0.28	0.28	0.19	0.30	0.30
Sat Flow, veh/h	1668	3064	298	1668	2920	420	1739	3469	1547	1739	3052	431
Grp Volume(v), veh/h	167	373	382	140	379	383	124	664	165	136	463	467
Grp Sat Flow(s),veh/h/ln	1668	1664	1698	1668	1664	1676	1739	1735	1547	1739	1735	1748
Q Serve(g_s), s	10.7	25.0	25.0	8.8	25.0	25.0	7.4	19.2	9.7	7.7	28.4	28.4
Cycle Q Clear(g_c), s	10.7	25.0	25.0	8.8	25.0	25.0	7.4	19.2	9.7	7.7	28.4	28.4
Prop In Lane	1.00		0.18	1.00		0.25	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	238	371	379	238	371	374	248	960	428	326	527	531
V/C Ratio(X)	0.70	1.01	1.01	0.59	1.02	1.02	0.50	0.69	0.39	0.42	0.88	0.88
Avail Cap(c_a), veh/h	238	371	379	238	371	374	248	960	428	326	527	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	45.7	43.5	43.5	44.9	43.5	43.5	44.3	36.2	32.8	40.1	37.1	37.1
Incr Delay (d2), s/veh	15.8	48.0	47.9	10.2	52.1	52.5	7.0	4.1	2.6	3.9	18.6	18.5
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(95%),veh/ln	9.2	21.4	21.8	7.7	22.1	22.4	6.5	13.2	7.0	6.6	20.8	21.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.5	91.5	91.4	55.1	95.6	96.0	51.3	40.3	35.4	44.0	55.6	55.5
LnGrp LOS	E	F	F	E	F	F	D	D	D	D	E	E
Approach Vol, veh/h		922			902			953			1066	
Approach Delay, s/veh		86.0			89.5			40.9			54.1	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	37.0	20.0	30.0	22.0	40.0	20.0	30.0
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	6.0	* 6	4.0	5.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	25.0	16.0	* 34	16.0	25.0
Max Q Clear Time (g_c+I1), s	9.7	21.2	10.8	27.0	9.4	30.4	12.7	27.0
Green Ext Time (p_c), s	0.0	1.2	0.0	0.0	0.0	1.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	66.8
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	420	111	76	407	13	57	10	30	2	6	4
Future Vol, veh/h	4	420	111	76	407	13	57	10	30	2	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	480	550	-	-	-	-	400	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	15	15	15	20	20	20	25	25	25	58	58	58
Mvmt Flow	5	483	128	87	468	15	66	11	34	2	7	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	483	0	0	610	0	0	1138	1149	483	1148	1270	475
Stage 1	-	-	-	-	-	-	492	492	-	650	650	-
Stage 2	-	-	-	-	-	-	646	657	-	498	620	-
Critical Hdwy	4.25	-	-	4.3	-	-	7.35	6.75	6.45	7.68	7.08	6.78
Critical Hdwy Stg 1	-	-	-	-	-	-	6.35	5.75	-	6.68	6.08	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.35	5.75	-	6.68	6.08	-
Follow-up Hdwy	2.335	-	-	2.38	-	-	3.725	4.225	3.525	4.022	4.522	3.822
Pot Cap-1 Maneuver	1016	-	-	887	-	-	161	180	540	137	131	490
Stage 1	-	-	-	-	-	-	518	511	-	377	389	-
Stage 2	-	-	-	-	-	-	424	428	-	463	402	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1016	-	-	887	-	-	136	161	540	108	118	490
Mov Cap-2 Maneuver	-	-	-	-	-	-	136	161	-	108	118	-
Stage 1	-	-	-	-	-	-	515	509	-	340	350	-
Stage 2	-	-	-	-	-	-	371	386	-	422	401	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.06	1.46	44.61	30.57
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	139	540	1016	-	-	887	-	-	155
HCM Lane V/C Ratio	0.554	0.064	0.005	-	-	0.099	-	-	0.089
HCM Control Delay (s/veh)	59.2	12.1	8.6	-	-	9.5	-	-	30.6
HCM Lane LOS	F	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	2.8	0.2	0	-	-	0.3	-	-	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	378	170	29	313	333	347	296	248	71	328	109
Future Volume (veh/h)	122	378	170	29	313	333	347	296	248	71	328	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1856	1856	1856	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	156	485	218	37	401	427	445	379	318	91	421	140
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	5	5	5	3	3	3	3	3	3	2	2	2
Cap, veh/h	390	1761	785	73	572	510	330	412	349	115	500	165
Arrive On Green	0.22	0.51	0.51	0.04	0.32	0.32	0.10	0.22	0.22	0.06	0.19	0.19
Sat Flow, veh/h	1739	3469	1547	1767	1763	1572	3428	1856	1572	1781	2627	865
Grp Volume(v), veh/h	156	485	218	37	401	427	445	379	318	91	283	278
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1767	1763	1572	1714	1856	1572	1781	1777	1715
Q Serve(g_s), s	8.4	8.8	5.7	2.3	21.9	27.7	10.6	22.0	18.2	5.5	16.9	17.2
Cycle Q Clear(g_c), s	8.4	8.8	5.7	2.3	21.9	27.7	10.6	22.0	18.2	5.5	16.9	17.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	390	1761	785	73	572	510	330	412	349	115	338	326
V/C Ratio(X)	0.40	0.28	0.28	0.51	0.70	0.84	1.35	0.92	0.91	0.79	0.84	0.85
Avail Cap(c_a), veh/h	390	1761	785	252	572	510	330	423	359	168	405	391
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	0.65	0.65	0.65	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	15.5	6.4	51.6	32.5	34.4	49.7	41.8	29.4	50.7	42.9	43.0
Incr Delay (d2), s/veh	0.7	0.4	0.9	5.4	7.0	15.0	169.4	18.2	19.1	14.3	12.4	14.1
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(95%),veh/ln	6.5	6.2	5.5	2.0	15.4	18.2	18.8	16.6	12.5	5.3	13.3	13.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.0	15.9	7.2	57.0	39.5	49.5	219.1	60.0	48.5	65.0	55.3	57.1
LnGrp LOS	D	B	A	E	D	D	F	E	D	E	E	E
Approach Vol, veh/h		859			865			1142			652	
Approach Delay, s/veh		17.5			45.2			118.8			57.4	
Approach LOS		B			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	60.1	15.2	25.8	29.0	40.0	11.7	29.3
Change Period (Y+Rc), s	4.3	4.3	4.6	4.9	4.3	4.3	4.6	4.9
Max Green Setting (Gmax), s	15.7	40.7	10.4	25.1	20.7	35.7	10.4	25.1
Max Q Clear Time (g_c+I1), s	4.3	10.8	12.6	19.2	10.4	29.7	7.5	24.0
Green Ext Time (p_c), s	0.0	4.2	0.0	1.7	0.3	2.6	0.0	0.5

Intersection Summary	
HCM 7th Control Delay, s/veh	64.6
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	33	17	356	87	353	17	419	65	246	218	50
Future Volume (veh/h)	47	33	17	356	87	353	17	419	65	246	218	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1781	1781	1781	1870	1870	1870	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	55	39	20	261	324	415	20	493	76	289	256	59
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	8	8	8	2	2	2	3	3	3	5	5	5
Cap, veh/h	141	185	88	513	538	456	56	582	89	327	1202	536
Arrive On Green	0.08	0.08	0.08	0.29	0.29	0.29	0.03	0.19	0.19	0.19	0.35	0.35
Sat Flow, veh/h	1697	2224	1059	1781	1870	1585	1767	3064	470	1739	3469	1547
Grp Volume(v), veh/h	55	29	30	261	324	415	20	283	286	289	256	59
Grp Sat Flow(s),veh/h/ln	1697	1692	1591	1781	1870	1585	1767	1763	1771	1739	1735	1547
Q Serve(g_s), s	2.4	1.2	1.4	9.4	11.4	19.3	0.8	11.8	12.0	12.4	4.0	2.0
Cycle Q Clear(g_c), s	2.4	1.2	1.4	9.4	11.4	19.3	0.8	11.8	12.0	12.4	4.0	2.0
Prop In Lane	1.00		0.67	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	141	141	133	513	538	456	56	335	337	327	1202	536
V/C Ratio(X)	0.39	0.21	0.23	0.51	0.60	0.91	0.36	0.84	0.85	0.88	0.21	0.11
Avail Cap(c_a), veh/h	213	212	200	689	723	613	249	479	481	359	1202	536
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	33.2	32.7	32.8	22.7	23.5	26.3	36.3	29.9	29.9	30.3	17.7	17.0
Incr Delay (d2), s/veh	0.6	0.3	0.3	0.3	0.4	12.4	1.4	6.5	7.0	19.6	0.0	0.0
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(95%),veh/ln	1.8	0.9	0.9	6.4	8.1	12.7	0.7	9.3	9.4	11.0	2.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.9	33.0	33.1	23.0	23.9	38.7	37.7	36.4	37.0	49.9	17.7	17.0
LnGrp LOS	C	C	C	C	C	D	D	D	D	D	B	B
Approach Vol, veh/h		114			1000			589			604	
Approach Delay, s/veh		33.4			29.8			36.7			33.0	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.6	18.7		11.8	6.6	30.7		27.4
Change Period (Y+Rc), s	4.2	4.2		5.4	4.2	4.2		5.4
Max Green Setting (Gmax), s	15.8	20.8		9.6	10.8	25.8		29.6
Max Q Clear Time (g_c+I1), s	4.4	14.0		4.4	2.8	6.0		21.3
Green Ext Time (p_c), s	0.0	0.6		0.1	0.0	0.4		0.7

Intersection Summary	
HCM 7th Control Delay, s/veh	32.6
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	9.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	654	60	7	0	34	4	3	1	1	1	0	557
Future Vol, veh/h	654	60	7	0	34	4	3	1	1	1	0	557
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	-	75	-	-	-	-	-	-	-	215
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	5	5	5	26	26	26	0	0	0	2	2	2
Mvmt Flow	807	74	9	0	42	5	4	1	1	1	0	688

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	47	0	0	83	0	0	1735	1740	78	1734	1742	-
Stage 1	-	-	-	-	-	-	1693	1693	-	44	44	-
Stage 2	-	-	-	-	-	-	42	47	-	1690	1698	-
Critical Hdwy	4.15	-	-	4.36	-	-	7.1	6.5	6.2	7.12	6.52	-
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.434	-	-	3.5	4	3.3	3.518	4.018	-
Pot Cap-1 Maneuver	1541	-	-	1376	-	-	70	88	988	69	87	0
Stage 1	-	-	-	-	-	-	119	150	-	970	858	0
Stage 2	-	-	-	-	-	-	978	860	-	118	148	0
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1541	-	-	1376	-	-	33	42	988	32	41	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	33	42	-	32	41	-
Stage 1	-	-	-	-	-	-	57	72	-	970	858	-
Stage 2	-	-	-	-	-	-	978	860	-	55	70	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	8.96	0	101.57	120.94
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	43	1541	-	-	1376	-	-	32	-
HCM Lane V/C Ratio	0.143	0.524	-	-	-	-	-	0.038	-
HCM Control Delay (s/veh)	101.6	9.9	-	-	0	-	-	120.9	0
HCM Lane LOS	F	A	-	-	A	-	-	F	A
HCM 95th %tile Q(veh)	0.5	3.2	-	-	0	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	64	505	0	0	187	51	1	2	5	88	0	20
Future Vol, veh/h	64	505	0	0	187	51	1	2	5	88	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	130	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	92	92	79	79	92	92	92	79	92	79
Heavy Vehicles, %	11	11	2	2	24	24	2	2	2	16	2	16
Mvmt Flow	81	639	0	0	237	65	1	2	5	111	0	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	301	0	-	-	-	0	1038	1103	320	719	-	237
Stage 1	-	-	-	-	-	-	801	801	-	237	-	-
Stage 2	-	-	-	-	-	-	237	301	-	483	-	-
Critical Hdwy	4.265	-	-	-	-	-	7.33	6.53	6.93	7.54	-	6.44
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.34	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.74	-	-
Follow-up Hdwy	2.3045	-	-	-	-	-	3.519	4.019	3.319	3.652	-	3.452
Pot Cap-1 Maneuver	1202	-	0	0	-	-	197	211	677	308	0	763
Stage 1	-	-	0	0	-	-	345	396	-	731	0	-
Stage 2	-	-	0	0	-	-	766	664	-	505	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1202	-	-	-	-	-	175	194	677	278	-	763
Mov Cap-2 Maneuver	-	-	-	-	-	-	260	285	-	371	-	-
Stage 1	-	-	-	-	-	-	317	363	-	731	-	-
Stage 2	-	-	-	-	-	-	740	664	-	457	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.4	0	13.39	18.11
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	438	405	-	-	-	410
HCM Lane V/C Ratio	0.02	0.067	-	-	-	0.333
HCM Control Delay (s/veh)	13.4	8.2	0.5	-	-	18.1
HCM Lane LOS	B	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.2	-	-	-	1.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	407	132	189	176	240	48	929	192	184	693	17
Future Volume (veh/h)	185	407	132	189	176	240	48	929	192	184	693	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1737	1737	1737	1722	1722	1722	1856	1856	1856	1811	1811	1811
Adj Flow Rate, veh/h	203	447	145	208	193	264	53	1021	211	202	762	19
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	11	11	11	12	12	12	3	3	3	6	6	6
Cap, veh/h	229	502	161	234	341	304	68	1188	530	231	1484	37
Arrive On Green	0.14	0.20	0.20	0.14	0.21	0.21	0.04	0.34	0.34	0.13	0.43	0.43
Sat Flow, veh/h	1654	2455	790	1640	1636	1459	1767	3526	1572	1725	3431	86
Grp Volume(v), veh/h	203	299	293	208	193	264	53	1021	211	202	382	399
Grp Sat Flow(s),veh/h/ln	1654	1650	1595	1640	1636	1459	1767	1763	1572	1725	1721	1796
Q Serve(g_s), s	13.3	19.4	19.7	13.7	11.6	19.2	3.3	29.7	11.3	12.6	17.8	17.8
Cycle Q Clear(g_c), s	13.3	19.4	19.7	13.7	11.6	19.2	3.3	29.7	11.3	12.6	17.8	17.8
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	229	337	326	234	341	304	68	1188	530	231	744	777
V/C Ratio(X)	0.89	0.89	0.90	0.89	0.57	0.87	0.78	0.86	0.40	0.87	0.51	0.51
Avail Cap(c_a), veh/h	241	360	348	239	357	318	257	1188	530	329	744	777
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	46.5	42.5	42.6	46.3	39.1	42.1	52.4	34.0	27.9	46.7	22.8	22.8
Incr Delay (d2), s/veh	28.0	21.6	24.0	29.7	1.9	21.0	6.9	8.2	2.2	12.7	2.5	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(95%),veh/ln	11.5	14.8	14.8	11.8	8.3	13.3	2.8	19.3	7.9	10.2	11.9	12.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	74.5	64.1	66.6	76.0	41.0	63.1	59.3	42.2	30.1	59.4	25.3	25.2
LnGrp LOS	E	E	E	E	D	E	E	D	C	E	C	C
Approach Vol, veh/h		795			665			1285			983	
Approach Delay, s/veh		67.7			60.7			40.9			32.3	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.7	43.1	19.7	28.5	8.2	53.6	19.2	28.9
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	24.0	16.0	34.0	16.0	24.0
Max Q Clear Time (g_c+I1), s	14.6	31.7	15.7	21.7	5.3	19.8	15.3	21.2
Green Ext Time (p_c), s	0.1	0.0	0.0	0.8	0.0	3.9	0.0	0.7

Intersection Summary	
HCM 7th Control Delay, s/veh	47.9
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	7.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	90	66	70	189	166	90
Future Vol, veh/h	90	66	70	189	166	90
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	79	79	79	79	79	79
Heavy Vehicles, %	23	23	18	18	12	12
Mvmt Flow	114	84	89	239	210	114

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	742	208	0	0	328	0
Stage 1	208	-	-	-	-	-
Stage 2	534	-	-	-	-	-
Critical Hdwy	6.63	6.43	-	-	4.22	-
Critical Hdwy Stg 1	5.63	-	-	-	-	-
Critical Hdwy Stg 2	5.63	-	-	-	-	-
Follow-up Hdwy	3.707	3.507	-	-	2.308	-
Pot Cap-1 Maneuver	354	782	-	-	1178	-
Stage 1	779	-	-	-	-	-
Stage 2	548	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	287	782	-	-	1178	-
Mov Cap-2 Maneuver	287	-	-	-	-	-
Stage 1	779	-	-	-	-	-
Stage 2	443	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	23.19	0	5.65
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	391	1103	-
HCM Lane V/C Ratio	-	-	0.504	0.178	-
HCM Control Delay (s/veh)	-	-	23.2	8.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	2.7	0.6	-

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	125	13	357	220	8	187
Future Vol, veh/h	125	13	357	220	8	187
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	-	-	0	175	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	2	2	2	2
Mvmt Flow	130	14	372	229	8	195

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	583	372	0	0	601	0
Stage 1	372	-	-	-	-	-
Stage 2	211	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.12	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.218	-
Pot Cap-1 Maneuver	473	672	-	-	976	-
Stage 1	695	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	469	672	-	-	976	-
Mov Cap-2 Maneuver	469	-	-	-	-	-
Stage 1	695	-	-	-	-	-
Stage 2	814	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	15.6	0	0.36
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	482	976	-
HCM Lane V/C Ratio	-	-	0.298	0.009	-
HCM Control Delay (s/veh)	-	-	15.6	8.7	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1.2	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	736	129	144	805	136	213	993	317	126	938	124
Future Volume (veh/h)	203	736	129	144	805	136	213	993	317	126	938	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1796	1796	1796	1796	1796	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	216	783	137	153	856	145	227	1056	337	134	998	132
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	244	648	113	244	652	110	254	984	439	334	958	127
Arrive On Green	0.14	0.22	0.22	0.14	0.22	0.22	0.14	0.28	0.28	0.19	0.30	0.30
Sat Flow, veh/h	1711	2903	508	1711	2919	494	1781	3554	1585	1781	3155	417
Grp Volume(v), veh/h	216	460	460	153	500	501	227	1056	337	134	562	568
Grp Sat Flow(s),veh/h/ln	1711	1706	1705	1711	1706	1707	1781	1777	1585	1781	1777	1795
Q Serve(g_s), s	13.9	25.0	25.0	9.4	25.0	25.0	14.0	31.0	21.9	7.4	34.0	34.0
Cycle Q Clear(g_c), s	13.9	25.0	25.0	9.4	25.0	25.0	14.0	31.0	21.9	7.4	34.0	34.0
Prop In Lane	1.00		0.30	1.00		0.29	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	244	381	381	244	381	381	254	984	439	334	539	545
V/C Ratio(X)	0.88	1.21	1.21	0.63	1.31	1.31	0.89	1.07	0.77	0.40	1.04	1.04
Avail Cap(c_a), veh/h	244	381	381	244	381	381	254	984	439	334	539	545
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	47.1	43.5	43.5	45.2	43.5	43.5	47.2	40.5	37.2	40.0	39.0	39.0
Incr Delay (d2), s/veh	34.0	115.8	115.9	11.5	158.7	158.8	34.3	50.6	12.2	3.6	50.0	50.1
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(95%),veh/ln	12.8	33.5	33.5	8.3	40.9	40.9	13.3	28.5	14.9	6.4	30.5	30.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	81.1	159.3	159.4	56.7	202.2	202.3	81.4	91.1	49.4	43.5	89.0	89.1
LnGrp LOS	F	F	F	E	F	F	F	F	D	D	F	F
Approach Vol, veh/h		1136			1154			1620			1264	
Approach Delay, s/veh		144.5			183.0			81.1			84.2	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	37.0	20.0	30.0	22.0	40.0	20.0	30.0
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	6.0	* 6	4.0	5.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	25.0	16.0	* 34	16.0	25.0
Max Q Clear Time (g_c+I1), s	9.4	33.0	11.4	27.0	16.0	36.0	15.9	27.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	118.5
HCM 7th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	11.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	662	146	68	435	13	83	3	63	14	8	5
Future Vol, veh/h	0	662	146	68	435	13	83	3	63	14	8	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	480	550	-	-	-	-	400	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	8	8	8	7	7	7	21	21	21	31	31	31
Mvmt Flow	0	720	159	74	473	14	90	3	68	15	9	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	487	0	0	878	0	0	1345	1354	720	1349	1506	480
Stage 1	-	-	-	-	-	-	720	720	-	628	628	-
Stage 2	-	-	-	-	-	-	625	635	-	721	878	-
Critical Hdwy	4.18	-	-	4.17	-	-	7.31	6.71	6.41	7.41	6.81	6.51
Critical Hdwy Stg 1	-	-	-	-	-	-	6.31	5.71	-	6.41	5.81	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.31	5.71	-	6.41	5.81	-
Follow-up Hdwy	2.272	-	-	2.263	-	-	3.689	4.189	3.489	3.779	4.279	3.579
Pot Cap-1 Maneuver	1046	-	-	748	-	-	117	137	398	111	105	531
Stage 1	-	-	-	-	-	-	391	405	-	425	433	-
Stage 2	-	-	-	-	-	-	442	444	-	376	328	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1046	-	-	748	-	-	96	123	398	81	94	531
Mov Cap-2 Maneuver	-	-	-	-	-	-	96	123	-	81	94	-
Stage 1	-	-	-	-	-	-	391	405	-	383	391	-
Stage 2	-	-	-	-	-	-	385	400	-	309	328	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	1.36	100.67	54.69
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	97	398	1046	-	-	748	-	-	101
HCM Lane V/C Ratio	0.968	0.172	-	-	-	0.099	-	-	0.291
HCM Control Delay (s/veh)	162.8	15.9	0	-	-	10.3	-	-	54.7
HCM Lane LOS	F	C	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	5.7	0.6	0	-	-	0.3	-	-	1.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	519	277	68	262	114	288	266	474	114	529	164
Future Volume (veh/h)	195	519	277	68	262	114	288	266	474	114	529	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	212	564	301	74	285	124	313	289	515	124	575	178
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, %	5	5	5	5	5	5	2	2	2	1	1	1
Cap, veh/h	327	1589	709	95	770	327	327	372	315	222	615	190
Arrive On Green	0.19	0.46	0.46	0.05	0.32	0.32	0.09	0.20	0.20	0.12	0.23	0.23
Sat Flow, veh/h	1739	3469	1547	1739	2372	1007	3456	1870	1585	1795	2694	832
Grp Volume(v), veh/h	212	564	301	74	206	203	313	289	515	124	382	371
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1739	1735	1645	1728	1870	1585	1795	1791	1735
Q Serve(g_s), s	12.4	11.6	9.7	4.6	10.0	10.4	9.9	16.1	18.1	7.2	23.0	23.1
Cycle Q Clear(g_c), s	12.4	11.6	9.7	4.6	10.0	10.4	9.9	16.1	18.1	7.2	23.0	23.1
Prop In Lane	1.00		1.00	1.00		0.61	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	327	1589	709	95	563	534	327	372	315	222	409	396
V/C Ratio(X)	0.65	0.35	0.42	0.78	0.37	0.38	0.96	0.78	1.63	0.56	0.93	0.94
Avail Cap(c_a), veh/h	327	1589	709	248	563	534	327	427	362	222	409	396
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	0.29	0.29	0.29	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	19.3	9.2	51.3	28.5	28.6	49.6	41.7	30.2	45.4	41.6	41.7
Incr Delay (d2), s/veh	4.4	0.6	1.9	12.8	1.8	2.0	17.6	2.4	289.1	3.1	28.5	29.9
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(95%),veh/ln	9.5	8.2	6.2	4.2	7.8	7.8	7.0	10.1	46.3	6.1	19.2	19.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	45.7	19.9	11.0	64.1	30.3	30.7	67.2	44.1	319.3	48.5	70.1	71.6
LnGrp LOS	D	B	B	E	C	C	E	D	F	D	E	E
Approach Vol, veh/h		1077			483			1117			877	
Approach Delay, s/veh		22.5			35.6			177.4			67.7	
Approach LOS		C			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	54.7	15.0	30.0	25.0	40.0	18.2	26.8
Change Period (Y+Rc), s	4.3	4.3	4.6	4.9	4.3	4.3	4.6	4.9
Max Green Setting (Gmax), s	15.7	40.7	10.4	25.1	20.7	35.7	10.4	25.1
Max Q Clear Time (g_c+I1), s	6.6	13.6	11.9	25.1	14.4	12.4	9.2	20.1
Green Ext Time (p_c), s	0.1	5.1	0.0	0.0	0.3	2.4	0.0	1.8

Intersection Summary	
HCM 7th Control Delay, s/veh	84.1
HCM 7th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	96	98	556	93	192	100	728	123	327	449	94
Future Volume (veh/h)	101	96	98	556	93	192	100	728	123	327	449	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1885	1885	1885	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	110	104	107	676	0	209	109	791	134	355	488	102
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, %	1	1	1	2	2	2	1	1	1	1	1	1
Cap, veh/h	165	164	147	767	0	341	142	791	134	352	1344	599
Arrive On Green	0.09	0.09	0.09	0.22	0.00	0.22	0.08	0.26	0.26	0.20	0.38	0.38
Sat Flow, veh/h	1795	1791	1598	3563	0	1585	1795	3064	519	1795	3582	1598
Grp Volume(v), veh/h	110	104	107	676	0	209	109	462	463	355	488	102
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1781	0	1585	1795	1791	1792	1795	1791	1598
Q Serve(g_s), s	4.8	4.5	5.2	14.8	0.0	9.6	4.8	20.8	20.8	15.8	7.9	3.4
Cycle Q Clear(g_c), s	4.8	4.5	5.2	14.8	0.0	9.6	4.8	20.8	20.8	15.8	7.9	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	165	164	147	767	0	341	142	463	463	352	1344	599
V/C Ratio(X)	0.67	0.63	0.73	0.88	0.00	0.61	0.77	1.00	1.00	1.01	0.36	0.17
Avail Cap(c_a), veh/h	214	214	190	1310	0	583	241	463	463	352	1344	599
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	35.3	35.6	30.6	0.0	28.6	36.3	29.9	29.9	32.4	18.2	16.8
Incr Delay (d2), s/veh	2.3	1.5	6.1	1.9	0.0	0.7	3.2	41.7	41.7	49.9	0.1	0.0
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(95%),veh/ln	3.9	3.6	4.1	10.1	0.0	6.2	3.9	20.0	20.0	17.1	5.7	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.7	36.7	41.7	32.5	0.0	29.2	39.5	71.5	71.6	82.3	18.3	16.8
LnGrp LOS	D	D	D	C		C	D	E	E	F	B	B
Approach Vol, veh/h		321			885			1034			945	
Approach Delay, s/veh		38.7			31.7			68.2			42.1	
Approach LOS		D			C			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	25.0		12.8	10.6	34.4		22.7				
Change Period (Y+Rc), s	4.2	4.2		5.4	4.2	4.2		5.4				
Max Green Setting (Gmax), s	5.8	20.8		9.6	10.8	25.8		29.6				
Max Q Clear Time (g_c+I1), s	7.8	22.8		7.2	6.8	9.9		16.8				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	0.8		0.5				

Intersection Summary	
HCM 7th Control Delay, s/veh	47.3
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	75.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1125	44	21	0	58	12	10	3	1	0	15	480
Future Vol, veh/h	1125	44	21	0	58	12	10	3	1	0	15	480
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	-	75	-	-	-	-	-	-	-	215
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	15	15	15	0	0	0	4	4	4
Mvmt Flow	1223	48	23	0	63	13	11	3	1	0	16	522

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	76	0	0	71	0	0	2576	2581	59	2565	2586	-
Stage 1	-	-	-	-	-	-	2505	2505	-	70	70	-
Stage 2	-	-	-	-	-	-	71	76	-	2495	2516	-
Critical Hdwy	4.13	-	-	4.25	-	-	7.1	6.5	6.2	7.14	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.14	5.54	-
Follow-up Hdwy	2.227	-	-	2.335	-	-	3.5	4	3.3	3.536	4.036	-
Pot Cap-1 Maneuver	1517	-	-	1451	-	-	17	26	1012	17	25	0
Stage 1	-	-	-	-	-	-	39	58	-	935	833	0
Stage 2	-	-	-	-	-	-	944	836	-	39	56	0
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1517	-	-	1451	-	-	~ 3	5	1012	2	~ 5	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 3	5	-	2	~ 5	-
Stage 1	-	-	-	-	-	-	~ 8	11	-	935	833	-
Stage 2	-	-	-	-	-	-	925	836	-	5	~ 11	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	15.44	0	$ 2984.1	$ 2474.56
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	4	1517	-	-	1451	-	-	5	-
HCM Lane V/C Ratio	3.87	0.806	-	-	-	-	-	3.374	-
HCM Control Delay (s/veh)	$ 2984.1	16.3	-	-	0	-	-	$ 2474.6	0
HCM Lane LOS	F	C	-	-	A	-	-	F	A
HCM 95th %tile Q(veh)	3.2	9.8	-	-	0	-	-	3.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Appendix E.3 – 2027 Build Conditions

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	163	0	0	235	65	0	0	1	92	0	41
Future Vol, veh/h	30	163	0	0	235	65	0	0	1	92	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	130	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	92	92	80	80	92	92	92	80	92	80
Heavy Vehicles, %	36	36	2	2	24	24	2	2	2	16	2	16
Mvmt Flow	38	204	0	0	294	81	0	0	1	115	0	51

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	375	0	-	-	-	0	573	654	102	471	-	294
Stage 1	-	-	-	-	-	-	279	279	-	294	-	-
Stage 2	-	-	-	-	-	-	294	375	-	177	-	-
Critical Hdwy	4.64	-	-	-	-	-	7.33	6.53	6.93	7.54	-	6.44
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.34	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.74	-	-
Follow-up Hdwy	2.542	-	-	-	-	-	3.519	4.019	3.319	3.652	-	3.452
Pot Cap-1 Maneuver	994	-	0	0	-	-	416	386	934	463	0	708
Stage 1	-	-	0	0	-	-	705	679	-	680	0	-
Stage 2	-	-	0	0	-	-	714	616	-	773	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	994	-	-	-	-	-	371	370	934	444	-	708
Mov Cap-2 Maneuver	-	-	-	-	-	-	465	447	-	525	-	-
Stage 1	-	-	-	-	-	-	677	652	-	680	-	-
Stage 2	-	-	-	-	-	-	662	616	-	741	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.58	0	8.86	13.89
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	934	560	-	-	-	570
HCM Lane V/C Ratio	0.001	0.038	-	-	-	0.291
HCM Control Delay (s/veh)	8.9	8.8	0.3	-	-	13.9
HCM Lane LOS	A	A	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	-	1.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	167	96	316	253	214	129	659	226	59	452	13
Future Volume (veh/h)	23	167	96	316	253	214	129	659	226	59	452	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1455	1455	1455	1707	1707	1707	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	24	178	102	336	269	228	137	701	240	63	481	14
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	30	30	30	13	13	13	9	9	9	9	9	9
Cap, veh/h	26	230	126	237	440	360	164	1651	737	80	1473	43
Arrive On Green	0.02	0.13	0.13	0.15	0.26	0.26	0.10	0.49	0.49	0.05	0.44	0.44
Sat Flow, veh/h	1386	1726	942	1626	1693	1387	1682	3357	1497	1682	3331	97
Grp Volume(v), veh/h	24	141	139	336	257	240	137	701	240	63	242	253
Grp Sat Flow(s),veh/h/ln	1386	1383	1286	1626	1622	1458	1682	1678	1497	1682	1678	1749
Q Serve(g_s), s	1.9	10.8	11.6	16.0	15.4	16.0	8.8	14.8	10.7	4.1	10.3	10.4
Cycle Q Clear(g_c), s	1.9	10.8	11.6	16.0	15.4	16.0	8.8	14.8	10.7	4.1	10.3	10.4
Prop In Lane	1.00		0.73	1.00		0.95	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	26	184	171	237	421	379	164	1651	737	80	742	773
V/C Ratio(X)	0.92	0.76	0.81	1.42	0.61	0.63	0.84	0.42	0.33	0.79	0.33	0.33
Avail Cap(c_a), veh/h	202	302	281	237	421	379	245	1651	737	321	742	773
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	53.9	46.0	46.3	47.0	35.8	36.1	48.8	17.9	16.9	51.8	20.0	20.0
Incr Delay (d2), s/veh	32.4	6.5	8.9	212.2	2.6	3.4	9.5	0.8	1.2	6.3	1.2	1.1
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(95%),veh/ln	1.6	7.1	7.3	31.7	10.3	9.9	7.2	9.3	6.7	3.3	7.4	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	86.3	52.5	55.2	259.2	38.4	39.5	58.3	18.7	18.1	58.1	21.2	21.1
LnGrp LOS	F	D	E	F	D	D	E	B	B	E	C	C
Approach Vol, veh/h		304			833			1078			558	
Approach Delay, s/veh		56.4			127.8			23.6			25.3	
Approach LOS		E			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	60.1	20.0	20.7	14.7	54.6	6.1	34.6
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	24.0	16.0	34.0	16.0	24.0
Max Q Clear Time (g_c+I1), s	6.1	16.8	18.0	13.6	10.8	12.4	3.9	18.0
Green Ext Time (p_c), s	0.0	4.2	0.0	1.1	0.1	2.7	0.0	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	58.8
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	46	68	69	56	91	97
Future Vol, veh/h	46	68	69	56	91	97
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	91	91	91	91	91	91
Heavy Vehicles, %	23	23	21	21	24	24
Mvmt Flow	51	75	76	62	100	107

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	413	107	0	0	137	0
Stage 1	107	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Critical Hdwy	6.63	6.43	-	-	4.34	-
Critical Hdwy Stg 1	5.63	-	-	-	-	-
Critical Hdwy Stg 2	5.63	-	-	-	-	-
Follow-up Hdwy	3.707	3.507	-	-	2.416	-
Pot Cap-1 Maneuver	557	893	-	-	1322	-
Stage 1	868	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	512	893	-	-	1322	-
Mov Cap-2 Maneuver	512	-	-	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	645	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	11.4	0	3.85
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	687	871	-
HCM Lane V/C Ratio	-	-	0.182	0.076	-
HCM Control Delay (s/veh)	-	-	11.4	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.2	-

Intersection	
Int Delay, s/veh	4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	147	35	206	77	11	257
Future Vol, veh/h	147	35	206	77	11	257
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	-	-	0	175	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	5	5	4	4	6	6
Mvmt Flow	173	41	242	91	13	302

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	571	242	0	0	333	0
Stage 1	242	-	-	-	-	-
Stage 2	328	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.16	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.254	-
Pot Cap-1 Maneuver	478	789	-	-	1204	-
Stage 1	791	-	-	-	-	-
Stage 2	723	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	472	789	-	-	1204	-
Mov Cap-2 Maneuver	472	-	-	-	-	-
Stage 1	791	-	-	-	-	-
Stage 2	715	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	16.99	0	0.33
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	512	1204	-
HCM Lane V/C Ratio	-	-	0.418	0.011	-
HCM Control Delay (s/veh)	-	-	17	8	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	2	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	656	64	133	639	91	119	631	157	129	774	110
Future Volume (veh/h)	159	656	64	133	639	91	119	631	157	129	774	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1752	1752	1752	1752	1752	1752	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	167	691	67	140	673	96	125	664	165	136	815	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	10	10	10	5	5	5	5	5	5
Cap, veh/h	238	684	66	238	653	93	248	960	428	326	925	132
Arrive On Green	0.14	0.22	0.22	0.14	0.22	0.22	0.14	0.28	0.28	0.19	0.30	0.30
Sat Flow, veh/h	1668	3066	297	1668	2924	417	1739	3469	1547	1739	3049	434
Grp Volume(v), veh/h	167	375	383	140	383	386	125	664	165	136	464	467
Grp Sat Flow(s),veh/h/ln	1668	1664	1698	1668	1664	1677	1739	1735	1547	1739	1735	1748
Q Serve(g_s), s	10.7	25.0	25.0	8.8	25.0	25.0	7.4	19.2	9.7	7.7	28.5	28.5
Cycle Q Clear(g_c), s	10.7	25.0	25.0	8.8	25.0	25.0	7.4	19.2	9.7	7.7	28.5	28.5
Prop In Lane	1.00		0.17	1.00		0.25	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	238	371	379	238	371	374	248	960	428	326	527	531
V/C Ratio(X)	0.70	1.01	1.01	0.59	1.03	1.03	0.50	0.69	0.39	0.42	0.88	0.88
Avail Cap(c_a), veh/h	238	371	379	238	371	374	248	960	428	326	527	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	45.7	43.5	43.5	44.9	43.5	43.5	44.3	36.2	32.8	40.1	37.1	37.1
Incr Delay (d2), s/veh	15.8	49.0	48.9	10.2	54.7	55.0	7.1	4.1	2.6	3.9	18.7	18.6
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(95%),veh/ln	9.2	21.6	22.0	7.7	22.6	22.8	6.5	13.2	7.0	6.6	20.9	21.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.5	92.5	92.4	55.1	98.2	98.5	51.4	40.3	35.4	44.0	55.8	55.7
LnGrp LOS	E	F	F	E	F	F	D	D	D	D	E	E
Approach Vol, veh/h		925			909			954			1067	
Approach Delay, s/veh		86.9			91.7			40.9			54.2	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	37.0	20.0	30.0	22.0	40.0	20.0	30.0
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	6.0	* 6	4.0	5.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	25.0	16.0	* 34	16.0	25.0
Max Q Clear Time (g_c+I1), s	9.7	21.2	10.8	27.0	9.4	30.5	12.7	27.0
Green Ext Time (p_c), s	0.0	1.2	0.0	0.0	0.0	1.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	67.6
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	420	112	76	407	13	57	10	30	2	6	4
Future Vol, veh/h	4	420	112	76	407	13	57	10	30	2	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	480	550	-	-	-	-	400	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	15	15	15	20	20	20	25	25	25	58	58	58
Mvmt Flow	5	483	129	87	468	15	66	11	34	2	7	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	483	0	0	611	0	0	1138	1149	483	1148	1271	475
Stage 1	-	-	-	-	-	-	492	492	-	650	650	-
Stage 2	-	-	-	-	-	-	646	657	-	498	621	-
Critical Hdwy	4.25	-	-	4.3	-	-	7.35	6.75	6.45	7.68	7.08	6.78
Critical Hdwy Stg 1	-	-	-	-	-	-	6.35	5.75	-	6.68	6.08	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.35	5.75	-	6.68	6.08	-
Follow-up Hdwy	2.335	-	-	2.38	-	-	3.725	4.225	3.525	4.022	4.522	3.822
Pot Cap-1 Maneuver	1016	-	-	886	-	-	161	180	540	137	131	490
Stage 1	-	-	-	-	-	-	518	511	-	377	389	-
Stage 2	-	-	-	-	-	-	424	428	-	463	402	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1016	-	-	886	-	-	136	161	540	108	117	490
Mov Cap-2 Maneuver	-	-	-	-	-	-	136	161	-	108	117	-
Stage 1	-	-	-	-	-	-	515	509	-	340	350	-
Stage 2	-	-	-	-	-	-	371	386	-	422	400	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.06	1.46	44.62	30.61
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	139	540	1016	-	-	886	-	-	154
HCM Lane V/C Ratio	0.554	0.064	0.005	-	-	0.099	-	-	0.089
HCM Control Delay (s/veh)	59.2	12.1	8.6	-	-	9.5	-	-	30.6
HCM Lane LOS	F	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	2.8	0.2	0	-	-	0.3	-	-	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	379	170	29	318	333	349	296	248	71	328	109
Future Volume (veh/h)	122	379	170	29	318	333	349	296	248	71	328	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1856	1856	1856	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	156	486	218	37	408	427	447	379	318	91	421	140
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	5	5	5	3	3	3	3	3	3	2	2	2
Cap, veh/h	390	1761	785	73	572	510	330	412	349	115	500	165
Arrive On Green	0.22	0.51	0.51	0.04	0.32	0.32	0.10	0.22	0.22	0.06	0.19	0.19
Sat Flow, veh/h	1739	3469	1547	1767	1763	1572	3428	1856	1572	1781	2627	865
Grp Volume(v), veh/h	156	486	218	37	408	427	447	379	318	91	283	278
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1767	1763	1572	1714	1856	1572	1781	1777	1715
Q Serve(g_s), s	8.4	8.8	5.7	2.3	22.4	27.7	10.6	22.0	18.2	5.5	16.9	17.2
Cycle Q Clear(g_c), s	8.4	8.8	5.7	2.3	22.4	27.7	10.6	22.0	18.2	5.5	16.9	17.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	390	1761	785	73	572	510	330	412	349	115	338	326
V/C Ratio(X)	0.40	0.28	0.28	0.51	0.71	0.84	1.35	0.92	0.91	0.79	0.84	0.85
Avail Cap(c_a), veh/h	390	1761	785	252	572	510	330	423	359	168	405	391
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	0.65	0.65	0.65	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	15.5	6.4	51.6	32.7	34.4	49.7	41.8	29.4	50.7	42.9	43.0
Incr Delay (d2), s/veh	0.7	0.4	0.9	5.4	7.4	15.0	172.0	18.2	19.1	14.3	12.4	14.1
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(95%),veh/ln	6.5	6.2	5.5	2.0	15.8	18.2	19.0	16.6	12.5	5.3	13.3	13.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.0	15.9	7.2	57.0	40.0	49.5	221.7	60.0	48.5	65.0	55.3	57.1
LnGrp LOS	D	B	A	E	D	D	F	E	D	E	E	E
Approach Vol, veh/h		860			872			1144			652	
Approach Delay, s/veh		17.5			45.4			120.0			57.4	
Approach LOS		B			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	60.1	15.2	25.8	29.0	40.0	11.7	29.3
Change Period (Y+Rc), s	4.3	4.3	4.6	4.9	4.3	4.3	4.6	4.9
Max Green Setting (Gmax), s	15.7	40.7	10.4	25.1	20.7	35.7	10.4	25.1
Max Q Clear Time (g_c+I1), s	4.3	10.8	12.6	19.2	10.4	29.7	7.5	24.0
Green Ext Time (p_c), s	0.0	4.2	0.0	1.7	0.3	2.7	0.0	0.5

Intersection Summary	
HCM 7th Control Delay, s/veh	65.0
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	33	17	356	87	355	17	419	65	247	218	50
Future Volume (veh/h)	47	33	17	356	87	355	17	419	65	247	218	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1781	1781	1781	1870	1870	1870	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	55	39	20	261	324	418	20	493	76	291	256	59
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	8	8	8	2	2	2	3	3	3	5	5	5
Cap, veh/h	141	184	88	515	541	459	56	582	89	329	1204	537
Arrive On Green	0.08	0.08	0.08	0.29	0.29	0.29	0.03	0.19	0.19	0.19	0.35	0.35
Sat Flow, veh/h	1697	2224	1059	1781	1870	1585	1767	3064	470	1739	3469	1547
Grp Volume(v), veh/h	55	29	30	261	324	418	20	283	286	291	256	59
Grp Sat Flow(s),veh/h/ln	1697	1692	1591	1781	1870	1585	1767	1763	1771	1739	1735	1547
Q Serve(g_s), s	2.4	1.2	1.4	9.4	11.5	19.6	0.9	11.9	12.0	12.6	4.0	2.0
Cycle Q Clear(g_c), s	2.4	1.2	1.4	9.4	11.5	19.6	0.9	11.9	12.0	12.6	4.0	2.0
Prop In Lane	1.00		0.67	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	141	140	132	515	541	459	56	335	336	329	1204	537
V/C Ratio(X)	0.39	0.21	0.23	0.51	0.60	0.91	0.36	0.84	0.85	0.89	0.21	0.11
Avail Cap(c_a), veh/h	211	211	198	684	718	609	248	476	478	356	1204	537
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	33.5	33.0	33.0	22.8	23.5	26.4	36.6	30.1	30.2	30.5	17.7	17.1
Incr Delay (d2), s/veh	0.7	0.3	0.3	0.3	0.4	12.9	1.4	6.8	7.3	20.2	0.0	0.0
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(95%),veh/ln	1.8	0.9	1.0	6.5	8.2	13.0	0.7	9.3	9.5	11.2	2.8	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.2	33.3	33.4	23.1	23.9	39.4	38.0	36.9	37.5	50.7	17.8	17.1
LnGrp LOS	C	C	C	C	C	D	D	D	D	D	B	B
Approach Vol, veh/h		114			1003			589			606	
Approach Delay, s/veh		33.7			30.2			37.2			33.5	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	18.8		11.8	6.6	31.0		27.7				
Change Period (Y+Rc), s	4.2	4.2		5.4	4.2	4.2		5.4				
Max Green Setting (Gmax), s	15.8	20.8		9.6	10.8	25.8		29.6				
Max Q Clear Time (g_c+I1), s	4.4	14.0		4.4	2.9	6.0		21.6				
Green Ext Time (p_c), s	0.0	0.6		0.1	0.0	0.4		0.7				

Intersection Summary	
HCM 7th Control Delay, s/veh	33.0
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	9.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	655	60	7	0	34	4	3	1	1	1	0	561
Future Vol, veh/h	655	60	7	0	34	4	3	1	1	1	0	561
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	-	75	-	-	-	-	-	-	-	215
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	5	5	5	26	26	26	0	0	0	2	2	2
Mvmt Flow	809	74	9	0	42	5	4	1	1	1	0	693

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	47	0	0	83	0	0	1738	1743	78	1736	1744	-
Stage 1	-	-	-	-	-	-	1696	1696	-	44	44	-
Stage 2	-	-	-	-	-	-	42	47	-	1692	1700	-
Critical Hdwy	4.15	-	-	4.36	-	-	7.1	6.5	6.2	7.12	6.52	-
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.434	-	-	3.5	4	3.3	3.518	4.018	-
Pot Cap-1 Maneuver	1541	-	-	1376	-	-	69	88	988	69	86	0
Stage 1	-	-	-	-	-	-	119	150	-	970	858	0
Stage 2	-	-	-	-	-	-	978	860	-	118	148	0
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1541	-	-	1376	-	-	33	42	988	32	41	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	33	42	-	32	41	-
Stage 1	-	-	-	-	-	-	56	71	-	970	858	-
Stage 2	-	-	-	-	-	-	978	860	-	55	70	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	8.97	0	102.19	121.63
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	43	1541	-	-	1376	-	-	32	-
HCM Lane V/C Ratio	0.143	0.525	-	-	-	-	-	0.038	-
HCM Control Delay (s/veh)	102.2	9.9	-	-	0	-	-	121.6	0
HCM Lane LOS	F	A	-	-	A	-	-	F	A
HCM 95th %tile Q(veh)	0.5	3.2	-	-	0	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	147	0	1	188	0	2
Future Vol, veh/h	147	0	1	188	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	160	0	1	204	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	160	0	366	160
Stage 1	-	-	-	-	160	-
Stage 2	-	-	-	-	207	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1419	-	633	885
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	828	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1419	-	633	885
Mov Cap-2 Maneuver	-	-	-	-	633	-
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	827	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.04	9.08
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	885	-	-	10	-
HCM Lane V/C Ratio	0.002	-	-	0.001	-
HCM Control Delay (s/veh)	9.1	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	148	1	2	189	0	0
Future Vol, veh/h	148	1	2	189	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	-	-	-	-	-	-
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	161	1	2	205	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	162	0	371	161
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	210	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1417	-	629	884
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	825	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1417	-	628	884
Mov Cap-2 Maneuver	-	-	-	-	628	-
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	824	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.08	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	19	-
HCM Lane V/C Ratio	-	-	-	0.002	-
HCM Control Delay (s/veh)	0	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	148	0	9	191	0	0
Future Vol, veh/h	148	0	9	191	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	-	-	-	-	-	-
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	161	0	10	208	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	161	0	388	161
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	227	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1418	-	615	884
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	811	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1418	-	611	884
Mov Cap-2 Maneuver	-	-	-	-	611	-
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	804	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.34	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	81	-
HCM Lane V/C Ratio	-	-	-	0.007	-
HCM Control Delay (s/veh)	0	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	64	549	0	0	275	51	1	2	5	88	0	20
Future Vol, veh/h	64	549	0	0	275	51	1	2	5	88	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	130	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	92	92	79	79	92	92	92	79	92	79
Heavy Vehicles, %	11	11	2	2	24	24	2	2	2	16	2	16
Mvmt Flow	81	695	0	0	348	65	1	2	5	111	0	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	413	0	-	-	-	0	1205	1270	347	859	-	348
Stage 1	-	-	-	-	-	-	857	857	-	348	-	-
Stage 2	-	-	-	-	-	-	348	413	-	511	-	-
Critical Hdwy	4.265	-	-	-	-	-	7.33	6.53	6.93	7.54	-	6.44
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.34	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.74	-	-
Follow-up Hdwy	2.3045	-	-	-	-	-	3.519	4.019	3.319	3.652	-	3.452
Pot Cap-1 Maneuver	1090	-	0	0	-	-	150	168	649	244	0	658
Stage 1	-	-	0	0	-	-	319	373	-	634	0	-
Stage 2	-	-	0	0	-	-	667	593	-	486	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1090	-	-	-	-	-	131	152	649	218	-	658
Mov Cap-2 Maneuver	-	-	-	-	-	-	225	251	-	329	-	-
Stage 1	-	-	-	-	-	-	290	339	-	634	-	-
Stage 2	-	-	-	-	-	-	642	593	-	434	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.47	0	14.25	20.81
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	398	376	-	-	-	363
HCM Lane V/C Ratio	0.022	0.074	-	-	-	0.377
HCM Control Delay (s/veh)	14.2	8.6	0.6	-	-	20.8
HCM Lane LOS	B	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.2	-	-	-	1.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	437	137	189	235	240	58	929	192	184	693	36
Future Volume (veh/h)	195	437	137	189	235	240	58	929	192	184	693	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1737	1737	1737	1722	1722	1722	1856	1856	1856	1811	1811	1811
Adj Flow Rate, veh/h	214	480	151	208	258	264	64	1021	211	202	762	40
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	11	11	11	12	12	12	3	3	3	6	6	6
Cap, veh/h	240	527	165	234	344	307	82	1159	517	231	1384	73
Arrive On Green	0.15	0.21	0.21	0.14	0.21	0.21	0.05	0.33	0.33	0.13	0.42	0.42
Sat Flow, veh/h	1654	2475	773	1640	1636	1459	1767	3526	1572	1725	3326	175
Grp Volume(v), veh/h	214	319	312	208	258	264	64	1021	211	202	394	408
Grp Sat Flow(s),veh/h/ln	1654	1650	1598	1640	1636	1459	1767	1763	1572	1725	1721	1780
Q Serve(g_s), s	14.0	20.8	21.0	13.7	16.3	19.2	3.9	30.1	11.4	12.6	19.1	19.1
Cycle Q Clear(g_c), s	14.0	20.8	21.0	13.7	16.3	19.2	3.9	30.1	11.4	12.6	19.1	19.1
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	240	351	340	234	344	307	82	1159	517	231	716	741
V/C Ratio(X)	0.89	0.91	0.92	0.89	0.75	0.86	0.78	0.88	0.41	0.87	0.55	0.55
Avail Cap(c_a), veh/h	241	360	349	239	357	318	257	1159	517	329	716	741
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	46.2	42.3	42.4	46.3	40.7	41.9	51.9	34.9	28.6	46.7	24.3	24.3
Incr Delay (d2), s/veh	30.4	25.7	28.1	29.7	8.3	20.0	5.8	9.7	2.4	12.7	3.0	2.9
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(95%),veh/ln	12.1	16.1	16.0	11.8	11.5	13.2	3.3	19.8	8.0	10.2	12.7	13.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	76.6	68.0	70.4	76.0	49.0	61.9	57.6	44.6	31.0	59.4	27.3	27.3
LnGrp LOS	E	E	E	E	D	E	E	D	C	E	C	C
Approach Vol, veh/h		845			730			1296			1004	
Approach Delay, s/veh		71.1			61.3			43.0			33.8	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.7	42.2	19.7	29.4	9.1	51.8	20.0	29.1
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	24.0	16.0	34.0	16.0	24.0
Max Q Clear Time (g_c+I1), s	14.6	32.1	15.7	23.0	5.9	21.1	16.0	21.2
Green Ext Time (p_c), s	0.1	0.0	0.0	0.4	0.0	3.9	0.0	0.9

Intersection Summary	
HCM 7th Control Delay, s/veh	50.2
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	7.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	92	66	70	194	166	90
Future Vol, veh/h	92	66	70	194	166	90
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	79	79	79	79	79	79
Heavy Vehicles, %	23	23	18	18	12	12
Mvmt Flow	116	84	89	246	210	114

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	746	211	0	0	334	0
Stage 1	211	-	-	-	-	-
Stage 2	534	-	-	-	-	-
Critical Hdwy	6.63	6.43	-	-	4.22	-
Critical Hdwy Stg 1	5.63	-	-	-	-	-
Critical Hdwy Stg 2	5.63	-	-	-	-	-
Follow-up Hdwy	3.707	3.507	-	-	2.308	-
Pot Cap-1 Maneuver	352	779	-	-	1171	-
Stage 1	776	-	-	-	-	-
Stage 2	548	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	285	779	-	-	1171	-
Mov Cap-2 Maneuver	285	-	-	-	-	-
Stage 1	776	-	-	-	-	-
Stage 2	443	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	23.78	0	5.67
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	388	1097	-
HCM Lane V/C Ratio	-	-	0.516	0.179	-
HCM Control Delay (s/veh)	-	-	23.8	8.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	2.9	0.7	-

Intersection	
Int Delay, s/veh	2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	135	13	357	225	8	187
Future Vol, veh/h	135	13	357	225	8	187
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	-	-	0	175	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	2	2	2	2
Mvmt Flow	141	14	372	234	8	195

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	583	372	0	0	606	0
Stage 1	372	-	-	-	-	-
Stage 2	211	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.12	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.218	-
Pot Cap-1 Maneuver	473	672	-	-	972	-
Stage 1	695	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	469	672	-	-	972	-
Mov Cap-2 Maneuver	469	-	-	-	-	-
Stage 1	695	-	-	-	-	-
Stage 2	814	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	15.96	0	0.36
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	481	972	-
HCM Lane V/C Ratio	-	-	0.32	0.009	-
HCM Control Delay (s/veh)	-	-	16	8.7	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1.4	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	759	134	144	850	136	223	993	317	126	938	129
Future Volume (veh/h)	205	759	134	144	850	136	223	993	317	126	938	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1796	1796	1796	1796	1796	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	218	807	143	153	904	145	237	1056	337	134	998	137
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	244	647	115	244	657	105	254	984	439	334	953	131
Arrive On Green	0.14	0.22	0.22	0.14	0.22	0.22	0.14	0.28	0.28	0.19	0.30	0.30
Sat Flow, veh/h	1711	2897	513	1711	2945	472	1781	3554	1585	1781	3139	431
Grp Volume(v), veh/h	218	475	475	153	524	525	237	1056	337	134	565	570
Grp Sat Flow(s),veh/h/ln	1711	1706	1704	1711	1706	1711	1781	1777	1585	1781	1777	1793
Q Serve(g_s), s	14.0	25.0	25.0	9.4	25.0	25.0	14.7	31.0	21.9	7.4	34.0	34.0
Cycle Q Clear(g_c), s	14.0	25.0	25.0	9.4	25.0	25.0	14.7	31.0	21.9	7.4	34.0	34.0
Prop In Lane	1.00		0.30	1.00		0.28	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	244	381	380	244	381	382	254	984	439	334	539	544
V/C Ratio(X)	0.89	1.25	1.25	0.63	1.37	1.38	0.93	1.07	0.77	0.40	1.05	1.05
Avail Cap(c_a), veh/h	244	381	380	244	381	382	254	984	439	334	539	544
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	47.2	43.5	43.5	45.2	43.5	43.5	47.5	40.5	37.2	40.0	39.0	39.0
Incr Delay (d2), s/veh	35.3	131.7	131.8	11.5	184.5	184.7	41.1	50.6	12.2	3.6	51.5	51.7
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(95%),veh/ln	13.0	36.2	36.2	8.3	45.3	45.4	14.3	28.5	14.9	6.4	30.9	31.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	82.4	175.2	175.3	56.7	228.0	228.2	88.6	91.1	49.4	43.5	90.5	90.7
LnGrp LOS	F	F	F	E	F	F	F	F	D	D	F	F
Approach Vol, veh/h		1168			1202			1630			1269	
Approach Delay, s/veh		157.9			206.3			82.1			85.7	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	37.0	20.0	30.0	22.0	40.0	20.0	30.0
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	6.0	* 6	4.0	5.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	25.0	16.0	* 34	16.0	25.0
Max Q Clear Time (g_c+I1), s	9.4	33.0	11.4	27.0	16.7	36.0	16.0	27.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	128.1
HCM 7th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	12

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	662	151	68	435	13	85	3	63	14	8	5
Future Vol, veh/h	0	662	151	68	435	13	85	3	63	14	8	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	480	550	-	-	-	-	400	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	8	8	8	7	7	7	21	21	21	31	31	31
Mvmt Flow	0	720	164	74	473	14	92	3	68	15	9	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	487	0	0	884	0	0	1345	1354	720	1349	1511	480
Stage 1	-	-	-	-	-	-	720	720	-	628	628	-
Stage 2	-	-	-	-	-	-	625	635	-	721	884	-
Critical Hdwy	4.18	-	-	4.17	-	-	7.31	6.71	6.41	7.41	6.81	6.51
Critical Hdwy Stg 1	-	-	-	-	-	-	6.31	5.71	-	6.41	5.81	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.31	5.71	-	6.41	5.81	-
Follow-up Hdwy	2.272	-	-	2.263	-	-	3.689	4.189	3.489	3.779	4.279	3.579
Pot Cap-1 Maneuver	1046	-	-	745	-	-	117	137	398	111	104	531
Stage 1	-	-	-	-	-	-	391	405	-	425	433	-
Stage 2	-	-	-	-	-	-	442	444	-	376	326	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1046	-	-	745	-	-	96	123	398	81	94	531
Mov Cap-2 Maneuver	-	-	-	-	-	-	96	123	-	81	94	-
Stage 1	-	-	-	-	-	-	391	405	-	383	390	-
Stage 2	-	-	-	-	-	-	385	400	-	309	326	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	1.37	105.51	54.89
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	96	398	1046	-	-	745	-	-	101
HCM Lane V/C Ratio	0.992	0.172	-	-	-	0.099	-	-	0.292
HCM Control Delay (s/veh)	169.7	15.9	0	-	-	10.4	-	-	54.9
HCM Lane LOS	F	C	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	5.9	0.6	0	-	-	0.3	-	-	1.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	530	289	68	292	114	303	266	474	114	529	164
Future Volume (veh/h)	195	530	289	68	292	114	303	266	474	114	529	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	212	576	314	74	317	124	329	289	515	124	575	178
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, %	5	5	5	5	5	5	2	2	2	1	1	1
Cap, veh/h	327	1589	709	95	796	305	327	372	315	222	615	190
Arrive On Green	0.19	0.46	0.46	0.05	0.32	0.32	0.09	0.20	0.20	0.12	0.23	0.23
Sat Flow, veh/h	1739	3469	1547	1739	2451	940	3456	1870	1585	1795	2694	832
Grp Volume(v), veh/h	212	576	314	74	222	219	329	289	515	124	382	371
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1739	1735	1657	1728	1870	1585	1795	1791	1735
Q Serve(g_s), s	12.4	11.9	10.3	4.6	10.9	11.3	10.4	16.1	18.1	7.2	23.0	23.1
Cycle Q Clear(g_c), s	12.4	11.9	10.3	4.6	10.9	11.3	10.4	16.1	18.1	7.2	23.0	23.1
Prop In Lane	1.00		1.00	1.00		0.57	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	327	1589	709	95	563	538	327	372	315	222	409	396
V/C Ratio(X)	0.65	0.36	0.44	0.78	0.40	0.41	1.01	0.78	1.63	0.56	0.93	0.94
Avail Cap(c_a), veh/h	327	1589	709	248	563	538	327	427	362	222	409	396
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	0.30	0.30	0.30	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	19.4	9.3	51.3	28.8	28.9	49.8	41.7	30.2	45.4	41.6	41.7
Incr Delay (d2), s/veh	4.4	0.6	2.0	12.8	2.1	2.3	29.0	2.4	289.3	3.1	28.5	29.9
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(95%),veh/ln	9.5	8.4	6.6	4.2	8.4	8.3	8.0	10.1	46.4	6.1	19.2	19.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	45.7	20.0	11.3	64.1	30.9	31.2	78.8	44.2	319.4	48.5	70.1	71.6
LnGrp LOS	D	C	B	E	C	C	F	D	F	D	E	E
Approach Vol, veh/h		1102			515			1133			877	
Approach Delay, s/veh		22.5			35.8			179.3			67.7	
Approach LOS		C			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	54.7	15.0	30.0	25.0	40.0	18.2	26.8
Change Period (Y+Rc), s	4.3	4.3	4.6	4.9	4.3	4.3	4.6	4.9
Max Green Setting (Gmax), s	15.7	40.7	10.4	25.1	20.7	35.7	10.4	25.1
Max Q Clear Time (g_c+I1), s	6.6	13.9	12.4	25.1	14.4	13.3	9.2	20.1
Green Ext Time (p_c), s	0.1	5.3	0.0	0.0	0.3	2.6	0.0	1.8

Intersection Summary	
HCM 7th Control Delay, s/veh	84.3
HCM 7th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	96	98	556	93	207	100	728	123	339	449	94
Future Volume (veh/h)	101	96	98	556	93	207	100	728	123	339	449	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1885	1885	1885	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	110	104	107	676	0	225	109	791	134	368	488	102
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, %	1	1	1	2	2	2	1	1	1	1	1	1
Cap, veh/h	165	164	147	767	0	341	142	791	134	352	1344	599
Arrive On Green	0.09	0.09	0.09	0.22	0.00	0.22	0.08	0.26	0.26	0.20	0.38	0.38
Sat Flow, veh/h	1795	1791	1598	3563	0	1585	1795	3064	519	1795	3582	1598
Grp Volume(v), veh/h	110	104	107	676	0	225	109	462	463	368	488	102
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1781	0	1585	1795	1791	1792	1795	1791	1598
Q Serve(g_s), s	4.8	4.5	5.3	14.8	0.0	10.5	4.8	20.8	20.8	15.8	7.9	3.4
Cycle Q Clear(g_c), s	4.8	4.5	5.3	14.8	0.0	10.5	4.8	20.8	20.8	15.8	7.9	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	165	164	147	767	0	341	142	463	463	352	1344	599
V/C Ratio(X)	0.67	0.63	0.73	0.88	0.00	0.66	0.77	1.00	1.00	1.04	0.36	0.17
Avail Cap(c_a), veh/h	214	213	190	1309	0	583	241	463	463	352	1344	599
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	35.3	35.6	30.6	0.0	28.9	36.3	29.9	29.9	32.4	18.2	16.8
Incr Delay (d2), s/veh	2.3	1.5	6.1	1.9	0.0	0.8	3.2	41.7	41.8	60.1	0.1	0.0
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(95%),veh/ln	3.9	3.6	4.1	10.1	0.0	6.7	3.9	20.0	20.0	18.7	5.7	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.7	36.8	41.7	32.5	0.0	29.7	39.5	71.6	71.6	92.5	18.3	16.8
LnGrp LOS	D	D	D	C		C	D	E	E	F	B	B
Approach Vol, veh/h		321			901			1034			958	
Approach Delay, s/veh		38.7			31.8			68.2			46.6	
Approach LOS		D			C			E			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	25.0		12.8	10.6	34.4		22.7
Change Period (Y+Rc), s	4.2	4.2		5.4	4.2	4.2		5.4
Max Green Setting (Gmax), s	5.8	20.8		9.6	10.8	25.8		29.6
Max Q Clear Time (g_c+I1), s	7.3	22.8		7.3	6.8	9.9		16.8
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	0.8		0.5

Intersection Summary	
HCM 7th Control Delay, s/veh	48.6
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	79.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1133	46	21	0	58	12	10	3	1	0	15	505
Future Vol, veh/h	1133	46	21	0	58	12	10	3	1	0	15	505
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	-	75	-	-	-	-	-	-	-	215
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	15	15	15	0	0	0	4	4	4
Mvmt Flow	1232	50	23	0	63	13	11	3	1	0	16	549

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	76	0	0	73	0	0	2596	2601	61	2584	2605	-
Stage 1	-	-	-	-	-	-	2524	2524	-	70	70	-
Stage 2	-	-	-	-	-	-	71	76	-	2515	2536	-
Critical Hdwy	4.13	-	-	4.25	-	-	7.1	6.5	6.2	7.14	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.14	5.54	-
Follow-up Hdwy	2.227	-	-	2.335	-	-	3.5	4	3.3	3.536	4.036	-
Pot Cap-1 Maneuver	1517	-	-	1448	-	-	17	25	1009	17	24	0
Stage 1	-	-	-	-	-	-	38	57	-	935	833	0
Stage 2	-	-	-	-	-	-	944	836	-	38	54	0
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1517	-	-	1448	-	-	~ 3	5	1009	2	~ 5	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 3	5	-	2	~ 5	-
Stage 1	-	-	-	-	-	-	~ 7	11	-	935	833	-
Stage 2	-	-	-	-	-	-	925	836	-	5	~ 10	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	15.69	0	$ 3196.08	$ 2645.48
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	4	1517	-	-	1448	-	-	5	-
HCM Lane V/C Ratio	4.118	0.812	-	-	-	-	-	3.581	-
HCM Control Delay (s/veh)	$ 3196.1	16.6	-	-	0	-	-	$ 2645.5	0
HCM Lane LOS	F	C	-	-	A	-	-	F	A
HCM 95th %tile Q(veh)	3.2	10.1	-	-	0	-	-	3.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	364	0	1	160	0	1
Future Vol, veh/h	364	0	1	160	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	-	-	-	-	-	-
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	396	0	1	174	0	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	396	0	572	396
Stage 1	-	-	-	-	396	-
Stage 2	-	-	-	-	176	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1163	-	482	654
Stage 1	-	-	-	-	680	-
Stage 2	-	-	-	-	854	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1163	-	481	654
Mov Cap-2 Maneuver	-	-	-	-	481	-
Stage 1	-	-	-	-	680	-
Stage 2	-	-	-	-	854	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.05	10.52
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	654	-	-	11	-
HCM Lane V/C Ratio	0.002	-	-	0.001	-
HCM Control Delay (s/veh)	10.5	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	355	10	15	156	5	7
Future Vol, veh/h	355	10	15	156	5	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	386	11	16	170	5	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	397	0	593	391
Stage 1	-	-	-	-	391	-
Stage 2	-	-	-	-	202	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1162	-	468	657
Stage 1	-	-	-	-	683	-
Stage 2	-	-	-	-	832	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1162	-	461	657
Mov Cap-2 Maneuver	-	-	-	-	461	-
Stage 1	-	-	-	-	683	-
Stage 2	-	-	-	-	819	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.71	11.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	558	-	-	158	-
HCM Lane V/C Ratio	0.023	-	-	0.014	-
HCM Control Delay (s/veh)	11.6	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	362	0	73	171	0	36
Future Vol, veh/h	362	0	73	171	0	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	393	0	79	186	0	39

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	393	0	738	393
Stage 1	-	-	-	-	393	-
Stage 2	-	-	-	-	345	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1165	-	385	655
Stage 1	-	-	-	-	682	-
Stage 2	-	-	-	-	717	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1165	-	356	655
Mov Cap-2 Maneuver	-	-	-	-	356	-
Stage 1	-	-	-	-	682	-
Stage 2	-	-	-	-	663	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	2.49	10.84
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	655	-	-	539	-
HCM Lane V/C Ratio	0.06	-	-	0.068	-
HCM Control Delay (s/veh)	10.8	-	-	8.3	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

Appendix E.4 – 2027 Build Mitigated Conditions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	167	96	316	253	214	129	659	226	59	452	13
Future Volume (veh/h)	23	167	96	316	253	214	129	659	226	59	452	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1455	1455	1455	1707	1707	1707	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	24	178	102	336	269	228	137	701	240	63	481	14
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	30	30	30	13	13	13	9	9	9	9	9	9
Cap, veh/h	26	221	121	364	564	462	164	1407	627	80	1229	36
Arrive On Green	0.02	0.13	0.13	0.22	0.33	0.33	0.10	0.42	0.42	0.05	0.37	0.37
Sat Flow, veh/h	1386	1726	942	1626	1693	1387	1682	3357	1497	1682	3331	97
Grp Volume(v), veh/h	24	141	139	336	257	240	137	701	240	63	242	253
Grp Sat Flow(s),veh/h/ln	1386	1383	1286	1626	1622	1458	1682	1678	1497	1682	1678	1749
Q Serve(g_s), s	1.9	10.9	11.6	22.2	13.8	14.4	8.8	16.9	12.2	4.1	11.7	11.7
Cycle Q Clear(g_c), s	1.9	10.9	11.6	22.2	13.8	14.4	8.8	16.9	12.2	4.1	11.7	11.7
Prop In Lane	1.00		0.73	1.00		0.95	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	26	177	165	364	540	485	164	1407	627	80	619	646
V/C Ratio(X)	0.92	0.79	0.84	0.92	0.48	0.49	0.84	0.50	0.38	0.79	0.39	0.39
Avail Cap(c_a), veh/h	88	214	199	488	634	570	229	1407	627	138	619	646
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	53.9	46.5	46.9	41.8	29.1	29.3	48.8	23.5	22.1	51.9	25.6	25.6
Incr Delay (d2), s/veh	32.4	15.6	23.5	17.2	0.7	0.8	12.5	1.3	1.8	6.5	1.9	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(95%),veh/ln	1.6	7.9	8.3	15.6	9.1	8.6	7.5	10.7	7.9	3.3	8.4	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	86.3	62.1	70.4	58.9	29.7	30.1	61.3	24.7	23.9	58.3	27.4	27.4
LnGrp LOS	F	E	E	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h		304			833			1078			558	
Approach Delay, s/veh		67.8			41.6			29.2			30.9	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	52.1	28.6	20.1	14.7	46.6	6.1	42.6
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	9.0	31.0	33.0	17.0	15.0	25.0	7.0	43.0
Max Q Clear Time (g_c+I1), s	6.1	18.9	24.2	13.6	10.8	13.7	3.9	16.4
Green Ext Time (p_c), s	0.0	4.2	0.4	0.5	0.1	2.1	0.0	3.0

Intersection Summary	
HCM 7th Control Delay, s/veh	37.5
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	437	137	189	235	240	58	929	192	184	693	36
Future Volume (veh/h)	195	437	137	189	235	240	58	929	192	184	693	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1737	1737	1737	1722	1722	1722	1856	1856	1856	1811	1811	1811
Adj Flow Rate, veh/h	214	480	151	208	258	264	64	1021	211	202	762	40
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	11	11	11	12	12	12	3	3	3	6	6	6
Cap, veh/h	241	495	155	234	322	287	82	1208	539	229	1427	75
Arrive On Green	0.15	0.20	0.20	0.14	0.20	0.20	0.05	0.34	0.34	0.13	0.43	0.43
Sat Flow, veh/h	1654	2475	773	1640	1636	1459	1767	3526	1572	1725	3326	175
Grp Volume(v), veh/h	214	319	312	208	258	264	64	1021	211	202	394	408
Grp Sat Flow(s),veh/h/ln	1654	1650	1598	1640	1636	1459	1767	1763	1572	1725	1721	1780
Q Serve(g_s), s	14.0	21.1	21.4	13.7	16.5	19.5	3.9	29.5	11.2	12.7	18.7	18.7
Cycle Q Clear(g_c), s	14.0	21.1	21.4	13.7	16.5	19.5	3.9	29.5	11.2	12.7	18.7	18.7
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	241	330	320	234	322	287	82	1208	539	229	738	764
V/C Ratio(X)	0.89	0.97	0.98	0.89	0.80	0.92	0.78	0.85	0.39	0.88	0.53	0.53
Avail Cap(c_a), veh/h	286	330	320	239	322	287	154	1208	539	235	738	764
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	46.1	43.6	43.7	46.3	42.1	43.3	51.9	33.5	27.5	46.8	23.2	23.3
Incr Delay (d2), s/veh	22.1	40.5	43.8	29.7	13.5	32.7	5.9	7.4	2.1	28.1	2.8	2.7
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(95%),veh/ln	11.4	17.7	17.8	11.8	12.3	14.5	3.3	19.0	7.8	11.4	12.3	12.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	68.2	84.1	87.5	76.0	55.6	76.0	57.7	40.8	29.6	74.9	26.0	25.9
LnGrp LOS	E	F	F	E	E	E	E	D	C	E	C	C
Approach Vol, veh/h		845			730			1296			1004	
Approach Delay, s/veh		81.3			68.8			39.8			35.8	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.6	43.7	19.7	28.0	9.1	53.2	20.0	27.7
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	15.0	37.0	16.0	22.0	9.6	42.4	19.0	19.0
Max Q Clear Time (g_c+I1), s	14.7	31.5	15.7	23.4	5.9	20.7	16.0	21.5
Green Ext Time (p_c), s	0.0	3.3	0.0	0.0	0.0	4.8	0.1	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	53.3
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	656	64	133	639	91	119	631	157	129	774	110
Future Volume (veh/h)	159	656	64	133	639	91	119	631	157	129	774	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1752	1752	1752	1752	1752	1752	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	167	691	67	140	673	96	125	664	165	136	815	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	10	10	10	5	5	5	5	5	5
Cap, veh/h	232	857	83	198	757	108	183	1087	485	207	942	134
Arrive On Green	0.14	0.28	0.28	0.12	0.26	0.26	0.11	0.31	0.31	0.12	0.31	0.31
Sat Flow, veh/h	1668	3066	297	1668	2924	417	1739	3469	1547	1739	3049	434
Grp Volume(v), veh/h	167	375	383	140	383	386	125	664	165	136	464	467
Grp Sat Flow(s),veh/h/ln	1668	1664	1698	1668	1664	1677	1739	1735	1547	1739	1735	1748
Q Serve(g_s), s	10.7	23.5	23.5	9.0	24.8	24.8	7.8	18.2	9.2	8.4	28.2	28.2
Cycle Q Clear(g_c), s	10.7	23.5	23.5	9.0	24.8	24.8	7.8	18.2	9.2	8.4	28.2	28.2
Prop In Lane	1.00		0.17	1.00		0.25	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	232	465	475	198	431	434	183	1087	485	207	536	540
V/C Ratio(X)	0.72	0.81	0.81	0.71	0.89	0.89	0.68	0.61	0.34	0.66	0.87	0.87
Avail Cap(c_a), veh/h	232	465	475	198	431	434	183	1087	485	207	536	540
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	46.1	37.5	37.5	47.5	39.9	40.0	48.3	32.6	29.6	47.2	36.5	36.5
Incr Delay (d2), s/veh	17.4	13.9	13.7	19.1	22.8	22.9	18.7	2.6	1.9	15.3	16.9	16.8
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(95%),veh/ln	9.4	16.6	16.9	8.3	18.5	18.6	7.6	12.3	6.5	8.0	20.5	20.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	63.5	51.4	51.3	66.6	62.8	62.9	67.0	35.2	31.5	62.5	53.4	53.3
LnGrp LOS	E	D	D	E	E	E	E	D	C	E	D	D
Approach Vol, veh/h		925			909			954			1067	
Approach Delay, s/veh		53.5			63.4			38.7			54.5	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.3	41.1	17.3	36.3	17.8	40.6	19.6	34.0
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	6.0	* 6	4.0	5.0
Max Green Setting (Gmax), s	13.3	33.1	13.3	31.3	11.8	* 35	15.6	29.0
Max Q Clear Time (g_c+I1), s	10.4	20.2	11.0	25.5	9.8	30.2	12.7	26.8
Green Ext Time (p_c), s	0.0	1.5	0.0	0.7	0.0	1.2	0.0	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	52.5
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	759	134	144	850	136	223	993	317	126	938	129
Future Volume (veh/h)	205	759	134	144	850	136	223	993	317	126	938	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1796	1796	1796	1796	1796	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	218	807	143	153	904	145	237	1056	337	134	998	137
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	199	802	142	168	763	122	223	1320	589	150	981	135
Arrive On Green	0.12	0.28	0.28	0.10	0.26	0.26	0.13	0.37	0.37	0.08	0.31	0.31
Sat Flow, veh/h	1711	2897	513	1711	2945	472	1781	3554	1585	1781	3139	431
Grp Volume(v), veh/h	218	475	475	153	524	525	237	1056	337	134	565	570
Grp Sat Flow(s),veh/h/ln	1711	1706	1704	1711	1706	1711	1781	1777	1585	1781	1777	1793
Q Serve(g_s), s	13.0	31.0	31.0	9.9	29.0	29.0	14.0	29.8	19.0	8.3	35.0	35.0
Cycle Q Clear(g_c), s	13.0	31.0	31.0	9.9	29.0	29.0	14.0	29.8	19.0	8.3	35.0	35.0
Prop In Lane	1.00		0.30	1.00		0.28	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	199	472	472	168	442	443	223	1320	589	150	555	560
V/C Ratio(X)	1.10	1.01	1.01	0.91	1.19	1.19	1.06	0.80	0.57	0.90	1.02	1.02
Avail Cap(c_a), veh/h	199	472	472	168	442	443	223	1320	589	150	555	560
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	49.5	40.5	40.5	50.0	41.5	41.5	49.0	31.5	28.1	50.8	38.5	38.5
Incr Delay (d2), s/veh	92.5	43.0	43.1	49.1	104.2	104.3	78.4	5.2	4.0	50.2	42.5	42.6
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(95%),veh/ln	16.5	25.4	25.4	10.7	36.1	36.2	16.8	19.0	12.2	9.7	29.4	29.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	142.0	83.5	83.6	99.1	145.7	145.8	127.4	36.6	32.1	101.0	81.0	81.1
LnGrp LOS	F	F	F	F	F	F	F	D	C	F	F	F
Approach Vol, veh/h		1168			1202			1630			1269	
Approach Delay, s/veh		94.4			139.8			48.9			83.2	
Approach LOS		F			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	47.6	15.0	36.0	20.0	41.0	17.0	34.0
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	6.0	* 6	4.0	5.0
Max Green Setting (Gmax), s	9.4	39.6	11.0	31.0	14.0	* 35	13.0	29.0
Max Q Clear Time (g_c+I1), s	10.3	31.8	11.9	33.0	16.0	37.0	15.0	31.0
Green Ext Time (p_c), s	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	88.0
HCM 7th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	379	170	29	318	333	349	296	248	71	328	109
Future Volume (veh/h)	122	379	170	29	318	333	349	296	248	71	328	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1856	1856	1856	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	156	486	218	37	408	427	447	379	318	91	421	140
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	5	5	5	3	3	3	3	3	3	2	2	2
Cap, veh/h	333	1560	696	73	527	470	503	443	376	188	520	171
Arrive On Green	0.19	0.45	0.45	0.04	0.30	0.30	0.15	0.24	0.24	0.11	0.20	0.20
Sat Flow, veh/h	1739	3469	1547	1767	1763	1572	3428	1856	1572	1781	2627	865
Grp Volume(v), veh/h	156	486	218	37	408	427	447	379	318	91	283	278
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1767	1763	1572	1714	1856	1572	1781	1777	1715
Q Serve(g_s), s	8.8	9.9	5.8	2.3	23.2	28.7	14.1	21.5	17.7	5.3	16.7	17.0
Cycle Q Clear(g_c), s	8.8	9.9	5.8	2.3	23.2	28.7	14.1	21.5	17.7	5.3	16.7	17.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	333	1560	696	73	527	470	503	443	376	188	352	339
V/C Ratio(X)	0.47	0.31	0.31	0.51	0.77	0.91	0.89	0.86	0.85	0.48	0.81	0.82
Avail Cap(c_a), veh/h	333	1560	696	146	527	470	511	592	502	198	499	482
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	0.65	0.65	0.65	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.5	19.4	6.7	51.6	35.2	37.1	46.0	40.0	27.9	46.3	42.1	42.2
Incr Delay (d2), s/veh	1.0	0.5	1.2	5.4	10.6	23.9	12.0	6.2	6.7	1.9	6.4	7.3
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(95%),veh/ln	6.8	7.2	6.3	2.0	16.8	20.0	10.2	14.7	10.9	4.4	12.5	12.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.5	19.9	7.8	57.0	45.7	61.0	58.1	46.2	34.6	48.3	48.5	49.6
LnGrp LOS	D	B	A	E	D	E	E	D	C	D	D	D
Approach Vol, veh/h		860			872			1144			652	
Approach Delay, s/veh		20.6			53.7			47.6			48.9	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	53.8	20.7	26.7	25.4	37.2	16.2	31.2
Change Period (Y+Rc), s	4.3	4.3	4.6	4.9	4.3	4.3	4.6	4.9
Max Green Setting (Gmax), s	9.1	35.5	16.4	30.9	11.7	32.9	12.2	35.1
Max Q Clear Time (g_c+I1), s	4.3	11.9	16.1	19.0	10.8	30.7	7.3	23.5
Green Ext Time (p_c), s	0.0	4.0	0.1	2.7	0.0	1.1	0.1	2.8

Intersection Summary	
HCM 7th Control Delay, s/veh	42.8
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	530	289	68	292	114	303	266	474	114	529	164
Future Volume (veh/h)	195	530	289	68	292	114	303	266	474	114	529	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	212	576	314	74	317	124	329	289	515	124	575	178
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, %	5	5	5	5	5	5	2	2	2	1	1	1
Cap, veh/h	310	1467	654	95	733	281	386	439	372	221	663	205
Arrive On Green	0.18	0.42	0.42	0.05	0.30	0.30	0.11	0.23	0.23	0.12	0.25	0.25
Sat Flow, veh/h	1739	3469	1547	1739	2451	940	3456	1870	1585	1795	2694	832
Grp Volume(v), veh/h	212	576	314	74	222	219	329	289	515	124	382	371
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1739	1735	1657	1728	1870	1585	1795	1791	1735
Q Serve(g_s), s	12.5	12.6	10.8	4.6	11.3	11.7	10.3	15.4	21.1	7.2	22.5	22.6
Cycle Q Clear(g_c), s	12.5	12.6	10.8	4.6	11.3	11.7	10.3	15.4	21.1	7.2	22.5	22.6
Prop In Lane	1.00		1.00	1.00		0.57	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	310	1467	654	95	519	496	386	439	372	221	441	427
V/C Ratio(X)	0.68	0.39	0.48	0.78	0.43	0.44	0.85	0.66	1.38	0.56	0.87	0.87
Avail Cap(c_a), veh/h	310	1467	654	164	519	496	390	549	465	221	503	488
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	0.30	0.30	0.30	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.3	22.0	10.2	51.3	31.0	31.1	48.0	38.1	28.3	45.4	39.7	39.8
Incr Delay (d2), s/veh	6.1	0.8	2.5	12.9	2.6	2.8	5.6	0.6	178.2	3.2	13.4	14.1
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(95%),veh/ln	9.8	8.9	7.1	4.2	8.7	8.7	6.7	9.5	36.8	6.1	17.0	16.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.3	22.8	12.7	64.2	33.6	34.0	53.6	38.7	206.5	48.6	53.1	53.9
LnGrp LOS	D	C	B	E	C	C	D	D	F	D	D	D
Approach Vol, veh/h		1102			515			1133			877	
Approach Delay, s/veh		24.8			38.1			119.3			52.8	
Approach LOS		C			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	50.8	16.9	32.0	23.9	37.2	18.2	30.7
Change Period (Y+Rc), s	4.3	4.3	4.6	4.9	4.3	4.3	4.6	4.9
Max Green Setting (Gmax), s	10.4	38.2	12.4	30.9	15.7	32.9	11.0	32.3
Max Q Clear Time (g_c+I1), s	6.6	14.6	12.3	24.6	14.5	13.7	9.2	23.1
Green Ext Time (p_c), s	0.0	5.1	0.0	2.5	0.1	2.5	0.0	2.7

Intersection Summary	
HCM 7th Control Delay, s/veh	63.0
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Appendix F – Segment Analysis

HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 AM Existing - EB
Project Description	D1Z1 Delivery Station - W Stowell Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4850
Lane Width, ft	12	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	3.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	90	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	7.70
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.5
Speed Slope Coefficient	3.67204	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.32070	PF Power Coefficient	0.75529
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4850	-	-	57.5

Vehicle Results

Average Speed, mi/h	57.5	Percent Followers, %	19.3
Segment Travel Time, minutes	0.96	Followers Density, followers/mi/ln	0.3
Vehicle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 PM Existing - WB
Project Description	D1Z1 Delivery Station - W Stowell Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4850
Lane Width, ft	12	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	3.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	876	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	7.70
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.52

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.5
Speed Slope Coefficient	3.67204	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.32070	PF Power Coefficient	0.75529
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4850	-	-	54.2

Vehicle Results

Average Speed, mi/h	54.2	Percent Followers, %	69.7
Segment Travel Time, minutes	1.02	Followers Density, followers/mi/ln	11.3
Vehicle LOS	D		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 PM Existing - EB
Project Description	D1Z1 Delivery Station - W Stowell Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4850
Lane Width, ft	12	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	3.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	821	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	7.70
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.48

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.5
Speed Slope Coefficient	3.67204	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.32070	PF Power Coefficient	0.75529
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4850	-	-	54.3

Vehicle Results

Average Speed, mi/h	54.3	Percent Followers, %	68.0
Segment Travel Time, minutes	1.02	Followers Density, followers/mi/ln	10.3
Vehicle LOS	D		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 PM Existing - WB
Project Description	D1Z1 Delivery Station - W Stowell Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4850
Lane Width, ft	12	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	3.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	185	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	7.70
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.5
Speed Slope Coefficient	3.67204	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.32070	PF Power Coefficient	0.75529
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4850	-	-	56.2

Vehicle Results

Average Speed, mi/h	56.2	Percent Followers, %	30.9
Segment Travel Time, minutes	0.98	Followers Density, followers/mi/ln	1.0
Vehicle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 PM Build - EB
Project Description	D1Z1 Delivery Station - W Stowell Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4850
Lane Width, ft	12	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	3.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	94	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	7.70
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.06

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.5
Speed Slope Coefficient	3.67204	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.32070	PF Power Coefficient	0.75529
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4850	-	-	57.5

Vehicle Results

Average Speed, mi/h	57.5	Percent Followers, %	19.8
Segment Travel Time, minutes	0.96	Followers Density, followers/mi/ln	0.3
Vehicle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 PM Build - WB
Project Description	D1Z1 Delivery Station - W Stowell Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4850
Lane Width, ft	12	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	3.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	912	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	7.70
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.54

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.5
Speed Slope Coefficient	3.67204	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.32070	PF Power Coefficient	0.75529
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4850	-	-	54.1

Vehicle Results

Average Speed, mi/h	54.1	Percent Followers, %	70.8
Segment Travel Time, minutes	1.02	Followers Density, followers/mi/ln	11.9
Vehicle LOS	D		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 AM Existing - NB
Project Description	D1Z1 Delivery Station - Black Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	6100
Lane Width, ft	13	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	2.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	251	Opposing Demand Flow Rate, veh/h	0
Peak Hour Factor	0.94	Total Trucks, %	5.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.15

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	35.6
Speed Slope Coefficient	2.09611	Speed Power Coefficient	0.67576
PF Slope Coefficient	-1.09050	PF Power Coefficient	0.76374
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6100	-	-	35.0

Vehicle Results

Average Speed, mi/h	35.0	Percent Followers, %	31.6
Segment Travel Time, minutes	1.98	Followers Density, followers/mi/ln	2.3
Vehicle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 AM Existing - SB
Project Description	D1Z1 Delivery Station - Black Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	6100
Lane Width, ft	13	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	2.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	167	Opposing Demand Flow Rate, veh/h	0
Peak Hour Factor	0.94	Total Trucks, %	5.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	35.6
Speed Slope Coefficient	2.09611	Speed Power Coefficient	0.67576
PF Slope Coefficient	-1.09050	PF Power Coefficient	0.76374
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6100	-	-	35.3

Vehicle Results

Average Speed, mi/h	35.3	Percent Followers, %	24.3
Segment Travel Time, minutes	1.97	Followers Density, followers/mi/ln	1.1
Vehicle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 PM Existing - NB
Project Description	D1Z1 Delivery Station - Black Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	6100
Lane Width, ft	13	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	2.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	116	Opposing Demand Flow Rate, veh/h	0
Peak Hour Factor	0.94	Total Trucks, %	5.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	35.6
Speed Slope Coefficient	2.09611	Speed Power Coefficient	0.67576
PF Slope Coefficient	-1.09050	PF Power Coefficient	0.76374
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6100	-	-	35.5

Vehicle Results

Average Speed, mi/h	35.5	Percent Followers, %	19.0
Segment Travel Time, minutes	1.95	Followers Density, followers/mi/ln	0.6
Vehicle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 PM Existing - SB
Project Description	D1Z1 Delivery Station - Black Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	6100
Lane Width, ft	13	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	2.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	335	Opposing Demand Flow Rate, veh/h	0
Peak Hour Factor	0.94	Total Trucks, %	5.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	35.6
Speed Slope Coefficient	2.09611	Speed Power Coefficient	0.67576
PF Slope Coefficient	-1.09050	PF Power Coefficient	0.76374
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6100	-	-	34.8

Vehicle Results

Average Speed, mi/h	34.8	Percent Followers, %	37.7
Segment Travel Time, minutes	1.99	Followers Density, followers/mi/ln	3.6
Vehicle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 AM Build - NB
Project Description	D1Z1 Delivery Station - Black Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	6100
Lane Width, ft	13	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	2.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	262	Opposing Demand Flow Rate, veh/h	0
Peak Hour Factor	0.94	Total Trucks, %	5.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.15

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	35.6
Speed Slope Coefficient	2.09611	Speed Power Coefficient	0.67576
PF Slope Coefficient	-1.09050	PF Power Coefficient	0.76374
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6100	-	-	35.0

Vehicle Results

Average Speed, mi/h	35.0	Percent Followers, %	32.4
Segment Travel Time, minutes	1.98	Followers Density, followers/mi/ln	2.4
Vehicle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 AM Build - SB
Project Description	D1Z1 Delivery Station - Black Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	6100
Lane Width, ft	13	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	2.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	173	Opposing Demand Flow Rate, veh/h	0
Peak Hour Factor	0.94	Total Trucks, %	5.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	35.6
Speed Slope Coefficient	2.09611	Speed Power Coefficient	0.67576
PF Slope Coefficient	-1.09050	PF Power Coefficient	0.76374
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6100	-	-	35.2

Vehicle Results

Average Speed, mi/h	35.2	Percent Followers, %	24.9
Segment Travel Time, minutes	1.97	Followers Density, followers/mi/ln	1.2
Vehicle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 PM Build - NB
Project Description	D1Z1 Delivery Station - Black Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	6100
Lane Width, ft	13	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	2.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	120	Opposing Demand Flow Rate, veh/h	0
Peak Hour Factor	0.94	Total Trucks, %	5.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	35.6
Speed Slope Coefficient	2.09611	Speed Power Coefficient	0.67576
PF Slope Coefficient	-1.09050	PF Power Coefficient	0.76374
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6100	-	-	35.5

Vehicle Results

Average Speed, mi/h	35.5	Percent Followers, %	19.4
Segment Travel Time, minutes	1.96	Followers Density, followers/mi/ln	0.7
Vehicle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 PM Build - SB
Project Description	D1Z1 Delivery Station - Black Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	6100
Lane Width, ft	13	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	2.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	349	Opposing Demand Flow Rate, veh/h	0
Peak Hour Factor	0.94	Total Trucks, %	5.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.21

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	35.6
Speed Slope Coefficient	2.09611	Speed Power Coefficient	0.67576
PF Slope Coefficient	-1.09050	PF Power Coefficient	0.76374
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6100	-	-	34.8

Vehicle Results

Average Speed, mi/h	34.8	Percent Followers, %	38.6
Segment Travel Time, minutes	1.99	Followers Density, followers/mi/ln	3.9
Vehicle LOS	B		

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HCS7 Multilane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 AM Existing
Project Description	D1Z1 Delivery Station - Blosser Road	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	NB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	41.5		

Direction 1 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 1 Demand and Capacity

Volume(V) veh/h	459	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	244
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1839
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.5
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	6.0
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	244	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	1.99
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 AM Existing
Project Description	D1Z1 Delivery Station - Blosser Road	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	SB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	41.5		

Direction 2 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 2 Demand and Capacity

Volume(V) veh/h	576	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	306
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1839
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.17

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.5
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	7.6
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	306	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.11
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 PM Existing
Project Description	D1Z1 Delivery Station - Blosser Road	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	NB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	41.5		

Direction 1 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 1 Demand and Capacity

Volume(V) veh/h	730	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	388
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1839
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.21

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.5
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	9.6
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	388	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.23
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 PM Existing
Project Description	D1Z1 Delivery Station - Blosser Road	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	SB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	41.5		

Direction 2 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 2 Demand and Capacity

Volume(V) veh/h	769	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	409
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1839
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.22

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.5
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	10.1
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	409	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.25
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 AM Build
Project Description	D1Z1 Delivery Station - Blosser Road	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	NB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	41.5		

Direction 1 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 1 Demand and Capacity

Volume(V) veh/h	478	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	254
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1839
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.14

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.5
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	6.3
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	254	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.01
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 AM Build
Project Description	D1Z1 Delivery Station - Blosser Road	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	SB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	41.5		

Direction 2 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 2 Demand and Capacity

Volume(V) veh/h	600	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	319
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1839
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.17

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.5
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	7.9
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	319	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.13
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 PM Build
Project Description	D1Z1 Delivery Station - Blosser Road	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	NB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	41.5		

Direction 1 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 1 Demand and Capacity

Volume(V) veh/h	760	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	404
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1839
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.22

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.5
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	10.0
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	404	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.25
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 PM Build
Project Description	D1Z1 Delivery Station - Blosser Road	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	SB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	41.5		

Direction 2 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 2 Demand and Capacity

Volume(V) veh/h	800	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	426
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1839
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.5
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	10.5
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	426	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.27
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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Appendix G – Traffic Scoping Memo

UPDATED MEMORANDUM OF UNDERSTANDING

To: City of Santa Maria, CA

From: John Karnowski, PE, PTOE, AICP, NV5 (john.karnowski@NV5.com)
Bethany Judd, NV5 (Bethany.Judd@NV5.com)

cc: Ben Ochoa, Seefried Industrial Development

Date: April 11, 2024

Re: Memorandum of Understanding – Scope for Supplemental Traffic Analysis for a delivery station W Stowell Road

---

The purpose of this memo is to confirm the required scope for a proposed delivery station West Stowell Road in Santa Maria, California per the City response provided on April 4, 2024 (attached).

SITE DESCRIPTION AND OPERATIONAL PLAN

The proposed facility is being designed for a package delivery service. It is anticipated that the facility will have two shifts working days and evenings. There may be a third shift added at peak season. Packages arriving at this facility are prepackaged in cardboard boxes and labeled for shipping within local neighborhoods and areas surrounding the facility. The packages are brought into the facility via tractor trailer trucks, who use designated loading dock positions. Once unloaded into the facility, the packages are sorted into more specific locations, put into bins and onto small mobile cards. These carts are rolled out to the loading area, from which the packages are located into vans for final delivery. There is no high by racking/high piled storage in the facility. This facility is purely a sortation operation. There is no storage or stock kept at the facility, and all goods that enter this facility leaven within 24 hours. No hazardous materials will be handled or stored at the facility. The commodity classification is Class I-IV, cartooned, unexpanded Group A plastics.

The purpose of the delivery station is to deliver merchandise that comes from nearby and regional sort centers to local customers. The service area is approximately 125 square miles. The following describes the current and planned operations.

- A large majority of the line-haul deliveries to the site take place between 9 pm and 6 am. On average one to two trucks will access the site during the other hours. Trucks use the site's westernmost driveway on W Stowell Road and the loading docks located on the west side of the building. No trucks/trailers are housed onsite longer than a few hours.

- Amazon employees/contract drivers arrive and depart according to one of the shifts below:
    - 1st Shift 1:20 a.m. to 1:50 p.m. 160 Associates
    - 2nd Shift 9:20 a.m. to 7:30 p.m. 47 Associates
    - 3rd Shift 2:00 p.m. to 6:00 p.m. 19 Associates
    - 4th Shift 4:00 p.m. to 10:30 p.m. 5 Associates
    - Van Drivers 5:40 a.m. to 10:45 p.m. 345 Contract Van Drivers*

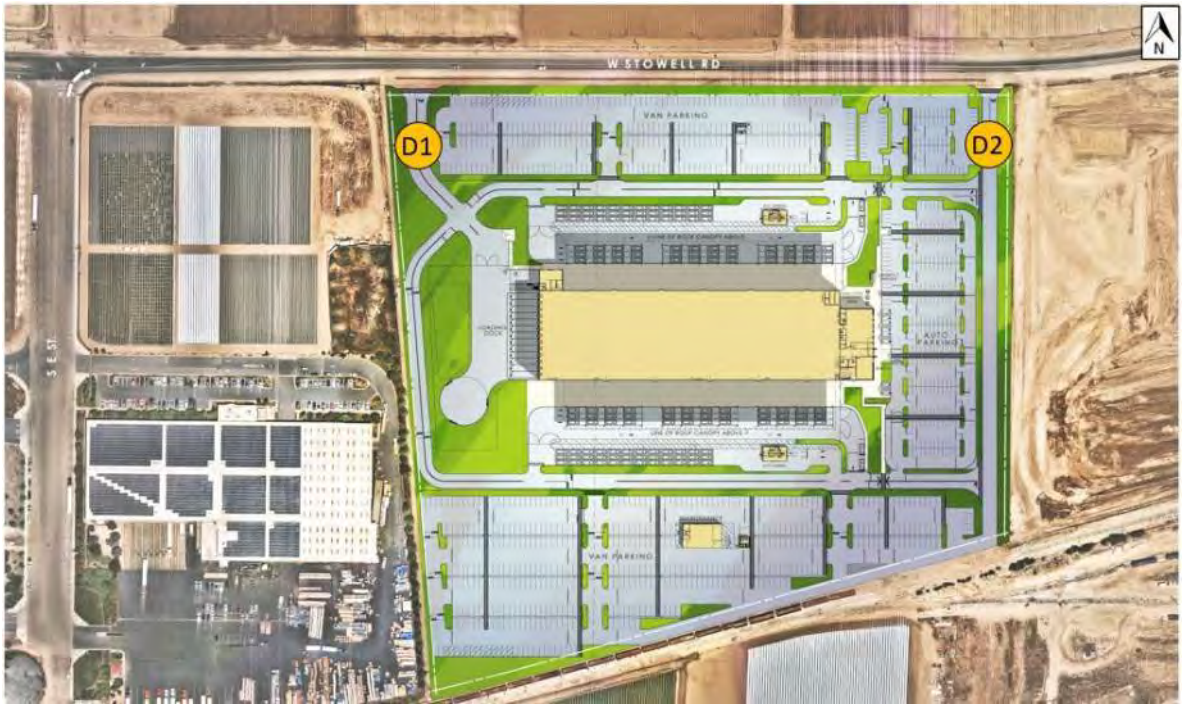
  *Dispatch in 20-minute waves
- An early morning associate shift sorts the packages and prepares them for loading into the delivery vans. Customer orders are assigned to delivery routes in a dynamic and optimal manner, i.e., there are no set daily routes.

- Vans are operated by Delivery Service Providers (DSPs) – independent companies contracted exclusively to Amazon.

- In the late morning, after the typical peak hour of adjacent street traffic, delivery vans arrive at the facility and queue onsite for loading as shown on both the north and southside of the facility. Up to 96 vans at a time can be lined up under roof canopy with an additional 36 queued south of the building. Loading

begins after 10 am and is repeated until all vans have been loaded and dispatched. While the first group of vans is loading, the next group of vans lines up in the staging area outside the building.

Figure 1. Site Location and Access



Site Trip Generation and Distribution

The proposed site is anticipated to generate 2,132 daily, 16 AM and 160 PM Peak Hour trips during the typical commuter peak hours (6:00 – 9:00 a.m. and 4:00 – 6:00 p.m.). The site peak hours are offset from the commuter peak hours. Site peak hours occur from 10:00 -11:00 a.m. (393 trips) and 10:00 – 11:00 p.m. (408 trips). Site operates 24 hours a day with majority of the truck trips occurring between 11:00 p.m. and 6:00 a.m. Line-haul trucks are anticipated to arrive at the site one per hour throughout the day to support operations.

Land Use	Source	Peak Scenarios	Time	AM Peak Hour			PM Peak Hour		
				IN	OUT	TOTAL	IN	OUT	TOTAL
Delivery Station	User Data	Adjacent Street	7:30-8:30 AM & ~~5:00- 6:00 PM~~ 4:30 - 5:30	13	~~3~~ 2	~~16~~ 15	~~63~~ 98	~~97~~ 49	~~160~~ 147
		Site Peak Hrs	10:00 – 11:00 AM & 10:00 – 11:00 PM	201	192	393	204	204	408

The distribution of employee trips will be based on the existing traffic patterns and engineering judgement. Distribution of delivery vehicles is based on the known delivery area and included in the VMT analysis.

Site Access

The site is located along the south side of Stowell Road with two full access driveways. All line-haul trucks will access the site at the westernmost driveway (D1) and all vans and associates will enter at the eastern driveway (D2) as shown in Figure 1. The eastern driveway serves as an internal site access roadway providing circulation separation north and south of the facility to optimize queuing on-site, reduce conflict, and accommodate all required parking.

TRAFFIC STUDY SCOPE OF WORK

Study Intersections

The following intersections will be studied:

1. W. Stowell Road / Hanson Way
2. W. Stowell Road / S. Blosser Road
3. W. Stowell Road / Black Road
4. Taylor / N. Blosser Road
5. W. Stowell Road / Broadway
6. Main Street / Black Road

The two driveways shown in Figure 1 will also be studied.

Data Collection

Existing data collection is proposed for the following:

- New AM (8-11 am) and PM (4-7 pm) turning movement counts (TMCs) shall be conducted on a Tuesday, Wednesday, or Thursday while schools are in session at the following locations:

  1. W. Stowell Road / Hanson Way
  2. W. Stowell Road / S. Blosser Road Signalized
  3. W. Stowell Road / Black Road
  4. Taylor / N. Blosser Road
  5. W. Stowell Road / Broadway Signalized
  6. Main Street / Black Road

  The TMCs shall also include classification of vehicles (autos, vans, or trucks), as well as pedestrian and bicycle volumes.

- New 24-hour classification TMCs will be collected on Stowell Road, Black Road, and Blosser Road.

Background Growth

A background growth rate of 2% will be assumed or as stated in response to this scope.

Analysis Scenarios

Capacity analyses will be completed utilizing Synchro 12® and Highway Capacity Manual, 7th Edition methodology. All study intersections will be analyzed during the adjacent roadways' weekday AM and PM peak hours for the operational conditions. The analysis will be conducted for the Existing Conditions (2024), Existing (2024)+ Project, Cumulative Conditions (2026), and Cumulative + Project (2026) scenarios.

The study will include LOS analysis, trip distribution, and an analysis of road capacity for Stowell Road, Black Road, and Blosser Road.

Measures of effectiveness (MOEs) shall include driveway capacity (LOS, V/C), idling (average delay), and analysis of parking onsite.

Report

A technical report along with figures and illustrations needed to describe the traffic volume and results shall be prepared to the satisfaction of the City Traffic Engineer. The report shall be sealed by a qualified Licensed Professional Engineer or Licensed Professional Traffic Engineer in the state of California.

CITY OF SANTA MARIA
PUBLIC WORKS DEPARTMENT
Engineering Division

110 SOUTH PINE STREET, SUITE #221 ● SANTA MARIA, CALIFORNIA 93458 ● 805-925-0951 Ext. 2225

DEPARTMENT OF PUBLIC WORKS April 4, 2024

NV5
Attn: John Karnowski

SUBJECT: **Draft Memorandum of Understanding – Public Works Comments**

Thank you for providing the Scoping Letter for the proposed delivery station project along West Stowell Road. After review of the scope, the City of Santa Maria Public Works Department has the following comments:

- Provide an analysis of the road capacity for Stowell Road, Black Road, and Blosser Road.
- Provide the trip distribution.
- Provide a level of service (LOS) analysis.
- Provide an analysis for the following traffic scenarios:
  - Existing Conditions
  - Existing + Project
  - Cumulative Conditions
  - Cumulative + Project
- Assume 2% for the background growth rate. The major development list for the City can be obtained at the following website: https://www.cityofsantamaria.org/services/departments/community-development/planning-division/planning-policies-and-regulations/current-development-activity
- The study intersections shall be as follows:
  - W. Stowell Road / Hanson Way
  - W. Stowell Road / S. Blosser Road
  - W. Stowell Road / Black Road
  - Taylor / N. Blosser Road
  - W. Stowell Road / Broadway
  - Main Street / Black Road

Please feel free to contact me if you have any questions/comments.

Best Regards,
-Luis

Luis A. Magallón, P.E., T.E.
805-361-9741
lmagallon@cityofsantamaria.org

Appendix H – 24-Hour Segment Counts

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Black Rd North of W Stowell Rd
SPECIFIC LOCATION:
CITY/STATE: Santa Maria, CA

QC JOB #: 16559414
DIRECTION: NB, SB
DATE: Apr 18 2024

Passenger | Medium Trucks | Heavy Trucks

Start Time	Motorcycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12:00 AM	0	7	3	0	2	0	0	0	0	0	0	0	0	12
01:00 AM	0	8	2	0	1	1	0	0	0	0	0	0	0	12
02:00 AM	0	2	2	0	1	0	0	0	0	0	0	0	0	5
03:00 AM	0	24	8	0	0	0	0	0	1	0	0	0	0	33
04:00 AM	0	29	7	0	2	0	0	1	0	0	0	0	0	39
05:00 AM	0	108	26	4	9	0	0	0	0	0	0	0	0	147
06:00 AM	0	**252**	**79**	17	42	0	0	1	1	0	1	0	0	**393**
07:00 AM	0	132	55	22	58	1	0	13	1	0	2	0	0	284
08:00 AM	**1**	69	54	21	**71**	3	0	11	0	0	8	**1**	0	239
09:00 AM	0	59	60	20	61	3	0	**19**	4	0	4	0	0	230
10:00 AM	0	87	70	29	68	5	0	7	**5**	0	**10**	0	0	281
11:00 AM	0	81	71	**30**	54	**8**	0	15	2	0	6	0	0	267
12:00 PM	**1**	92	66	31	53	3	0	12	3	0	**7**	0	0	268
01:00 PM	1	115	54	**35**	**71**	**5**	0	10	**9**	0	7	0	0	307
02:00 PM	0	189	67	34	48	4	0	**13**	4	0	5	0	0	364
03:00 PM	0	**250**	72	33	53	3	0	7	3	0	3	0	0	**424**
04:00 PM	1	166	**92**	21	49	0	0	9	9	0	3	0	0	350
05:00 PM	0	121	48	7	36	0	0	1	7	0	5	0	0	225
06:00 PM	0	68	25	2	10	0	0	2	7	0	2	0	0	116
07:00 PM	0	70	29	0	9	0	0	0	3	0	0	0	0	111
08:00 PM	0	35	17	0	6	0	0	0	3	0	0	0	0	61
09:00 PM	0	34	13	0	7	0	0	2	0	0	0	0	0	56
10:00 PM	0	16	7	0	4	0	0	0	0	0	0	0	0	27
11:00 PM	0	12	1	0	4	0	0	0	2	0	0	0	0	19
Day Total	4	2026	928	306	719	36	0	123	64	0	63	1	0	4270
Percent	0.1%	47.4%	21.7%	7.2%	16.8%	0.8%	0%	2.9%	1.5%	0%	1.5%	0%	0%	
AM Peak	8:00 AM	6:00 AM	6:00 AM	11:00 AM	8:00 AM	11:00 AM	12:00 AM	9:00 AM	10:00 AM	12:00 AM	10:00 AM	8:00 AM	12:00 AM	6:00 AM
Volume	1	252	79	30	71	8	0	19	5	0	10	1	0	393
PM Peak	12:00 PM	3:00 PM	4:00 PM	1:00 PM	1:00 PM	1:00 PM	12:00 PM	2:00 PM	1:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	3:00 PM
Volume	1	250	92	35	71	5	0	13	9	0	7	0	0	424

ADT 4270



Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: Black Rd North of W Stowell Rd
SPECIFIC LOCATION:
CITY/STATE: Santa Maria, CA

QC JOB #: 16559414
DIRECTION: NB, SB
DATE: Apr 18 2024

Start Time	Motorcycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
Grand Total	4	2026	928	306	719	36	0	123	64	0	63	1	0	4270
Percent	0.1%	47.4%	21.7%	7.2%	16.8%	0.8%	0%	2.9%	1.5%	0%	1.5%	0%	0%	

ADT
4270



Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Volume Data

LOCATION: Black Rd North of W Stowell Rd
QC JOB #: 16559414
SPECIFIC LOCATION:
DIRECTION: NB
CITY/STATE: Santa Maria, CA
DATE: Apr 18 2024 - Apr 18 2024

Start Time	Mon	Tue	Wed	Thu 18 Apr 24	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				10		10			10	
01:00 AM				12		12			12	
02:00 AM				4		4			4	
03:00 AM				8		8			8	
04:00 AM				18		18			18	
05:00 AM				97		97			97	
06:00 AM				**236**		**236**			**236**	
07:00 AM				104		104			104	
08:00 AM				113		113			113	
09:00 AM				104		104			104	
10:00 AM				128		128			128	
11:00 AM				129		129			129	
12:00 PM				113		113			113	
01:00 PM				137		137			137	
02:00 PM				**141**		**141**			**141**	
03:00 PM				109		109			109	
04:00 PM				121		121			121	
05:00 PM				117		117			117	
06:00 PM				53		53			53	
07:00 PM				52		52			52	
08:00 PM				36		36			36	
09:00 PM				28		28			28	
10:00 PM				23		23			23	
11:00 PM				15		15			15	
Day Total				1908		1908			1908	
% Weekday Average				100%						
% Week Average				100%		100%				
AM Peak Volume				6:00 AM 236		6:00 AM 236			6:00 AM 236	
PM Peak Volume				2:00 PM 141		2:00 PM 141			2:00 PM 141	

Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Volume Data

LOCATION: Black Rd North of W Stowell Rd
QC JOB #: 16559414
SPECIFIC LOCATION:
DIRECTION: SB
CITY/STATE: Santa Maria, CA
DATE: Apr 18 2024 - Apr 18 2024

Start Time	Mon	Tue	Wed	Thu 18 Apr 24	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				2		2			2	
01:00 AM				0		0			0	
02:00 AM				1		1			1	
03:00 AM				25		25			25	
04:00 AM				21		21			21	
05:00 AM				50		50			50	
06:00 AM				157		157			157	
07:00 AM				**180**		**180**			**180**	
08:00 AM				126		126			126	
09:00 AM				126		126			126	
10:00 AM				153		153			153	
11:00 AM				138		138			138	
12:00 PM				155		155			155	
01:00 PM				170		170			170	
02:00 PM				223		223			223	
03:00 PM				**315**		**315**			**315**	
04:00 PM				229		229			229	
05:00 PM				108		108			108	
06:00 PM				63		63			63	
07:00 PM				59		59			59	
08:00 PM				25		25			25	
09:00 PM				28		28			28	
10:00 PM				4		4			4	
11:00 PM				4		4			4	
Day Total				2362		2362			2362	
% Weekday Average				100%						
% Week Average				100%		100%				
AM Peak Volume				7:00 AM 180		7:00 AM 180			7:00 AM 180	
PM Peak Volume				3:00 PM 315		3:00 PM 315			3:00 PM 315	

Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Vehicle Classification Data

LOCATION: S Blosser Rd North of W Cypress St
SPECIFIC LOCATION:
CITY/STATE: Santa Maria, CA

QC JOB #: 16559415
DIRECTION: NB, SB
DATE: Apr 18 2024

Passenger | Medium Trucks | Heavy Trucks

Start Time	Motorcycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12:00 AM	0	91	30	1	4	0	0	0	0	0	0	0	0	126
01:00 AM	0	49	15	0	1	0	0	0	1	0	0	0	0	66
02:00 AM	0	36	7	0	2	0	0	0	1	0	0	0	0	46
03:00 AM	0	71	29	3	5	0	0	4	3	0	2	2	0	119
04:00 AM	0	164	72	1	5	3	0	4	3	0	0	0	0	252
05:00 AM	4	587	166	7	28	6	0	18	4	2	**3**	0	0	825
06:00 AM	**10**	**682**	179	14	56	**9**	**2**	28	4	3	0	0	0	987
07:00 AM	5	649	224	**23**	73	8	2	28	8	**6**	3	**6**	0	**1035**
08:00 AM	4	607	**248**	12	**93**	7	2	34	5	3	2	0	**4**	1021
09:00 AM	8	518	204	15	81	3	0	**36**	9	1	2	4	0	881
10:00 AM	9	525	231	16	78	6	1	30	7	2	0	2	1	908
11:00 AM	6	598	226	10	89	5	0	23	**10**	6	2	1	0	976
12:00 PM	4	702	244	15	**81**	10	1	33	**10**	2	0	1	2	1105
01:00 PM	6	782	265	21	76	9	2	27	8	7	4	2	**3**	1212
02:00 PM	8	890	263	20	79	10	2	42	2	2	2	2	0	1322
03:00 PM	13	935	263	17	79	9	2	35	10	**10**	1	2	1	1377
04:00 PM	**20**	952	**280**	**37**	76	**13**	0	43	7	10	**10**	1	1	1450
05:00 PM	14	**1050**	267	23	60	11	2	**44**	8	9	6	**3**	2	**1499**
06:00 PM	11	992	246	7	52	10	**3**	30	5	8	3	0	2	1369
07:00 PM	8	816	235	3	49	10	2	26	9	2	0	2	2	1164
08:00 PM	8	687	185	3	39	1	0	18	4	4	0	0	2	951
09:00 PM	2	534	138	1	19	0	0	6	1	2	0	0	0	703
10:00 PM	2	306	87	0	17	2	0	5	3	0	0	0	0	422
11:00 PM	1	181	55	2	9	1	0	2	4	1	0	0	0	256
Day Total	143	13404	4159	251	1151	133	21	516	126	80	40	28	20	20072
Percent	0.7%	66.8%	20.7%	1.3%	5.7%	0.7%	0.1%	2.6%	0.6%	0.4%	0.2%	0.1%	0.1%	
AM Peak	6:00 AM	6:00 AM	8:00 AM	7:00 AM	8:00 AM	6:00 AM	6:00 AM	9:00 AM	11:00 AM	7:00 AM	5:00 AM	7:00 AM	8:00 AM	7:00 AM
Volume	10	682	248	23	93	9	2	36	10	6	3	6	4	1035
PM Peak	4:00 PM	5:00 PM	4:00 PM	4:00 PM	12:00 PM	4:00 PM	6:00 PM	5:00 PM	12:00 PM	3:00 PM	4:00 PM	5:00 PM	1:00 PM	5:00 PM
Volume	20	1050	280	37	81	13	3	44	10	10	10	3	3	1499

ADT 20072



Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: S Blosser Rd North of W Cypress St
SPECIFIC LOCATION:
CITY/STATE: Santa Maria, CA

QC JOB #: 16559415
DIRECTION: NB, SB
DATE: Apr 18 2024

Start Time	Motorcycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
Grand Total	143	13404	4159	251	1151	133	21	516	126	80	40	28	20	20072
Percent	0.7%	66.8%	20.7%	1.3%	5.7%	0.7%	0.1%	2.6%	0.6%	0.4%	0.2%	0.1%	0.1%	

ADT
20072



Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Volume Data

LOCATION: S Blosser Rd North of W Cypress St | **QC JOB #:** 16559415

SPECIFIC LOCATION: | **DIRECTION:** NB

CITY/STATE: Santa Maria, CA | **DATE:** Apr 18 2024 - Apr 18 2024

Start Time	Mon	Tue	Wed	Thu 18 Apr 24	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				76		76			76	
01:00 AM				40		40			40	
02:00 AM				22		22			22	
03:00 AM				54		54			54	
04:00 AM				121		121			121	
05:00 AM				381		381			381	
06:00 AM				411		411			411	
07:00 AM				459		459			459	
08:00 AM				466		466			466	
09:00 AM				440		440			440	
10:00 AM				472		472			472	
11:00 AM				**483**		**483**			**483**	
12:00 PM				572		572			572	
01:00 PM				562		562			562	
02:00 PM				628		628			628	
03:00 PM				682		682			682	
04:00 PM				712		712			712	
05:00 PM				**730**		**730**			**730**	
06:00 PM				704		704			704	
07:00 PM				618		618			618	
08:00 PM				494		494			494	
09:00 PM				377		377			377	
10:00 PM				232		232			232	
11:00 PM				157		157			157	
Day Total				9893		9893			9893	
% Weekday Average				100%						
% Week Average				100%		100%				
AM Peak Volume				11:00 AM 483		11:00 AM 483			11:00 AM 483	
PM Peak Volume				5:00 PM 730		5:00 PM 730			5:00 PM 730	

Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Volume Data

LOCATION: S Blosser Rd North of W Cypress St | **QC JOB #:** 16559415

SPECIFIC LOCATION: | **DIRECTION:** SB

CITY/STATE: Santa Maria, CA | **DATE:** Apr 18 2024 - Apr 18 2024

Start Time	Mon	Tue	Wed	Thu 18 Apr 24	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				50		50			50	
01:00 AM				26		26			26	
02:00 AM				24		24			24	
03:00 AM				65		65			65	
04:00 AM				131		131			131	
05:00 AM				444		444			444	
06:00 AM				**576**		**576**			**576**	
07:00 AM				576		576			576	
08:00 AM				555		555			555	
09:00 AM				441		441			441	
10:00 AM				436		436			436	
11:00 AM				493		493			493	
12:00 PM				533		533			533	
01:00 PM				650		650			650	
02:00 PM				694		694			694	
03:00 PM				695		695			695	
04:00 PM				738		738			738	
05:00 PM				**769**		**769**			**769**	
06:00 PM				665		665			665	
07:00 PM				546		546			546	
08:00 PM				457		457			457	
09:00 PM				326		326			326	
10:00 PM				190		190			190	
11:00 PM				99		99			99	
Day Total				10179		10179			10179	
% Weekday Average				100%						
% Week Average				100%		100%				
AM Peak Volume				6:00 AM 576		6:00 AM 576			6:00 AM 576	
PM Peak Volume				5:00 PM 769		5:00 PM 769			5:00 PM 769	

Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Vehicle Classification Data

LOCATION: W Stowell Rd East of S E St
SPECIFIC LOCATION:
CITY/STATE: Santa Maria, CA

Passenger | Medium Trucks | Heavy Trucks

QC JOB #: 16559413
DIRECTION: EB, WB
DATE: Apr 18 2024

Start Time	Motorcycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12:00 AM	0	7	4	1	1	0	0	0	9	0	0	0	0	22
01:00 AM	0	17	1	0	1	0	0	0	3	0	0	0	0	22
02:00 AM	0	4	1	0	0	1	0	0	3	0	0	0	0	9
03:00 AM	0	21	4	0	1	0	0	0	2	0	0	0	0	28
04:00 AM	0	42	13	0	1	0	0	1	3	0	0	0	0	60
05:00 AM	0	224	47	9	9	0	0	1	4	0	0	0	0	294
06:00 AM	**2**	**650**	**162**	35	43	3	0	3	6	0	2	2	0	**908**
07:00 AM	0	152	50	42	60	2	0	6	12	0	0	2	0	326
08:00 AM	1	115	60	31	55	**13**	0	6	12	0	0	2	0	295
09:00 AM	0	94	55	50	55	5	0	6	22	0	**3**	2	**1**	293
10:00 AM	1	123	58	**55**	**70**	5	**1**	**7**	16	0	1	2	0	339
11:00 AM	1	158	84	50	61	1	0	7	**24**	0	2	**6**	0	394
12:00 PM	4	160	78	55	58	**5**	0	**9**	26	0	1	**3**	0	399
01:00 PM	1	222	89	**62**	43	2	0	5	30	0	0	2	0	456
02:00 PM	2	317	119	45	65	4	0	7	29	0	1	2	0	591
03:00 PM	**6**	**566**	**172**	54	**103**	3	0	7	**31**	**1**	1	2	0	**946**
04:00 PM	0	302	147	33	79	0	0	7	25	0	0	0	0	593
05:00 PM	1	165	57	18	38	3	0	5	28	0	**2**	0	0	317
06:00 PM	2	97	28	9	18	1	0	2	30	0	1	0	0	188
07:00 PM	0	83	34	2	8	1	0	3	28	0	0	0	0	159
08:00 PM	0	42	25	0	9	2	0	2	28	0	0	0	0	108
09:00 PM	2	49	15	1	11	0	0	1	16	0	0	0	0	95
10:00 PM	1	12	7	0	0	1	0	1	11	0	0	0	0	33
11:00 PM	0	28	5	0	4	0	0	0	8	0	0	0	0	45
Day Total	24	3650	1315	552	793	52	1	86	406	1	14	25	1	6920
Percent	0.3%	52.7%	19%	8%	11.5%	0.8%	0%	1.2%	5.9%	0%	0.2%	0.4%	0%	
AM Peak	6:00 AM	6:00 AM	6:00 AM	10:00 AM	10:00 AM	8:00 AM	10:00 AM	10:00 AM	11:00 AM	12:00 AM	9:00 AM	11:00 AM	9:00 AM	6:00 AM
Volume	2	650	162	55	70	13	1	7	24	0	3	6	1	908
PM Peak	3:00 PM	3:00 PM	3:00 PM	1:00 PM	3:00 PM	12:00 PM	12:00 PM	12:00 PM	3:00 PM	3:00 PM	5:00 PM	12:00 PM	12:00 PM	3:00 PM
Volume	6	566	172	62	103	5	0	9	31	1	2	3	0	946

ADT 6920



Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: W Stowell Rd East of S E St
SPECIFIC LOCATION:
CITY/STATE: Santa Maria, CA

QC JOB #: 16559413
DIRECTION: EB, WB
DATE: Apr 18 2024

Start Time	Motorcycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
Grand Total	24	3650	1315	552	793	52	1	86	406	1	14	25	1	6920
Percent	0.3%	52.7%	19%	8%	11.5%	0.8%	0%	1.2%	5.9%	0%	0.2%	0.4%	0%	

ADT 6920



Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Volume Data

LOCATION: W Stowell Rd East of S E St
QC JOB #: 16559413
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Santa Maria, CA
DATE: Apr 18 2024 - Apr 18 2024

Start Time	Mon	Tue	Wed	Thu 18 Apr 24	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				13		13			13	
01:00 AM				17		17			17	
02:00 AM				5		5			5	
03:00 AM				5		5			5	
04:00 AM				13		13			13	
05:00 AM				30		30			30	
06:00 AM				85		85			85	
07:00 AM				159		159			159	
08:00 AM				131		131			131	
09:00 AM				141		141			141	
10:00 AM				190		190			190	
11:00 AM				**222**		**222**			**222**	
12:00 PM				222		222			222	
01:00 PM				265		265			265	
02:00 PM				423		423			423	
03:00 PM				**772**		**772**			**772**	
04:00 PM				454		454			454	
05:00 PM				197		197			197	
06:00 PM				114		114			114	
07:00 PM				88		88			88	
08:00 PM				68		68			68	
09:00 PM				57		57			57	
10:00 PM				25		25			25	
11:00 PM				28		28			28	
Day Total				3724		3724			3724	
% Weekday Average				100%						
% Week Average				100%		100%				
AM Peak Volume				11:00 AM 222		11:00 AM 222			11:00 AM 222	
PM Peak Volume				3:00 PM 772		3:00 PM 772			3:00 PM 772	

Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: W Stowell Rd East of S E St
QC JOB #: 16559413
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Santa Maria, CA
DATE: Apr 18 2024 - Apr 18 2024

Start Time	Mon	Tue	Wed	Thu 18 Apr 24	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				9		9			9	
01:00 AM				5		5			5	
02:00 AM				4		4			4	
03:00 AM				23		23			23	
04:00 AM				47		47			47	
05:00 AM				264		264			264	
06:00 AM				**823**		**823**			**823**	
07:00 AM				167		167			167	
08:00 AM				164		164			164	
09:00 AM				152		152			152	
10:00 AM				149		149			149	
11:00 AM				172		172			172	
12:00 PM				177		177			177	
01:00 PM				**191**		**191**			**191**	
02:00 PM				168		168			168	
03:00 PM				174		174			174	
04:00 PM				139		139			139	
05:00 PM				120		120			120	
06:00 PM				74		74			74	
07:00 PM				71		71			71	
08:00 PM				40		40			40	
09:00 PM				38		38			38	
10:00 PM				8		8			8	
11:00 PM				17		17			17	
Day Total				3196		3196			3196	
% Weekday Average				100%						
% Week Average				100%		100%				
AM Peak Volume				6:00 AM 823		6:00 AM 823			6:00 AM 823	
PM Peak Volume				1:00 PM 191		1:00 PM 191			1:00 PM 191	

Comments:

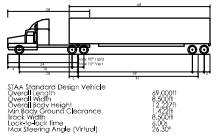
Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Appendix I – Auto-Turn Turning Templates

WEST STOWELL ROAD



0 20 40 60 feet

1"=20'

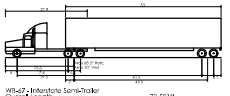
1680 STOWELL ROAD

TRUCK TURNING TEMPLATE

C5

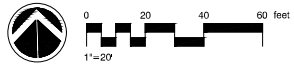
rrm design group

WEST STOWELL ROAD



WB-67 - Interstate Semi-Trailer

Overall Length	73.00ft
Overall Width	8.50ft
Overall Body Height	13.46ft
Min Ground Clearance	1.34ft
Max Track Width	8.50ft
Lock-to-Lock Time	6.0s
Max Steering Angle (Virtual)	28.40°

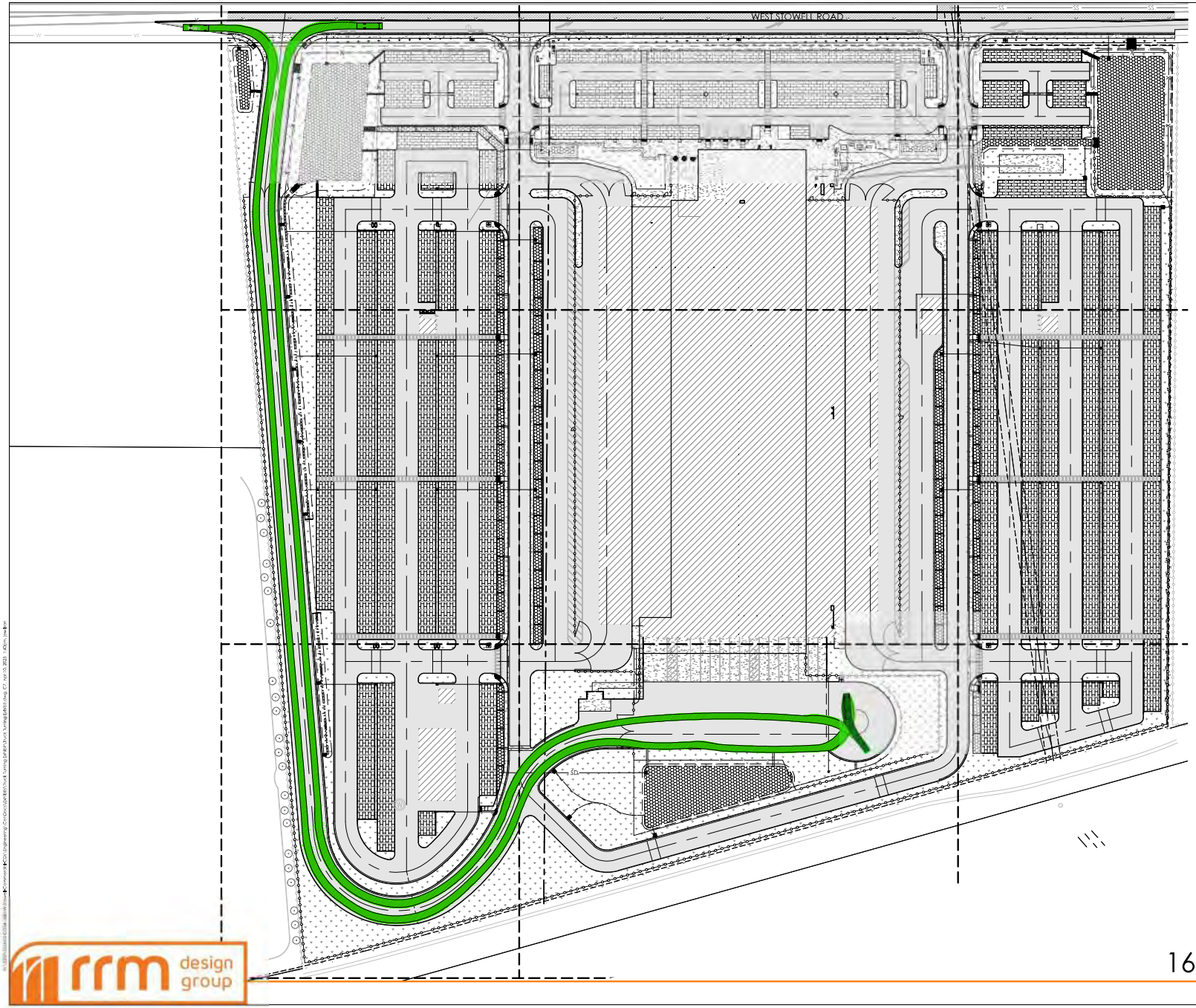


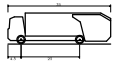
1680 STOWELL ROAD

TRUCK TURNING TEMPLATE

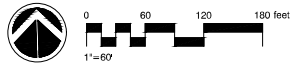
C6

rrm design group





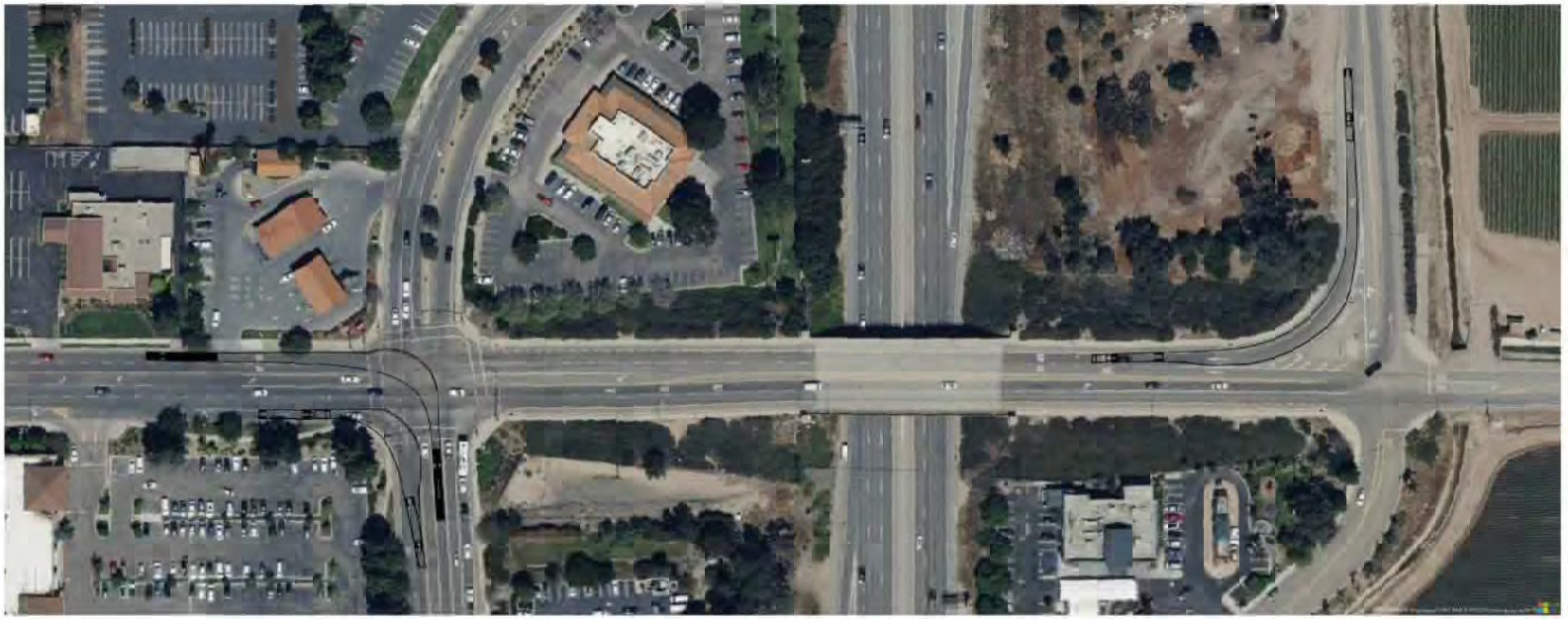
Rear-Load Garbage Truck	
Overall Length	35.000ft
Overall Width	8.315ft
Overall Body Height	10.546ft
Min Body Ground Clearance	1.000ft
Track Width	6.375ft
Lock-to-Lock time	6.0s
Curb to Curb Turning Radius	29.300ft



1680 STOWELL ROAD

TRUCK TURNING TEMPLATE

C7







rrm design group

1680 STOWELL ROAD

TRUCK TURNING TEMPLATE

C7

VEHICLE MILES TRAVELED (VMT) ANALYSIS FOR

W. STOWELL ROAD DELIVERY STATION

DATE:
May 29, 2025

LOCATION:
Santa Maria, California

PREPARED FOR:
City of Santa Maria

PREPARED BY:
NV5 Engineers & Consultants
15092 Avenue of Science, Suite 200
San Diego, CA 92128

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Figure 1. Vicinity Map 1

Figure 2. Percentage of Deliveries within Future Service Area 7

LIST OF ATTACHMENTS

Attachment A – Site Plan

Attachment B – Tenant Supplied Trip Generation Table

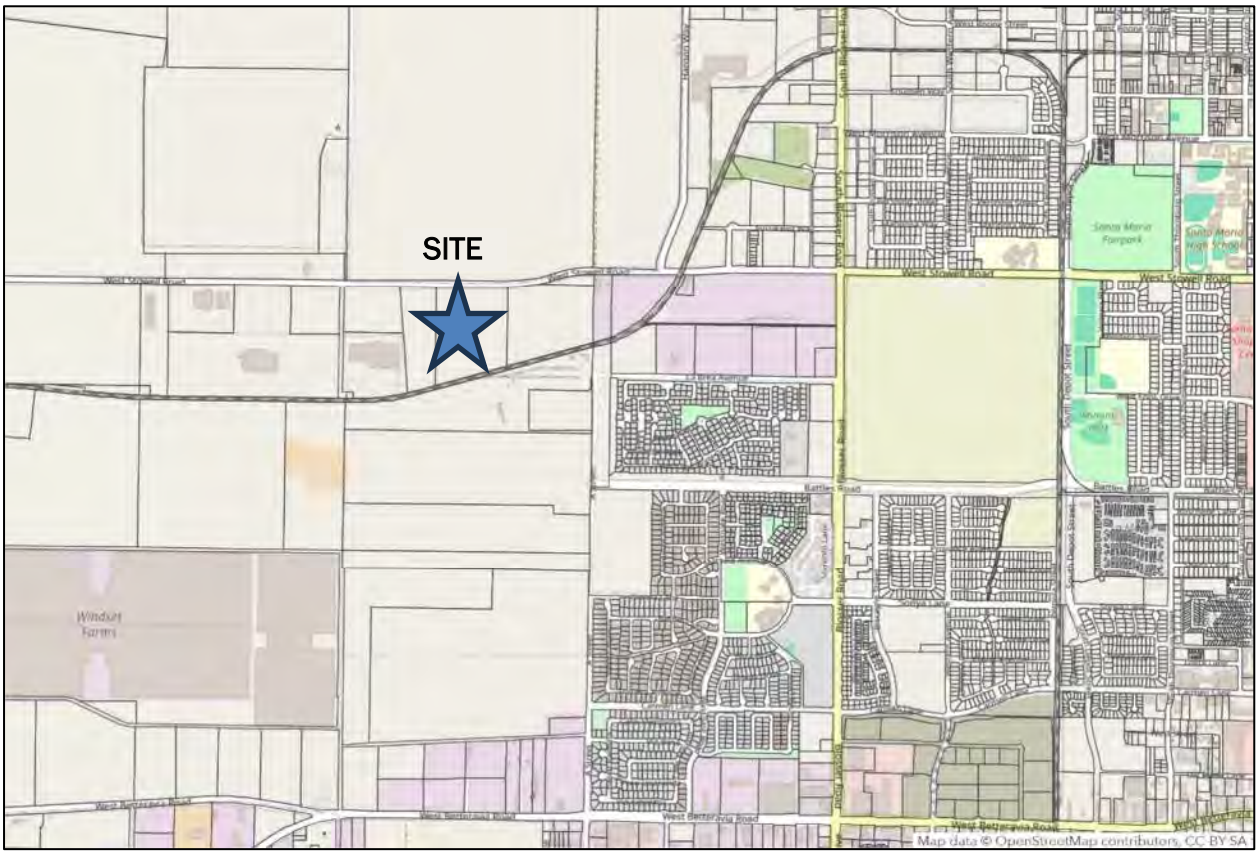
Attachment C – VMT Resources

A. Introduction

A new 169,104 square-foot e-commerce delivery station is planned for construction on an undeveloped parcel along West Stowell Road in Santa Maria, California. The proposed site will include a delivery station, a delivery van queueing area, and surface parking lots (the "Project"). Figure 1 depicts the site location in Santa Maria. Figure 1 shows the location of the Project.

The Project site is designated for Planned Development in the West Stowell Specific Plan and is zoned Commercial Manufacturing/Agriculture Overlay (CM/AG). To adhere to local and state policies, the following vehicle miles traveled (VMT) study was prepared for purposes of determining whether the Project may have significant transportation impacts.

Figure 1. Vicinity Map



B. Analysis Guidelines

State Requirements

The California Environmental Quality Act, known as CEQA, was enacted in 1970. In 2013, Governor Brown signed Senate Bill (SB) 743 to better align CEQA with State policies that promote public health, improve air quality, encourage infill development, promote multimodal transportation, and help reduce greenhouse gas emissions to achieve climate action goals.

In December 2018, the Natural Resources Agency certified amendments to the CEQA Guidelines to implement SB 743. Pursuant to the new CEQA Guidelines, as of July 1, 2020, transportation impacts under CEQA are no longer analyzed using LOS and instead use the VMT metric.

Section 15064.3 of the CEQA Guidelines states that "a lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project."

Local Requirements

The City of Santa Maria's Environmental Procedures and Guidelines require a VMT analysis for many discretionary development projects, except for certain categories of projects. Consistent with CEQA Guidelines Section 15064.7, Thresholds of Significance, the City of Santa Maria has adopted the countywide baseline average and thresholds set at 85% of these countywide baseline averages for determining whether a project's VMT will be significant. The countywide baseline average for VMT per employee is 11.08 (one-way). 85% (15% below) the countywide baseline average is 9.41 VMT per employee (one-way). Projects that exceed these thresholds may have a significant effect on the environment and may require project revisions and/or mitigation measures may be implemented to reduce the impact to less than significant.

C. Project Trip Generation

Delivery stations are the last-mile connection between the tenant's fulfillment process and their customers. Packages are transported to delivery stations via line-haul (tractor trailer) trucks from fulfillment and/or sortation centers, and are further sorted by delivery routes, organized, and loaded into delivery vehicles. Delivery stations operate 24/7 to support delivery of packages to customer locations between approximately 10:00 AM and 9:00 PM. The operations, including delivery van departure and return windows, are designed to minimize traffic impacts by shifting primary trips outside of standard peak hours (7:00–9:00 AM, 4:00–6:00 PM) and avoiding rush hour periods. The first wave of delivery drivers arrives in their personal vehicles at the delivery station around 9:20 AM, and begin queuing for loading. Starting at 9:55 AM and ending at 11:10 AM, up to 345 delivery vans will load and depart from the delivery station at a rate of up to 72 vans per 15 minutes to facilitate a regulated traffic flow into the surrounding area. The first wave of delivery vans leaves at 10:10 AM. The final wave of delivery vans (57) leaves the facility at 11:10 AM. Approximately 8-10 hours after dispatch, delivery routes are completed, and the vans return to the station between 7:10 PM and 9:10 PM. The drivers park all delivery vans onsite, and depart using a personal vehicle or other mode of transport.

At the proposed delivery station, up to 34 line-haul trucks are expected to deliver packages to the delivery station each day. The line-haul trucks will primarily arrive at the site between the hours of 10:00 PM and 8:00 AM. Trucks enter the site via W. Stowell Road on the north side of the building. Once trucks are unloaded, the trucks continue to the next delivery station and do not return to the site. The customer packages are sorted by address groupings, assigned to the delivery routes, placed onto movable racks, and staged for dispatch.

The delivery station will also use private carriers (primarily individual passenger vehicles) to deliver packages from this location. The tenant anticipates up to 97 passenger vehicles entering the facility, staggered between 4:30 PM and 6:00 PM daily. Private carrier vehicles will load and depart every 15 minutes. They will not return to the station that same day. Table 1 shows the anticipated traffic volume by vehicle type.

Table 1: Project Trip Generation - Traffic Volume by Vehicle Type

Traffic	Number of Vehicles	Daily Trips
Auto - Employees	588	1,176
Delivery Vans	345	690
Auto – Private Carrier	97	194
Line-Haul Trucks	34	68
Total	**1,064**	**2,128**

Based on Tenant Specified Schedule provided in Attachment B. Note that no adjustments have been made to the numbers to account for passenger equivalency of line-haul trucks.

Table 2: Employee Shifts

Employee Shift	# of Employees
Sort Center/C1 Shift	160
Operations	12
Managers Shift	47
Same Day Shift	19
Return to Station Shift	5
Drivers	345
TOTAL	**588**

D. Project Level VMT Analysis

Based on the anticipated daily trip generation for the Project, there are four types of vehicle trips:

- Line-haul truck trips
- Employee commute trips
- Delivery van trips
- Personal delivery vehicles (private carrier) trips

Line-haul Truck Trips

Note: Section 15064.3 of the CEQA Guidelines states that VMT for transportation impacts refers to "… the amount and distance of automobile travel…" Per guidance provided by the California Institute of Transportation Engineers (ITE) SB 743 Task Force (April 2021), SB 743 does not apply to the movement of goods (i.e. trucks). Therefore, line-haul truck trips are not considered in VMT impact calculations.

While not germane to measuring site impacts, line-haul VMT is used in the air quality analysis, and is therefore calculated for inclusion in other studies. Table 3 show the estimated VMT for line-haul trips. The likely fulfillment/sort centers to serve the site include:

- Fulfillment Center, Shafter, CA 93263 (121 miles from site)
- Sort Center, Oxnard, CA 93030 (103 miles from site)

Table 3: Freight Vehicle Miles Travels (VMT) for New Delivery Station

Traffic	Number	Daily Trips	Average Delivery Miles	Daily VMT
Line-Haul*	34	68	112	7,616

*Not used in site VMT calculations; included for air quality analysis

The total VMT for the site is the sum of the different vehicle types (except line-haul trucks). The methodology and assumptions for determining the VMT for each vehicle type other than line-haul trucks are provided below. The below analysis provides both the Project generated VMT (per vehicle type and in total), as well as the Project's effect on VMT. The Project's effect on VMT is analyzed through determining changes to VMT by locating delivery operations closer to customers to reduce overall miles traveled.

Commuter Trips

The analysis assumes that employees (onsite workers and delivery drivers) will live within a reasonable commuting distance of the site and likely follow the same trends as those that are now employed within the same area. Both the California Emissions Estimator Model (CalEEMod, Version: CalEEMod.2020.4.0) and the Santa Barbara County Association of Governments Regional

Transportation Demand Model estimate the commute distance for industrial employees who work in Santa Maria to be 6.6 miles each way, or 13.20 vehicle-miles per day.

Employment_VMT = (Number of Employees * Average Employee VMT)

The Employment VMT is 588 * 13.20 = 7,762 vehicle miles per day.

Delivery Van Trips

The Project tenant delivers packages to zones much like the U.S. Postal Service (the "USPS"), except that the routes the vans take vary by day and are optimized for the most efficient movement. The analysis estimates the VMT for delivery vehicles (via GIS) by finding the distance from the site to the furthest point within the delivery zone and multiplying by the number of vehicles bound for those zones. The furthest point within the zone is assumed to account for circuitous travel as packages are dropped off throughout a route. (Note: not every van will travel to the furthest point within a zone). The total number of delivery vans is shown in Table 1.

Some of the customers from the new delivery station (i.e. the Project) are currently being served by an existing delivery station and some by the U.S. Postal Service.

Since all vans leave the site and then return, the VMT would be doubled to account for the return trip. The future van VMT is calculated as such:

Van_VMT = $\sum$ (Van Trips to Zip Code * Dist. To Zip Code * 2)

With the addition of the Santa Maria delivery station, the two-way VMT will be 33,472 miles per day. This would equate to 97.02 VMT per person (driver) per day.

Figure 2. Percentage of Deliveries within Future Service Area



Private Carrier Trips

Private carrier trips are made by private contractors who deliver packages in their own automobiles. These individuals, called private carriers, are managed via a mobile application which instructs them when to arrive at the delivery station and how many packages they will be delivering. They are routed from the site to their delivery zones in the same manner as the delivery vans. The primary difference is that the private carrier vehicles do not return to the delivery station. Many private carrier drivers work for ridesharing companies or are professional drivers, but some are independent drivers who work at locations nearby and deliver packages after their day shift before returning home.

The delivery zones are the same as for the delivery vans, so the methodology for determining VMT is similar, except that because the private carrier vehicles do not return to the delivery station, the VMT is not doubled. The future VMT for the new site is calculated thusly:

Private Carrier_VMT = $\sum$ (private carrier Trips to Zip Code * Dist. To Zip Code).

The future daily VMT for the private carrier operations is 4,705 per day or 48.5 per driver per day.

Total Site VMT

The future total VMT for the site, including employee trips, is calculated as follows:

Total_VMT = EMP_VMT + Van_VMT + private carrier_VMT

VMT/person = Total_VMT / $\sum$ (All Commuters, Vans, and Private Carriers)

The total future VMT for the proposed delivery station is 7,762 + 33,472 + 4,705 = 45,939. The per capita VMT is 45,939 divided by 1,030 personnel or 44.60 per person per day. The VMT calculation results are shown in Table 4.

Table 4: Project VMT Results

Traffic	Personnel	Daily Trips	VMT	New VMT per Person per Day*
Commuter Trips*	588	1,176	7,762	
Delivery Vans	345	690	33,472	
Private Carrier	97	97	4,705	
Total**	**1,030**	**1,963**	**45,939**	**44.60**

*Per capita travel is based on 588 people – warehouse workers plus van and private carrier delivery personnel
**Total per capita VMT includes the commuters and the delivery operations

VMT Thresholds

Per the City of Santa Maria Environmental Procedures and Guidelines, 2020, employment generating projects (commercial, industrial, manufacturing, etc.) are required to generate less than 9.41 VMT per employee one-way trip or 18.82 two-way trips. The results show that the proposed Project's VMT is more than the targeted Regional VMT, resulting in a potentially significant impact on VMT. See Table 5.

Many of the customers in zip codes that will be served by the new delivery station in Santa Maria are currently served by the USPS. Because the USPS delivers to every address, there are no VMT savings associated with these new station trips.

Table 5: VMT Significance

Description	Project VMT per Capita per Day	City of Santa Maria Threshold[1]	Compared to Threshold	Impact Significance
Santa Maria, CA	44.60	18.82	237% higher	Potentially Significant

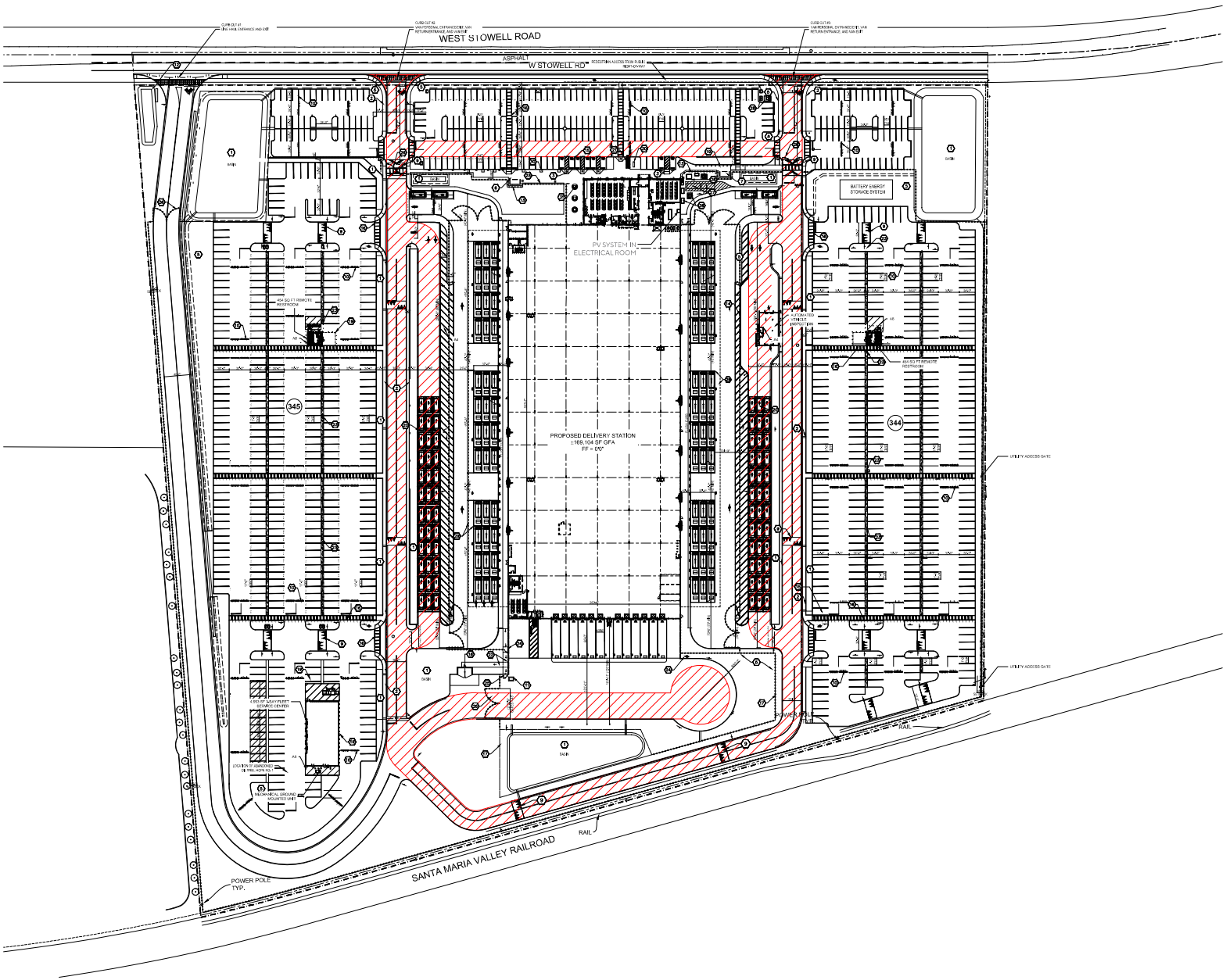
[1]The significance threshold is 9.41 for one-way trips.

The commuter VMT is 7,762 per day and the per capita VMT is 13.2 per day.

E. Mitigation

The VMT for the delivery station can be viewed in two parts: 1) the VMT associated with the employees (warehouse workers, van drivers, private carrier drivers) who commute to the site (the "commuter VMT"); and, 2) the VMT associated with the operations of the delivery station (i.e. the van and private carrier deliveries) (the "delivery operations VMT"). The commuter VMT is fairly low at 13.20 per person per day and is due to the relatively close proximity of the workforce expected for industrial uses in Santa Maria. The only potentially feasible mitigation measure to reduce commuter VMT is using transportation demand management (TDM) techniques such as increased bicycle use, carpooling, vanpooling, or transit use. For this project, however, a TDM plan would only result in de minimis VMT reductions. For example, if 20% of the onsite employees carpooled the average 6.6 miles to work (i.e. a 10% reduction of those trips), it would equate to a VMT per capita of 41.44, or a 0.46 VMT per capita reduction. There are also no feasible mitigation measures to reduce delivery operations VMT. This VMT could only be reduced by reducing delivery service, which would defeat the primary purpose of the Project. Therefore, no VMT mitigation is feasible for the Project, and the VMT impact will remain significant and unavoidable.

Attachment A – Site Plan



KEYNOTES

1	STORMWATER MANAGEMENT AS REQUIRED BY CODE	20	EMPLOYEE MUSTER AREA SIGNAGE PER SIGNAGE AND STRIPING PLAN
2	CONCRETE SIDEWALK	21	BIKE RACKS
3	ACCESSIBLE CURB RAMP	22	5' WIDE CONCRETE SIDEWALK (5% MAX SLOPE) WITH GUARDRAILS AND LANDINGS AS REQUIRED
4	RIDE SHARE DROP-OFF		
5	LANDSCAPE	23	TRASH CAN ON CONCRETE PAD
6	PREFABRICATED SMOKING SHELTER	24	RETAINING WALL WITH GUARD RAIL, AS REQUIRED, PER STRUCTURAL PLANS
7	RIDE-SHARE SHELTER	25	5' WIDE MAIN GATE WITH LOCKING HARDWARE
8	WHEEL STOP	26	PAIR OF 8'-0"H GALVANIZED MANUAL SWING GATES WITH DROP ROD AND LOCKING HARDWARE. IS REQUIRED, PROVIDE GATE WITH RUBBER ROLLERS OR TIRED. IN-GROUND TRACK SYSTEMS ARE NOT ALLOWED
9	SPEED HUMP / PEDESTRIAN TABLE		
10	SPEED BUMP		
11	4'x6' TRUCK YARD SPILL KIT SHED (BY TENANT) ON 6'X8' CONCRETE PAD		
12	SIGNAGE PER SIGNAGE AND STRIPING PLAN		
13	PEDESTRIAN BARRIER FENCE PER SITE DETAILS	27	EMERGENCY MOBILE GENERATOR PARKING
14	STRIPED TRAFFIC SEPARATION WITH JERSEY BARRIERS (OR EQUAL)	28	ELECTRICAL EQUIPMENT WITH BOLLARD PROTECTION PER ELECTRICAL PLANS
15	ACCESSIBLE PARKING STALL	29	BUILDING CANOPY AND COLUMNS PER ARCHITECTURAL PLAN
16	STRIPED PEDESTRIAN ACCESS	30	BENCH
17	YARD PERIMETER SECURITY FENCE	31	OUTDOOR BREAK AREA
18	TRASH ENCLOSURE	32	LOADING ZONE SECURITY FENCE
19	BOLLARDS PER SITE PLAN ENLARGEMENTS AND SITE DETAILS	33	42" HIGH CABLE RAILING FENCE
		34	8' HIGH BLACK TUBULAR FENCE

LEGEND:

- 42" HIGH CABLE RAILING FENCE
- 8' HIGH BLACK TUBULAR FENCE
- PROPERTY LINE
- 30'-0" (TYPICAL) WIDE FIRE LANE (HATCHED), 24'-0" AT NORTH ELEVATION, EXTENT OF FIRE LANE CONTINUOUS CURB PAINTED RED & MARKED WITH "FIRE LANE NO PARKING" PER THE FIRE DEPARTMENT HAVING JURISDICTION

REQUIRED PARKING

WAREHOUSE	157,507 SF	1 PER 1,040 SF	151	STALLS
OFFICE	11,597 SF	1 PER 260 SF	45	STALLS
TOTALS	169,104 SF		196	STALLS REQUIRED

PROPOSED PARKING

STANDARD STALLS (9' x 19')	210	STALLS
EV CAPABLE STALLS*	54	STALLS
HANDICAP STALLS	8	STALLS
TOTAL PARKING PROVIDED	272	STALLS

*ELECTRONIC VEHICLE CHARGING STATIONS (EVCS) 25% OF OVERALL EV CAPABLE STALLS 14 STALLS

DELIVERY VAN PARKING

VAN STALLS (11' x 27')	504 STALLS
EVCS VAN STALLS (11' X 27')	202 STALLS
TOTAL DELIVERY VAN PARKING	706 STALLS

SEMI TRUCK PARKING

DOCK POSITIONS (53') 12 STALLS

HEIGHT LIMIT

MAXIMUM: 40'-0" PER SANTA MARIA ZONING
PROPOSED: *MAXIMUM HEIGHT OF ±45'-0"

*REQUEST FOR A MODIFICATION TO THE MAX BUILDING HEIGHT.

SEEFRIED INDUSTRIAL PROPERTIES

DISTRIBUTION CENTER

Santa Maria, CA

SITE PLAN

0 60' 120'

AO Architecture. Design. Relationships.

A1

Scale 1" = 60'-0"
Job No. 2024-0141
Date 2025-04-16

Attachment B – Tenant Specified Trip Schedule

Santa Maria Delivery Facility

Time	Autos			Trucks			Vans			Total		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
0:00	0	0	0	1	1	2	0	0	0	1	1	2
0:30	0	0	0	1	1	2	0	0	0	1	1	2
1:00	160	0	160	1	1	2	0	0	0	161	1	162
1:30	0	0	0	1	1	2	0	0	0	1	1	2
2:00	0	0	0	1	1	2	0	0	0	1	1	2
2:30	0	0	0	1	1	2	0	0	0	1	1	2
3:00	0	0	0	1	1	2	0	0	0	1	1	2
3:30	0	0	0	1	1	2	0	0	0	1	1	2
4:00	0	0	0	1	2	3	0	0	0	1	2	3
4:30	0	0	0	2	1	3	0	0	0	2	1	3
5:00	0	0	0	1	2	3	0	0	0	1	2	3
5:30	0	0	0	2	1	3	0	0	0	2	1	3
6:00	0	0	0	1	1	2	0	0	0	1	1	2
6:30	0	0	0	1	1	2	0	0	0	1	1	2
7:00	0	0	0	1	1	2	0	0	0	1	1	2
7:30	0	0	0	1	1	2	0	0	0	1	1	2
8:00	12	0	12	0	1	1	0	0	0	12	1	13
8:30	0	0	0	0	1	1	0	0	0	0	1	1
9:00	0	0	0	0	1	1	0	0	0	0	1	1
9:30	144	0	144	0	1	1	0	0	0	144	1	145
10:00	72	47	119	0	0	0	0	72	72	72	119	191
10:30	129	0	129	0	0	0	0	72	72	129	72	201
11:00	0	0	0	0	0	0	0	144	144	0	144	144
11:30	0	0	0	0	0	0	0	57	57	0	57	57
12:00	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0	0	0	0	0
13:30	19	0	19	0	0	0	0	0	0	19	0	19
14:00	0	160	160	1	0	1	0	0	0	1	160	161
14:30	0	0	0	0	1	1	0	0	0	0	1	1
15:00	0	0	0	1	0	1	0	0	0	1	0	1
15:30	5	0	5	0	1	1	0	0	0	5	1	6
16:00	0	0	0	1	0	1	0	0	0	1	0	1
16:30	36	12	48	0	1	1	0	0	0	36	13	49
17:00	61	36	97	1	0	1	0	0	0	62	36	98
17:30	0	61	61	0	1	1	0	0	0	0	62	62
18:00	0	19	19	1	0	1	0	0	0	1	19	20
18:30	0	0	0	1	0	1	0	0	0	1	0	1
19:00	0	0	0	1	0	1	0	0	0	1	0	1
19:30	0	0	0	1	0	1	0	0	0	1	0	1
20:00	0	0	0	1	1	2	72	0	72	73	1	74
20:30	0	144	144	1	1	2	72	0	72	73	145	218
21:00	0	72	72	1	1	2	144	0	144	145	73	218
21:30	0	129	129	1	1	2	57	0	57	58	130	188
22:00	0	0	0	1	1	2	0	0	0	1	1	2
22:30	0	5	5	1	1	2	0	0	0	1	6	7
23:00	47	0	47	1	1	2	0	0	0	48	1	49
23:30	0	0	0	1	1	2	0	0	0	1	1	2
Total	**685**	**685**	**1370**	**34**	**34**	**68**	**345**	**345**	**690**	**1064**	**1064**	**2128**

SC/CI Shift:	1:20	13:50	160	Assoc.	27%
Operations:	8:30	16:00	12	Assoc.	2%
Managers Shift:	23:30	10:00	47	Assoc.	8%
PFSD Shift:	14:00	18:00	19	Assoc.	3%
RTS Shift:	16:00	22:30	5	Assoc.	1%
Drivers:	5:40	22:45	345	Drivers	59%

Attachment C – VMT Resources

City of Santa Maria Environmental Procedures and Guidelines







Environmental Procedures and Guidelines
City of Santa Maria, California

Adopted by City Council Resolution 2001-186, November 6, 2001
Amended by City Council Resolution 2020-111, November 3, 2020

City Council:

Alice Patino, Mayor
Gloria Soto
Michael Moats
Mike Cordero
Etta Waterfield

Prepared by:

Community Development Department

Chuen Ng, Director
Ryan Hostetter, Planning Manager
Dana Eady, Principal Planner

City Attorney's Office

Thomas T. Watson, City Attorney
Heather Whitham, Assistant City Attorney

2. Affordable housing projects where a minimum of 20 percent of the units are deed restricted for low or very low income residents.

3. Small discretionary development projects that would generate or attract fewer than 110 daily trips (per CEQA). Examples include a project with 11 or fewer single family residential units, 20 or fewer multi-family units, or an office of 6,800 square feet or less.

4. Residential and non-residential land uses located in the green Transportation Analysis Zone (TAZ) areas of the Countywide Average Home-Based VMT per Capita and per Employee Maps (Appendix A and B) are expected to generate VMT at 85 percent or less of the baseline average rate and are presumed to have less than significant VMT impacts.

5. Infrastructure projects listed in Appendix C[1].

Discretionary development projects that do not meet any of the above screening criteria will require VMT Analysis. The City of Santa Maria can require a VMT analysis for discretionary development projects that trigger one or more of the above screening criteria if there are concerns regarding the VMT generating impacts of a given development.

Thresholds of Significance:

Consistent with CEQA Guidelines Section 15064.7, Thresholds of Significance, the City of Santa Maria has adopted the *countywide baseline average* (Appendix A for Residential Uses and Appendix B for Employment Generating Uses) and thresholds set at 85% of these countywide baseline averages for determining whether a project's VMT will be significant. The thresholds will be periodically updated as necessary during normal updates of the model baseline (approximately every five years).

Projects that comply with the applicable threshold will normally have a less than significant effect on the environment. Projects that exceed or otherwise do not comply with the applicable threshold may have a significant effect on the environment and, as a result, may require project modifications or mitigation measures to avoid or reduce those effects to less than significant levels. The following thresholds reflect this general guidance as well as the specific guidance set forth in CEQA Guidelines Section 15064.3 regarding estimating VMT, and developing thresholds of significance for VMT and transportation impacts.

Employment generating projects (commercial, industrial, manufacturing, etc.) are required to generate less than 9.41 VMT per employee (one-way trip). New residential projects (single family, multi-family, mobile home) are required to generate less than 6.17 VMT per person (one-way trip). Projects that exceed these thresholds may have a significant effect on the environment and will require project revisions and/or mitigation measures may be implemented to reduce the impact to less than significant. Mitigation strategies would be specific to the particular project and could include alternative transportation opportunities, pedestrian and/or transit network improvements, and traffic calming measures.

[1] The City of Santa Maria can require a VMT analysis if there are concerns regarding the VMT generating impacts of a given infrastructure project.



2024 RTIP

Regional Transportation Improvement Program

Santa Barbara County

Prepared and Submitted By:

SBCAG
SANTA BARBARA COUNTY ASSOCIATION OF GOVERNMENTS

Member Agencies:

Buellton ● Carpinteria ● Goleta ● Guadalupe ● Lompoc
Santa Barbara ● Santa Maria ● Solvang ● Santa Barbara County

A. Regional Level Performance Indicators and Measures (per Appendix B of the STIP Guidelines).

Use the following Table B1 to indicate quantitatively the overall regional level performance of your Regional Transportation Plan (RTP). For regions outside a MPO, a second Table B1(a) may be used as a replacement to Table B1. Table B1(a) is included on the next page.

Table B1
Evaluation – Regional Level Performance Indicators and Measures

Goal	Indicator/Measure	Current System Performance (Baseline)	Projected System Performance (2050 Future Baseline)	Projected System Performance (2050 Preferred Scenario)
Congestion Reduction	Vehicle Miles Traveled (VMT) per capita.	22.81 (2015)	26.20	22.12
	Percent of congested VMT (at or below 35 mph)	12.7% (2015)	19.1%	15.5%
	Commute mode share (travel to work or school)	86.84% (2015)	93.37%	86.21%
Infrastructure Condition	Percent of distressed state highway lane-miles	Good: 0% Fair 96.8% Poor 3.2% (2021 HPMS data, based on 2020 APCS inspection)	Good: 0% Fair 85.2% Poor 14.8% 10-year 'Do Nothing' scenario (2022-2032)	Good: 17.8% Fair: 76.9% Poor: 5.3% 10-year invested scenario (2022-2032)
	Pavement Condition Index (local streets and roads)	N/A	N/A	N/A
	Percent of highway bridges by deck area classified in Poor condition	Poor 14.7% (2021 National Bridge Inventory data)	Poor 18.1% 10-year 'Do Nothing' scenario (2022-2032)	Poor 0% 10-year invested scenario (2022-2032)
	Percent of transit assets that have surpassed the FTA useful life period	N/A	N/A	N/A
System Reliability	Highway Buffer Index (the extra time cushion that most travelers add to their average travel time when planning trips to ensure on-time arrival)	N/A	N/A	N/A
	Accessibility and on-time performance for rail and transit	N/A	N/A	N/A

UNDERSTANDING REGIONAL TRAVEL PATTERNS



January 2024

SBCAG
SANTA BARBARA COUNTY ASSOCIATION OF GOVERNMENTS

Miles Traveled

This analysis considers miles traveled by jurisdiction and sub region for two time periods: fall 2022 and fall 2019, both for a typical weekday. The two periods enable a view of pre-pandemic and post-pandemic conditions. It is broken down by vehicle miles traveled, bicycle miles traveled, and transit miles traveled. It should be noted that transit data is not available for the small operators in the region being Guadalupe, Lompoc, and Santa Ynez Valley. Data is provided for trips originating in jurisdiction or sub region and includes all trip purposes.

Table 147: Vehicle Miles Traveled

Jurisdiction	Fall 2022	Fall 2019	% Change 2022-2019
Buellton	270,180	280,670	-3.7%
Carpinteria	274,040	332,050	-17.5%
Goleta	863,500	912,920	-5.4%
Guadalupe	133,340	118,950	12.1%
Lompoc	623,000	606,090	2.8%
Santa Barbara	1,900,600	1,996,800	-4.8%
Santa Maria	1,763,200	1,959,600	-10.0%
Solvang	185,760	250,200	-25.8%
North County	4,203,600	4,763,000	-11.7%
South County	4,166,400	4,389,000	-5.1%
County	8,370,000	9,190,800	-8.9%

The following table considers population to provide vehicle miles traveled per capita. Population figures are Census 2020 which doesn't account for change, but it provides a reference point.

Table 148: Vehicle Miles Traveled Per Capita

Jurisdiction	Population (2020)	VMT/Capita Fall 2022	VMT/Capita Fall 2019	% Change 2022-2019
Buellton	5,161	52.4	54.4	-3.7%
Carpinteria	13,264	20.7	25.0	-17.5%
Goleta	32,690	26.4	27.9	-5.4%
Guadalupe	8,057	16.5	14.8	12.1%
Lompoc	44,444	14.0	13.6	2.8%
Santa Barbara	88,665	21.4	22.5	-4.8%
Santa Maria	109,707	16.1	17.9	-10.0%
Solvang	6,126	30.3	40.8	-25.8%
North County	239,868	17.5	19.9	-11.7%
South County	208,361	20.0	21.1	-5.1%
County	448,229	18.7	20.5	-8.9%

The following table provides bicycle miles traveled by jurisdiction and sub area. All values are for a typical weekday and for bike trips originating in the stated jurisdiction or sub area.

DIZ1 - Santa Barbara-North of Santa Ynez County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

DIZ1

Santa Barbara-North of Santa Ynez County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	127.00	1000sqft	2.92	127,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.1	**Precipitation Freq (Days)**	37
Climate Zone	4			**Operational Year**	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Large Parking area

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

DIZ1 - Santa Barbara-North of Santa Ynez County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.2325	0.2800	1.9919	3.9000e-003	0.4533	3.0000e-003	0.4563	0.1214	2.8100e-003	0.1242	0.0000	360.9581	360.9581	0.0262	0.0195	367.4180
Unmitigated	0.2325	0.2800	1.9919	3.9000e-003	0.4533	3.0000e-003	0.4563	0.1214	2.8100e-003	0.1242	0.0000	360.9581	360.9581	0.0262	0.0195	367.4180

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	499.11	815.34	646.43	1,203,003	1,203,003
Total	499.11	815.34	646.43	1,203,003	1,203,003

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
General Heavy Industry	6.60	5.50	6.40	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.506430	0.055863	0.206798	0.143793	0.025842	0.006469	0.011207	0.006259	0.000953	0.000560	0.028990	0.003362	0.003474

Appendix B

Notice of Preparation

CITY OF SANTA MARIA
NOTICE OF PREPARATION

DATE August 13, 2025

TO: Governor's Office of Planning and Research State Clearinghouse, Responsible Agencies, Trustee Agencies, Organizations, and Interested Parties

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report

Lead Agency:		**Consultant (if applicable):**	
Agency Name:	City of Santa Maria, Planning Division, Community Development Department	Firm Name:	Rincon Consultants
Street Address:	110 S Pine St, Suite 101	Street Address:	1530 Monterey Street, Suite D
City/State/Zip:	Santa Maria, CA 93454	City/State/Zip:	San Luis Obispo, California 93401
Contact:	Cody Graybehl, Senior Planner, cgraybehl@cityofsantamaria.org or (805) 925-0951 x 2552	Contact:	Eric VonBerg, Supervising Planner, evonberg@rinconconsultants.com

The City of Santa Maria will be the Lead Agency and will prepare an environmental impact report (EIR) for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory requirements in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the initial study (__X__ is ___ is not) attached. Please see the link on page two for the initial study.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date ***but not later than 30 days after receipt of this notice.***

Please send your response to __Cody Graybehl___ at the email or address shown above. We will need a contact person in your agency.

Project Title: City of Santa Maria Package Delivery Warehouse Planned Development Permit, Project No. PD2024-0003

Project Location: 1680 West Stowell Road in the city of Santa Maria in Santa Barabra County (Assessor's Parcel Numbers 117-820-012 and 117-820-013)

Project Description: Attached. Please see page two.

Date: August 13, 2025 **Signature:** Cody Graybehl

PROJECT DESCRIPTION

Project Location

The Package Delivery Warehouse Planned Development Permit Project (project) would be located at 1680 West Stowell Road in the city of Santa Maria (City) in Santa Barabra County. The property is located in the western portion of the city within the West Stowell Specific Plan area. The project is in zone district PD/CM-AG (Planned Development/Commercial Manufacturing - Agriculture Overlay) of the Specific Plan. The project would be built on a 32-acre site consisting of two parcels (Assessor's Parcel Numbers 117-820-012 and 117-820-013) currently used for growing row crops. As shown in Project Location Map, the project site is vacant. The project site is bordered on the north by West Stowell Road. The land north of West Stowell Road is in unincorporated Santa Barbara County. There is an operating freight rail track abutting the south boundary of the site owned by Santa Maria Valley Railroad. The facility would not be using the rail tracks for the project. Neighboring land uses include agricultural, industrial, and commercial uses, including a Driscoll's packaging facility, an animal shelter, trucking facility, and various farms.

Previous Environmental Review

The City of Santa Maria is the Lead Agency under the California Environmental Quality Act (CEQA). After preparing an Initial Study, the City has determined that the project may have potentially significant effects related to Transportation. An Environmental Impact Report (EIR) will be prepared to evaluate these potential effects.

Project Description

The proposed Package Delivery Warehouse project, led by Seefried Industrial Properties, Inc., is planned for a 32-acre site at 1680 West Stowell Road in Santa Maria, California. Currently used for agriculture, the site would be developed with a 244,418-square-foot distribution facility featuring a main warehouse, office space, fleet service center, and various support structures. The project requires a Planned Development Permit, including a modification to exceed the 35-foot building height limit to 45 feet. The facility would operate 24/7, supporting last-mile delivery operations with up to 345 delivery vans and 34 line-haul trucks daily. It would include sustainable features such as solar panels, EV charging stations, and a battery energy storage system, while also addressing stormwater management and re-abandonment of an old oil well on-site.

Site improvements include drought-tolerant landscaping, advanced irrigation systems, and lighting for safety. Access would be provided via three driveways, with parking for nearly 1,000 vehicles, including delivery vans and semi-trucks. The project also includes utility upgrades, such as replacing an undersized sewer main, and off-site improvements like new travel lanes, sidewalks, and street lighting to support increased traffic and ensure safe circulation. Construction is planned for approximately March 2026 to July 2027 and would involve phased development.

The draft of the Initial Study for the project is available for review on the City's website: https://www.cityofsantamaria.org/services/departments/community-development/planning-division/planning-policies-and-regulations/environmental-impact-reports.

City of Santa Maria Package Delivery Warehouse Planned Development Permit
Project No. PD2024-0003

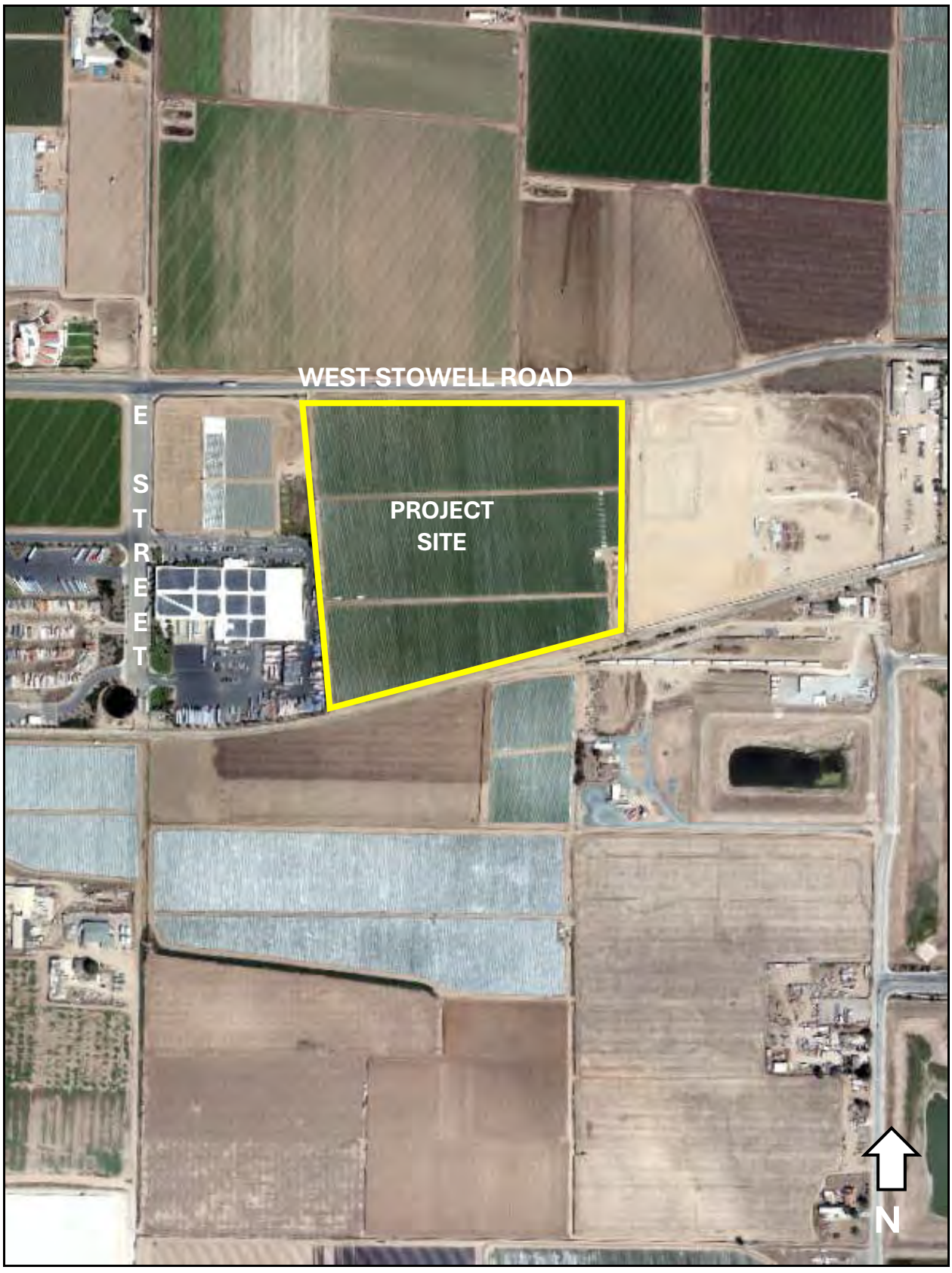
ENVIRONMENTAL SUMMARY

The Environmental Officer has determined that an Environmental Impact Report (EIR) is required for the proposed project in accordance with Section 15081 of the CEQA Guidelines. The basis for the determination is that there is a potentially significant impact related to transportation, specifically vehicle miles travelled (VMT).

An initial study was prepared for the proposed project (on file at the Community Development Department). Based on the initial study, several impact categories were determined not to require further review in the EIR. These categories are 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, Tribal Cultural Resources, Utilities and Service Systems, and Wildfire. The following is a brief description of the impact to be reviewed in the EIR.

The EIR is a project-specific document that will analyze the potentially significant environmental impacts on transportation systems from development and operation of the project, specifically potential conflicts with program, plan, ordinance or policy addressing VMT and conflicts with CEQA Guidelines Section 15064.3(b) regarding VMT. The EIR will evaluate whether feasible mitigation measures exist that may lessen or avoid identified significant VMT impacts and identify and evaluate feasible alternatives to the project to avoid or lessen this significant impact.

Project Location Map



Appendix C

Traffic Impact Study

TRAFFIC IMPACT STUDY FOR

W. STOWELL ROAD DELIVERY STATION

DATE:
May 28, 2025

LOCATION:
Santa Maria, CA

PREPARED FOR:
Ben Ochoa, Seefried Industrial Development



PREPARED BY:
NV5 Engineers & Consultants
15092 Avenue of Science, Suite 200
San Diego, CA 92128

nv5.com

Executive Summary

A new delivery station is planned for construction along W. Stowell Road in Santa Maria, California. The proposed site will include a 169,104 square-foot warehouse facility, a delivery van queueing area, and surface parking lots (the "Project"). The development will have 3 full access driveways off W. Stowell Road (D1, D2, and D3). The Project site is designated for Planned Development in the West Stowell Specific Plan and is zoned Commercial Manufacturing/Agriculture Overlay (CM/AG). The site will generate passenger cars, delivery vans, and truck traffic. A total of 2,128 daily trips will be generated by the site, with 15 occurring during the AM peak hour (13 entering, 2 exiting) and 147 occurring during the PM peak hour (98 entering, 49 exiting).

Capacity analysis for existing (2024), No-Build (2027), and Build (2027) Conditions were completed at the following intersections utilizing Synchro® 12:

1. W. Stowell Road & Hanson Way – Three-leg, stop control.
2. W. Stowell Road & S. Blosser Road – Four-leg, signal.
3. W. Stowell Road & Black Road - Three-leg, stop control.
4. W. Taylor Street & N. Blosser Road - Three-leg, stop control.
5. W. Stowell Road & Broadway - Four-leg, signal.
6. Main Street & Black Road - Three-leg, stop control.
7. W. Stowell Road & S Bradley Road - Four-leg, signal.
8. S. Bradley Road & I-101 SB Off/On Ramp/Columbia - Four-leg, signal.
9. W. Stowell Road & I-101 NB Off/On Ramp/Nicholson Four-leg, stop control.
10. W. Stowell Road & Access Driveway 1 - Three-leg, stop control.
11. W. Stowell Road & Access Driveway 2 - Three-leg, stop control.
12. W. Stowell Road & Access Driveway 3 - Three-leg, stop control.

The following are the segments included in the study:

A. W. Stowell Road from Black Road to Blosser Road.
B. Black Road from W. Stowell Road to Main Street.
C. Blosser Road from W. Stowell Road to Main Street.

A comparison of the 2024 Existing, 2027 No-Build, and 2027 Build traffic analysis results indicates that the proposed Project will have a slight impact on the overall intersection Level of Service (LOS) along nearby roads. All study area unsignalized intersections and driveways are expected to operate at an acceptable LOS, except for the intersections of Main Street and Black Road, and E Stowell Road/Nicholson Avenue/I-101 NB On Ramp. Four signalized intersections are experiencing LOS E or F during AM and/or PM peak hours under Existing, No-Build, and Build conditions. Improvements for these four existing signalized intersections include optimizing the corridor along W. Stowell Road in line with the planned roadway improvements, which will enhance the overall levels of service.

The intersection of E Stowell Road and Broadway will experience poor levels of service as other developments are completed. The City of Santa Maria and CalTrans are aware of the deficiency and have plans to mitigate it in the future. The Project traffic has the ability to avoid the intersection during times of congestion, with alternate paths available.

The intersection of W Stowell Road and S Blosser Road will be improved by adding a northbound right-turn lane as a condition of the Blosser Ranch development on the southeast corner.

The following improvements are proposed as part of the Project:

W. Stowell Road from S. Blosser Road to US 101

- Optimize traffic signal timing

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Introduction

A new delivery station is proposed for construction along W. Stowell Road located in Santa Maria, California. The proposed industrial building will consist of 169,104 square feet, and will operate as a distribution warehouse where goods are sorted and transferred from large tractor trailers to smaller van-sized vehicles for delivery to final users (the "Project"). Figure 1 indicates the approximate location of the Project site.

NV5 Inc., has been retained to prepare this Traffic Impact Study (TIS) to determine the amount of traffic expected to be added to the adjacent roadway network due to the Project, and identify any improvements necessary to minimize the effects of additional traffic. To complete this determination, NV5 has undertaken the following tasks:

- Conducted field inspections of the site and surrounding roadway network to obtain an existing inventory of the roadway geometry, traffic control, and surrounding land uses.
- Determined existing traffic conditions by performing intersection turning movement counts at key intersections in the vicinity of the proposed Project during the weekday morning and weekday evening peak hours.
- Estimated the amount of traffic to be generated by the proposed Project utilizing the trip generation data published by the Institute of Transportation Engineers (ITE), and available information on the intended operation of the site. Site generated trips were then assigned to the local roadway network based on existing travel patterns and the site's proposed use.
- Completed capacity analyses for Existing (2024), No-Build (2027), and Build (2027) Conditions throughout the study area.
- Identified potential improvements to improve traffic conditions, if necessary.

This report represents a summary of our findings and recommendations with regard to the proposed Project.

A.1. Project Overview

The site will include a newly developed 169,104 square-foot delivery station, to deliver merchandise from nearby and regional sort centers to local customers within approximately 125 square miles. The Project site is designated for Planned Development in the West Stowell Specific Plan and is zoned Commercial Manufacturing/Agriculture Overlay (CM/AG). The targeted build-out date for the new facility is 2027.

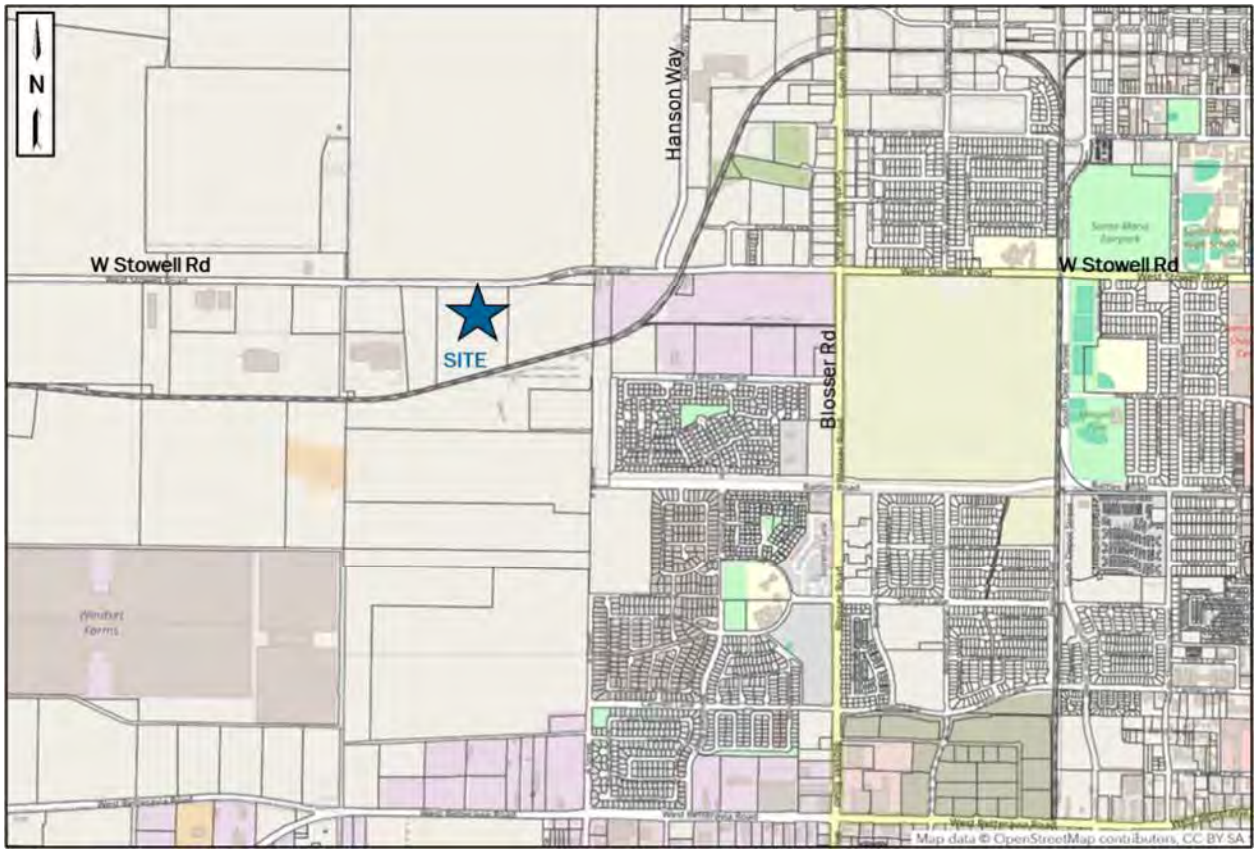
This TIS documents the effects that the proposed development may have on the surrounding existing and future roadway network. The study also documents major inputs and assumptions behind trip generation by the proposed development and details any recommended improvement measures or infrastructure improvements to reduce the impact of site traffic in the study area.

The scope of this study was based on the City of Santa Maria Public Work Department's Policies and Procedures for Transportation Impact Studies. The proposed scope was accepted by the City of Santa Maria's Engineering Division, and can be found in Appendix G.

A.2. Site Location & Study Area Boundaries

The site is located along the south side of W. Stowell Road on the west side of the City of Santa Maria, approximately 64 miles northwest of Santa Barbara. It is bounded on the south by a railroad and agricultural land. The delivery station is located just 3 miles west of U.S. Highway 101, and 3 miles north of the Santa Maria Airport. Access to U.S. Highway 101 is available via W. Stowell Road, and the Airport is a short commute down S. Blosser Road. Land use in the area is a mix of commercial, industrial, and residential properties. Figure 1 illustrates the site's location.

Figure 1. Vicinity Map



This study includes analysis of the Existing and Future Conditions at the following intersections:

1. W. Stowell Road & Hanson Way
2. W. Stowell Road & S. Blosser Road
3. W. Stowell Road & Black Road
4. W. Taylor Street & N. Blosser Road
5. W. Stowell Road & Broadway
6. Main Street & Black Road
7. W. Stowell Road & S Bradley Road
8. S. Bradley Road & I-101 SB Off/On Ramp/Columbia
9. W. Stowell Road & I-101 NB Off/On Ramp/Nicholson
10. W. Stowell Road & Access Driveway 1
11. W. Stowell Road & Access Driveway 2
12. W. Stowell Road & Access Driveway 3

Figure 2 illustrates the previously listed study intersections superimposed on existing aerial imagery. A detailed copy of the site development concept plan is provided in Appendix A.

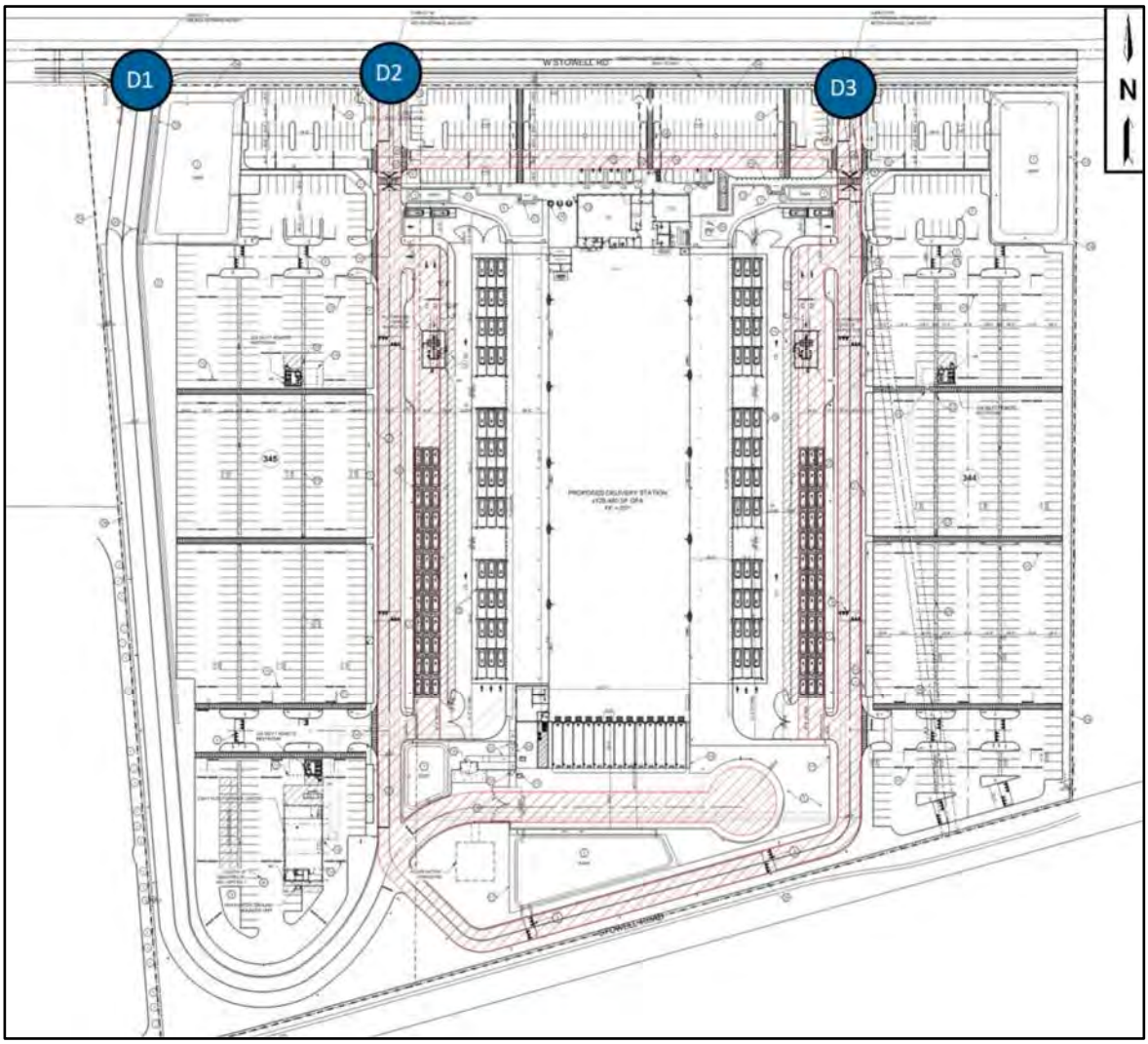
Figure 2. Site Location Aerial



A.3. Development Site Description

The site will be developed as a 169,104 square-foot delivery station. The targeted build-out for the new facility is 2027. The site has three driveway connections to the roadway network, and the parking for passenger cars, delivery vans, and trucks will encompass approximately 31.37 acres of the parcel. The delivery station will be served by D1, D2, and D3 along W. Stowell Road, as shown on the Site Plan in Figure 3.

Figure 3. Site Plan



All line-haul trucks will access the site at the westernmost driveway (D1), and all vans and employees will enter at the two eastern driveways (D2 and D3). Driveways D2 and D3 serve as internal site access providing circulation separation north and south of the facility to optimize queuing on-site, reduce conflict, and accommodate all required parking.

A.4. Existing Transportation Network

A review of the roadway network and intersections in the study area was conducted including field investigation (May 7th, 2024), traffic counts, and review of existing traffic signals and timings. The following is a summary of the existing transportation network in the nearby area.

The "SMRT" fixed route bus service serves Main Street and Broadway within the vicinity of the study area, one of the twelve routes in the system. There are no sidewalks or bicycle facilities along W. Stowell Road or any of the side streets within a half-mile of the proposed delivery station.

U.S. Highway 101 is a six-lane, median-divided interstate with a posted speed limit of 65 MPH. The highway features northbound and southbound ramps that divert to Stowell Road, leading to the proposed development. Additionally, U.S. Highway 101 provides connectivity to Highway 166, Highway 227, and Highway 135.

W. Stowell Road transitions from a two-lane to a four-lane median-divided roadway, and is classified as an urban secondary arterial with a posted speed limit of 55 MPH adjacent to the Project development, 40 MPH between Blosser Road and Depot Road, and 35 MPH from Depot Road to U.S. Highway 101. W. Stowell Road originates at Black Road and runs east to west that connects to U.S. Highway 101. Land uses along the W. Stowell roadway segment include commercial and residential single-family detached housing.

Broadway (State Route 135) is a four to six-lane divided freeway that serves as Santa Maria's primary route north-to-south link, connecting the city along the Pacific Coast. The four-lane section north of W. Stowell Road is posted at 30 MPH, and the six-lane section south of W. Stowell Road is posted at 40 MPH. The surrounding land uses along this thoroughfare consist of commercial areas, parks, and single-family detached housing.

Main Street (SR-166) is a two-lane median-divided primary arterial roadway. Main Street is also a part of State Route 166, which connects Santa Maria to the Guadalupe area west of the city with a posted speed limit of 55 MPH. The land uses along Main Street are almost exclusively industrial yards, with some undeveloped lots near Black Road.

Blosser Road is a four-lane divided arterial roadway with a posted speed limit of 40 MPH north of W. Stowell, 45 MPH between W. Stowell and Betteravia, and 55 MPH south of Betteravia. The roadway network is the primary route from the Project site to the Santa Maria Airport. The land uses along Blosser Road are mixed with commercial and residential developments, with minor vacant lots adjacent to the roadway.

Black Road is a two-lane undivided local roadway with a posted speed of 45 MPH. The land uses along the roadway are almost exclusively vacant, undeveloped parcels, including a water treatment plant. Black Road serves as the connecting link from Main Street to Betteravia Road.

Existing Traffic Conditions

A.5. Traffic Counts

Intersection turning movement counts (TMCs) at the six study intersections were collected on Thursday, April 18, 2024, while schools were in session. In addition to the turning movement counts, 24-hour traffic counts were taken on Stowell Road, east of E. Street, Black Road, North of Stowell Road, and Blosser Road, north of W. Cypress Street on Thursday, April 18, 2024. The AM peak hour was determined to be 7:30-8:30 AM and the PM peak hour was determined to be 4:00-5:00 PM for the intersections of W. Stowell Road & Hanson Way, W. Stowell Road & Blosser Road, and W. Stowell Road & Broadway. W. Stowell Road & Black Road and Main Street & Black Road had an AM Peak hour from 7:00-8:00 AM and PM Peak from 4:00-5:00 PM. Blosser Road & W. Taylor Street had an AM Peak hour from 7:45-8:45 AM and PM Peak from 4:30-5:30 PM. The following intersection traffic data is included in Appendix B. The resultant Existing Traffic Volumes are shown in Figure 4.

A.6. Existing Traffic Analysis Results

Analysis in each of the study's scenarios was performed using the traffic analysis software Synchro® 12. Average vehicular delays (in seconds) are calculated and reported as Levels of Service (LOS) as defined by the Highway Capacity Manual (HCM) 7th edition. Synchro® output reports are included in Appendix E. Signal phasing is reflective of signal timing plans provided by the City of Santa Maria, as well as Caltrans, and kept constant through Future Conditions. Site driveways are not shown in Existing and No-Build Conditions as they are currently not in use. Because traffic flow on urban arterials is most constrained at intersections, detailed traffic flow analyses focus on the operating conditions of critical intersections during peak travel periods. LOS A through F are used to rate intersection operations, with LOS A indicating very good operation, and LOS F indicating poor operation. The City of Santa Maria considers LOS D as the performance standard for intersections (maintain LOS D or better). LOS E is coded as orange, and LOS F is coded as red in the Tables provided. The results of the Existing capacity analysis are shown in Table 1, and include analysis of the volumes presented in Figure 4.

Figure 4. Existing (2024) Volumes

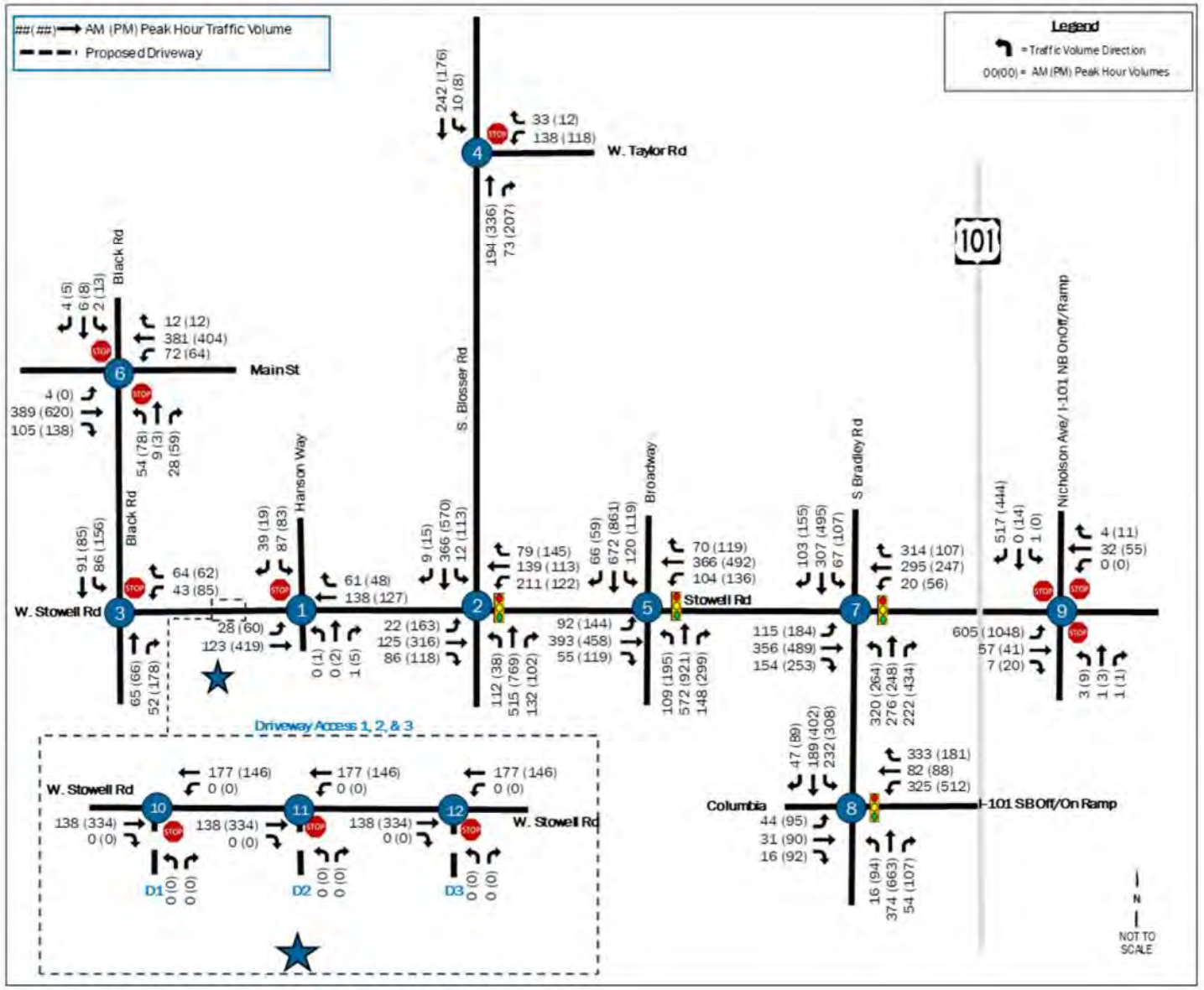


Table 1. Existing (2024) Intersection Capacity Analysis

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	W. Stowell Road / Hanson Way	Stop-Control	**OVERALL**	**A**	**3.6**	**A**	**2.8**
			EB	A	1.7	A	1.4
			WB	A	0.0	A	0.0
			NB	A	8.7	B	12.3
			SB	B	11.7	B	14.0
2	W. Stowell Road / S. Blosser Road	Signal	**OVERALL**	**D**	**35.1**	**D**	**37.2**
			EB	E	57.8	E	61.0
			WB	E	62.0	D	51.0
			NB	C	21.0	C	26.8
			SB	B	19.4	C	23.0
3	W. Stowell Road / Black Road	Stop-Control	**OVERALL**	**A**	**4.7**	**A**	**6.9**
			WB	B	11.1	C	20.4
			NB	A	0.0	A	0.0
			SB	A	3.8	A	5.6
4	W. Taylor St / N. Blosser Road	Stop-Control	**OVERALL**	**A**	**4.0**	**A**	**2.3**
			WB	C	15.7	B	14.8
			NB	A	0.0	A	0.0
			SB	A	0.3	A	0.4
5	W. Stowell Road / Broadway	Signal	**OVERALL**	**D**	**43.8**	**E**	**60.3**
			EB	D	47.5	D	58.3
			WB	D	47.4	E	62.1
			NB	D	39.4	E	64.0
			SB	D	43.4	D	55.4
6	Main Street / Black Road	Stop-Control	**OVERALL**	**A**	**4.0**	**A**	**7.8**
			EB	A	0.1	A	0.0
			WB	A	1.4	A	1.3
			NB	E	35.0	F	65.2
			SB	D	27.2	E	43.7
7	W. Stowell Road / S. Bradley Rd	Signal	**OVERALL**	**E**	**59.1**	**E**	**74.0**
			EB	B	16.4	C	21.2
			WB	D	42.3	C	34.2
			NB	F	106.7	F	151.8
			SB	E	55.6	E	63.0
8	S. Bradley Rd / Columbia/I-101 SB Off/On Ramp	Signal	**OVERALL**	**C**	**27.4**	**D**	**36.9**
			EB	C	29.7	D	35.9
			WB	C	25.4	C	30.7
			NB	C	29.5	D	47.1
			SB	C	28.4	C	32.2
9		Stop-Control	**OVERALL**	**A**	**8.7**	**D**	**43.4**
			EB	A	8.6	B	13.2

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp		WB	A	0.0	A	0.0
			NB	F	75.5	F	1599.4
			SB	F	91.0	F	1281.2

Based on the 2024 analysis results, the intersections at W Stowell & Broadway and W Stowell & Bradley exhibit an overall LOS of E or worse during AM and/or PM peak hours. Additionally, the following approaches at these intersections also display LOS E or worse:

- W Stowell Road & Blosser Road: Eastbound (EB) and Westbound (WB) approaches.
- W Stowell Road & Broadway: Westbound (WB) and Northbound (NB) approaches.
- Main Street & Black Road: Northbound (NB) and Southbound (SB) approaches.
- W Stowell Road & Bradley Road: Northbound (NB) and Southbound (SB) approaches.
- E Stowell Road/Nicholson Avenue/I-101 NB On Ramp: Northbound (NB) and Southbound (SB) approaches.

Table 2. Existing (2024) Queuing Analysis

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
					Existing	Existing
1	W. Stowell Road / Hanson Way	Stop-Control	EBL	-	2.5	5.0
			EBT	-	0.0	0.0
			WBR	130	0.0	0.0
			SBL	-	22.5	25.0
2	W. Stowell Road / S. Blosser Road	Signal	EBL	200	37.5	250.0
			EBT	-	142.5	290.0
			EBR	-	147.5	290.0
			WBL	200	340.0	180.0
			WBT	-	115.0	142.5
			WBR	-	115.0	192.5
			NBL	225	147.5	55.0
			NB	-	207.5	355.0
			NBR	200	207.5	357.5
			SBL	250	20.0	155.0
			SBT	-	132.5	207.5
			SBR	-	140.0	212.5
3	W. Stowell Road / Black Road	Stop-Control	WBL	-	15.0	55.0
			WBR	-	0.0	0.0
			NBTR	-	0.0	0.0

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
					Existing	Existing
			SBL	-	5.0	15.0
			SBT	-	0.0	0.0
4	W. Taylor St / N. Blosser Road	Stop-Control	WBL	-	42.5	27.5
			WBR	-	0.0	0.0
			NBTR	-	0.0	0.0
			SBL	175	0.0	0.0
			SBT	-	0.0	0.0
5	W. Stowell Road / Broadway	Signal	EBL	100	125.0	207.5
			EBT	-	267.5	370.0
			EBR	-	272.5	370.0
			WBL	150	142.5	197.5
			WB	-	262.5	402.5
			WBR	-	265.0	402.5
			NBL	225	147.5	287.5
			NB	-	295.0	587.5
			NBR	-	165.0	345.0
			SBL	125	150.0	152.5
			SB	-	395.0	545.0
			SBR	-	402.5	557.5
6	Main Street / Black Road	Stop-Control	EBL	400	0.0	0.0
			EBT	-	0.0	0.0
			EBR	480	0.0	0.0
			WBL	550	7.5	7.5
			WBTR	-	0.0	0.0
			NBTL	-	52.5	107.5
			NBR	400	5.0	12.5
			SBL	-	7.5	22.5
			SBTR	-	0.0	0.0
7	W. Stowell Road / S. Bradley Rd	Signal	EBL	175	150.0	220.0
			EBT	-	137.5	190.0
			EBR	200	117.5	132.5
			WBL	175	35.0	82.5
			WBT	-	360.0	182.5
			WBR	-	415.0	182.5
			NBL	250	407.5	170.0
			NBT	-	387.5	252.5
			NBR	240	275.0	1007.5
			SBL	215	120.0	142.5
			SBT	-	310.0	437.5
			SBR	-	310.0	432.5

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
					Existing	Existing
8	S. Bradley Rd / Columbia/I-101 SB Off/On Ramp	Signal	EBL	100	37.5	87.5
			EBT	-	17.5	82.5
			EBR	125	20.0	85.0
			WBL	-	130.0	227.5
			WBT	-	165.0	0.0
			WBR	-	255.0	140.0
			NBL	250	15.0	87.5
			NBT	-	177.5	370.0
			NBR	-	180.0	372.5
			SBL	210	225.0	335.0
			SBT	-	52.5	117.5
			SBR	240	25.0	50.0
9	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp	Stop-Control	EBL	-	67.5	192.5
			EBTR	-	0.0	0.0
			WBL	75	0.0	0.0
			WBTR	-	7.5	0.0
			NBTLR	-	7.5	70.0
			SBTL	-	2.5	72.5
			SBR	215	0.0	0.0

Queuing at the following intersections, highlighted in red in Table 2 above, has exceeded the provided storage length:

- W. Stowell Road / S. Blosser Road: The eastbound-left, westbound-left, and northbound-right movements have exceeded the provided storage length during the AM or PM peak periods.
- W. Stowell Road / S. Bradley Road: The eastbound-left, westbound-left, northbound-left, and southbound-left movements have exceeded the provided storage length during the AM or PM peak periods.
- S. Bradley Road / Columbia/I-101 SB Off/On Ramp: The southbound-left movement has exceeded the provided storage length during both the AM and PM peak periods.

Development Site Traffic

A.7. Trip Generation

Delivery stations are the last-mile connection between the tenant's fulfillment process and their customers. Packages are transported to delivery stations via line-haul (tractor trailer) trucks from fulfillment and/or sortation centers, and are further sorted by delivery routes, organized, and loaded into delivery vehicles. Delivery stations operate 24/7 to support delivery of packages to customer locations between approximately 10:00 AM and 9:00 PM. The operations, including delivery van departure and return windows, are designed to minimize traffic impacts by shifting primary trips outside of standard peak hours (7:00–9:00 AM, 4:00–6:00 PM) and avoiding rush hour periods. The first wave of delivery drivers arrives in their personal vehicles at the delivery station around 9:20 AM and begin queuing for loading. Starting at 9:55 AM and ending at 11:10 AM, up to 345 delivery vans will load and depart from the delivery station at a rate of up to 72 vans per 15 minutes to facilitate a regulated traffic flow into the surrounding area. The first wave of delivery vans leaves at 10:10 AM. The final wave of delivery vans (57) leaves the facility at 11:10 AM. Approximately 8-10 hours after dispatch, delivery routes are completed, and the vans return to the station between 7:10 PM and 9:10 PM. The drivers park all delivery vans onsite and depart using a personal vehicle or other mode of transport.

At the proposed delivery station, up to 34 line-haul trucks are expected to deliver packages to the delivery station each day. The line-haul trucks will primarily arrive at the site between the hours of 10:00 PM and 8:00 AM. Trucks enter the site via W. Stowell Road on the north side of the building. Once trucks are unloaded, the trucks continue to the next delivery station and do not return to the site. The customer packages are sorted by address groupings, assigned to the delivery routes, placed onto movable racks, and staged for dispatch.

It is anticipated that the delivery station will also use private carriers (primarily individual passenger vehicles) to deliver packages from this location. It is anticipated up to 97 passenger vehicles will enter the facility between 4:30 PM and 6:00 PM daily. Private carrier vehicles will load and depart every 15 minutes. They will not return to the station that same day. Table 3 shows the projected traffic volumes by vehicle type based upon the anticipated operations of the facility.

Table 3: Project Trip Generation - Traffic Volume by Vehicle Type

Traffic	Number of Vehicles	Daily Trips
Auto - Employees	588	1,176
Delivery Vans	345	690
Auto – Private carrier	97	194
Line-Haul Trucks	34	68
Total	**1,064**	**2,128**

Table 4: Project Trip Generation – Peak Hour Traffic Volume

Land Use	Code	Project Density		Total	Inbound	Outbound
Proposed: E-Commerce Delivery Station	User-Specified	588 employees/day	Daily	2,128	1,064	1,064
			AM	15	13	2
			PM	147	98	49

A.8. Adjustments to Trip Generation Rates

Due to the nature of the development, no adjustments for pass-by or internal capture were considered for trips generated by the Project.

A.9. Trip Distribution and Assignment

The proposed Project will encompass merchandise provided from nearby regional fulfillment and sort centers to local customers. The service area for deliveries is approximately 125 square miles of the Santa Maria vicinity. Figure 5 illustrates the Project's potential service area. The assignment and directional distribution of new Project trips on the transportation network are based on existing traffic patterns, evidenced by counts and typical traffic patterns in the area, as well as the Project's proposed use.

Figure 5: Trip Distribution Map (Cars/Vans)

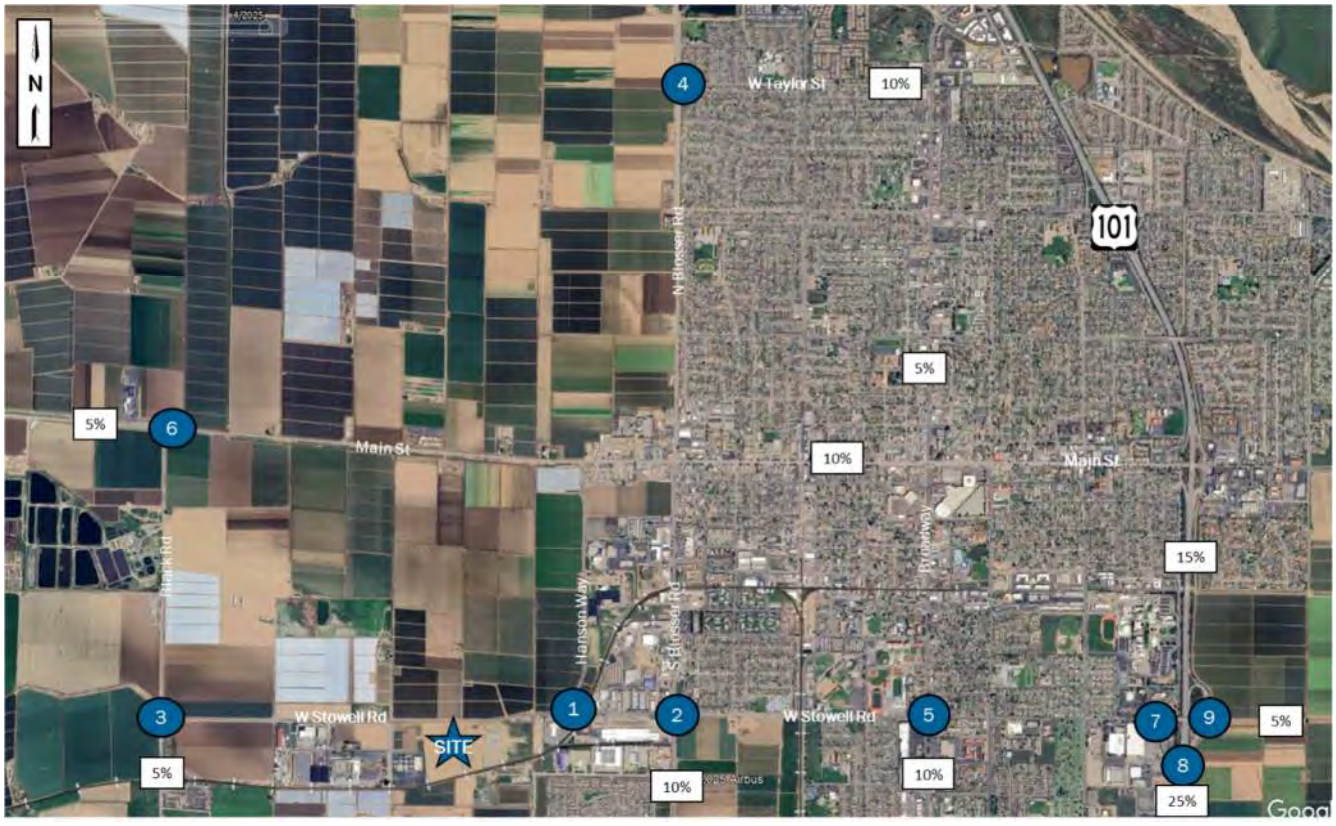


Figure 6: Trip Distribution Map (Trucks)

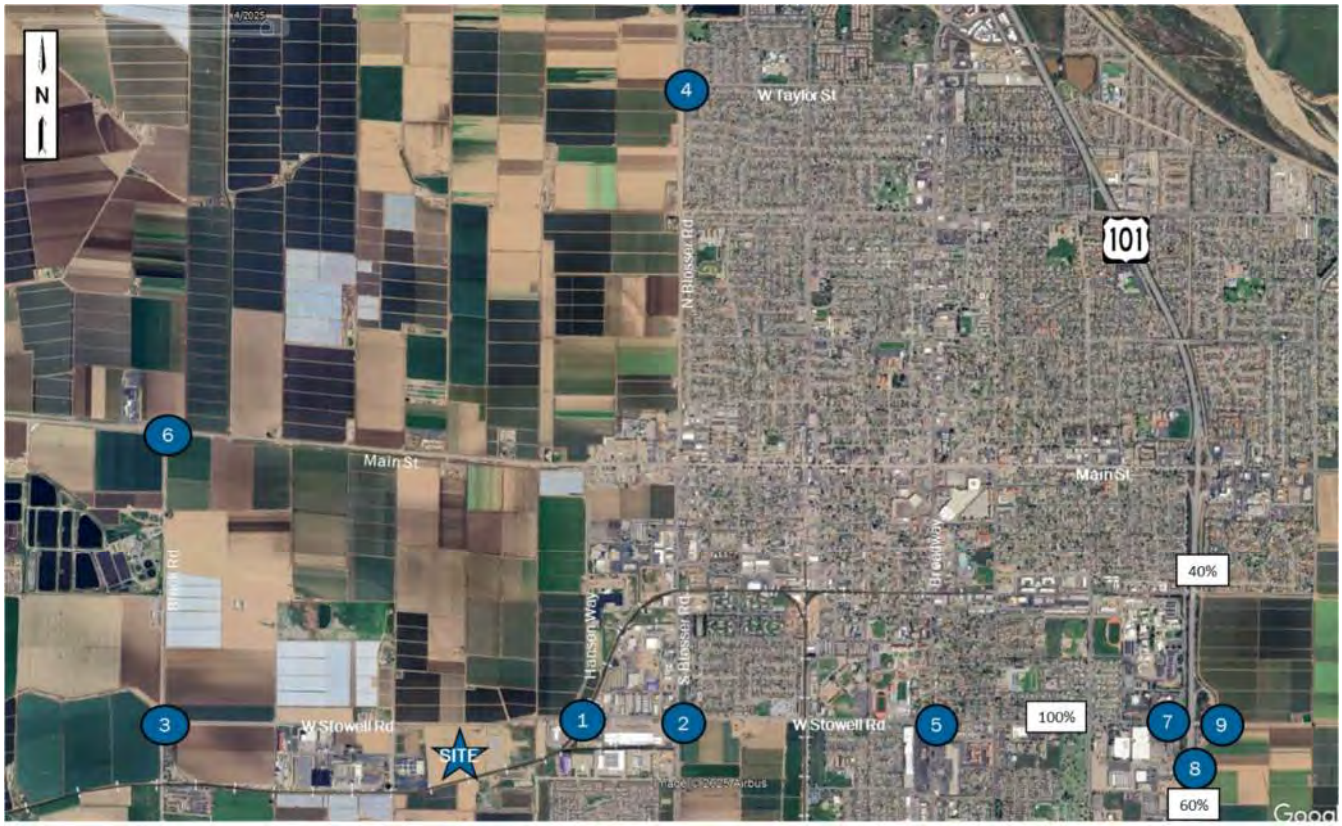


Figure 7. Trip Distribution Cars

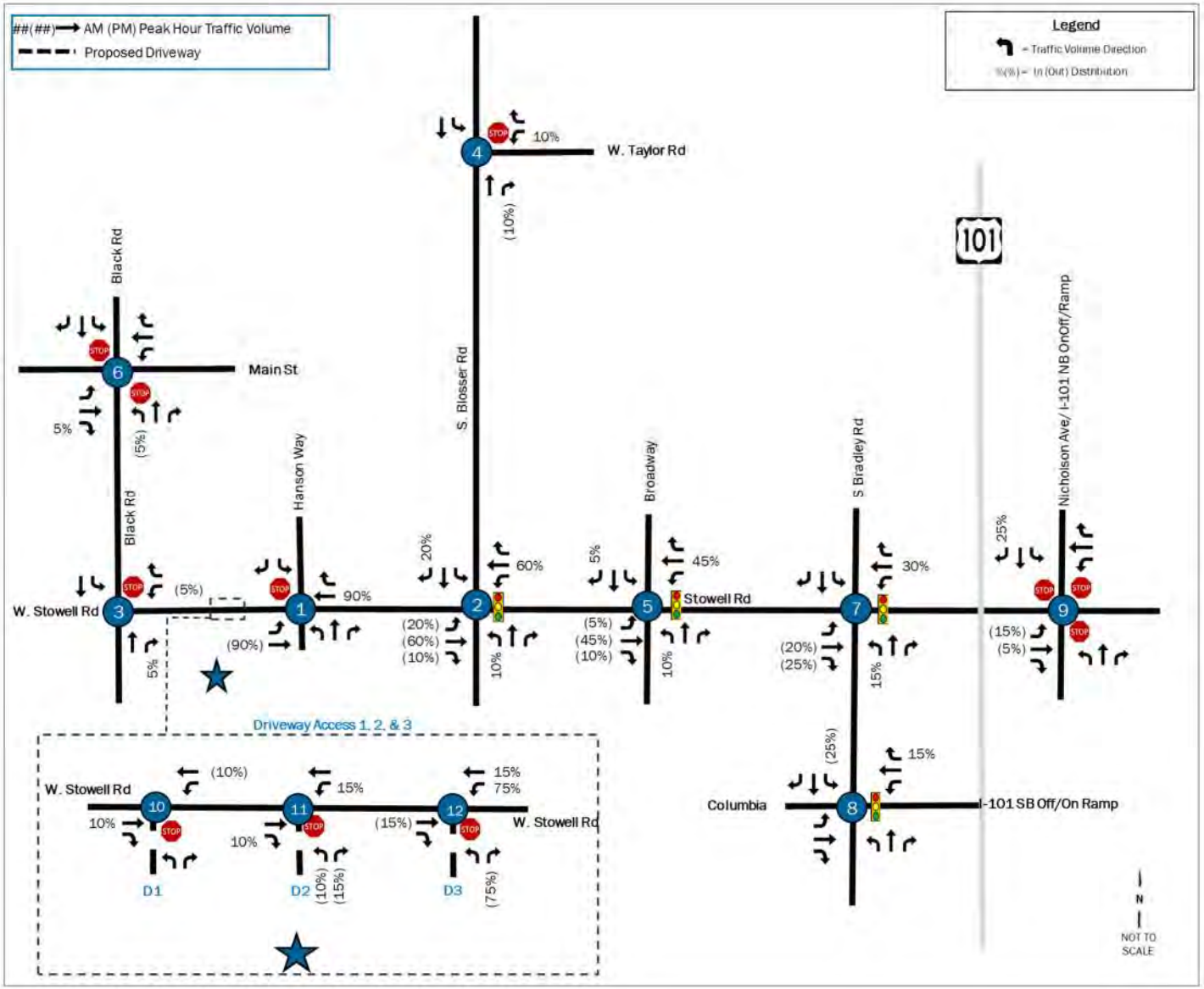


Figure 8. Trip Distribution Trucks

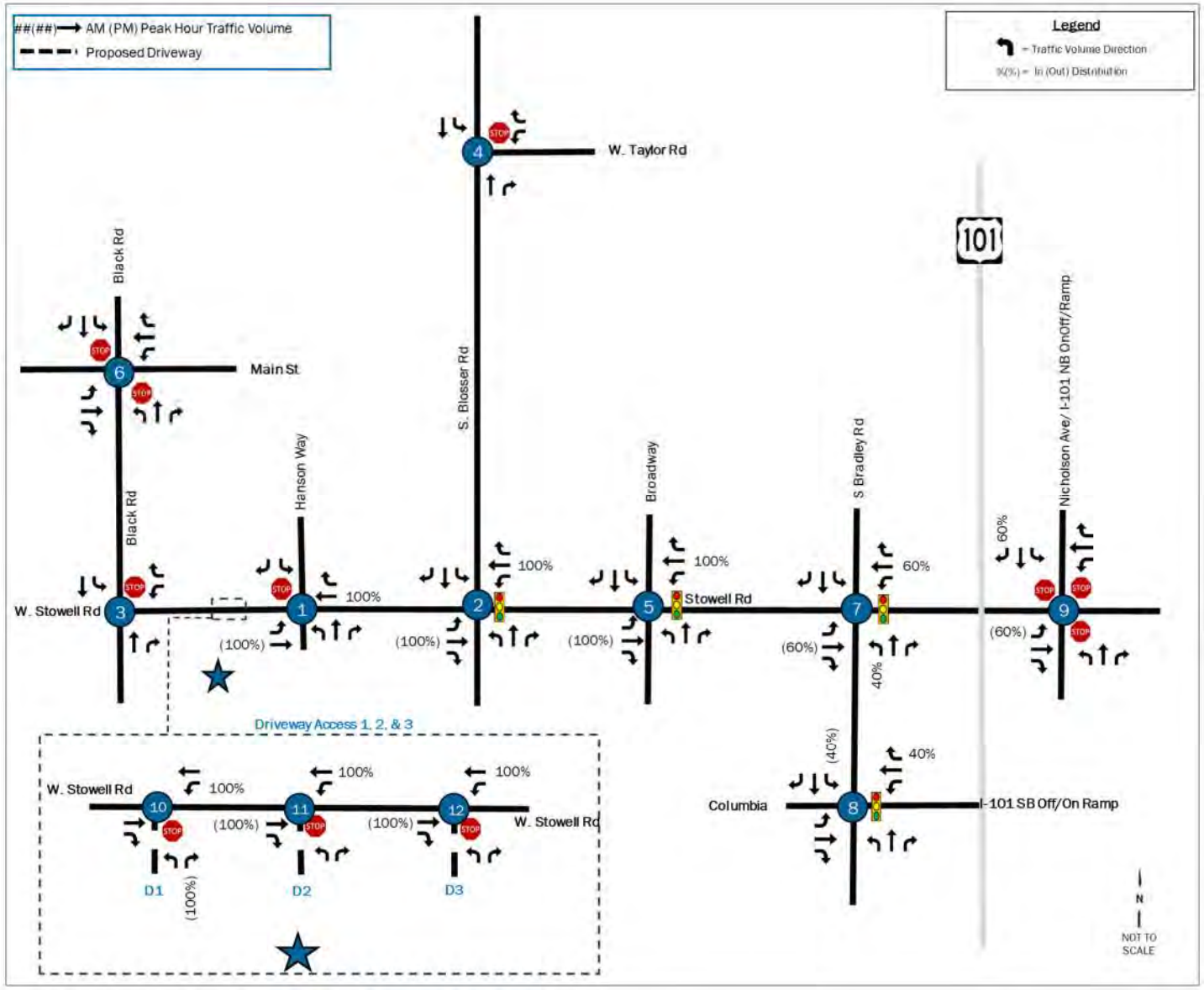


Figure 9. Trip Distribution Vans

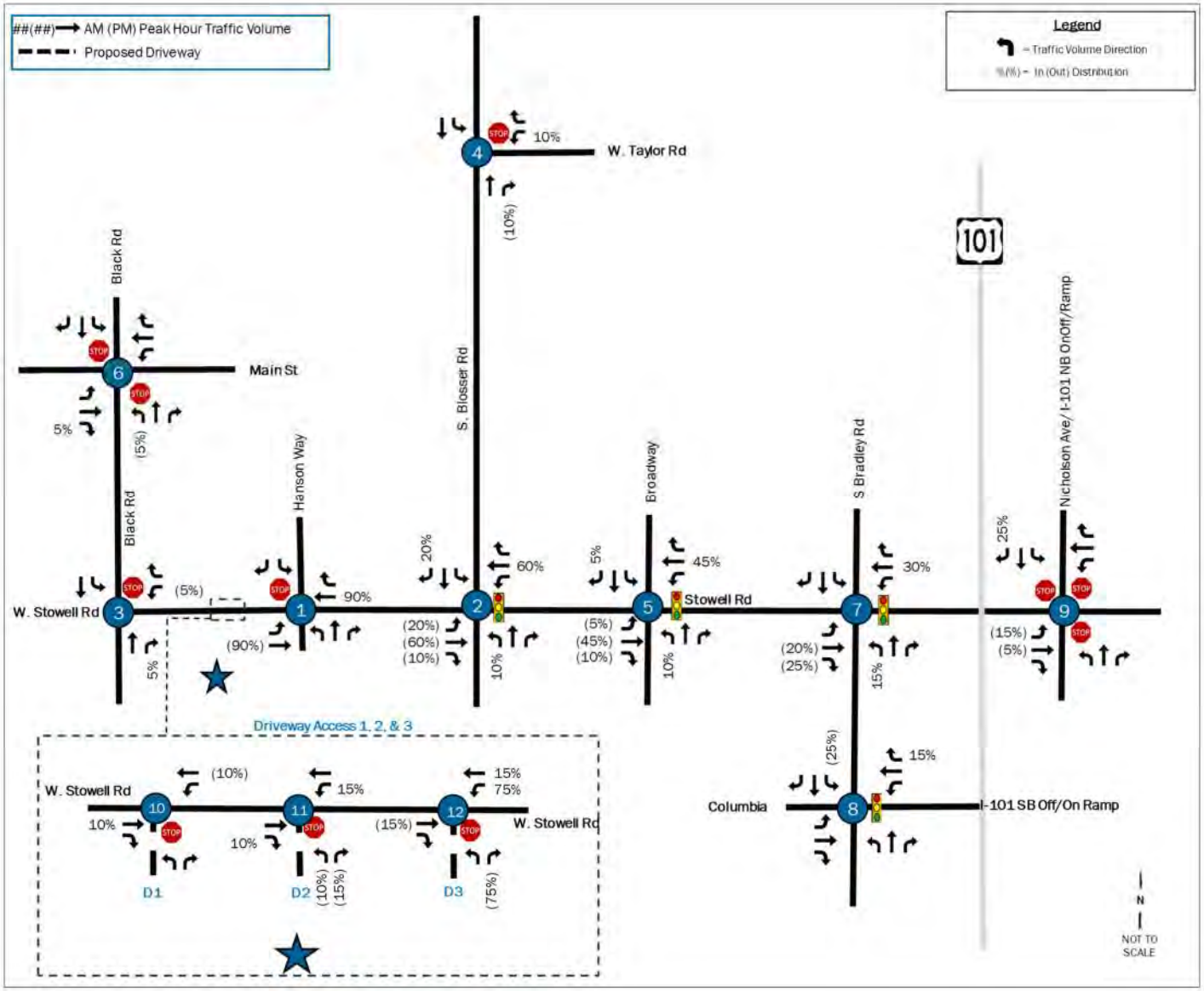
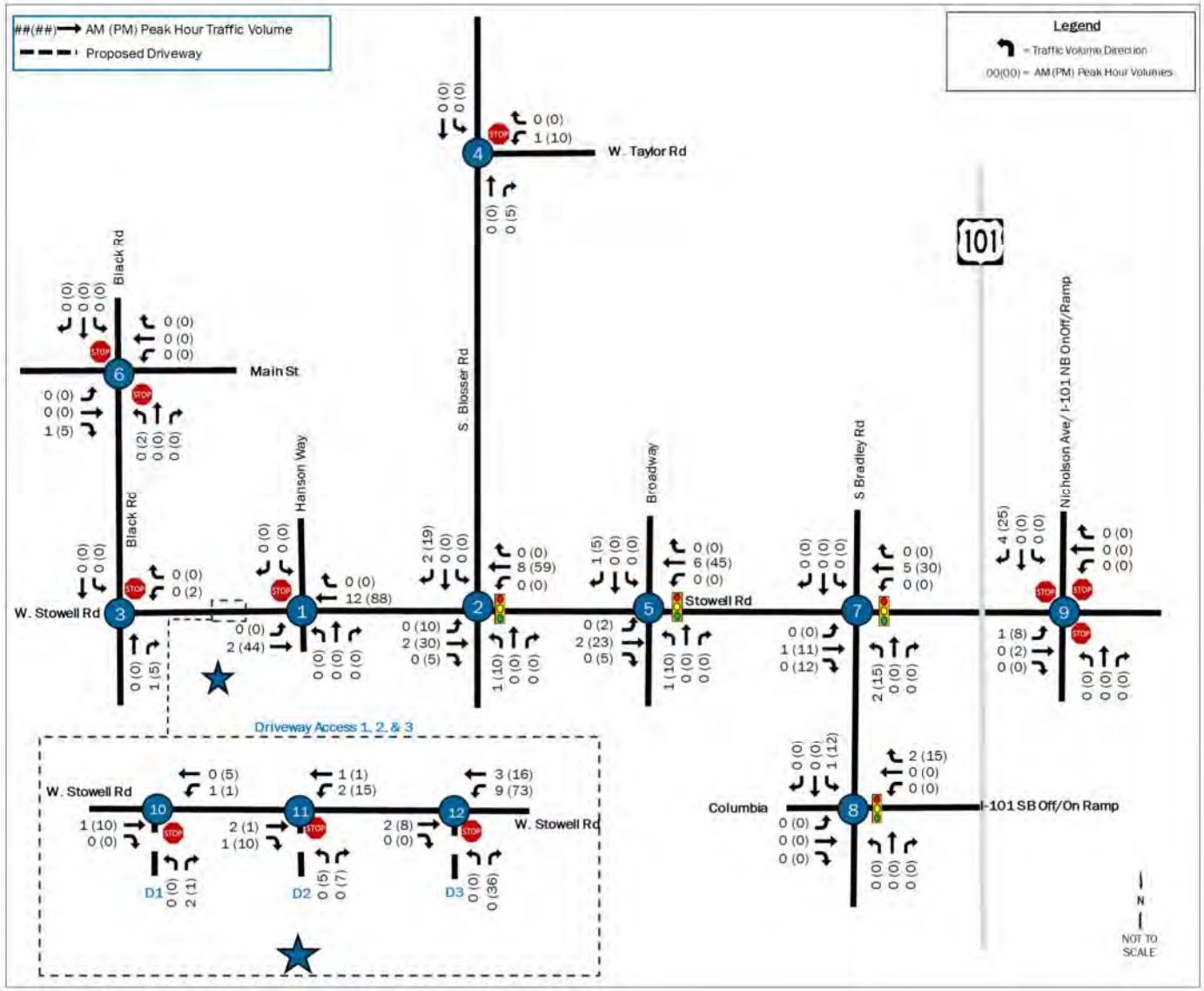


Figure 10. Project Site Trips (Cars, Vans, & Trucks)



Future Traffic Conditions

A.10. Background Growth

Analysis of the area's historic development pattern, changes in nearby traffic volumes, and the anticipated completion of the Project was used to determine a growth rate for the study area's traffic. Project build-out is anticipated no later than 2027. The study uses a growth rate of 2.0% per year from Existing Year 2024 to Opening Year 2027. The growth rate was derived from a Project scoping memorandum based on the traffic growth patterns for the Project vicinity area.

There are 11 known developments or programmed improvements within the vicinity of the study area that would be expected to alter traffic patterns or traffic growth in the area. These major city developments were obtained from the City of Santa Maria or estimated using ITE Trip Generation data. They have been included in the projected traffic volumes for the 2027 No-Build and Build scenarios. The adjacent projects circled below correspond to the City of Santa Maria Engineering Division's approved projects, as shown in the map in Figure 11.

Figure 11. Adjacent Developments



A.11. No-Build Traffic Analysis Results

The results of the 2027 No-Build traffic capacity analysis are shown in Table 5 and represent volumes as shown in Figure 12. Future No-Build traffic volumes are demonstrated before any trips generated by the Project have been added. The City of Santa Maria considers LOS D as the performance standard for intersections (maintain LOS D or better). LOS E is coded as orange, and LOS F is coded as red in the Tables provided.

Figure 12. No Build (2027) Volumes

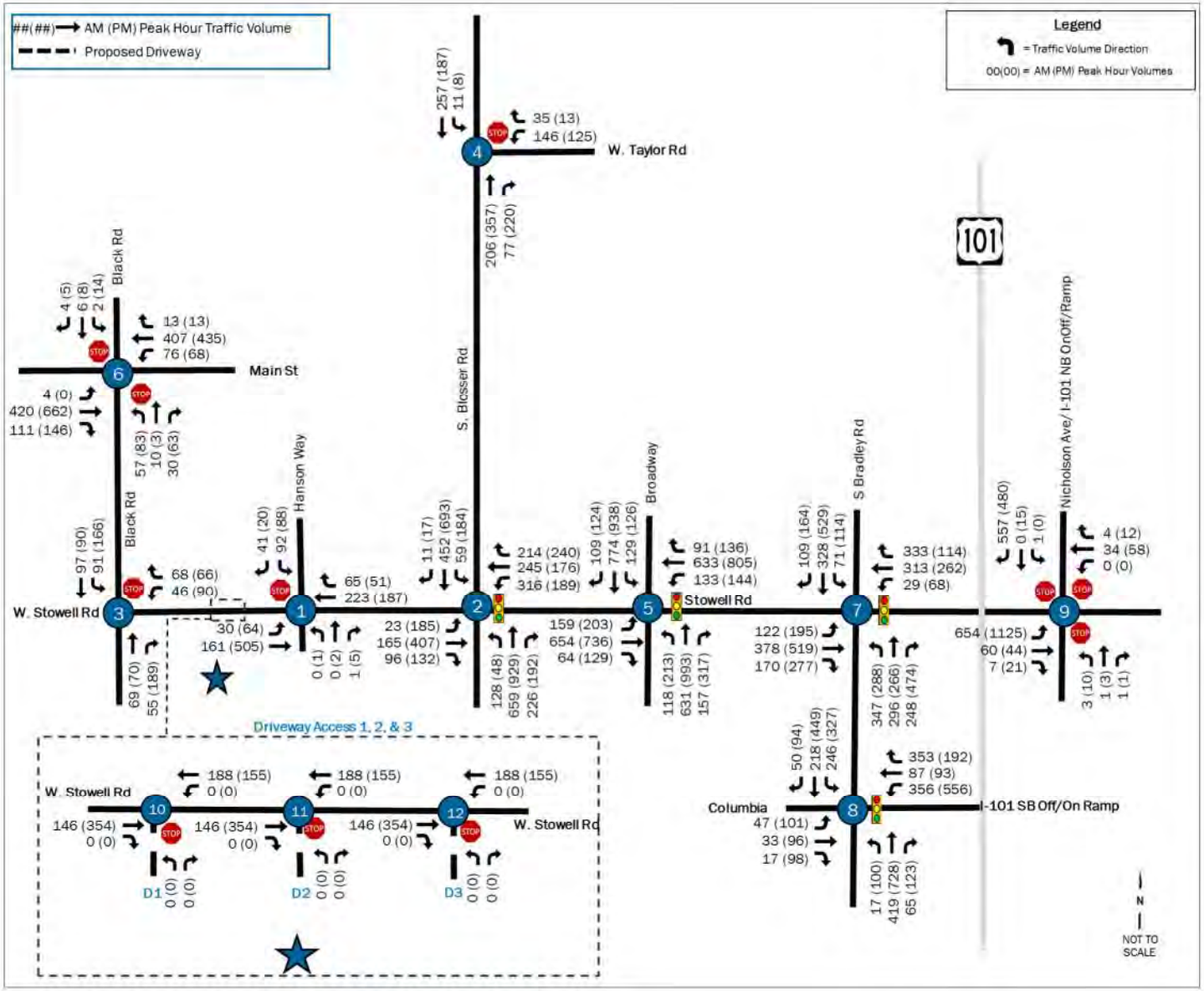


Table 5. No-Build (2027) Intersection Capacity Analysis

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	W. Stowell Road / Hanson Way	Stop-Control	**OVERALL**	**A**	**3.4**	**A**	**2.7**
			EB	A	1.6	A	1.4
			WB	A	0.0	A	0.0
			NB	A	8.9	B	13.4
			SB	B	13.2	C	15.9
2	W. Stowell Road / S. Blosser Road	Signal	**OVERALL**	**E**	**58.8**	**D**	**47.9**
			EB	E	56.6	E	67.7
			WB	F	128.5	E	60.7
			NB	C	23.5	D	40.9
			SB	C	25.2	C	32.3
3	W. Stowell Road / Black Road	Stop-Control	**OVERALL**	**A**	**4.7**	**A**	**7.5**
			WB	B	11.4	C	23.2
			NB	A	0.0	A	0.0
			SB	A	3.8	A	5.7
4	W. Taylor St / N. Blosser Road	Stop-Control	**OVERALL**	**A**	**4.3**	**A**	**2.4**
			WB	C	16.9	C	15.6
			NB	A	0.0	A	0.0
			SB	A	0.3	A	0.4
5	W. Stowell Road / Broadway	Signal	**OVERALL**	**E**	**66.8**	**F**	**118.5**
			EB	F	86.0	F	144.5
			WB	F	59.5	F	183.0
			NB	D	40.9	F	81.1
			SB	D	54.1	F	84.2
6	Main Street / Black Road	Stop-Control	**OVERALL**	**A**	**4.8**	**B**	**11.5**
			EB	A	0.1	A	0.0
			WB	A	1.5	A	1.4
			NB	E	44.6	F	100.7
			SB	D	30.6	F	54.7
7	W. Stowell Road / S. Bradley Rd	Signal	**OVERALL**	**E**	**64.6**	**F**	**84.1**
			EB	B	17.5	C	22.5
			WB	D	45.2	D	35.6
			NB	F	118.8	F	177.4
			SB	E	57.4	E	67.7
8	S. Bradley Rd / Columbia/I-101 SB Off/On Ramp	Signal	**OVERALL**	**C**	**32.6**	**D**	**47.3**
			EB	C	33.4	D	38.7
			WB	C	29.8	C	31.7
			NB	D	36.7	E	68.2
			SB	C	33.0	D	42.1
9		Stop-Control	**OVERALL**	**A**	**9.3**	**F**	**75.5**
			EB	A	9.0	B	15.4

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp		WB	A	0.0	A	0.0
			NB	F	101.6	F	2984.1
			SB	F	120.9	F	2474.6

Based on the 2027 No Build analysis results, the intersections at W Stowell & Blosser, W Stowell & Broadway, W Stowell & Bradley, and E Stowell Rd/Nicholson Ave/I-101 NB On Ramp exhibit an overall LOS of E or worse during AM and/or PM peak hours. Additionally, the following approaches at these intersections also display LOS E or worse:

- W Stowell Road & Blosser Road: Eastbound (EB) and Westbound (WB) approaches.
- W Stowell Road & Broadway: Eastbound (EB), Westbound (WB), Northbound (NB), and Southbound (SB) approaches.
- Main Street & Black Road: Northbound (NB) and Southbound (SB) approaches.
- W Stowell Road & Bradley Road: Northbound (NB) and Southbound (SB) approaches.
- S. Bradley Rd & Columbia/I-101 SB Off/On Ramp: Northbound (NB) approach during the PM peak hour only.
- E Stowell Road/Nicholson Avenue/I-101 NB On Ramp: Northbound (NB) and Southbound (SB) approaches.

Table 6. Existing (2024) vs. No-Build (2027) Queuing Analysis

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)			
					AM		PM	
					Existing	No-Build	Existing	No-Build
1	W. Stowell Road / Hanson Way	Stop-Control	EBL	-	2.5	2.5	5.0	5.0
			EBT	-	0.0	0.0	0.0	0.0
			WBR	130	0.0	0.0	0.0	0.0
			SBL	-	22.5	27.5	25.0	30.0
2	W. Stowell Road / S. Blosser Road	Signal	EBL	200	37.5	40.0	250.0	287.5
			EBT	-	142.5	177.5	290.0	370.0
			EBR	-	147.5	180.0	290.0	370.0
			WBL	200	340.0	792.5	180.0	295.0
			WBT	-	115.0	252.5	142.5	207.5
			WBR	-	115.0	242.5	192.5	332.5
			NBL	225	147.5	177.5	55.0	70.0
			NB	-	207.5	232.5	355.0	482.5
			NBR	200	207.5	167.5	357.5	197.5
			SBL	250	20.0	82.5	155.0	255.0
			SBT	-	132.5	185.0	207.5	297.5
			SBR	-	140.0	190.0	212.5	307.5

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)			
					AM		PM	
					Existing	No-Build	Existing	No-Build
3	W. Stowell Road / Black Road	Stop-Control	WBL	-	15.0	17.5	55.0	67.5
			WBR	-	0.0	0.0	0.0	0.0
			NBTR	-	0.0	0.0	0.0	0.0
			SBL	-	5.0	5.0	15.0	15.0
			SBT	-	0.0	0.0	0.0	0.0
4	W. Taylor St / N. Blosser Road	Stop-Control	WBL	-	42.5	50.0	27.5	30.0
			WBR	-	0.0	0.0	0.0	0.0
			NBTR	-	0.0	0.0	0.0	0.0
			SBL	175	0.0	0.0	0.0	0.0
			SBT	-	0.0	0.0	0.0	0.0
5	W. Stowell Road / Broadway	Signal	EBL	100	125.0	230.0	207.5	320.0
			EBT	-	267.5	535.0	370.0	837.5
			EBR	-	272.5	545.0	370.0	837.5
			WBL	150	142.5	192.5	197.5	207.5
			WB	-	262.5	552.5	402.5	1022.5
			WBR	-	265.0	560.0	402.5	1022.5
			NBL	225	147.5	162.5	287.5	332.5
			NB	-	295.0	330.0	587.5	712.5
			NBR	-	165.0	175.0	345.0	372.5
			SBL	125	150.0	165.0	152.5	160.0
			SB	-	395.0	520.0	545.0	762.5
			SBR	-	402.5	525.0	557.5	770.0
6	Main Street / Black Road	Stop-Control	EBL	400	0.0	0.0	0.0	0.0
			EBT	-	0.0	0.0	0.0	0.0
			EBR	480	0.0	0.0	0.0	0.0
			WBL	550	7.5	7.5	7.5	7.5
			WBTR	-	0.0	0.0	0.0	0.0
			NBTL	-	52.5	70.0	107.5	142.5
			NBR	400	5.0	5.0	12.5	15.0
			SBL	-	7.5	7.5	22.5	27.5
			SBTR	-	0.0	0.0	0.0	0.0
7	W. Stowell Road / S. Bradley Rd	Signal	EBL	175	150.0	162.5	220.0	237.5
			EBT	-	137.5	155.0	190.0	205.0
			EBR	200	117.5	137.5	132.5	155.0
			WBL	175	35.0	50.0	82.5	105.0
			WBT	-	360.0	385.0	182.5	195.0
			WBR	-	415.0	455.0	182.5	195.0
			NBL	250	407.5	470.0	170.0	175.0
			NBT	-	387.5	415.0	252.5	252.5
			NBR	240	275.0	312.5	1007.5	1157.5

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)			
					AM		PM	
					Existing	No-Build	Existing	No-Build
			SBL	215	120.0	132.5	142.5	152.5
			SBT	-	310.0	332.5	437.5	480.0
			SBR	-	310.0	332.5	432.5	475.0
8	S. Bradley Rd / Columbia/I-101 SB Off/On Ramp	Signal	EBL	100	37.5	45.0	87.5	97.5
			EBT	-	17.5	22.5	82.5	90.0
			EBR	125	20.0	22.5	85.0	102.5
			WBL	-	130.0	160.0	227.5	252.5
			WBT	-	165.0	202.5	0.0	0.0
			WBR	-	255.0	317.5	140.0	155.0
			NBL	250	15.0	17.5	87.5	97.5
			NBT	-	177.5	232.5	370.0	500.0
			NBR	-	180.0	235.0	372.5	500.0
			SBL	210	225.0	275.0	335.0	427.5
			SBT	-	52.5	67.5	117.5	142.5
			SBR	240	25.0	30.0	50.0	55.0
9	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp	Stop-Control	EBL	-	67.5	80.0	192.5	245.0
			EBTR	-	0.0	0.0	0.0	0.0
			WBL	75	0.0	0.0	0.0	0.0
			WBTR	-	7.5	0.0	0.0	0.0
			NBTLR	-	7.5	12.5	70.0	80.0
			SBTL	-	2.5	2.5	72.5	82.5
			SBR	215	0.0	0.0	0.0	0.0

Queuing at the following intersections, highlighted in red in Table 6 above, has exceeded the provided storage length:

- W. Stowell Road / S. Blosser Road: The eastbound-left, westbound-left, northbound-right, and southbound-left movements have exceeded the provided storage length during the AM or PM peak periods.
- W. Stowell Road / Broadway: The eastbound-left, westbound-left, northbound-left, and southbound-left movements have exceeded the provided storage length during the AM or PM peak periods.
- W. Stowell Road / Bradley Road: The eastbound-left, northbound-left, and northbound-right movements have exceeded the provided storage length during the AM or PM peak periods.
- S. Bradley Road / Columbia/I-101 SB Off/On Ramp: The southbound-left movement has exceeded the provided storage length during both the AM and PM peak periods.

A.12. Future Traffic with Proposed Development

Peak hour site traffic volumes were distributed to study area roadways based on the trip distribution percentages discussed in Section C.3. These volumes were added to No-Build (2027) volumes to determine operating conditions in the Build scenario.

A.13. Build Traffic Analysis Results

The results of the Build (2027) traffic capacity analysis are shown in Table 5. Figure 12 illustrates the Build traffic volumes. The segment capacity analysis was completed using HCS 7, and results are shown in Table 6. The City of Santa Maria considers LOS D as the performance standard for intersections (maintain LOS D or better). LOS E is coded as orange, and LOS F is coded as red in the Tables provided.

Figure 13. Build (2027) Volumes

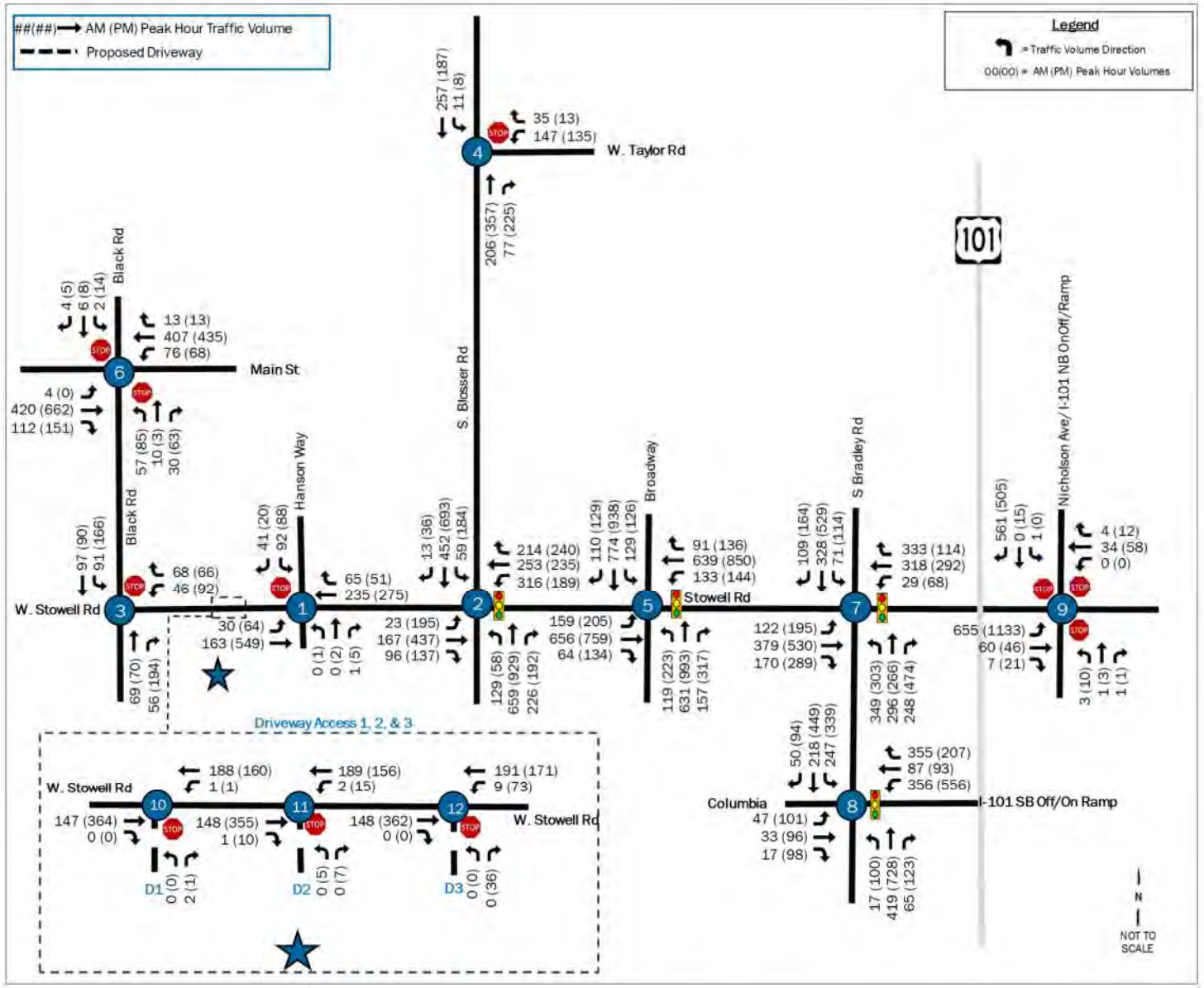


Table 7. Build (2027) Intersection Capacity Analysis

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	W. Stowell Road / Hanson Way	Stop-Control	**OVERALL**	**A**	**3.3**	**A**	**2.7**
			EB	A	1.6	A	1.5
			WB	A	0.0	A	0.0
			NB	A	8.9	B	14.3
			SB	B	13.4	C	18.0
2	W. Stowell Road / S. Blosser Road	Signal	**OVERALL**	**E**	**58.8**	**D**	**50.2**
			EB	E	56.4	E	71.1
			WB	F	127.8	E	61.3
			NB	C	23.6	D	43.0
			SB	C	25.3	C	33.8
3	W. Stowell Road / Black Road	Stop-Control	**OVERALL**	**A**	**4.7**	**A**	**7.7**
			WB	B	11.4	C	23.8
			NB	A	0.0	A	0.0
			SB	A	3.9	A	5.7
4	W. Taylor St / N. Blosser Road	Stop-Control	**OVERALL**	**A**	**4.3**	**A**	**2.6**
			WB	C	17.0	C	16.0
			NB	A	0.0	A	0.0
			SB	A	0.3	A	0.4
5	W. Stowell Road / Broadway	Signal	**OVERALL**	**E**	**67.6**	**F**	**128.1**
			EB	F	86.9	F	157.9
			WB	F	91.7	F	206.3
			NB	D	40.9	F	82.1
			SB	D	54.2	F	85.7
6	Main Street / Black Road	Stop-Control	**OVERALL**	**A**	**4.8**	**B**	**12.0**
			EB	A	0.1	A	0.0
			WB	A	1.5	A	1.4
			NB	E	44.6	F	105.5
			SB	D	30.6	F	54.9
7	W. Stowell Road / S. Bradley Rd	Signal	**OVERALL**	**E**	**65.0**	**F**	**84.3**
			EB	B	17.5	C	22.5
			WB	D	45.4	D	35.8
			NB	F	120.0	F	179.3
			SB	**E**	**57.4**	**E**	**67.7**
8	S. Bradley Rd / Columbia/I-101 SB Off/On Ramp	Signal	**OVERALL**	**C**	**33.0**	**D**	**48.6**
			EB	C	33.7	D	38.7
			WB	C	30.2	C	31.8
			NB	D	37.2	E	68.2
			SB	C	33.5	D	46.6
9		Stop-Control	**OVERALL**	**A**	**9.3**	**F**	**79.5**

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp		EB	A	9.0	B	15.7
			WB	A	0.0	A	0.0
			NB	F	102.2	F	3196.1
			SB	F	121.6	F	2645.5
10	W. Stowell Road / Site Access 1	Stop-Control	**OVERALL**	**A**	**0.1**	**A**	**0.0**
			EB	A	0.0	A	0.0
			WB	A	0.0	A	0.1
			NB	A	9.1	B	10.5
11	W. Stowell Road / Site Access 2	Stop-Control	**OVERALL**	**A**	**0.0**	**A**	**0.1**
			EB	A	0.0	A	0.0
			WB	A	7.5	A	0.7
			NB	A	0.0	B	11.6
12	W. Stowell Road / Site Access 3	Stop-Control	**OVERALL**	**A**	**0.0**	**A**	**1.6**
			EB	A	0.0	A	0.0
			WB	A	7.6	A	8.3
			NB	A	0.0	A	10.8

Based on the 2027 Build analysis results, the intersections at W Stowell & Blosser, W Stowell & Broadway, W Stowell & Bradley, and E Stowell Rd/Nicholson Ave/I-101 NB On Ramp exhibit an overall LOS of E or worse during AM and/or PM peak hours. Additionally, the following approaches at these intersections also display LOS E or worse:

- W Stowell Road & Blosser Road: Eastbound (EB) and Westbound (WB) approaches.
- W Stowell Road & Broadway: Eastbound (EB), Westbound (WB), Northbound (NB), and Southbound (SB) approaches.
- Main Street & Black Road: Northbound (NB) and Southbound (SB) approaches. Due to the proposed development contributing 0 vehicles in the AM and 2 vehicles in the PM, for both NB and SB approaches, mitigations are not recommended.
- W Stowell Road & Bradley Road: Northbound (NB) and Southbound (SB) approaches.
- S. Bradley Rd & Columbia/I-101 SB Off/On Ramp: Northbound (NB) approach during the PM peak hour only.
- E Stowell Road/Nicholson Avenue/I-101 NB On Ramp: Northbound (NB) and Southbound (SB) approaches. Due to the Project only contributing to the “free” movements at this intersection, mitigations are not recommended.

Table 8. No-Build (2027) vs. Build (2027) Queuing Analysis

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)			
					AM		PM	
					No-Build	Build	No-Build	Build
1	W. Stowell Road / Hanson Way	Stop-Control	EBL	-	2.5	2.5	5.0	5.0
			EBT	-	0.0	0.0	0.0	0.0
			WBR	130	0.0	0.0	0.0	0.0
			SBL	-	27.5	27.5	30.0	35.0
2	W. Stowell Road / S. Blosser Road	Signal	EBL	200	40.0	40.0	287.5	302.5
			EBT	-	177.5	177.5	370.0	402.5
			EBR	-	180.0	182.5	370.0	400.0
			WBL	200	792.5	792.5	295.0	295.0
			WBT	-	252.5	257.5	207.5	287.5
			WBR	-	242.5	247.5	332.5	330.0
			NBL	225	177.5	180.0	70.0	82.5
			NB	-	232.5	232.5	482.5	495.0
			NBR	200	167.5	167.5	197.5	200.0
			SBL	250	82.5	82.5	255.0	255.0
			SBT	-	185.0	185.0	297.5	317.5
			SBR	-	190.0	192.5	307.5	325.0
3	W. Stowell Road / Black Road	Stop-Control	WBL	-	17.5	17.5	67.5	72.5
			WBR	-	0.0	0.0	0.0	0.0
			NBTR	-	0.0	0.0	0.0	0.0
			SBL	-	5.0	5.0	15.0	17.5
			SBT	-	0.0	0.0	0.0	0.0
4	W. Taylor St / N. Blosser Road	Stop-Control	WBL	-	50.0	50.0	30.0	35.0
			WBR	-	0.0	0.0	0.0	0.0
			NBTR	-	0.0	0.0	0.0	0.0
			SBL	175	0.0	0.0	0.0	0.0
			SBT	-	0.0	0.0	0.0	0.0
5	W. Stowell Road / Broadway	Signal	EBL	100	230.0	237.5	320.0	325.0
			EBT	-	535.0	540.0	837.5	905.0
			EBR	-	545.0	550.0	837.5	905.0
			WBL	150	192.5	192.5	207.5	207.5
			WB	-	552.5	565.0	1022.5	1132.5
			WBR	-	560.0	570.0	1022.5	1135.0
			NBL	225	162.5	162.5	332.5	357.5
			NB	-	330.0	330.0	712.5	712.5
			NBR	-	175.0	175.0	372.5	372.5
			SBL	125	165.0	165.0	160.0	160.0
			SB	-	520.0	522.5	762.5	772.5
			SBR	-	525.0	525.0	770.0	780.0
6			EBL	400	0.0	0.0	0.0	0.0

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)			
					AM		PM	
					No-Build	Build	No-Build	Build
	Main Street / Black Road	Stop-Control	EBT	-	0.0	0.0	0.0	0.0
			EBR	480	0.0	0.0	0.0	0.0
			WBL	550	7.5	7.5	7.5	7.5
			WBTR	-	0.0	0.0	0.0	0.0
			NBTL	-	70.0	70.0	142.5	147.5
			NBR	400	5.0	5.0	15.0	15.0
			SBL	-	7.5	7.5	27.5	27.5
			SBTR	-	0.0	0.0	0.0	0.0
7	W. Stowell Road / S. Bradley Rd	Signal	EBL	175	162.5	162.5	237.5	237.5
			EBT	-	155.0	155.0	205.0	210.0
			EBR	200	137.5	137.5	155.0	165.0
			WBL	175	50.0	50.0	105.0	105.0
			WBT	-	385.0	395.0	195.0	210.0
			WBR	-	455.0	455.0	195.0	207.5
			NBL	250	470.0	475.0	175.0	200.0
			NBT	-	415.0	415.0	252.5	252.5
			NBR	240	312.5	312.5	1157.5	1160.0
			SBL	215	132.5	132.5	152.5	152.5
			SBT	-	332.5	332.5	480.0	480.0
			SBR	-	332.5	332.5	475.0	475.0
8	S. Bradley Rd / Columbia/I-101 SB Off/On Ramp	Signal	EBL	100	45.0	45.0	97.5	97.5
			EBT	-	22.5	22.5	90.0	90.0
			EBR	125	22.5	25.0	102.5	102.5
			WBL	-	160.0	162.5	252.5	252.5
			WBT	-	202.5	205.0	0.0	0.0
			WBR	-	317.5	325.0	155.0	167.5
			NBL	250	17.5	17.5	97.5	97.5
			NBT	-	232.5	232.5	500.0	500.0
			NBR	-	235.0	237.5	500.0	500.0
			SBL	210	275.0	280.0	427.5	467.5
			SBT	-	67.5	70.0	142.5	142.5
			SBR	240	30.0	30.0	55.0	55.0
9	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp	Stop-Control	EBL	-	80.0	80.0	245.0	252.5
			EBTR	-	0.0	0.0	0.0	0.0
			WBL	75	0.0	0.0	0.0	0.0
			WBTR	-	0.0	0.0	0.0	0.0
			NBTLR	-	12.5	12.5	80.0	80.0
			SBTL	-	2.5	2.5	82.5	82.5
			SBR	215	0.0	0.0	0.0	0.0

Queuing at the following intersections, highlighted in red in Table 8 above, has exceeded the provided storage length:

- W. Stowell Road / S. Blosser Road: The eastbound-left, westbound-left, and southbound-left movements have exceeded the provided storage length during the AM or PM peak periods.
- W. Stowell Road / Broadway: The eastbound-left, westbound-left, northbound-left, and southbound-left movements have exceeded the provided storage length during the AM or PM peak periods.
- W. Stowell Road / Bradley Road: The eastbound-left, northbound-left, and northbound-right movements have exceeded the provided storage length during the AM or PM peak periods.
- S. Bradley Road / Columbia/I-101 SB Off/On Ramp: The southbound-left movement has exceeded the provided storage length during both the AM and PM peak periods.

Table 9: HCS7 Street Segment Analysis

ID	Street Segment	Direction	AM/PM	LOS		Deficiency
				Existing	Build	
A	W. Stowell Road from Black Road to Blosser Road	EB	AM	A	A	No
		WB	AM	D	D	No
		EB	PM	D	D	No
		WB	PM	A	A	No
B	Black Road from W. Stowell Road to Main Street	NB	AM	A	A	No
		SB	AM	A	A	No
		NB	PM	A	A	No
		SB	PM	B	B	No
C	Blosser Road from W. Stowell Road to Main Street	NB	AM	A	A	No
		SB	AM	A	A	No
		NB	PM	A	A	No
		SB	PM	A	A	No

All segment evaluations operate at an acceptable LOS D or better for Existing and Build scenarios, as indicated in Table 9.

Site Access, Parking, and Circulation

Access to the site is proposed via three unsignalized driveways. Driveways 1, 2, and 3 are situated along W. Stowell Road. Driveway 1 serves as the primary access point for line-haul trucks, providing entry to the delivery vehicle staging and loading areas. All truck drivers will also exit via Driveway 1. Vans and employee vehicles will enter and depart from Driveways 2 and 3, the most eastern driveways for the proposed site. Employees will park in a lot north of the facility, accessible from Driveways 2 and 3. All three driveways are designed to allow unsignalized, full movement access to W. Stowell Road. Analysis of the site's driveways indicates that each driveway will operate at LOS B or better for all approach movements.

Parking for passenger cars and delivery vans will be available on-site. Drivers' personal vehicle parking is available north of the building and accessible from Driveways 2 and 3. Overnight van parking, in addition to the personal vehicle parking stalls, is located to the east and west of the facility, and is also available via Driveways 2 and 3. A site plan is provided in Figure 3 and in Appendix A.

Improvement Analyses

A.14. Improvements to Accommodate Background Traffic and Site Traffic

The intersections of W. Stowell Road and S. Blosser Road, W. Stowell Road and Broadway, and W. Stowell Road and S. Bradley Road should be re-timed to improve Build conditions. Table 10 shows the resultant capacity with the improvements from signal optimization. Although unsatisfactory levels of service were observed at these signalized intersections, optimizing the signals along the W. Stowell corridor will enhance traffic operations in line with the future roadway improvements identified in Section A.15. Signalized study intersections can be optimized for a maximum decrease in overall delay of 3 to 40 seconds for the three intersections listed below. Corridor signal reevaluations should include all signalized intersections along W. Stowell Road from U.S. Highway 101 to S. Blosser Road.

Table 10: 2027 Build Mitigated; Signal Optimization

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
2	W. Stowell Road / S. Blosser Road	Signal	**OVERALL**	**D**	**37.5**	**D**	**53.3**
			EB	E	67.8	F	81.3
			WB	D	41.6	E	68.8
			NB	C	29.2	D	39.8
			SB	C	30.9	D	35.8
5	W. Stowell Road / Broadway	Signal	**OVERALL**	**D**	**52.5**	**F**	**88.0**
			EB	D	53.5	F	94.4
			WB	E	63.4	F	139.8
			NB	D	38.7	D	48.9
			SB	D	54.5	F	83.2
7	W. Stowell Road / S. Bradley Rd	Signal	**OVERALL**	**D**	**42.8**	**E**	**63.0**
			EB	C	20.6	C	24.8
			WB	D	53.7	D	38.1
			NB	D	47.6	F	119.3
			SB	D	48.9	D	52.8

A.15. Planned Alternative Improvements

Previous development initiatives and proposed city projects have incorporated improvements aimed at enhancing traffic flow. These are listed below:

Intersection of W. Stowell Road and S. Blosser Road: Planned improvements include the addition of a northbound-right deceleration lane. This improvement was not analyzed for the existing 2024 analysis but was analyzed for the 2027 No Build and Build Analysis.

Intersection of W. Stowell Road and Broadway: The installation of southbound-right and westbound-right deceleration lanes are planned as part of long-term regional improvements. These plans are anticipated by the City of Santa Maria and Caltrans; however, the expected completion date is currently unknown. The results below suggest that these intersection improvements will help mitigate the existing and growing traffic congestion. With these improvements and signal optimizations, the following anticipated results are indicated below:

Table 11: 2027 Build Mitigated; Signal Optimization and Deceleration Lanes Added

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
5	W. Stowell Road / Broadway	Signal	**OVERALL**	**D**	**45.7**	**E**	**64.0**
			EB	E	56.9	F	80.3
			WB	D	46.3	E	74.4
			NB	D	37.0	D	47.5
			SB	D	42.5	E	60.3

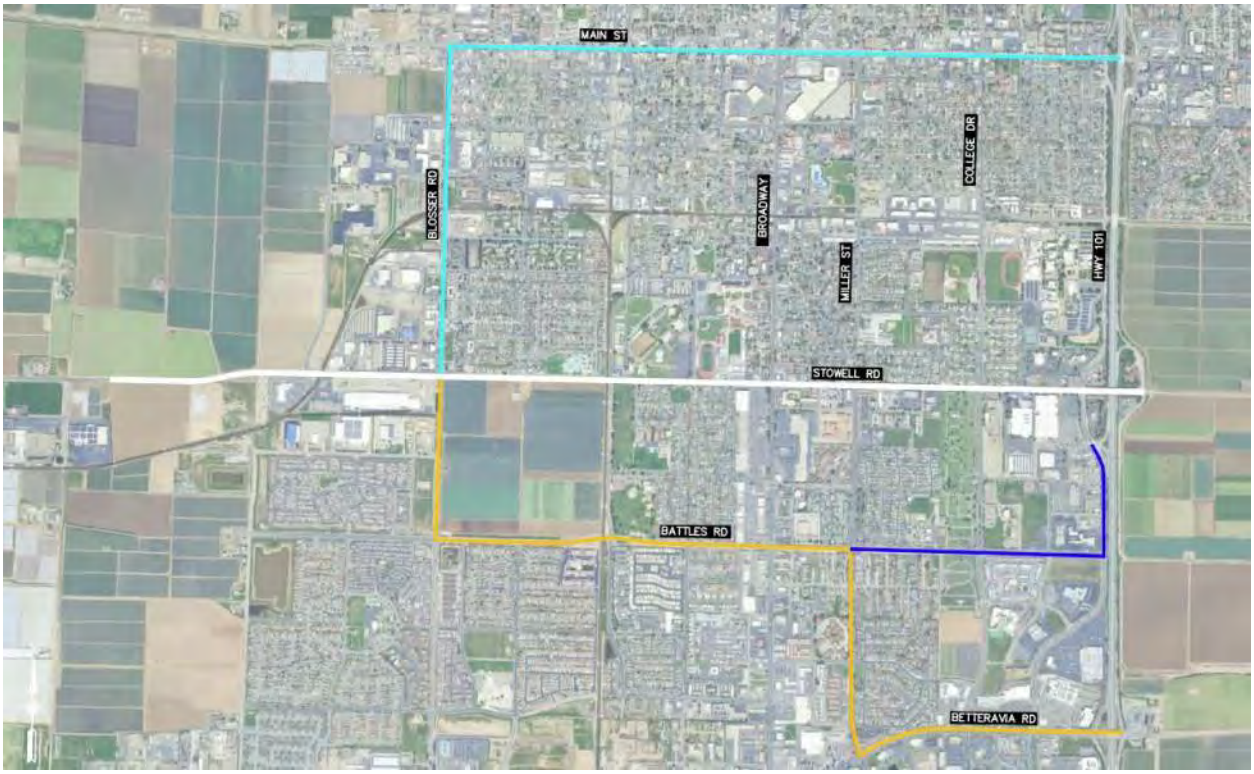
Intersection of E Stowell Rd and Nicholson Ave/I-101 NB On Ramp: The City has identified the intersection as needing enhanced traffic control, which may include a traffic signal or a roundabout. However, due to the proposed Project only adding minimal traffic to the "free" movements, there are no recommendations attributed to the proposed development. The City will construct the necessary traffic control measures when traffic conditions warrant it.

Alternative Routes

If congestion persists along Stowell Road, alternative routes are available. Other arterial roadways may have sufficient capacity to handle Project traffic during both AM and PM peak periods. The figure below illustrates these alternative routes. The white line represents the Stowell Road path, while the blue, cyan, and orange lines indicate alternative paths that can be taken if Stowell Road remains congested. To ensure effective use of these alternatives, project-related vehicles will be directed through a combination of strategies, including:

- GPS Navigation Updates: Coordination with major navigation platforms (e.g., Google Maps, Waze) to reflect real-time traffic conditions and suggest optimal routes.
- Driver Communication: For fleet or employee traffic, route guidance can be provided through internal communication channels or dispatch instructions.

Figure 14. Alternate Route Map



Conclusions and Recommendations

The Project site located along W. Stowell Road in Santa Maria, CA is proposed to be developed as a newly constructed delivery station. The 169,104 square-foot facility is expected to generate a net total of 2,128 daily trips, with 15 occurring during the AM peak hours (13 inbound, 2 outbound) and 147 occurring during the PM peak hours (98 inbound, 49 outbound). Analysis results indicate that the transportation network can adequately accommodate increases in traffic associated with the proposed Project.

A.16. Key Findings

A comparison of the 2024 Existing, 2027 No-Build, and 2027 Build traffic analysis results indicates that the proposed Project will have a slight impact on the overall intersection LOS along nearby roads. All study area unsignalized intersections and driveways are expected to operate at an acceptable LOS, except for the intersections of Main Street and Black Road, and E Stowell Road/Nicholson Avenue/I-101 NB On Ramp. Four signalized intersections are experiencing LOS E or F during AM and/or PM peak hours under Existing, No-Build, and Build conditions. Proposed improvements related to the Project for these four existing signalized intersections include optimizing the corridor along W. Stowell Road, which will enhance the overall LOS.

The City of Santa Maria and CalTrans have identified the intersection of E Stowell Road and Broadway as needing improvements. The intersection is space-constrained, so any improvements will require significant right-of-way to make any improvements. Since the problems are existing, or will be exacerbated by other previously approved developments, no improvements other than traffic signal optimization are proposed to accommodate the Project.

A.17. Mitigation Measures

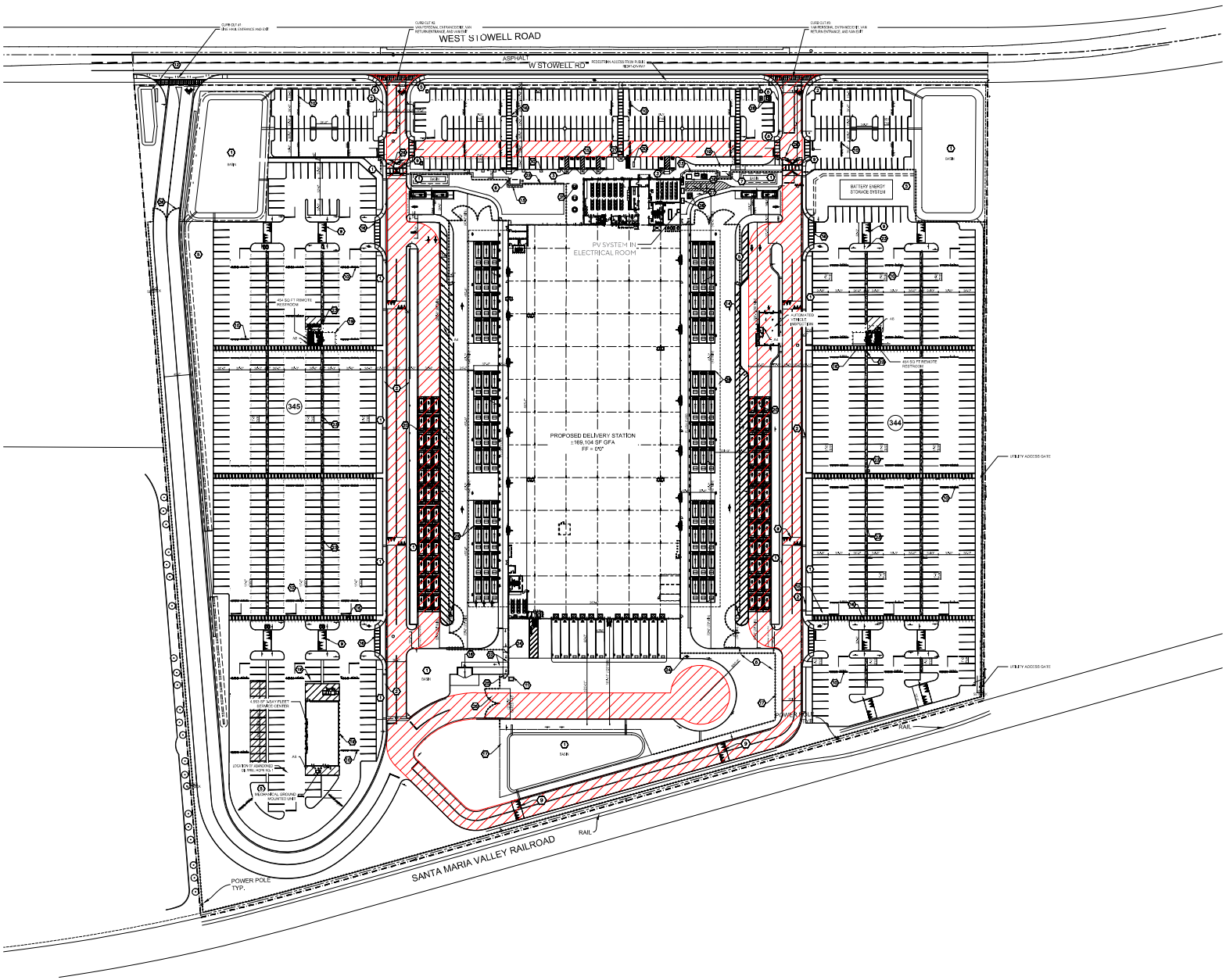
The following improvements are proposed as part of the Project:

W. Stowell Road from S. Blosser Road to US 101

- Optimize traffic signal timing

APPENDICES

Appendix A – Site Plan



KEYNOTES

1	STORMWATER MANAGEMENT AS REQUIRED BY CODE	21	EMPLOYEE MUSTER AREA SIGNAGE PER SIGNAGE AND STRIPING PLAN
2	CONCRETE SIDEWALK	22	BIKE RACKS
3	ACCESSIBLE CURB RAMP	23	5' WIDE CONCRETE SIDEWALK (5% MAX SLOPE) WITH GUARDRAILS AND LANDINGS AS REQUIRED
4	RIDE SHARE DROP-OFF		
5	LANDSCAPE	23	TRASH CAN ON CONCRETE PAD
6	PREFABRICATED SMOKING SHELTER	24	RETAINING WALL WITH GUARD RAIL, AS REQUIRED, PER STRUCTURAL PLANS
7	RIDE-SHARE SHELTER	25	5' WIDE MAIN GATE WITH LOCKING HARDWARE
8	WHEEL STOP	26	PAIR OF 8'-0"H GALVANIZED MANUAL SWING GATES WITH DROP ROD AND LOCKING HARDWARE. IS REQUIRED, PROVIDE GATE WITH RUBBER ROLLERS OR TIRED. IN-GROUND TRACK SYSTEMS ARE NOT ALLOWED
9	SPEED HUMP / PEDESTRIAN TABLE		
10	SPEED BUMP		
11	4'x6' TRUCK YARD SPILL KIT SHED (BY TENANT) ON 6'X8' CONCRETE PAD		
12	SIGNAGE PER SIGNAGE AND STRIPING PLAN		
13	PEDESTRIAN BARRIER FENCE PER SITE DETAILS	27	EMERGENCY MOBILE GENERATOR PARKING
14	STRIPED TRAFFIC SEPARATION WITH JERSEY BARRIERS (OR EQUAL)	28	ELECTRICAL EQUIPMENT WITH BOLLARD PROTECTION PER ELECTRICAL PLANS
15	ACCESSIBLE PARKING STALL	29	BUILDING CANOPY AND COLUMNS PER ARCHITECTURAL PLAN
16	STRIPED PEDESTRIAN ACCESS	30	BENCH
17	YARD PERIMETER SECURITY FENCE	31	OUTDOOR BREAK AREA
18	TRASH ENCLOSURE	32	LOADING ZONE SECURITY FENCE
19	BOLLARDS PER SITE PLAN ENLARGEMENTS AND SITE DETAILS	33	42" HIGH CABLE RAILING FENCE
		34	8' HIGH BLACK TUBULAR FENCE

LEGEND:

- 42" HIGH CABLE RAILING FENCE
- 8' HIGH BLACK TUBULAR FENCE
- PROPERTY LINE
- 30'-0" (TYPICAL) WIDE FIRE LANE (HATCHED), 24'-0" AT NORTH ELEVATION, EXTENT OF FIRE LANE CONTINUOUS CURB PAINTED RED & MARKED WITH "FIRE LANE NO PARKING" PER THE FIRE DEPARTMENT HAVING JURISDICTION

REQUIRED PARKING

WAREHOUSE	157,507 SF	1 PER 1,040 SF	151	STALLS
OFFICE	11,597 SF	1 PER 260 SF	45	STALLS
TOTALS	169,104 SF		196	STALLS REQUIRED

PROPOSED PARKING

STANDARD STALLS (9' x 19')	210	STALLS
EV CAPABLE STALLS*	54	STALLS
HANDICAP STALLS	8	STALLS
TOTAL PARKING PROVIDED	272	STALLS

*ELECTRONIC VEHICLE CHARGING STATIONS (EVCS) 25% OF OVERALL EV CAPABLE STALLS 14 STALLS

DELIVERY VAN PARKING

VAN STALLS (11' x 27')	504 STALLS
EVCS VAN STALLS (11' X 27')	202 STALLS
TOTAL DELIVERY VAN PARKING	706 STALLS

SEMI TRUCK PARKING

DOCK POSITIONS (53') 12 STALLS

HEIGHT LIMIT

MAXIMUM: 40'-0" PER SANTA MARIA ZONING
PROPOSED: *MAXIMUM HEIGHT OF ±45'-0"

*REQUEST FOR A MODIFICATION TO THE MAX BUILDING HEIGHT.

SEEFRIED INDUSTRIAL PROPERTIES

DISTRIBUTION CENTER

Santa Maria, CA

SITE PLAN

0 60' 120'

AO Architecture. Design. Relationships.

A1

Scale 1" = 60'-0"
Job No. 2024-0141
Date 2025-04-16

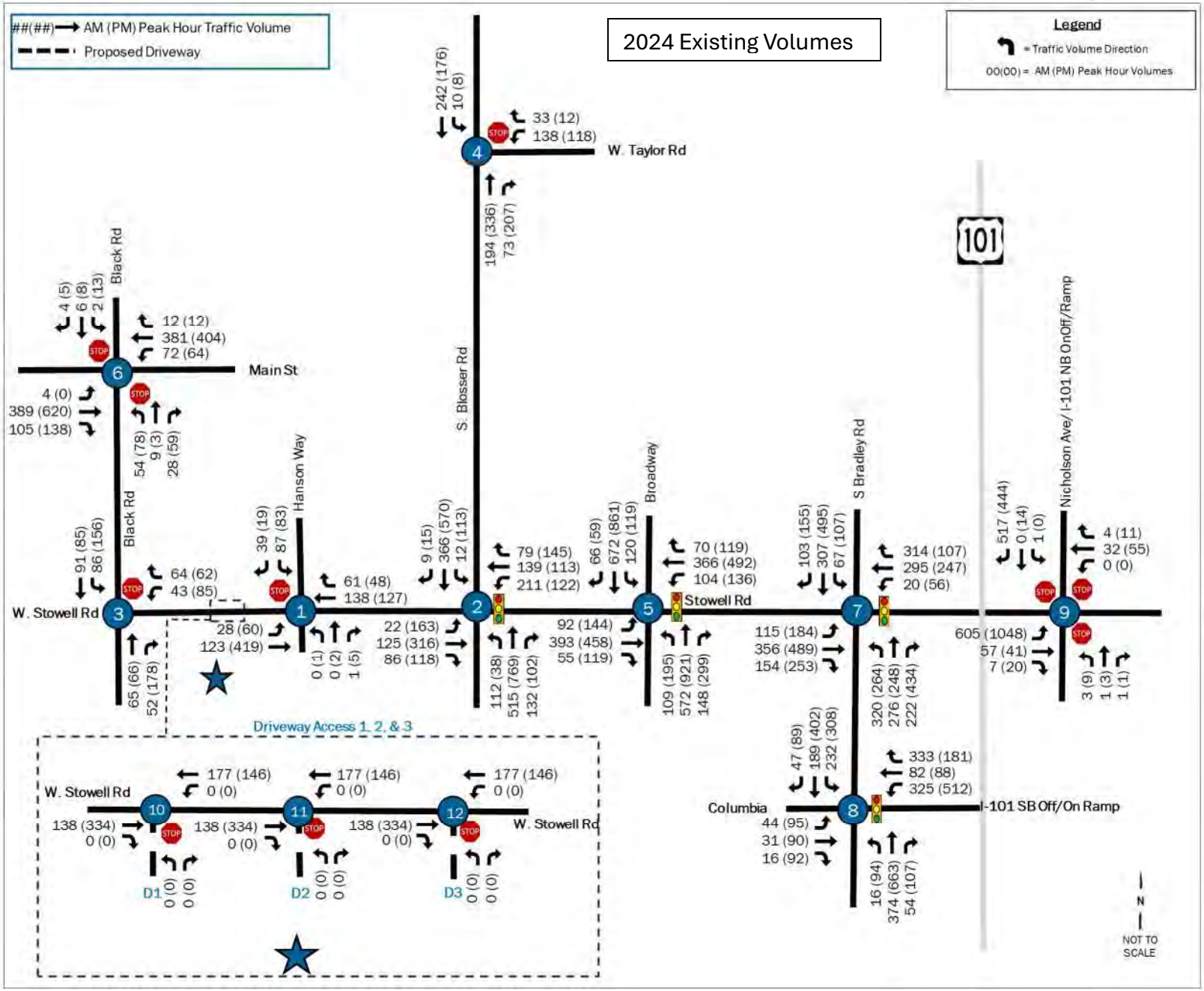
Appendix B – Site Traffic Schedule

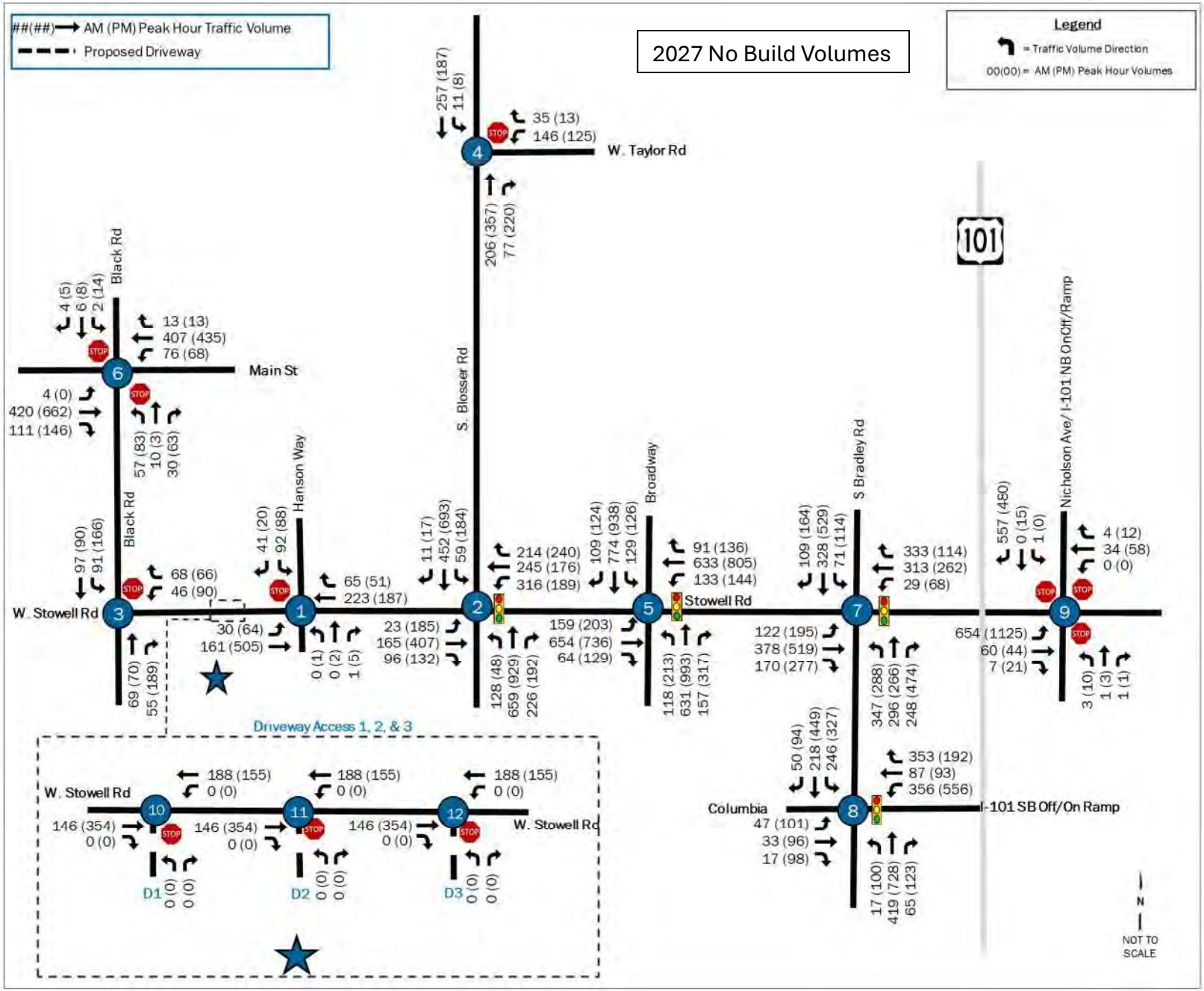
Santa Maria Delivery Facility

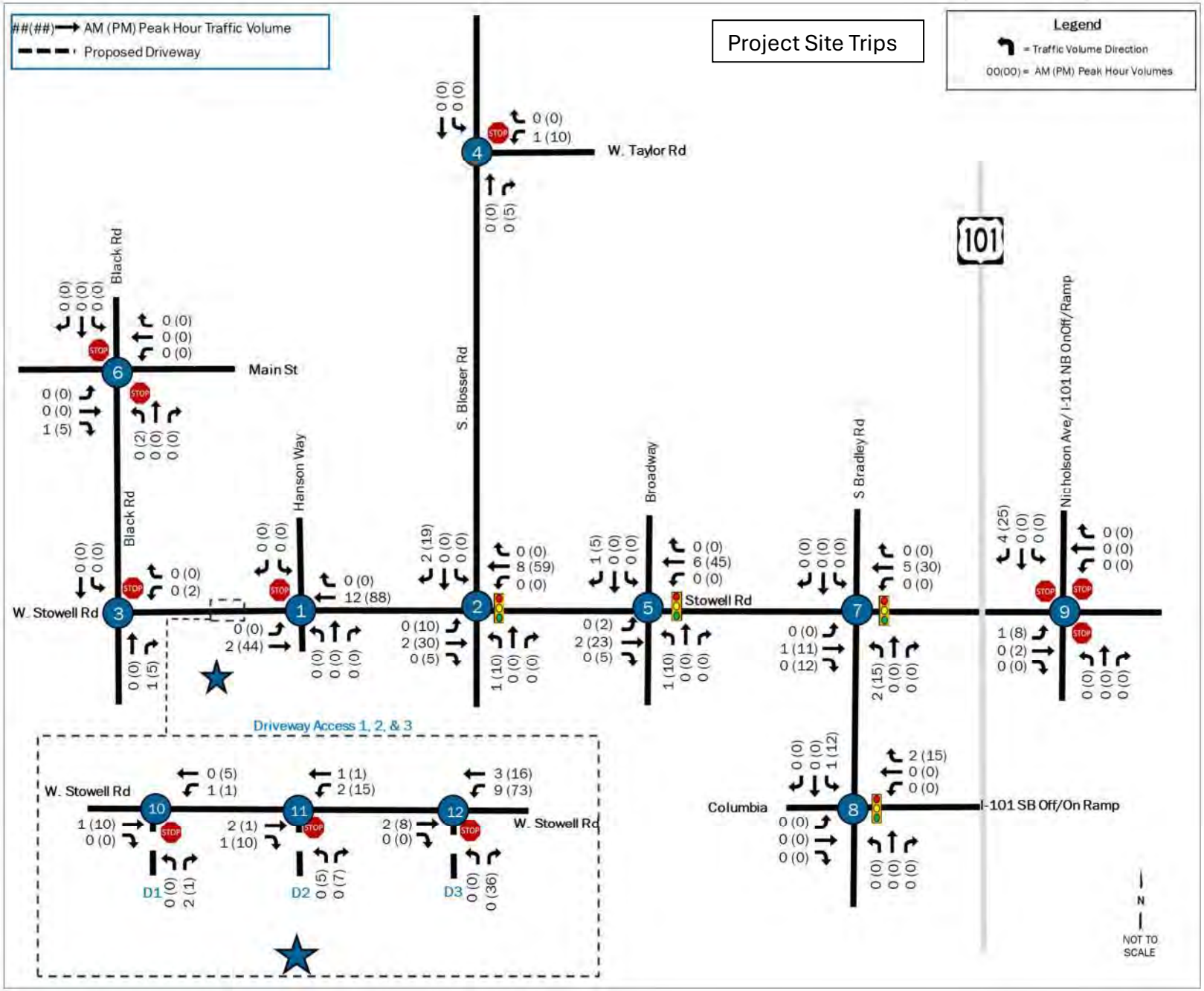
Time	Autos			Trucks			Vans			Total		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
0:00	0	0	0	1	1	2	0	0	0	1	1	2
0:30	0	0	0	1	1	2	0	0	0	1	1	2
1:00	160	0	160	1	1	2	0	0	0	161	1	162
1:30	0	0	0	1	1	2	0	0	0	1	1	2
2:00	0	0	0	1	1	2	0	0	0	1	1	2
2:30	0	0	0	1	1	2	0	0	0	1	1	2
3:00	0	0	0	1	1	2	0	0	0	1	1	2
3:30	0	0	0	1	1	2	0	0	0	1	1	2
4:00	0	0	0	1	2	3	0	0	0	1	2	3
4:30	0	0	0	2	1	3	0	0	0	2	1	3
5:00	0	0	0	1	2	3	0	0	0	1	2	3
5:30	0	0	0	2	1	3	0	0	0	2	1	3
6:00	0	0	0	1	1	2	0	0	0	1	1	2
6:30	0	0	0	1	1	2	0	0	0	1	1	2
7:00	0	0	0	1	1	2	0	0	0	1	1	2
7:30	0	0	0	1	1	2	0	0	0	1	1	2
8:00	12	0	12	0	1	1	0	0	0	12	1	13
8:30	0	0	0	0	1	1	0	0	0	0	1	1
9:00	0	0	0	0	1	1	0	0	0	0	1	1
9:30	144	0	144	0	1	1	0	0	0	144	1	145
10:00	72	47	119	0	0	0	0	72	72	72	119	191
10:30	129	0	129	0	0	0	0	72	72	129	72	201
11:00	0	0	0	0	0	0	0	144	144	0	144	144
11:30	0	0	0	0	0	0	0	57	57	0	57	57
12:00	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0	0	0	0	0
13:30	19	0	19	0	0	0	0	0	0	19	0	19
14:00	0	160	160	1	0	1	0	0	0	1	160	161
14:30	0	0	0	0	1	1	0	0	0	0	1	1
15:00	0	0	0	1	0	1	0	0	0	1	0	1
15:30	5	0	5	0	1	1	0	0	0	5	1	6
16:00	0	0	0	1	0	1	0	0	0	1	0	1
16:30	36	12	48	0	1	1	0	0	0	36	13	49
17:00	61	36	97	1	0	1	0	0	0	62	36	98
17:30	0	61	61	0	1	1	0	0	0	0	62	62
18:00	0	19	19	1	0	1	0	0	0	1	19	20
18:30	0	0	0	1	0	1	0	0	0	1	0	1
19:00	0	0	0	1	0	1	0	0	0	1	0	1
19:30	0	0	0	1	0	1	0	0	0	1	0	1
20:00	0	0	0	1	1	2	72	0	72	73	1	74
20:30	0	144	144	1	1	2	72	0	72	73	145	218
21:00	0	72	72	1	1	2	144	0	144	145	73	218
21:30	0	129	129	1	1	2	57	0	57	58	130	188
22:00	0	0	0	1	1	2	0	0	0	1	1	2
22:30	0	5	5	1	1	2	0	0	0	1	6	7
23:00	47	0	47	1	1	2	0	0	0	48	1	49
23:30	0	0	0	1	1	2	0	0	0	1	1	2
Total	**685**	**685**	**1370**	**34**	**34**	**68**	**345**	**345**	**690**	**1064**	**1064**	**2128**

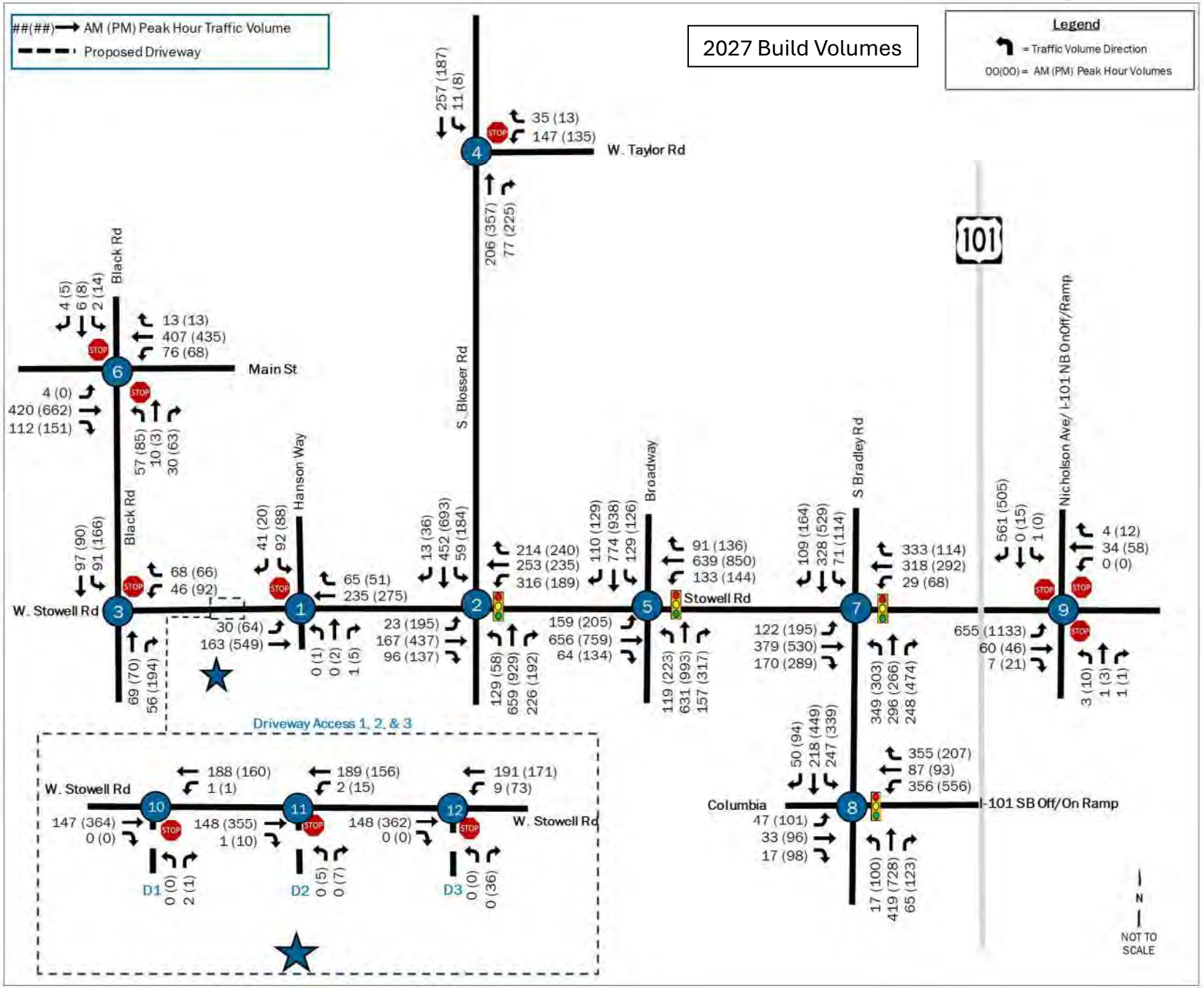
SC/CI Shift:	1:20	13:50	160	Assoc.	27%
Operations:	8:30	16:00	12	Assoc.	2%
Managers Shift:	23:30	10:00	47	Assoc.	8%
PFSD Shift:	14:00	18:00	19	Assoc.	3%
RTS Shift:	16:00	22:30	5	Assoc.	1%
Drivers:	5:40	22:45	345	Drivers	59%

Appendix C – Figures


##(##) AM (PM) Peak Hour Traffic Volume
Proposed Driveway
2024 Existing Volumes
Legend
= Traffic Volume Direction
00(00) = AM (PM) Peak Hour Volumes
W. Taylor Rd
S. Blosser Rd
Black Rd
Main St
Hanson Way
Broadway
Stowell Rd
S Bradley Rd
Nicholson Ave/ I-101 NB On/Off Ramp
W. Stowell Rd
Columbia
I-101 SB Off/On Ramp
Driveway Access 1, 2, & 3
D1
D2
D3
101
N
NOT TO SCALE


##(##) AM (PM) Peak Hour Traffic Volume
Proposed Driveway
2027 No Build Volumes
Legend
= Traffic Volume Direction
00(00) = AM (PM) Peak Hour Volumes
W. Taylor Rd
S. Blosser Rd
Black Rd
Main St
Hanson Way
Broadway
Stowell Rd
S Bradley Rd
Nicholson Ave/ I-101 NB On/Off Ramp
W. Stowell Rd
Columbia
I-101 SB Off/On Ramp
101
Driveway Access 1, 2, & 3
D1
D2
D3
NOT TO SCALE


##(##) AM (PM) Peak Hour Traffic Volume
Proposed Driveway
Project Site Trips
Legend
= Traffic Volume Direction
00(00) = AM (PM) Peak Hour Volumes
W. Taylor Rd
S. Blosser Rd
Black Rd
Main St
Hanson Way
Broadway
S Bradley Rd
Nicholson Ave/ I-101 NB On/Off Ramp
101
W. Stowell Rd
Stowell Rd
Columbia
I-101 SB Off/On Ramp
Driveway Access 1, 2, & 3
D1
D2
D3
N
NOT TO SCALE


##(##) AM (PM) Peak Hour Traffic Volume
Proposed Driveway
2027 Build Volumes
Legend
= Traffic Volume Direction
00(00) = AM (PM) Peak Hour Volumes
W. Taylor Rd
S. Blosser Rd
Black Rd
Main St
Hanson Way
Broadway
Stowell Rd
S Bradley Rd
Nicholson Ave/ I-101 NB On/Off Ramp
W. Stowell Rd
Columbia
I-101 SB Off/On Ramp
101
Driveway Access 1, 2, & 3
D1
D2
D3
N
NOT TO SCALE

Appendix D – Traffic Counts

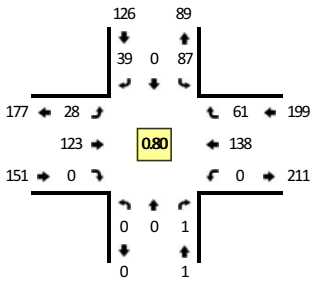
Type of peak hour being reported: Intersection Peak

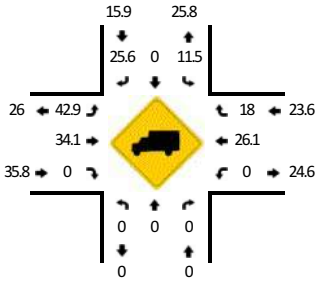
Method for determining peak hour: Total Entering Volume

LOCATION: Hanson Wy -- W Stowell Rd
CITY/STATE: Santa Maria, CA

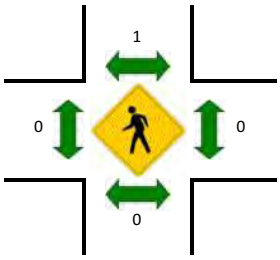
QC JOB #: 16559401
DATE: Thu, Apr 18 2024

Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

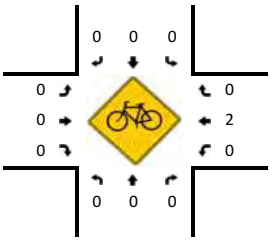


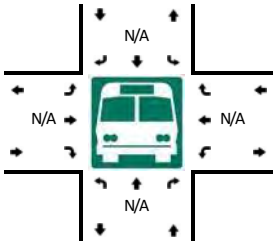


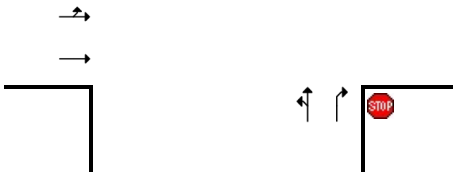
TRUE DATA TO IMPROVE MOBILITY

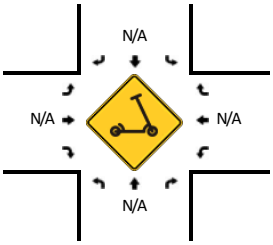












15-Min Count Period Beginning At	Hanson Wy (Northbound)				Hanson Wy (Southbound)				W Stowell Rd (Eastbound)				W Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	8	0	11	0	4	33	0	0	0	50	8	0	114	
7:15 AM	0	0	0	0	12	0	13	1	7	37	0	0	0	24	6	0	100	
7:30 AM	0	0	0	0	18	0	10	0	8	30	0	0	0	31	12	0	109	
7:45 AM	0	0	0	0	32	0	10	0	6	42	0	0	0	39	21	0	150	473
8:00 AM	0	0	1	0	17	0	9	0	5	21	0	0	0	38	15	0	106	465
8:15 AM	0	0	0	0	20	0	10	0	9	30	0	0	0	30	13	0	112	477
8:30 AM	0	0	2	0	23	0	10	0	4	24	0	0	0	30	13	0	106	474
8:45 AM	0	0	1	0	12	0	14	0	5	32	0	0	0	29	17	0	110	434

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	128	0	40	0	24	168	0	0	0	156	84	0	600
Heavy Trucks	0	0	0		16	0	8		8	36	0		0	24	28		120
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

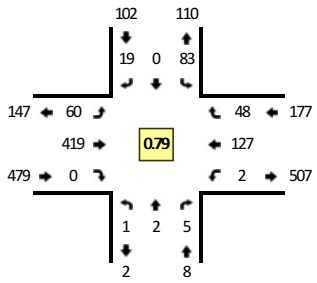
Report generated on 4/29/2024 3:11 PM

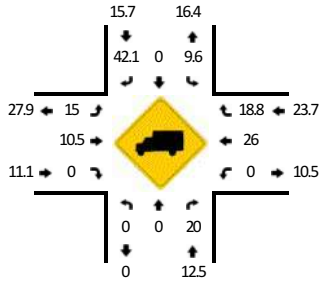
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

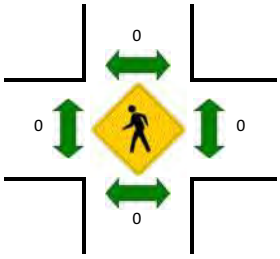
LOCATION: Hanson Wy -- W Stowell Rd | **QC JOB #:** 16559402
CITY/STATE: Santa Maria, CA | **DATE:** Thu, Apr 18 2024

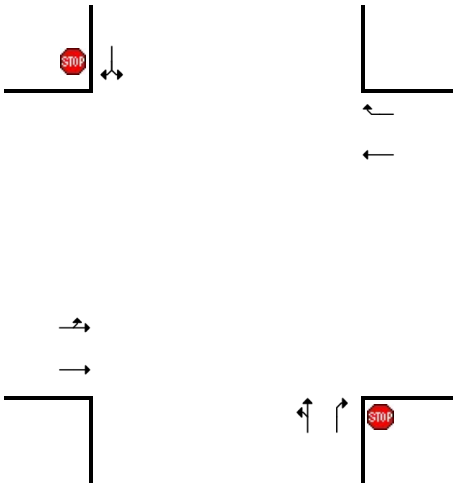
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

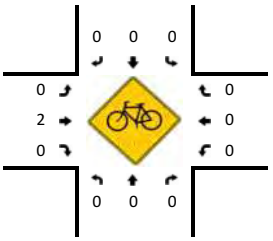


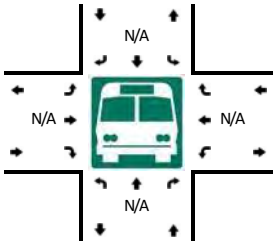


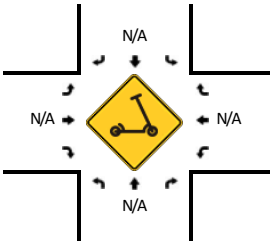
TRUE DATA TO IMPROVE MOBILITY











15-Min Count Period Beginning At	Hanson Wy (Northbound)				Hanson Wy (Southbound)				W Stowell Rd (Eastbound)				W Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	1	3	0	24	0	3	0	22	138	0	0	1	37	13	0	243	
4:15 PM	0	1	0	0	18	0	6	0	15	105	0	0	0	32	10	0	187	
4:30 PM	0	0	0	0	22	0	6	0	13	111	0	0	0	28	16	0	196	
4:45 PM	0	0	2	0	19	0	4	0	10	65	0	0	1	30	9	0	140	766
5:00 PM	0	0	0	0	21	0	2	0	20	75	0	0	0	29	15	0	162	685
5:15 PM	0	0	0	0	16	0	4	0	8	45	0	0	0	27	15	0	115	613
5:30 PM	0	0	0	0	11	0	2	0	6	42	0	0	0	32	11	0	104	521
5:45 PM	0	0	0	0	16	0	5	0	4	24	0	0	0	20	10	0	79	460

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	4	12	0	96	0	12	0	88	552	0	0	4	148	52	0	972
Heavy Trucks	0	0	4		8	0	4		8	76	0		0	24	16		140
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 4/29/2024 3:11 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

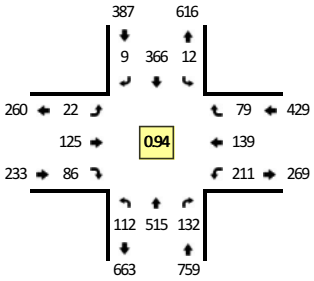
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

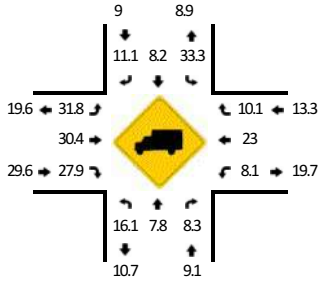
LOCATION: S Blosser Rd -- W Stowell Rd
CITY/STATE: Santa Maria, CA

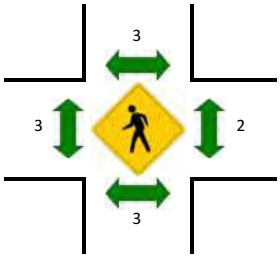
QC JOB #: 16559403
DATE: Thu, Apr 18 2024

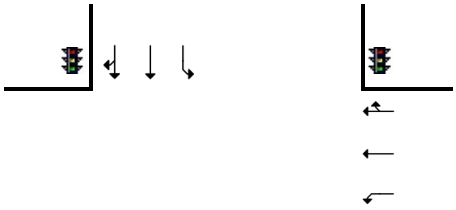
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

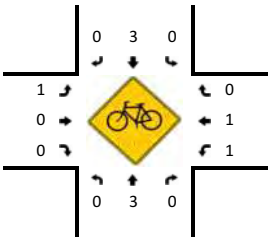


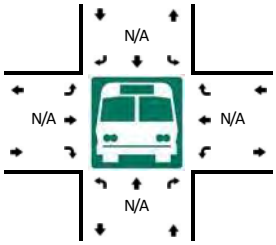


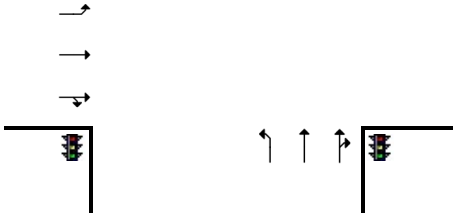


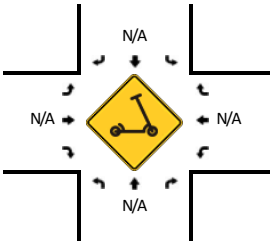












15-Min Count Period Beginning At	S Blosser Rd (Northbound)				S Blosser Rd (Southbound)				W Stowell Rd (Eastbound)				W Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	24	87	20	0	3	95	8	0	5	31	6	0	22	39	12	0	352	
7:15 AM	18	126	28	0	7	105	6	0	4	29	7	0	24	19	17	0	390	
7:30 AM	30	104	29	0	9	124	4	0	4	35	13	0	34	30	14	0	430	
7:45 AM	35	126	33	0	1	79	0	0	7	36	29	0	67	37	29	0	479	1651
8:00 AM	27	143	37	0	0	82	1	0	5	28	24	0	65	39	18	0	469	1768
8:15 AM	20	142	33	0	2	81	4	0	6	26	20	0	45	33	18	0	430	1808
8:30 AM	24	113	16	0	3	81	3	0	4	24	23	0	31	35	16	0	373	1751
8:45 AM	22	105	12	0	3	86	4	0	10	17	21	0	21	32	21	0	354	1626

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	140	504	132	0	4	316	0	0	28	144	116	0	268	148	116	0	1916
Heavy Trucks	20	32	12		4	24	0		12	24	40		16	32	8		224
Buses																	
Pedestrians		0				4				0				0			4
Bicycles	0	0	0		0	4	0		0	0	0		4	4	0		12
Scooters																	

Comments:

Report generated on 4/29/2024 3:11 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

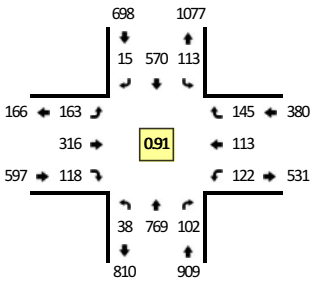
Type of peak hour being reported: Intersection Peak

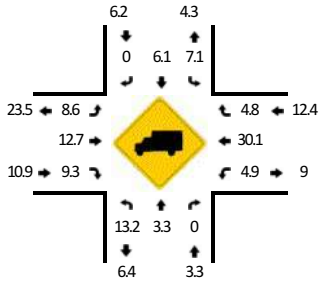
Method for determining peak hour: Total Entering Volume

LOCATION: S Blosser Rd -- W Stowell Rd
CITY/STATE: Santa Maria, CA

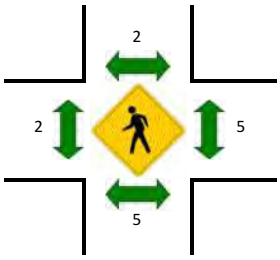
QC JOB #: 16559404
DATE: Thu, Apr 18 2024

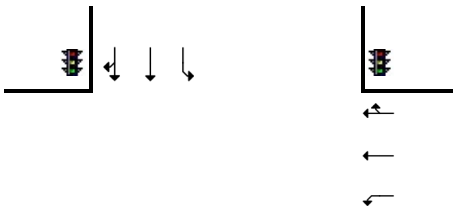
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

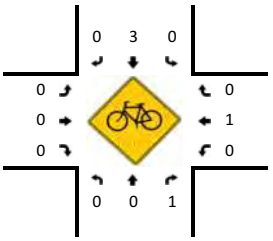


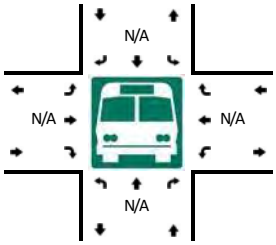


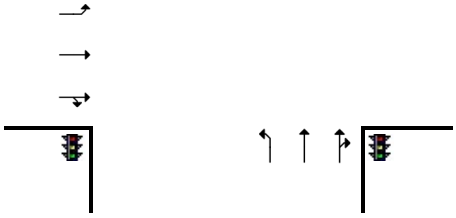
TRUE DATA TO IMPROVE MOBILITY

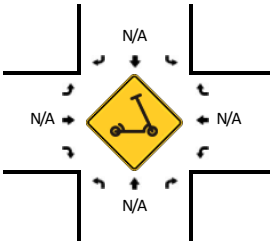












15-Min Count Period Beginning At	S Blosser Rd (Northbound)				S Blosser Rd (Southbound)				W Stowell Rd (Eastbound)				W Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	17	187	32	0	26	128	3	0	56	108	44	0	31	40	38	0	710	
4:15 PM	10	173	30	0	33	138	3	0	39	78	20	0	33	24	44	0	625	
4:30 PM	6	203	18	0	26	149	5	0	36	83	30	0	28	20	30	0	634	
4:45 PM	5	206	22	0	28	155	4	0	32	47	24	0	30	29	33	0	615	2584
5:00 PM	13	210	29	0	33	172	3	0	15	53	37	0	40	31	34	0	670	2544
5:15 PM	12	197	24	0	23	190	4	0	11	37	24	0	50	32	23	0	627	2546
5:30 PM	15	152	20	0	31	152	6	0	13	23	20	0	47	22	34	0	535	2447
5:45 PM	9	186	20	0	28	166	2	0	6	36	19	0	39	22	15	0	548	2380

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	68	748	128	0	104	512	12	0	224	432	176	0	124	160	152	0	2840
Heavy Trucks	8	28	0		12	24	0		28	44	20		4	44	16		228
Buses																	
Pedestrians		8				0				0				8			16
Bicycles	0	0	0		0	8	0		0	0	0		0	4	0		12
Scooters																	

Comments:

Report generated on 4/29/2024 3:11 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

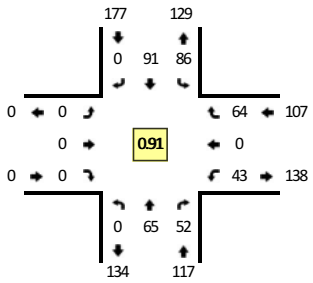
Type of peak hour being reported: Intersection Peak

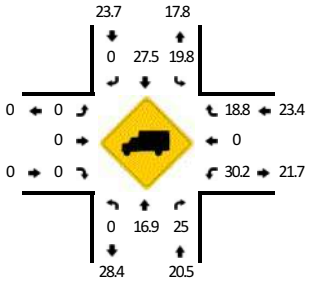
Method for determining peak hour: Total Entering Volume

LOCATION: Black Rd -- W Stowell Rd
CITY/STATE: Santa Maria, CA

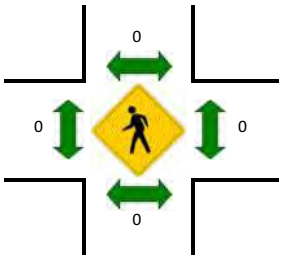
QC JOB #: 16559405
DATE: Thu, Apr 18 2024

Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:00 AM -- 7:15 AM

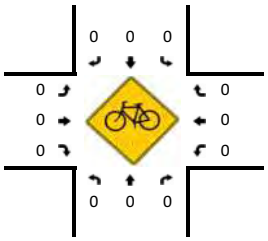


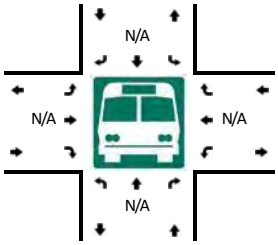


TRUE DATA TO IMPROVE MOBILITY

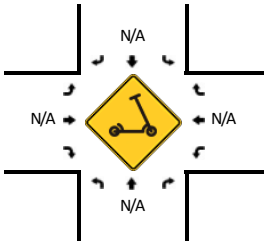












15-Min Count Period Beginning At	Black Rd (Northbound)				Black Rd (Southbound)				W Stowell Rd (Eastbound)				W Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	15	10	0	18	26	0	0	0	0	0	0	14	0	27	0	110	
7:15 AM	0	20	14	0	19	20	0	0	0	0	0	0	6	0	16	0	95	
7:30 AM	0	17	9	0	21	26	0	0	0	0	0	0	10	0	10	0	93	
7:45 AM	0	13	19	0	28	19	0	0	0	0	0	0	13	0	11	0	103	401
8:00 AM	0	14	6	0	11	23	0	0	0	0	0	0	17	0	11	0	82	373
8:15 AM	0	16	20	0	11	16	0	0	0	0	0	0	14	0	11	0	88	366
8:30 AM	0	27	14	0	20	8	0	0	0	0	0	0	12	0	10	0	91	364
8:45 AM	0	17	15	0	17	20	0	0	0	0	0	0	10	0	10	0	89	350

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	60	40	0	72	104	0	0	0	0	0	0	56	0	108	0	440
Heavy Trucks	0	8	8		32	36	0		0	0	0		8	0	8		100
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 4/29/2024 3:11 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

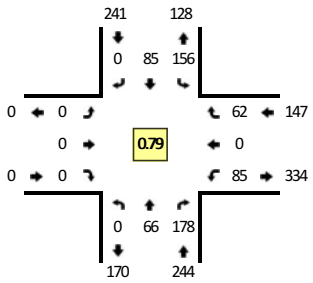
Type of peak hour being reported: Intersection Peak

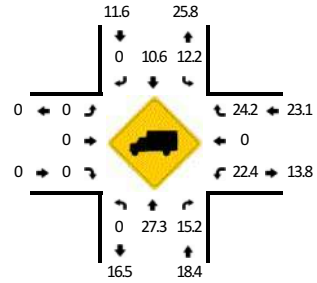
Method for determining peak hour: Total Entering Volume

LOCATION: Black Rd -- W Stowell Rd
CITY/STATE: Santa Maria, CA

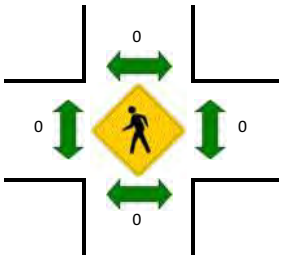
QC JOB #: 16559406
DATE: Thu, Apr 18 2024

Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

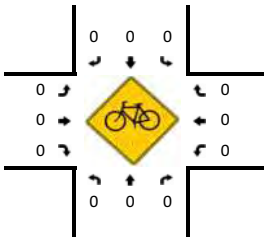


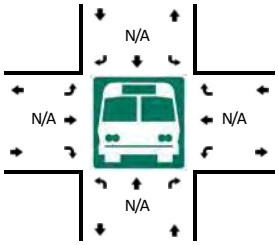




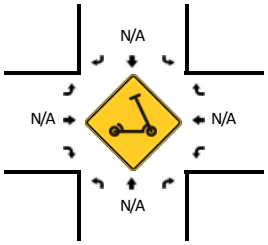












15-Min Count Period Beginning At	Black Rd (Northbound)				Black Rd (Southbound)				W Stowell Rd (Eastbound)				W Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	17	59	0	71	20	0	0	0	0	0	0	24	0	8	0	199	
4:15 PM	0	16	49	0	33	20	0	0	0	0	0	0	24	0	10	0	152	
4:30 PM	0	18	35	0	32	23	0	0	0	0	0	0	21	0	25	0	154	
4:45 PM	0	15	35	0	20	22	0	0	0	0	0	0	16	0	19	0	127	632
5:00 PM	0	20	29	0	24	15	0	0	0	0	0	0	12	0	19	0	119	552
5:15 PM	0	13	13	0	18	16	0	0	0	0	0	0	8	0	16	0	84	484
5:30 PM	0	12	12	0	6	15	0	0	0	0	0	0	17	0	16	0	78	408
5:45 PM	0	12	5	0	9	10	0	0	0	0	0	0	12	0	9	0	57	338

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	68	236	0	284	80	0	0	0	0	0	0	96	0	32	0	796
Heavy Trucks	0	20	20		36	12	0		0	0	0		12	0	4		104
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

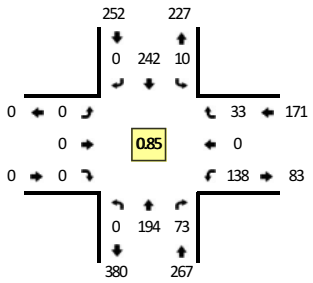
Report generated on 4/29/2024 3:11 PM

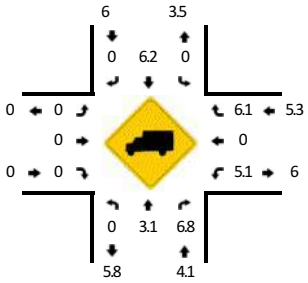
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

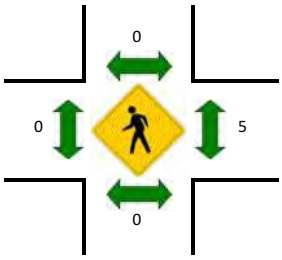
LOCATION: N Blosser Rd -- W Taylor St | **QC JOB #:** 16559407
CITY/STATE: Santa Maria, CA | **DATE:** Thu, Apr 18 2024

Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

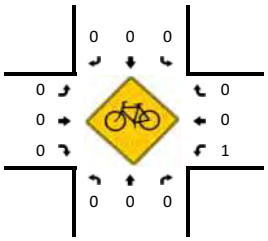


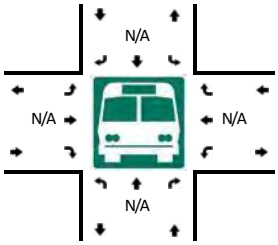


TRUE DATA TO IMPROVE MOBILITY

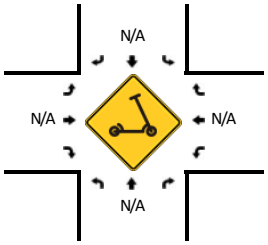












15-Min Count Period Beginning At	N Blosser Rd (Northbound)				N Blosser Rd (Southbound)				W Taylor St (Eastbound)				W Taylor St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	18	20	0	0	29	0	0	0	0	0	0	21	0	0	0	88	
7:15 AM	0	28	18	0	0	54	0	0	0	0	0	0	36	0	2	0	138	
7:30 AM	0	30	18	0	0	73	0	0	0	0	0	0	33	0	3	0	157	
7:45 AM	0	54	17	0	1	82	0	0	0	0	0	0	44	0	5	0	203	586
8:00 AM	0	35	16	0	3	60	0	0	0	0	0	0	43	0	4	0	161	659
8:15 AM	0	49	22	0	2	41	0	0	0	0	0	0	31	0	7	0	152	673
8:30 AM	0	56	18	0	4	59	0	0	0	0	0	0	20	0	17	0	174	690
8:45 AM	0	27	7	0	5	37	0	0	0	0	0	0	20	0	2	0	98	585

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	216	68	0	4	328	0	0	0	0	0	0	176	0	20	0	812
Heavy Trucks	0	4	4		0	8	0		0	0	0		4	0	8		28
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		4	0	0		4
Scooters																	

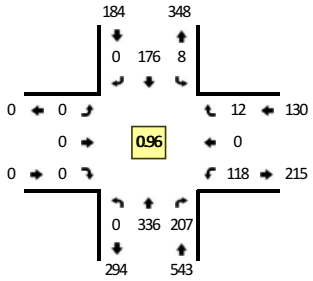
Comments:

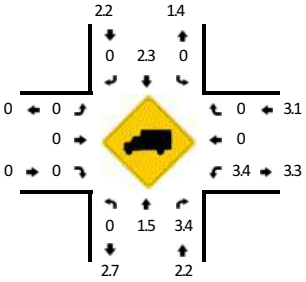
Report generated on 4/29/2024 3:11 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

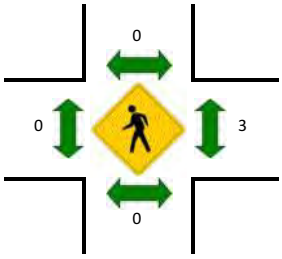
LOCATION: N Blosser Rd -- W Taylor St | **QC JOB #:** 16559408
CITY/STATE: Santa Maria, CA | **DATE:** Thu, Apr 18 2024

Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

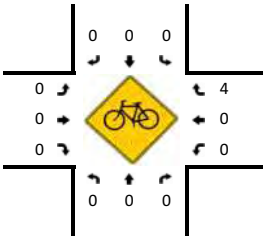


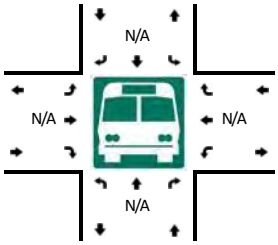


TRUE DATA TO IMPROVE MOBILITY

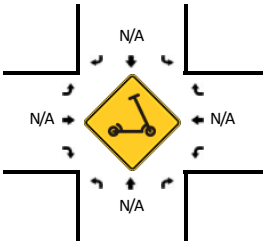












15-Min Count Period Beginning At	N Blosser Rd (Northbound)				N Blosser Rd (Southbound)				W Taylor St (Eastbound)				W Taylor St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	53	42	0	5	31	0	0	0	0	0	0	24	0	4	0	159	
4:15 PM	0	61	42	0	3	37	0	0	0	0	0	0	43	0	5	0	191	
4:30 PM	0	80	55	0	3	53	0	0	0	0	0	0	31	0	2	0	224	
4:45 PM	0	76	45	0	2	45	0	0	0	0	0	0	27	0	4	0	199	773
5:00 PM	0	96	54	0	1	42	0	0	0	0	0	0	25	0	3	0	221	835
5:15 PM	0	84	53	0	2	36	0	0	0	0	0	0	35	0	3	0	213	857
5:30 PM	0	73	46	0	4	51	0	0	0	0	0	0	27	0	2	0	203	836
5:45 PM	0	66	27	0	5	43	0	0	0	0	0	0	27	0	8	0	176	813

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	320	220	0	12	212	0	0	0	0	0	0	124	0	8	0	896
Heavy Trucks	0	8	12		0	8	0		0	0	0		8	0	0		36
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	8		8
Scooters																	

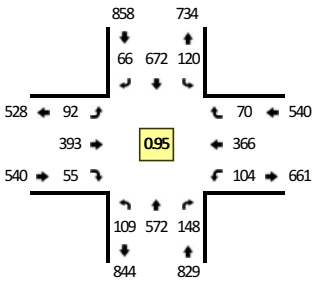
Comments:

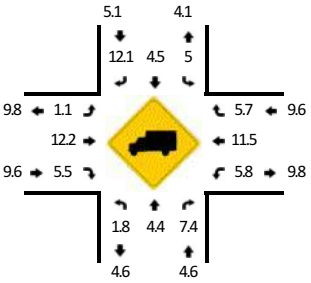
Report generated on 4/29/2024 3:11 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

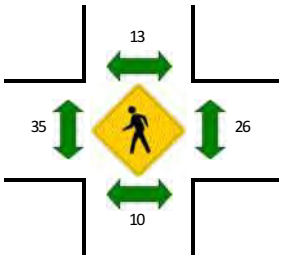
LOCATION: S Broadway -- Stowell Rd | **QC JOB #:** 16559409
CITY/STATE: Santa Maria, CA | **DATE:** Thu, Apr 18 2024

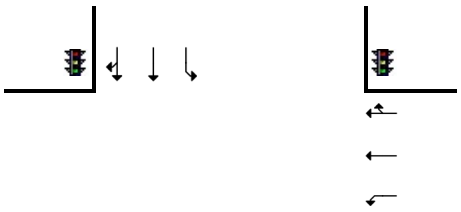
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

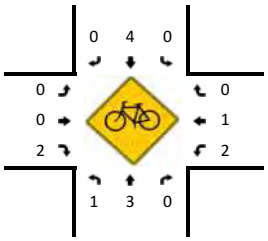


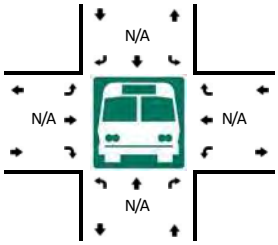


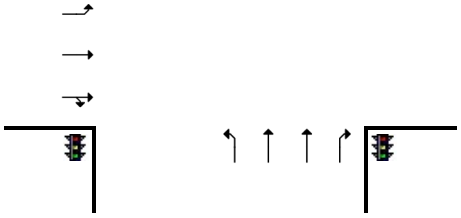
TRUE DATA TO IMPROVE MOBILITY

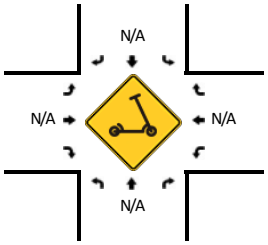












15-Min Count Period Beginning At	S Broadway (Northbound)				S Broadway (Southbound)				Stowell Rd (Eastbound)				Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	19	75	23	1	20	70	11	0	9	83	10	0	15	67	9	0	412	
7:15 AM	14	92	32	3	16	95	14	0	8	81	8	0	14	54	16	0	447	
7:30 AM	15	121	37	2	26	125	21	0	10	110	10	0	26	99	8	0	610	
7:45 AM	20	161	41	2	32	169	15	0	26	101	12	0	33	94	22	0	728	2197
8:00 AM	28	141	34	4	27	184	10	0	27	93	16	0	32	79	26	0	701	2486
8:15 AM	33	149	36	5	35	194	20	0	29	89	17	0	13	94	14	0	728	2767
8:30 AM	16	121	33	2	23	148	12	0	20	82	21	0	23	45	15	0	561	2718
8:45 AM	22	141	36	2	15	148	5	0	18	57	20	0	21	50	9	0	544	2534

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	80	644	164	8	128	676	60	0	104	404	48	0	132	376	88	0	2912
Heavy Trucks	8	32	0		0	40	0		4	40	0		16	32	4		176
Buses																	
Pedestrians		16				0				44				0			60
Bicycles	0	4	0		0	0	0		0	0	0		4	4	0		12
Scooters																	

Comments:

Report generated on 4/29/2024 3:11 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

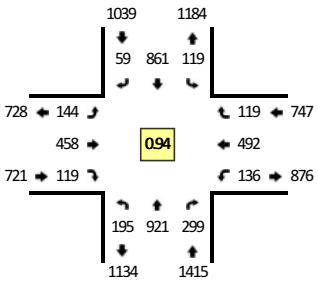
Type of peak hour being reported: Intersection Peak

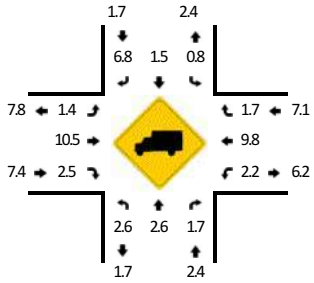
Method for determining peak hour: Total Entering Volume

LOCATION: S Broadway -- Stowell Rd
CITY/STATE: Santa Maria, CA

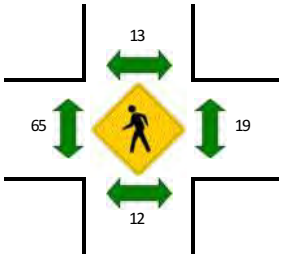
QC JOB #: 16559410
DATE: Thu, Apr 18 2024

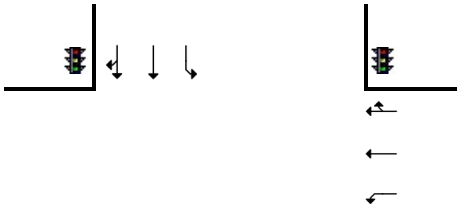
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:15 PM -- 4:30 PM

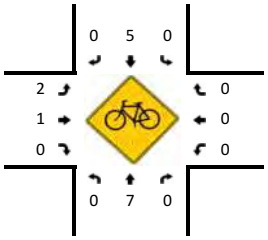


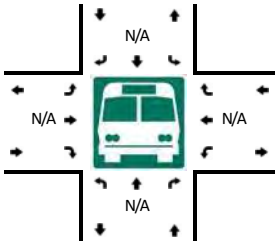


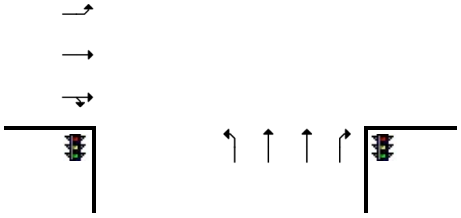
TRUE DATA TO IMPROVE MOBILITY

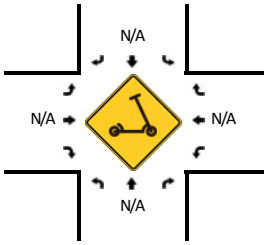












15-Min Count Period Beginning At	S Broadway (Northbound)				S Broadway (Southbound)				Stowell Rd (Eastbound)				Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	47	244	81	3	31	210	16	0	45	94	37	0	33	107	24	0	972	
4:15 PM	43	223	89	4	35	228	16	0	40	141	31	0	39	127	30	0	1046	
4:30 PM	42	235	81	6	32	233	16	0	31	120	31	0	31	115	29	0	1002	
4:45 PM	45	219	48	5	21	190	11	0	28	103	20	0	33	143	36	0	902	3922
5:00 PM	31	247	81	8	31	220	17	0	34	105	25	0	36	98	28	0	961	3911
5:15 PM	31	232	69	7	31	213	13	0	37	110	27	0	43	102	23	0	938	3803
5:30 PM	38	213	64	3	25	196	18	0	29	110	20	0	22	113	26	0	877	3678
5:45 PM	23	187	63	4	21	207	21	0	30	82	28	0	25	77	30	0	798	3574

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	172	892	356	16	140	912	64	0	160	564	124	0	156	508	120	0	4184
Heavy Trucks	0	12	4		0	12	0		0	52	0		4	44	0		128
Buses																	
Pedestrians		16				12				44				8			80
Bicycles	0	12	0		0	8	0		0	0	0		0	0	0		20
Scooters																	

Comments:

Report generated on 4/29/2024 3:11 PM

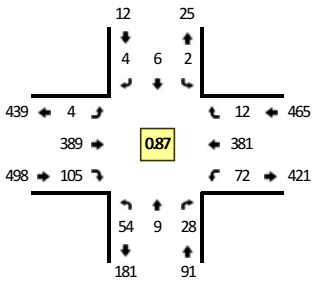
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

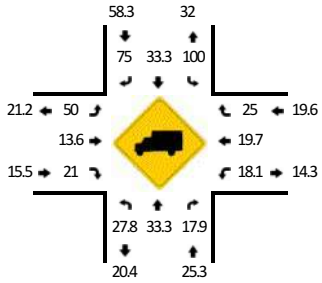
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Main St Produce Dwy/Black Rd -- W Main St
CITY/STATE: Santa Barbara, CA

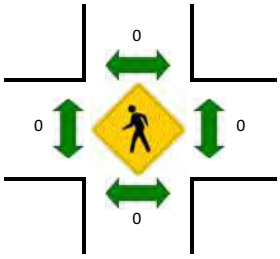
QC JOB #: 16559411
DATE: Thu, Apr 18 2024

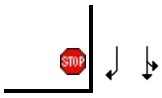
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

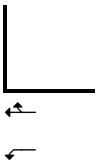


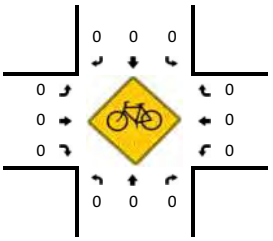


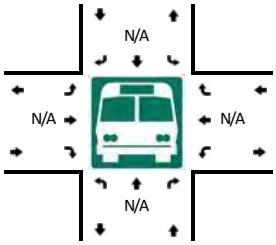
TRUE DATA TO IMPROVE MOBILITY

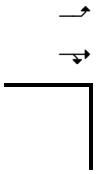


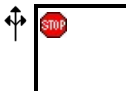


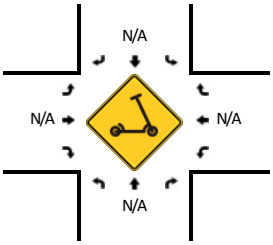












15-Min Count Period Beginning At	Main St Produce Dwy/Black Rd (Northbound)				Main St Produce Dwy/Black Rd (Southbound)				W Main St (Eastbound)				W Main St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	13	2	7	0	0	1	1	0	1	66	22	0	22	95	1	2	233	
7:15 AM	12	3	5	0	0	2	0	0	1	90	26	0	18	101	2	0	260	
7:30 AM	14	2	7	0	0	3	1	0	1	107	29	0	15	84	3	0	266	
7:45 AM	15	2	9	0	2	0	2	0	1	126	28	0	15	101	6	0	307	1066
8:00 AM	12	4	7	0	1	2	4	0	1	63	21	0	16	79	3	0	213	1046
8:15 AM	19	2	9	0	0	4	1	0	3	84	11	0	9	72	2	0	216	1002
8:30 AM	20	1	18	0	2	0	1	0	3	79	20	0	6	59	3	0	212	948
8:45 AM	17	4	9	0	1	0	0	0	2	69	24	0	13	76	6	0	221	862

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	60	8	36	0	8	0	8	0	4	504	112	0	60	404	24	0	1228
Heavy Trucks	20	4	8		8	0	4		0	64	28		12	80	4		232
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

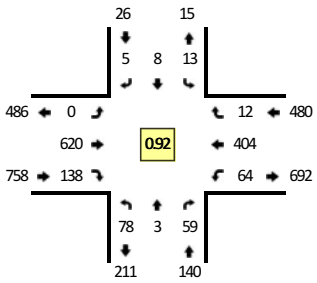
Report generated on 4/29/2024 3:11 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

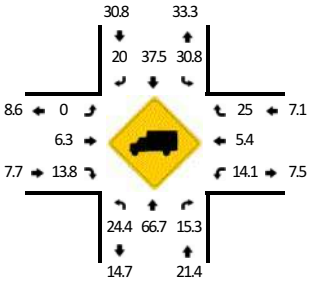
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

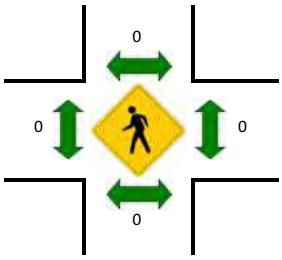
LOCATION: Main St Produce Dwy/Black Rd -- W Main St | **QC JOB #:** 16559412
CITY/STATE: Santa Barbara, CA | **DATE:** Thu, Apr 18 2024

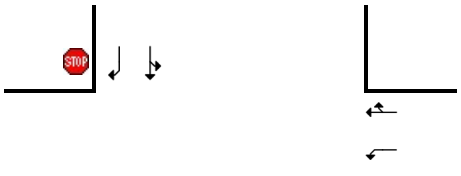
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

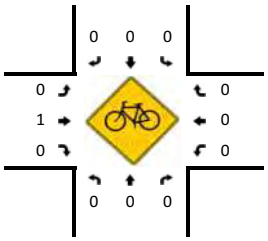


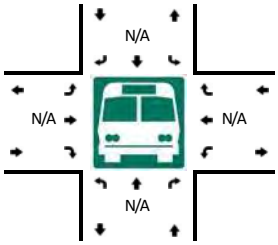




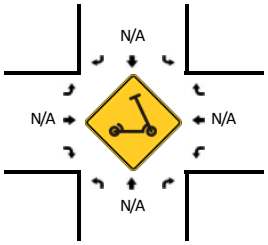












15-Min Count Period Beginning At	Main St Produce Dwy/Black Rd (Northbound)				Main St Produce Dwy/Black Rd (Southbound)				W Main St (Eastbound)				W Main St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	15	2	14	0	1	4	1	0	0	143	55	0	26	96	2	0	359	
4:15 PM	11	0	17	0	1	2	0	0	0	143	32	0	17	110	3	0	336	
4:30 PM	22	0	20	0	4	0	2	0	0	176	27	0	12	113	5	0	381	
4:45 PM	29	1	8	1	7	2	2	0	0	158	24	0	9	85	2	0	328	1404
5:00 PM	24	2	15	0	3	1	1	0	0	138	27	0	7	112	2	0	332	1377
5:15 PM	25	0	8	0	3	2	0	0	0	143	19	0	10	122	1	1	334	1375
5:30 PM	14	2	11	0	0	1	2	0	0	103	11	0	10	116	1	0	271	1265
5:45 PM	12	0	8	0	2	2	0	0	0	110	11	0	6	76	2	1	230	1167

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	88	0	80	0	16	0	8	0	0	704	108	0	48	452	20	0	1524
Heavy Trucks	32	0	28		8	0	0		0	52	20		0	24	8		172
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 4/29/2024 3:11 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: S College Dr -- E Stowell Rd

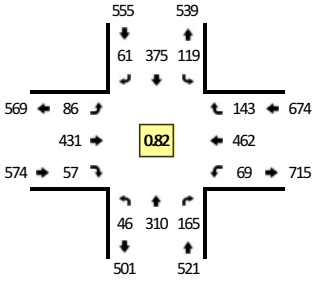
CITY/STATE: Santa Maria, CA

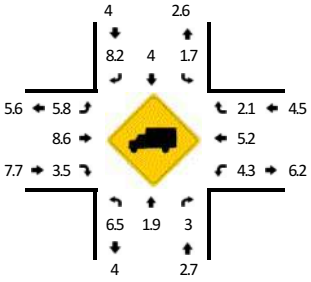
QC JOB #: 16809811

DATE: Wed, Oct 30 2024

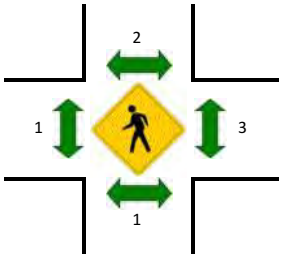
Peak-Hour: 7:25 AM -- 8:25 AM

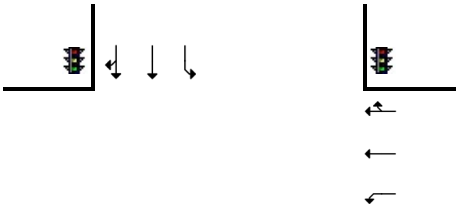
Peak 15-Min: 7:45 AM -- 8:00 AM

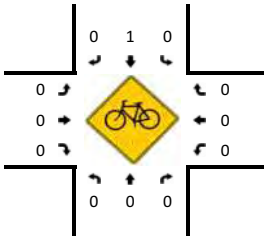


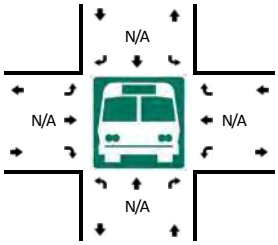


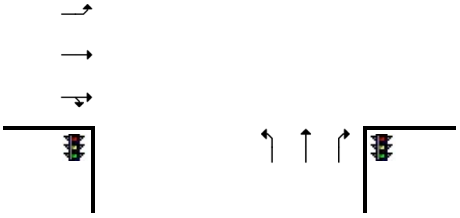
TRUE DATA TO IMPROVE MOBILITY

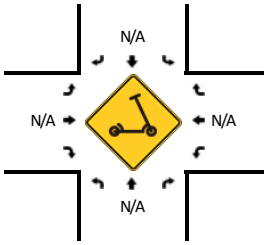












5-Min Count Period Beginning At	S College Dr (Northbound)				S College Dr (Southbound)				E Stowell Rd (Eastbound)				E Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 AM	0	3	0	0	0	3	1	0	0	9	0	0	0	4	0	0	20	
5:05 AM	0	6	0	0	1	1	0	0	0	17	0	0	0	5	0	0	30	
5:10 AM	2	0	2	0	1	1	0	0	1	12	0	0	0	8	0	0	27	
5:15 AM	0	2	6	0	2	5	0	0	0	11	1	0	0	4	0	0	31	
5:20 AM	0	1	1	0	4	6	3	0	1	21	0	0	0	4	0	0	41	
5:25 AM	0	1	3	0	2	6	1	0	0	32	0	0	1	7	1	0	54	
5:30 AM	0	2	2	0	3	6	4	0	2	22	2	0	3	3	2	0	51	
5:35 AM	0	0	2	0	2	8	3	0	0	26	1	0	0	6	1	0	49	
5:40 AM	2	5	4	0	3	12	3	0	0	21	2	0	0	12	0	0	64	
5:45 AM	2	6	6	0	3	9	6	0	4	35	2	0	1	13	1	0	88	
5:50 AM	1	5	3	0	11	15	9	0	1	40	3	0	4	14	0	0	106	
5:55 AM	2	4	6	0	10	16	7	0	3	32	3	0	1	11	0	0	95	656
6:00 AM	4	4	8	0	12	13	3	0	1	41	2	0	4	10	0	0	102	738
6:05 AM	4	4	8	0	10	13	2	0	3	41	1	0	3	10	0	0	99	807
6:10 AM	0	6	8	0	7	12	3	0	1	76	2	0	2	21	1	0	139	919
6:15 AM	3	3	5	0	8	16	8	0	0	55	2	0	0	19	4	0	123	1011
6:20 AM	0	8	11	0	10	14	2	0	4	49	1	0	1	10	2	0	112	1082
6:25 AM	4	10	10	0	14	12	4	0	4	51	1	0	3	10	0	0	123	1151
6:30 AM	2	2	1	0	13	12	4	0	2	48	4	0	1	23	1	0	113	1213
6:35 AM	1	3	9	0	4	21	4	0	1	60	5	0	2	22	1	0	133	1297
6:40 AM	1	8	14	0	8	17	3	0	1	50	3	0	1	19	2	0	127	1360
6:45 AM	0	11	11	0	9	21	5	0	1	42	1	0	1	16	1	0	119	1391
6:50 AM	1	8	3	0	9	15	3	0	1	54	0	0	4	22	3	0	123	1408
6:55 AM	0	8	1	0	9	17	6	0	2	22	2	0	3	21	3	0	94	1407
7:00 AM	2	11	9	0	10	15	2	0	3	41	2	0	1	23	4	0	123	1428
7:05 AM	1	12	7	0	6	16	6	0	3	33	4	0	1	18	5	0	112	1441
7:10 AM	4	4	9	0	7	17	1	0	0	29	4	0	3	28	3	0	109	1411
7:15 AM	2	9	12	0	4	11	6	0	0	32	9	0	4	23	5	0	117	1405
7:20 AM	1	14	10	0	11	21	2	0	10	41	7	0	2	24	3	0	146	1439
7:25 AM	1	10	14	0	11	27	1	0	2	33	7	0	5	29	11	0	151	1467
7:30 AM	5	20	10	0	10	15	6	0	1	49	9	0	3	31	9	0	168	1522
7:35 AM	3	18	16	0	6	29	4	0	8	42	7	0	4	35	11	0	183	1572
7:40 AM	5	28	12	0	6	28	6	0	8	35	0	0	8	50	14	0	200	1645
7:45 AM	4	37	14	0	9	38	3	0	4	40	7	0	4	44	16	0	220	1746
7:50 AM	6	35	14	0	12	31	2	0	13	44	5	0	7	63	10	0	242	1865
7:55 AM	5	35	24	0	8	45	7	0	11	38	8	0	10	43	13	0	247	2018
8:00 AM	5	33	15	0	17	45	7	0	3	28	2	0	7	45	12	0	219	2114
8:05 AM	1	28	12	0	6	28	9	0	10	37	2	0	6	30	17	0	186	2188

5-Min Count Period Beginning At	S College Dr (Northbound)				S College Dr (Southbound)				E Stowell Rd (Eastbound)				E Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:10 AM	4	22	11	0	10	39	5	0	3	29	3	0	4	31	12	0	173	2252
8:15 AM	3	25	13	0	13	31	6	0	13	31	4	0	3	23	10	0	175	2310
8:20 AM	4	19	10	0	11	19	5	0	10	25	3	0	8	38	8	0	160	2324
8:25 AM	2	22	10	0	10	24	6	0	5	33	2	0	4	22	6	0	146	2319
8:30 AM	2	17	8	0	6	20	4	0	8	27	6	0	8	34	4	0	144	2295
8:35 AM	3	22	12	0	5	17	5	0	3	30	11	0	5	20	10	0	143	2255
8:40 AM	3	28	9	0	3	21	2	0	10	31	4	0	3	25	7	0	146	2201
8:45 AM	1	23	9	0	8	26	4	0	8	30	7	0	7	31	10	0	164	2145
8:50 AM	4	26	8	0	3	27	4	0	6	23	7	0	5	31	4	0	148	2051
8:55 AM	2	21	6	0	6	15	3	0	8	29	12	0	3	22	9	0	136	1940
9:00 AM	5	23	15	0	6	18	4	0	4	27	5	0	6	19	5	0	137	1858
9:05 AM	3	16	9	0	5	27	5	0	4	25	6	0	6	20	5	0	131	1803
9:10 AM	3	24	18	0	4	16	2	0	9	22	11	0	3	27	3	0	142	1772
9:15 AM	2	25	11	0	4	13	3	0	9	30	3	0	8	28	3	0	139	1736
9:20 AM	3	20	9	0	6	18	2	0	8	26	1	0	6	23	10	0	132	1708
9:25 AM	2	25	14	0	6	19	5	0	6	34	11	0	5	30	7	0	164	1726
9:30 AM	3	31	17	0	3	24	5	0	5	30	8	0	8	19	7	0	160	1742
9:35 AM	4	26	5	0	5	15	6	0	9	16	7	0	3	13	7	0	116	1715
9:40 AM	5	24	8	0	9	25	1	0	3	36	7	0	0	22	8	0	148	1717
9:45 AM	1	23	6	0	2	19	2	0	5	29	9	0	5	18	7	0	126	1679
9:50 AM	4	18	6	0	5	14	5	0	3	28	14	0	7	37	6	0	147	1678
9:55 AM	7	18	8	0	9	24	4	0	4	25	4	0	4	26	5	0	138	1680
10:00 AM	2	14	7	0	2	19	3	0	5	30	6	0	3	22	6	0	119	1662
10:05 AM	6	19	7	0	5	14	7	0	4	20	4	0	3	27	6	0	122	1653
10:10 AM	4	16	5	0	6	21	4	0	6	33	6	0	4	20	3	0	128	1639
10:15 AM	3	16	7	0	2	28	5	0	5	35	11	0	6	21	7	0	146	1646
10:20 AM	2	28	8	0	8	33	2	0	4	32	13	0	6	24	3	0	163	1677
10:25 AM	1	16	8	0	5	22	3	0	6	34	13	0	6	21	7	0	142	1655
10:30 AM	3	39	12	0	8	25	5	0	2	24	8	0	2	9	7	0	144	1639
10:35 AM	2	19	7	0	3	22	2	0	8	24	5	0	5	30	3	0	130	1653
10:40 AM	4	25	8	0	6	26	0	0	2	25	11	0	12	32	8	0	159	1664
10:45 AM	3	24	10	0	2	32	3	0	6	45	10	0	5	26	14	0	180	1718
10:50 AM	3	37	10	0	9	27	5	0	4	14	7	0	10	26	8	0	160	1731
10:55 AM	3	16	6	0	3	29	4	0	7	35	12	0	7	37	3	0	162	1755

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	60	428	208	0	116	456	48	0	112	488	80	0	84	600	156	0	2836
Heavy Trucks	8	8	12		0	4	0		4	40	8		0	24	8		116
Buses																	
Pedestrians		4				0				0				4			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/7/2024 4:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: S College Dr -- E Stowell Rd

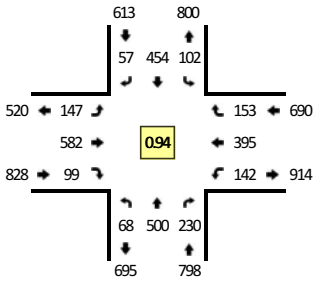
QC JOB #: 16809812

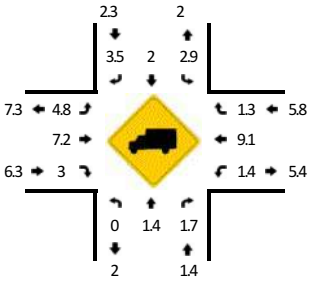
CITY/STATE: Santa Maria, CA

DATE: Tue, Oct 29 2024

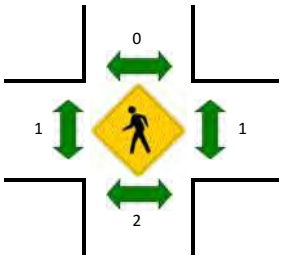
Peak-Hour: 4:25 PM -- 5:25 PM

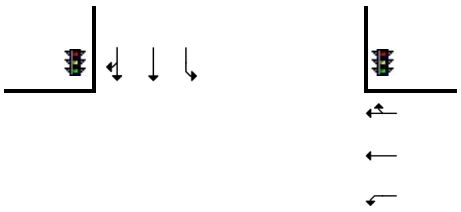
Peak 15-Min: 5:05 PM -- 5:20 PM

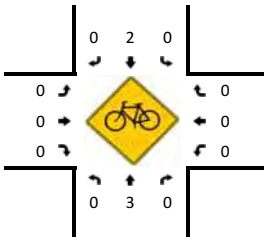


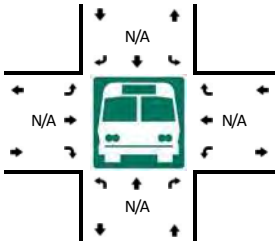


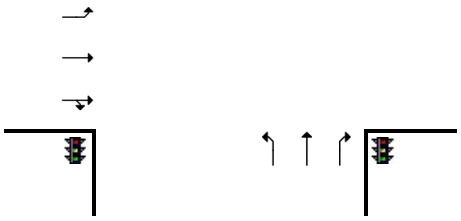
TRUE DATA TO IMPROVE MOBILITY

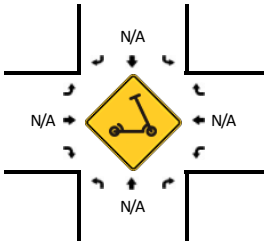












5-Min Count Period Beginning At	S College Dr (Northbound)				S College Dr (Southbound)				E Stowell Rd (Eastbound)				E Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	3	25	14	0	5	20	4	0	5	36	9	0	8	35	9	0	173	
2:05 PM	7	22	7	0	8	28	6	0	8	42	5	0	7	24	16	0	180	
2:10 PM	3	37	6	0	3	14	9	0	7	30	6	0	7	42	10	0	174	
2:15 PM	2	27	9	0	1	34	5	0	8	33	8	0	6	31	8	0	172	
2:20 PM	8	26	5	0	5	21	5	0	5	38	7	0	8	24	9	0	161	
2:25 PM	1	27	4	0	5	23	1	0	6	42	7	0	8	29	13	0	166	
2:30 PM	8	24	12	0	3	34	1	0	10	25	12	0	6	17	12	0	164	
2:35 PM	6	23	9	0	3	24	6	0	15	52	5	0	9	35	8	0	195	
2:40 PM	1	31	8	0	4	33	7	0	13	53	14	0	8	45	18	0	235	
2:45 PM	3	33	10	0	8	28	6	0	8	41	8	0	8	35	10	0	198	
2:50 PM	4	30	11	0	12	32	6	0	16	52	10	0	8	31	11	0	223	
2:55 PM	7	35	15	0	11	33	6	0	8	39	3	0	8	51	14	0	230	2271
3:00 PM	4	41	7	0	7	18	4	0	12	54	4	0	14	39	9	0	213	2311
3:05 PM	1	25	17	0	11	35	2	0	9	49	7	0	12	33	10	0	211	2342
3:10 PM	2	29	7	0	9	37	3	0	12	43	8	0	12	24	12	0	198	2366
3:15 PM	5	33	19	0	8	37	10	0	12	37	11	0	13	30	8	0	223	2417
3:20 PM	7	30	16	0	9	19	1	0	10	43	7	0	6	33	7	0	188	2444
3:25 PM	11	38	14	0	13	26	1	0	10	34	4	0	6	27	14	0	198	2476
3:30 PM	7	34	17	0	9	26	5	0	6	49	12	0	6	28	15	0	214	2526
3:35 PM	11	49	15	0	5	35	6	0	6	44	6	0	6	37	14	0	234	2565
3:40 PM	3	33	17	0	6	24	2	0	17	44	6	0	17	42	12	0	223	2553
3:45 PM	1	34	16	0	9	37	4	0	2	42	7	0	9	53	12	0	226	2581
3:50 PM	3	35	7	0	6	29	2	0	11	37	6	0	8	41	19	0	204	2562
3:55 PM	5	35	20	0	12	35	5	0	6	36	7	0	10	34	16	0	221	2553
4:00 PM	7	24	14	0	5	36	5	0	10	51	10	0	10	46	9	0	227	2567
4:05 PM	7	37	14	0	5	37	11	0	11	42	13	0	12	35	18	0	242	2598
4:10 PM	10	40	16	0	10	35	4	0	7	56	7	0	12	19	22	0	238	2638
4:15 PM	2	34	18	0	9	36	7	0	15	26	14	0	12	35	19	0	227	2642
4:20 PM	7	30	12	0	9	40	5	0	11	42	13	0	3	35	17	0	224	2678
4:25 PM	6	36	16	0	12	33	5	0	5	48	5	0	17	39	11	0	233	2713
4:30 PM	6	31	19	0	8	38	3	0	14	43	6	0	9	35	18	0	230	2729
4:35 PM	5	40	23	0	17	49	7	0	11	48	6	0	19	34	11	0	270	2765
4:40 PM	4	49	23	0	8	41	4	0	6	47	8	0	11	41	13	0	255	2797
4:45 PM	4	47	15	0	12	39	4	0	13	48	9	0	14	33	8	0	246	2817
4:50 PM	5	35	10	0	4	18	5	0	19	48	13	0	10	31	9	0	207	2820
4:55 PM	5	49	25	0	4	46	5	0	12	39	5	0	18	32	9	0	249	2848
5:00 PM	4	45	15	0	8	30	3	0	12	50	15	0	6	13	14	0	215	2836
5:05 PM	8	45	28	0	12	47	5	0	7	57	9	0	9	34	12	0	273	2867

5-Min Count Period Beginning At	S College Dr (Northbound)				S College Dr (Southbound)				E Stowell Rd (Eastbound)				E Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:10 PM	10	35	21	0	7	31	4	0	21	67	9	0	8	36	23	0	272	2901
5:15 PM	3	38	15	0	7	43	3	0	17	50	6	0	13	29	11	0	235	2909
5:20 PM	8	50	20	0	3	39	9	0	10	37	8	0	8	38	14	0	244	2929
5:25 PM	4	35	15	0	6	26	5	0	8	49	5	0	6	28	14	0	201	2897
5:30 PM	4	46	12	0	7	33	6	0	7	40	10	0	4	27	16	0	212	2879
5:35 PM	8	33	14	0	12	27	7	0	12	46	10	0	7	20	15	0	211	2820
5:40 PM	8	36	11	0	7	35	6	0	14	50	3	0	5	38	11	0	224	2789
5:45 PM	7	35	9	0	11	24	8	0	8	33	5	0	7	34	9	0	190	2733
5:50 PM	4	35	17	0	4	22	1	0	12	34	5	0	7	29	14	0	184	2710
5:55 PM	6	46	4	0	4	24	2	0	1	34	6	0	0	28	18	0	173	2634

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	84	472	256	0	104	484	48	0	180	696	96	0	120	396	184	0	3120
Heavy Trucks	0	8	0		4	8	4		8	32	4		0	32	4		104
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	4	0		0	0	0		0	0	0		0	0	0		4
Scooters																	

Comments:

Report generated on 11/7/2024 4:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: S Bradley Rd -- E Stowell Rd

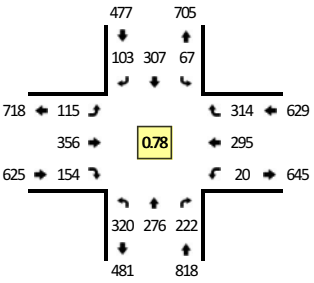
CITY/STATE: Santa Maria, CA

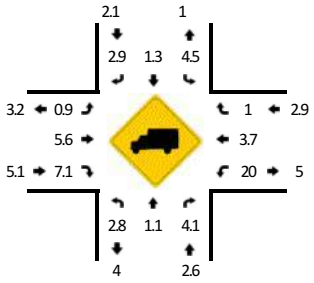
QC JOB #: 16809813

DATE: Wed, Oct 30 2024

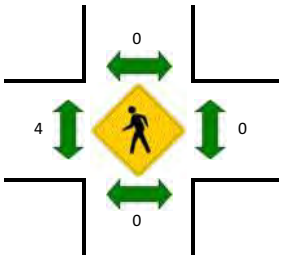
Peak-Hour: 7:25 AM -- 8:25 AM

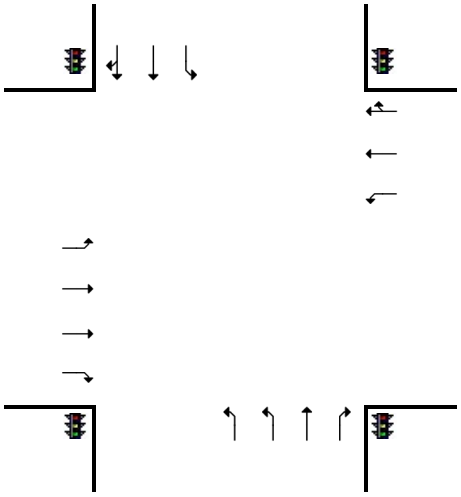
Peak 15-Min: 7:45 AM -- 8:00 AM

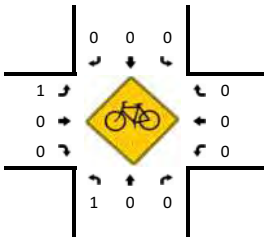


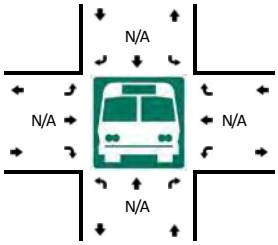


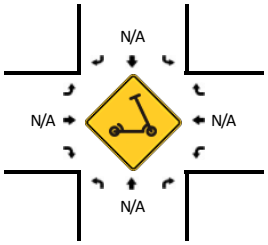
TRUE DATA TO IMPROVE MOBILITY











5-Min Count Period Beginning At	S Bradley Rd (Northbound)				S Bradley Rd (Southbound)				E Stowell Rd (Eastbound)				E Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 AM	4	1	3	0	2	1	0	0	0	6	4	0	1	0	0	0	22	
5:05 AM	3	1	6	0	1	2	0	0	0	11	5	0	0	2	0	0	31	
5:10 AM	0	0	3	0	0	4	2	0	0	9	4	0	0	5	0	0	27	
5:15 AM	3	1	6	0	2	4	0	0	1	12	4	0	0	2	0	0	35	
5:20 AM	4	1	3	0	0	3	0	0	0	17	7	0	0	0	1	0	36	
5:25 AM	6	3	8	0	1	9	3	0	1	17	3	0	1	0	0	0	52	
5:30 AM	5	1	9	0	1	10	0	0	1	11	5	0	1	1	0	0	45	
5:35 AM	6	2	9	0	2	7	2	0	2	15	6	0	1	1	0	0	53	
5:40 AM	8	1	7	0	5	6	0	0	2	18	4	0	0	2	1	0	54	
5:45 AM	6	2	12	0	2	11	4	0	1	28	6	0	0	3	1	0	76	
5:50 AM	10	2	7	0	4	8	7	0	1	25	7	0	0	3	1	0	75	
5:55 AM	6	2	10	0	3	10	3	0	2	25	16	0	1	5	1	0	84	590
6:00 AM	8	0	11	0	8	11	6	0	1	35	18	0	0	7	0	0	105	673
6:05 AM	4	2	13	0	5	14	7	0	2	34	18	0	0	4	2	0	105	747
6:10 AM	12	3	17	0	8	19	7	0	1	35	22	0	2	6	0	0	132	852
6:15 AM	10	3	17	0	9	21	1	0	0	49	24	0	1	10	0	0	145	962
6:20 AM	7	6	19	0	6	15	4	0	4	35	28	0	0	3	1	0	128	1054
6:25 AM	5	4	13	0	11	9	5	0	2	48	16	0	1	9	1	0	124	1126
6:30 AM	6	5	27	0	8	16	5	0	4	24	22	0	1	6	3	0	127	1208
6:35 AM	14	4	20	0	4	14	5	0	7	44	15	0	0	10	2	0	139	1294
6:40 AM	14	2	15	0	3	9	4	0	10	37	11	0	0	5	2	0	112	1352
6:45 AM	12	4	20	0	6	17	4	0	3	31	16	0	4	6	4	0	127	1403
6:50 AM	10	8	16	0	4	12	8	0	4	42	17	0	0	11	3	0	135	1463
6:55 AM	15	7	12	0	3	10	7	0	4	17	11	0	3	9	2	0	100	1479
7:00 AM	14	5	19	0	6	11	4	0	2	38	9	0	1	6	5	0	120	1494
7:05 AM	13	7	18	0	4	11	2	0	4	31	18	0	0	9	4	0	121	1510
7:10 AM	13	9	20	0	5	18	8	0	5	27	6	0	1	11	1	0	124	1502
7:15 AM	11	9	17	0	2	7	9	0	1	27	10	0	1	16	4	0	114	1471
7:20 AM	11	8	11	0	7	17	7	0	4	41	13	0	0	14	5	0	138	1481
7:25 AM	22	10	18	0	6	22	5	0	3	34	14	0	2	20	8	0	164	1521
7:30 AM	27	10	23	0	6	21	5	0	7	51	19	0	2	17	7	0	195	1589
7:35 AM	33	21	14	0	8	20	11	0	7	30	15	0	1	23	9	0	192	1642
7:40 AM	29	24	29	0	4	29	10	0	9	29	14	0	0	21	32	0	230	1760
7:45 AM	32	31	22	0	6	24	10	0	13	26	17	0	4	32	37	0	254	1887
7:50 AM	42	25	20	0	8	30	13	0	9	34	5	0	3	38	57	0	284	2036
7:55 AM	32	56	15	0	2	30	6	0	12	29	13	0	3	33	52	0	283	2219
8:00 AM	19	29	14	0	6	31	6	0	18	24	9	0	2	26	28	0	212	2311
8:05 AM	20	25	18	0	2	27	11	0	6	27	9	0	0	33	35	0	213	2403

5-Min Count Period Beginning At	S Bradley Rd (Northbound)				S Bradley Rd (Southbound)				E Stowell Rd (Eastbound)				E Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:10 AM	22	25	14	0	5	27	7	0	12	26	16	0	2	16	22	0	194	2473
8:15 AM	22	10	15	0	9	24	13	0	11	24	13	0	1	19	11	0	172	2531
8:20 AM	20	10	20	0	5	22	6	0	8	22	10	0	0	17	16	0	156	2549
8:25 AM	12	15	15	0	5	17	9	0	6	24	15	0	3	11	10	0	142	2527
8:30 AM	21	14	11	0	2	14	12	0	4	23	9	0	4	22	8	0	144	2476
8:35 AM	11	10	10	0	6	17	11	0	7	27	9	0	6	18	17	0	149	2433
8:40 AM	12	13	21	0	6	21	3	0	7	26	12	0	3	23	14	0	161	2364
8:45 AM	18	8	17	0	7	14	11	0	6	16	11	0	1	15	13	0	137	2247
8:50 AM	20	15	14	0	2	19	6	0	6	20	9	0	5	20	15	0	151	2114
8:55 AM	20	11	18	0	4	11	8	0	4	20	13	0	3	13	12	0	137	1968
9:00 AM	10	11	6	0	9	18	12	0	7	26	9	0	3	14	6	0	131	1887
9:05 AM	13	14	17	0	5	25	13	0	12	23	9	0	1	13	20	0	165	1839
9:10 AM	13	10	11	0	6	20	11	0	12	24	5	0	0	24	28	0	164	1809
9:15 AM	9	17	14	0	4	19	10	0	9	17	12	0	0	22	39	0	172	1809
9:20 AM	14	23	12	0	10	29	9	0	8	17	9	0	3	14	51	0	199	1852
9:25 AM	13	22	14	0	8	40	8	0	6	17	11	0	2	14	32	0	187	1897
9:30 AM	11	13	13	0	6	30	9	0	10	22	15	0	2	11	18	0	160	1913
9:35 AM	13	14	15	0	5	24	9	0	5	15	7	0	0	12	16	0	135	1899
9:40 AM	9	9	18	0	3	21	6	0	6	20	22	0	3	16	6	0	139	1877
9:45 AM	12	8	15	0	5	15	3	0	3	13	15	0	3	15	8	0	115	1855
9:50 AM	15	13	14	0	2	27	15	0	9	20	12	0	4	17	7	0	155	1859
9:55 AM	15	8	20	0	2	19	6	0	4	20	14	0	1	10	9	0	128	1850
10:00 AM	15	14	11	0	1	23	6	0	7	16	7	0	1	22	10	0	133	1852
10:05 AM	10	12	17	0	3	23	4	0	6	8	14	0	4	9	12	0	122	1809
10:10 AM	14	15	16	0	5	22	6	0	5	16	12	0	1	10	6	0	128	1773
10:15 AM	14	5	12	0	2	15	7	0	12	22	19	0	2	14	13	0	137	1738
10:20 AM	10	14	17	0	6	14	7	0	8	24	14	0	1	18	6	0	139	1678
10:25 AM	9	12	13	0	5	22	11	0	8	23	17	0	2	14	10	0	146	1637
10:30 AM	9	12	22	0	6	24	6	0	0	23	13	0	1	17	8	0	141	1618
10:35 AM	13	21	15	0	6	37	9	0	2	20	6	0	2	8	5	0	144	1627
10:40 AM	21	19	18	0	4	28	13	0	7	19	10	0	0	12	9	0	160	1648
10:45 AM	15	22	21	0	2	35	12	0	8	17	15	0	6	17	21	0	191	1724
10:50 AM	16	14	13	0	5	38	15	0	7	15	16	0	4	12	17	0	172	1741
10:55 AM	16	20	28	0	9	36	17	0	8	15	14	0	2	13	11	0	189	1802

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	424	448	228	0	64	336	116	0	136	356	140	0	40	412	584	0	3284
Heavy Trucks	4	4	8		0	0	0		0	28	0		4	24	8		80
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/7/2024 4:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: S Bradley Rd -- E Stowell Rd

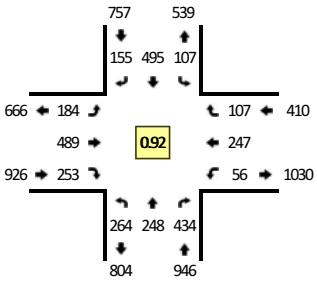
CITY/STATE: Santa Maria, CA

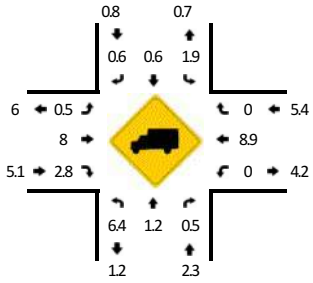
QC JOB #: 16809814

DATE: Tue, Oct 29 2024

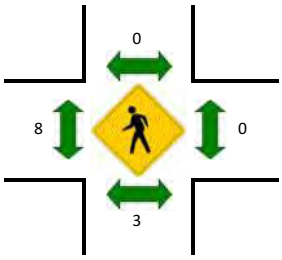
Peak-Hour: 4:25 PM -- 5:25 PM

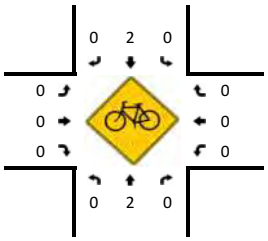
Peak 15-Min: 5:05 PM -- 5:20 PM

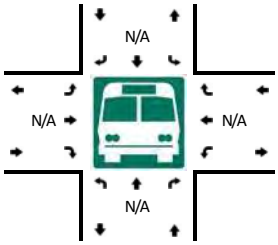


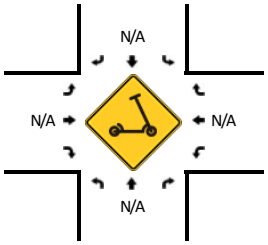


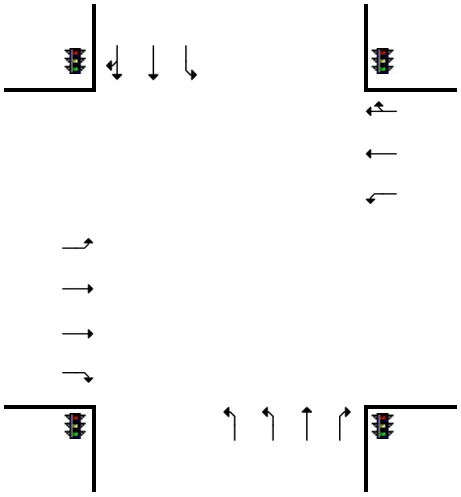
TRUE DATA TO IMPROVE MOBILITY











5-Min Count Period Beginning At	S Bradley Rd (Northbound)				S Bradley Rd (Southbound)				E Stowell Rd (Eastbound)				E Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	16	20	24	0	8	41	10	0	18	25	15	0	6	12	14	0	209	
2:05 PM	19	24	31	0	10	33	15	0	13	30	17	0	4	16	7	0	219	
2:10 PM	23	18	34	0	10	53	20	0	6	21	9	0	6	16	6	0	222	
2:15 PM	13	24	29	0	7	38	13	0	9	20	14	0	4	17	9	0	197	
2:20 PM	18	19	35	0	6	35	15	0	9	24	14	0	8	11	4	0	198	
2:25 PM	26	22	33	0	5	21	11	0	14	30	15	0	4	19	6	0	206	
2:30 PM	14	13	29	0	3	29	6	0	15	23	9	0	5	20	7	0	173	
2:35 PM	15	11	28	0	8	28	14	0	3	35	21	0	3	30	3	0	199	
2:40 PM	25	22	21	0	6	21	7	0	11	39	24	0	9	30	7	0	222	
2:45 PM	20	27	33	0	10	29	8	0	7	26	13	0	3	30	5	0	211	
2:50 PM	29	12	34	0	6	29	8	0	10	32	23	0	8	32	5	0	228	
2:55 PM	28	12	23	0	3	35	8	0	19	38	22	0	5	35	7	0	235	2519
3:00 PM	14	19	42	0	9	34	18	0	16	33	12	0	4	23	1	0	225	2535
3:05 PM	17	24	38	0	5	58	15	0	10	32	18	0	5	24	12	0	258	2574
3:10 PM	20	22	29	0	6	51	15	0	12	48	26	0	9	17	7	0	262	2614
3:15 PM	20	20	40	0	12	40	13	0	11	33	25	0	4	19	5	0	242	2659
3:20 PM	24	22	32	0	11	46	9	0	8	32	19	0	8	22	7	0	240	2701
3:25 PM	23	9	24	0	8	32	11	0	12	31	26	0	12	24	15	0	227	2722
3:30 PM	17	24	32	0	9	40	6	0	7	35	13	0	9	26	14	0	232	2781
3:35 PM	21	17	36	0	10	38	12	0	17	39	14	0	3	35	9	0	251	2833
3:40 PM	29	18	37	0	5	43	9	0	18	41	17	0	8	39	8	0	272	2883
3:45 PM	23	28	33	0	10	42	17	0	15	22	17	0	5	39	7	0	258	2930
3:50 PM	25	17	28	0	6	39	11	0	11	35	10	0	9	28	22	0	241	2943
3:55 PM	21	22	26	0	5	29	13	0	16	32	12	0	7	22	8	0	213	2921
4:00 PM	31	16	29	0	9	34	9	0	7	36	16	0	7	43	9	0	246	2942
4:05 PM	22	23	30	0	10	40	13	0	13	29	16	0	5	31	12	0	244	2928
4:10 PM	24	21	29	0	10	33	15	0	6	37	20	0	4	20	12	0	231	2897
4:15 PM	21	21	26	0	7	30	8	0	18	48	18	0	7	32	8	0	244	2899
4:20 PM	22	18	31	0	11	42	8	0	14	40	18	0	7	21	6	0	238	2897
4:25 PM	18	22	45	0	6	52	19	0	14	36	11	0	4	21	6	0	254	2924
4:30 PM	13	18	21	0	6	39	15	0	14	41	19	0	5	21	11	0	223	2915
4:35 PM	26	16	35	0	12	43	18	0	15	36	22	0	6	22	8	0	259	2923
4:40 PM	23	24	37	0	13	46	13	0	12	56	25	0	6	23	7	0	285	2936
4:45 PM	27	20	33	0	5	34	15	0	15	42	19	0	4	20	11	0	245	2923
4:50 PM	17	23	29	0	14	36	11	0	13	34	17	0	3	25	12	0	234	2916
4:55 PM	29	19	33	0	9	39	10	0	17	36	25	0	2	17	10	0	246	2949
5:00 PM	12	18	34	0	10	47	11	0	14	24	23	0	11	5	5	0	214	2917
5:05 PM	27	23	44	0	6	44	14	0	16	42	29	0	5	17	7	0	274	2947

5-Min Count Period Beginning At	S Bradley Rd (Northbound)				S Bradley Rd (Southbound)				E Stowell Rd (Eastbound)				E Stowell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:10 PM	36	20	38	0	12	38	10	0	10	60	27	0	2	27	7	0	287	3003
5:15 PM	21	22	40	0	7	38	10	0	25	50	17	0	3	22	7	0	262	3021
5:20 PM	15	23	45	0	7	39	9	0	19	32	19	0	5	27	16	0	256	3039
5:25 PM	22	21	31	0	6	39	6	0	10	37	17	0	6	7	13	0	215	3000
5:30 PM	32	24	35	0	11	36	5	0	11	30	19	0	5	21	8	0	237	3014
5:35 PM	24	21	27	0	10	23	13	0	16	35	14	0	11	20	8	0	222	2977
5:40 PM	14	28	45	0	4	33	13	0	15	30	9	0	6	24	6	0	227	2919
5:45 PM	29	20	39	0	9	24	10	0	7	47	16	0	10	15	9	0	235	2909
5:50 PM	22	22	22	0	10	23	8	0	9	37	15	0	1	21	13	0	203	2878
5:55 PM	22	23	28	0	13	26	7	0	10	32	11	0	7	29	20	0	228	2860

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	336	260	488	0	100	480	136	0	204	608	292	0	40	264	84	0	3292
Heavy Trucks	4	0	0		0	4	0		0	28	8		0	28	0		72
Buses																	
Pedestrians		0				0				12				0			12
Bicycles	0	4	0		0	4	0		0	0	0		0	0	0		8
Scooters																	

Comments:

Report generated on 11/7/2024 4:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: S Bradley Rd -- Columbia Dr/US 101 SB Ramps

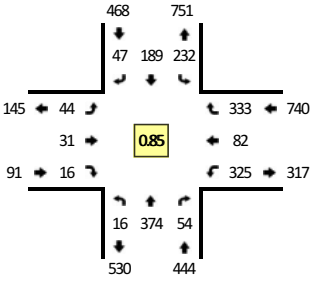
QC JOB #: 16809815

CITY/STATE: Santa Maria, CA

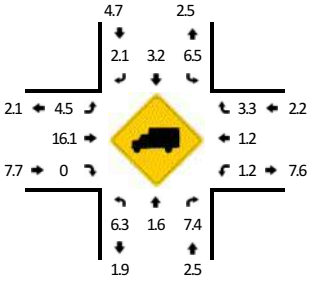
DATE: Wed, Oct 30 2024

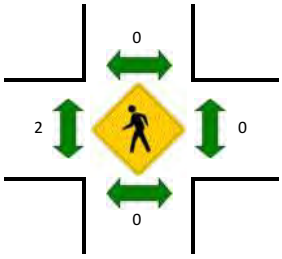
Peak-Hour: 7:25 AM -- 8:25 AM

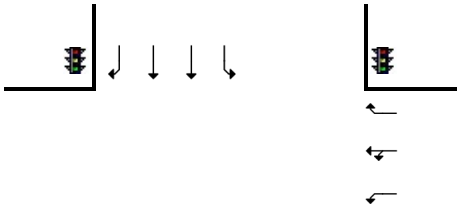
Peak 15-Min: 7:45 AM -- 8:00 AM

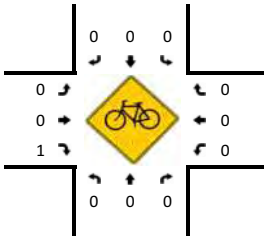


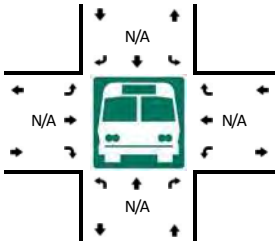


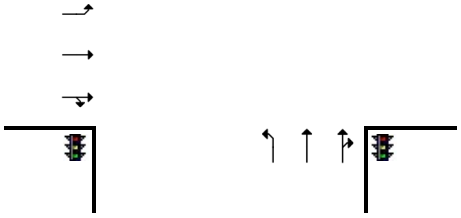


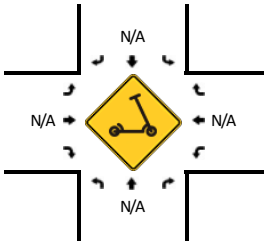












5-Min Count Period Beginning At	S Bradley Rd (Northbound)				S Bradley Rd (Southbound)				Columbia Dr/US 101 SB Ramps (Eastbound)				Columbia Dr/US 101 SB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 AM	0	2	0	0	8	2	1	0	0	1	0	0	2	0	6	0	22	
5:05 AM	0	5	0	0	5	1	0	0	1	0	0	0	5	2	3	0	22	
5:10 AM	2	3	0	0	4	2	1	0	0	0	0	0	4	1	0	0	17	
5:15 AM	0	6	0	0	4	3	2	0	0	0	0	0	4	0	4	0	23	
5:20 AM	1	5	0	0	8	2	0	0	0	1	0	0	7	1	10	0	35	
5:25 AM	1	4	0	0	10	5	2	0	3	0	0	0	6	1	8	0	40	
5:30 AM	0	8	2	0	12	1	2	0	3	1	0	0	3	3	6	0	41	
5:35 AM	1	10	1	0	11	4	0	0	0	2	0	0	7	3	6	0	45	
5:40 AM	0	3	4	0	14	6	0	0	2	0	0	0	7	6	10	0	52	
5:45 AM	2	14	3	0	10	4	3	0	0	2	0	0	12	5	5	0	60	
5:50 AM	0	10	4	0	18	3	0	0	3	0	1	0	10	0	11	0	60	
5:55 AM	0	11	2	0	18	5	3	0	0	1	0	0	19	6	12	0	77	494
6:00 AM	3	7	1	0	21	4	0	0	1	1	1	0	8	2	8	0	57	529
6:05 AM	0	16	1	0	32	7	0	0	0	2	0	0	7	2	5	0	72	579
6:10 AM	0	18	1	0	23	7	1	0	3	2	0	0	6	1	9	0	71	633
6:15 AM	1	19	1	0	38	6	0	0	0	2	0	0	7	5	16	0	95	705
6:20 AM	0	14	4	0	39	9	2	0	4	5	0	0	17	3	16	0	113	783
6:25 AM	0	24	4	0	26	1	0	0	2	1	1	0	15	5	5	0	84	827
6:30 AM	1	26	2	0	37	4	2	0	1	4	0	0	14	1	9	0	101	887
6:35 AM	2	15	5	0	17	5	3	0	0	0	0	0	13	2	20	0	82	924
6:40 AM	1	6	2	0	19	6	5	0	5	3	0	0	14	2	13	0	76	948
6:45 AM	2	21	2	0	21	7	5	0	0	3	1	0	11	4	15	0	92	980
6:50 AM	2	17	1	0	21	6	3	0	4	1	1	0	19	1	16	0	92	1012
6:55 AM	1	18	6	0	10	9	3	0	0	1	1	0	22	2	9	0	82	1017
7:00 AM	1	22	2	0	17	2	0	0	4	0	0	0	20	5	11	0	84	1044
7:05 AM	1	24	4	0	20	8	2	0	2	2	0	0	18	5	10	0	96	1068
7:10 AM	1	26	8	0	13	7	0	0	5	1	0	0	19	5	9	0	94	1091
7:15 AM	2	22	6	0	14	6	1	0	0	0	0	0	22	8	9	0	90	1086
7:20 AM	1	22	4	0	16	11	3	0	1	3	1	0	14	3	10	0	89	1062
7:25 AM	3	31	6	0	17	13	5	0	3	1	0	0	26	5	19	0	129	1107
7:30 AM	0	26	5	0	23	13	5	0	2	2	1	0	40	7	16	0	140	1146
7:35 AM	3	32	6	0	19	10	4	0	6	3	3	0	25	6	28	0	145	1209
7:40 AM	1	50	3	0	26	13	4	0	3	6	2	0	24	8	26	0	166	1299
7:45 AM	1	25	5	0	15	26	5	0	10	3	1	0	32	6	41	0	170	1377
7:50 AM	1	25	1	0	12	15	4	0	4	2	1	0	35	11	52	0	163	1448
7:55 AM	2	43	5	0	29	20	0	0	5	4	1	0	24	6	40	0	179	1545
8:00 AM	1	26	2	0	15	15	3	0	2	1	0	0	40	9	28	0	142	1603
8:05 AM	0	29	0	0	18	20	5	0	1	0	0	0	18	6	27	0	124	1631

5-Min Count Period Beginning At	S Bradley Rd (Northbound)				S Bradley Rd (Southbound)				Columbia Dr/US 101 SB Ramps (Eastbound)				Columbia Dr/US 101 SB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:10 AM	2	34	7	0	14	20	5	0	2	3	1	0	17	10	21	0	136	1673
8:15 AM	2	30	5	0	22	11	4	0	3	5	2	0	16	4	17	0	121	1704
8:20 AM	0	23	9	0	22	13	3	0	3	1	4	0	28	4	18	0	128	1743
8:25 AM	6	27	2	0	16	11	5	0	3	2	3	0	16	7	16	0	114	1728
8:30 AM	2	27	6	0	8	15	3	0	2	4	3	0	18	5	9	0	102	1690
8:35 AM	1	31	3	0	4	18	5	0	2	2	3	0	19	4	7	0	99	1644
8:40 AM	5	22	1	0	11	12	8	0	6	2	0	0	22	6	12	0	107	1585
8:45 AM	3	29	4	0	10	10	3	0	6	2	0	0	17	8	14	0	106	1521
8:50 AM	3	23	6	0	13	11	9	0	2	2	1	0	23	14	24	0	131	1489
8:55 AM	8	29	4	0	8	15	5	0	7	4	1	0	23	9	11	0	124	1434
9:00 AM	4	16	5	0	8	8	8	0	1	0	3	0	19	4	9	0	85	1377
9:05 AM	4	25	2	0	10	19	5	0	3	2	2	0	13	6	10	0	101	1354
9:10 AM	6	17	2	0	12	15	2	0	7	3	1	0	24	2	17	0	108	1326
9:15 AM	4	20	3	0	13	14	1	0	7	3	3	0	12	2	14	0	96	1301
9:20 AM	9	28	1	0	14	18	6	0	3	2	3	0	17	7	15	0	123	1296
9:25 AM	5	25	5	0	19	22	5	0	4	7	4	0	16	2	17	0	131	1313
9:30 AM	5	16	5	0	19	21	9	0	6	3	6	0	18	3	11	0	122	1333
9:35 AM	2	21	4	0	6	22	8	0	10	2	2	0	22	6	10	0	115	1349
9:40 AM	5	23	3	0	13	19	8	0	3	3	7	0	19	1	6	0	110	1352
9:45 AM	5	23	2	0	11	19	4	0	6	0	2	0	20	6	8	0	106	1352
9:50 AM	5	19	4	0	8	10	5	0	4	3	3	0	35	7	14	0	117	1338
9:55 AM	7	32	5	0	15	26	2	0	5	1	5	0	19	4	11	0	132	1346
10:00 AM	8	29	2	0	8	17	2	0	6	2	7	0	18	3	8	0	110	1371
10:05 AM	7	17	1	0	17	15	7	0	4	2	3	0	28	4	10	0	115	1385
10:10 AM	1	35	4	0	8	22	5	0	6	2	5	0	26	6	8	0	128	1405
10:15 AM	6	18	7	0	14	14	5	0	3	6	9	0	23	10	4	0	119	1428
10:20 AM	4	28	5	0	11	11	9	0	7	2	4	0	22	8	8	0	119	1424
10:25 AM	6	20	5	0	15	18	5	0	3	3	2	0	29	2	8	0	116	1409
10:30 AM	4	35	7	0	7	17	1	0	10	10	3	0	25	4	11	0	134	1421
10:35 AM	4	30	7	0	20	34	3	0	5	5	4	0	21	4	10	0	147	1453
10:40 AM	8	35	12	0	8	26	2	0	5	5	1	0	29	3	14	0	148	1491
10:45 AM	11	42	3	0	10	25	3	0	5	2	4	0	23	4	13	0	145	1530
10:50 AM	8	36	6	0	17	39	7	0	2	5	2	0	26	5	11	0	164	1577
10:55 AM	4	38	10	0	27	24	4	0	9	4	2	0	21	3	11	0	157	1602

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	372	44	0	224	244	36	0	76	36	12	0	364	92	532	0	2048
Heavy Trucks	4	0	0		12	8	0		4	16	0		8	0	8		60
Buses																	
Pedestrians		0				0				4				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/7/2024 4:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: S Bradley Rd -- Columbia Dr/US 101 SB Ramps

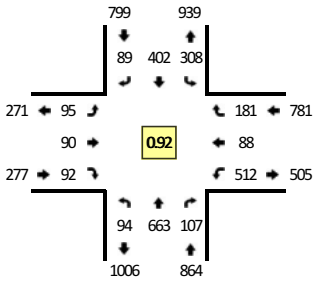
CITY/STATE: Santa Maria, CA

QC JOB #: 16809816

DATE: Tue, Oct 29 2024

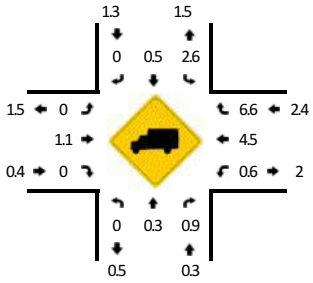
Peak-Hour: 4:30 PM -- 5:30 PM

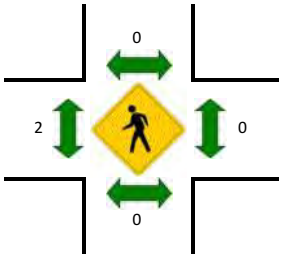
Peak 15-Min: 5:05 PM -- 5:20 PM

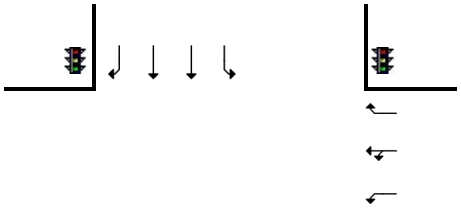


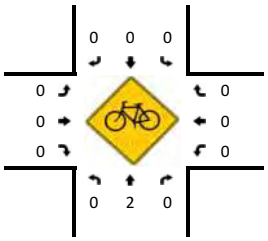


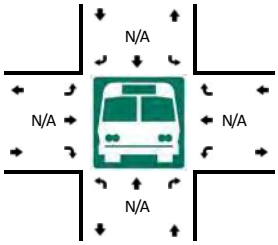
TRUE DATA TO IMPROVE MOBILITY

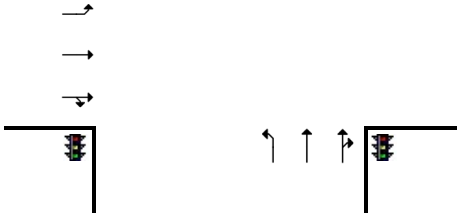


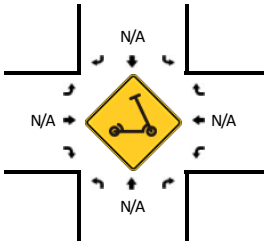












5-Min Count Period Beginning At	S Bradley Rd (Northbound)				S Bradley Rd (Southbound)				Columbia Dr/US 101 SB Ramps (Eastbound)				Columbia Dr/US 101 SB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	11	47	4	0	17	35	7	0	13	5	7	0	27	11	14	0	198	
2:05 PM	6	52	8	0	30	26	3	0	8	4	13	0	22	5	14	0	191	
2:10 PM	9	49	5	0	32	28	2	0	4	7	13	0	30	2	13	0	194	
2:15 PM	9	38	6	0	17	26	6	0	10	8	6	0	45	7	14	0	192	
2:20 PM	4	61	5	0	25	28	3	0	11	8	12	0	35	3	13	0	208	
2:25 PM	5	48	8	0	13	20	9	0	3	3	7	0	36	8	20	0	180	
2:30 PM	8	40	9	0	21	20	4	0	6	2	2	0	27	5	7	0	151	
2:35 PM	6	44	11	0	11	26	5	0	6	5	7	0	43	4	11	0	179	
2:40 PM	2	53	7	0	23	29	8	0	5	9	11	0	21	8	11	0	187	
2:45 PM	9	51	15	0	26	16	2	0	12	5	6	0	23	2	9	0	176	
2:50 PM	11	39	7	0	28	32	5	0	5	5	22	0	52	7	21	0	234	
2:55 PM	6	56	11	0	20	34	3	0	6	8	5	0	32	5	18	0	204	2294
3:00 PM	12	62	9	0	17	33	9	0	3	1	6	0	50	4	7	0	213	2309
3:05 PM	6	38	18	0	18	32	4	0	7	11	6	0	43	3	14	0	200	2318
3:10 PM	6	71	6	0	33	56	8	0	6	3	5	0	27	6	8	0	235	2359
3:15 PM	8	48	9	0	24	27	11	0	1	5	12	0	32	7	18	0	202	2369
3:20 PM	5	63	14	0	19	46	7	0	7	5	7	0	27	5	6	0	211	2372
3:25 PM	4	39	7	0	24	31	7	0	6	4	15	0	49	3	16	0	205	2397
3:30 PM	11	58	12	0	37	36	9	0	9	6	4	0	27	6	9	0	224	2470
3:35 PM	10	43	4	0	14	34	5	0	12	6	5	0	37	5	22	0	197	2488
3:40 PM	4	52	11	0	19	24	10	0	9	7	15	0	46	3	18	0	218	2519
3:45 PM	12	34	0	0	21	26	3	0	10	5	5	0	48	6	17	0	187	2530
3:50 PM	5	58	9	0	19	43	12	0	10	12	8	0	32	4	12	0	224	2520
3:55 PM	4	31	10	0	20	15	3	0	2	9	4	0	52	9	17	0	176	2492
4:00 PM	10	59	16	0	18	37	6	0	8	2	10	0	39	4	16	0	225	2504
4:05 PM	8	39	9	0	27	16	9	0	6	8	9	0	56	8	10	0	205	2509
4:10 PM	5	51	8	0	29	41	4	0	8	9	5	0	27	9	7	0	203	2477
4:15 PM	8	55	11	0	22	27	7	0	5	16	6	0	40	10	7	0	214	2489
4:20 PM	9	37	9	0	22	24	5	0	5	10	3	0	48	9	14	0	195	2473
4:25 PM	2	54	10	0	12	51	5	0	6	8	5	0	32	5	12	0	202	2470
4:30 PM	8	30	3	0	28	29	13	0	5	6	7	0	49	12	13	0	203	2449
4:35 PM	8	76	13	0	24	34	9	0	11	4	5	0	27	3	14	0	228	2480
4:40 PM	6	47	7	0	27	29	8	0	5	10	3	0	50	6	16	0	214	2476
4:45 PM	6	53	8	0	34	26	8	0	5	8	5	0	40	16	16	0	225	2514
4:50 PM	7	64	10	0	15	39	6	0	11	8	11	0	46	4	12	0	233	2523
4:55 PM	9	47	9	0	23	37	5	0	5	6	10	0	48	8	17	0	224	2571
5:00 PM	6	56	11	0	24	35	5	0	11	12	8	0	36	5	9	0	218	2564
5:05 PM	7	58	5	0	27	25	7	0	7	6	5	0	56	8	19	0	230	2589

5-Min Count Period Beginning At	S Bradley Rd (Northbound)				S Bradley Rd (Southbound)				Columbia Dr/US 101 SB Ramps (Eastbound)				Columbia Dr/US 101 SB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:10 PM	9	52	8	0	32	39	7	0	9	8	16	0	43	6	22	0	251	2637
5:15 PM	11	76	15	0	26	45	6	0	10	5	9	0	39	6	14	0	262	2685
5:20 PM	8	47	10	0	20	26	5	0	7	14	6	0	42	9	17	0	211	2701
5:25 PM	9	57	8	0	28	38	10	0	9	3	7	0	36	5	12	0	222	2721
5:30 PM	1	56	3	0	19	21	7	0	14	10	3	0	36	4	20	0	194	2712
5:35 PM	3	62	10	0	21	25	8	0	4	7	8	0	29	6	9	0	192	2676
5:40 PM	12	61	5	0	15	29	7	0	6	6	5	0	45	3	17	0	211	2673
5:45 PM	1	40	8	0	13	19	3	0	8	4	5	0	42	8	20	0	171	2619
5:50 PM	8	44	7	0	19	27	6	0	8	9	5	0	39	9	7	0	188	2574
5:55 PM	3	46	9	0	10	16	10	0	8	2	5	0	30	9	13	0	161	2511

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	108	744	112	0	340	436	80	0	104	76	120	0	552	80	220	0	2972
Heavy Trucks	0	0	0		8	4	0		0	0	0		4	8	0		24
Buses																	
Pedestrians		0				0				4				0			4
Bicycles	0	4	0		0	0	0		0	0	0		0	0	0		4
Scooters																	

Comments:

Report generated on 11/7/2024 4:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

P1= Projected volum
P_0= Current Volume
e= Constant
r= Growth Rate=
t= Time=

$P_1=P_oe^{rt}$

		2.0%	2.0%	
		1	1	
		1	2	
Year A	2023	1,110	1,132	vpd
Year B	2024	1,132	1,155	vpd

Approach	AM 2023	AM 2024
SBL	1	1
SBT	0	0
SBR	507	517
NBL	3	3
NBT	1	1
NBR	1	1
EBL	593	605
EBT	56	57
EBR	7	7
WBL	0	0
WBT	31	32
WBR	4	4

P1= Projected volum
P_0= Current Volume
e= Constant
r= Growth Rate=
t= Time=

$P_1=P_oe^{rt}$

		2.0%	2.0%	
		1	1	
		1	2	
Year A	2023	1,500	467	vpd
Year B	2024	1,530	477	vpd

Approach	PM 2023	PM 2024
SBL	0	0
SBT	14	14
SBR	435	444
NBL	9	9
NBT	3	3
NBR	1	1
EBL	1027	1048
EBT	40	41
EBR	20	20
WBL	0	0
WBT	54	55
WBR	11	11

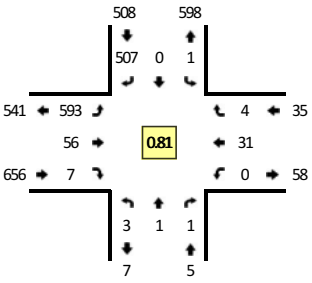
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

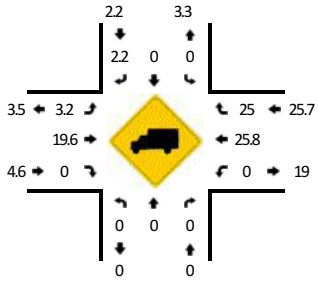
LOCATION: US 101 NB Ramps/Nicholson Ave -- E Stowell Rd
CITY/STATE: Santa Maria, CA

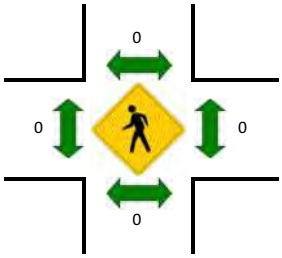
QC JOB #: 16382913
DATE: Thu, Nov 9 2023

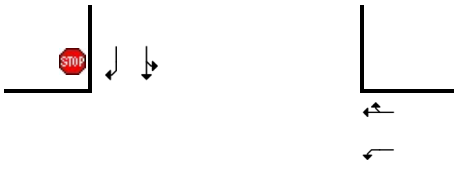
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

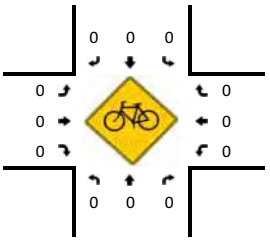


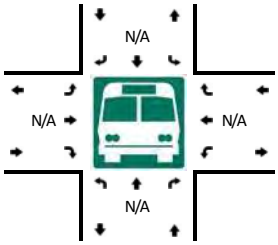




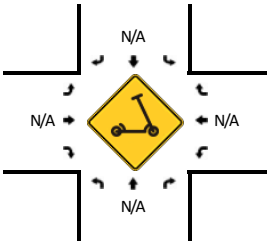












R* = RTOR

15-Min Count Period Beginning At	US 101 NB Ramps/Nicholson Ave (Northbound)					US 101 NB Ramps/Nicholson Ave (Southbound)					E Stowell Rd (Eastbound)					E Stowell Rd (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	0	0	0	0	0	1	0	52	0	0	126	9	0	0	0	0	2	2	0	0	192	
7:15 AM	0	0	0	0	0	0	0	66	0	0	158	11	0	0	0	1	5	3	0	0	244	
7:30 AM	1	0	0	0	0	0	0	117	0	0	162	7	2	0	0	0	8	1	0	0	298	
7:45 AM	1	0	1	0	0	0	0	171	0	0	162	21	2	0	0	0	11	1	0	0	370	1104
8:00 AM	1	0	0	0	0	0	0	121	0	0	130	13	3	0	0	0	6	1	0	0	275	1187
8:15 AM	0	1	0	0	0	1	0	98	0	0	139	15	0	0	0	0	6	1	0	0	261	1204
8:30 AM	1	0	0	0	0	0	0	101	0	0	117	8	0	0	0	0	4	1	0	0	232	1138
8:45 AM	0	0	0	0	0	2	0	85	0	0	106	8	2	0	0	0	13	2	0	0	218	986

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	4	0	4	0	0	0	0	684	0	0	648	84	8	0	0	0	44	4	0	0	1480
Heavy Trucks	0	0	0			0	0	12			20	20	0			0	8	0			60
Buses																					
Pedestrians		0					0					0					0				0
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0
Scooters																					

Comments:

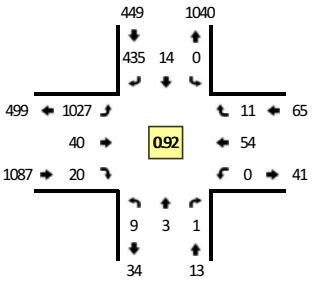
Report generated on 4/10/2025 7:12 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

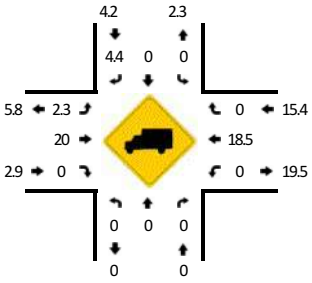
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

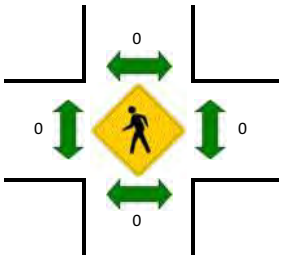
LOCATION: US 101 NB Ramps/Nicholson Ave -- E Stowell Rd | **QC JOB #:** 16382914
CITY/STATE: Santa Maria, CA | **DATE:** Thu, Nov 9 2023

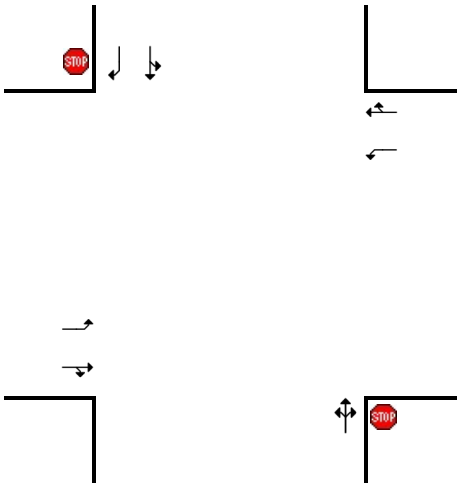
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

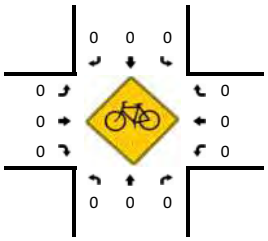


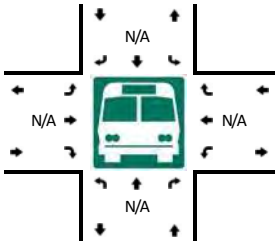
TRUE DATA TO IMPROVE MOBILITY

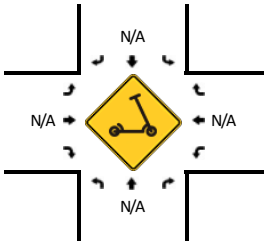












R* = RTOR

15-Min Count Period Beginning At	US 101 NB Ramps/Nicholson Ave (Northbound)					US 101 NB Ramps/Nicholson Ave (Southbound)					E Stowell Rd (Eastbound)					E Stowell Rd (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	3	1	0	0	0	0	0	115	0	0	215	9	1	0	0	0	26	3	0	0	373	
4:15 PM	2	0	1	0	0	0	1	122	0	0	221	11	2	1	0	0	14	1	0	0	376	
4:30 PM	3	1	0	0	0	0	0	88	0	0	281	12	5	0	0	0	12	7	0	0	409	
4:45 PM	0	0	0	0	0	0	11	113	0	0	231	8	9	0	0	0	17	2	0	0	391	1549
5:00 PM	4	2	0	0	0	0	2	112	0	0	293	9	4	0	0	0	11	1	0	0	438	1614
5:15 PM	2	2	0	0	0	0	5	84	0	0	241	9	11	0	0	0	13	1	0	0	368	1606
5:30 PM	5	3	0	0	0	0	2	104	0	0	214	6	9	0	0	0	5	1	0	0	349	1546
5:45 PM	12	2	0	0	0	0	4	81	0	0	202	2	12	0	0	0	8	1	0	0	324	1479

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	16	8	0	0	0	0	8	448	0	0	1172	36	16	0	0	0	44	4	0	0	1752
Heavy Trucks	0	0	0			0	0	16			36	4	0			0	12	0			68
Buses																					
Pedestrians		0					0					0					0				0
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0
Scooters																					

Comments:

Report generated on 4/10/2025 7:12 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Appendix E – Synchro Reports

2024 EXISTING								2027 NO BUILD								2027 BUILD								2027 MITIGATED (SIGNAL OPTIMIZATION ONLY)							
ID	Intersection	Control	Movement	AM		PM		ID	Intersection	Control	Movement	AM		PM		ID	Intersection	Control	Movement	AM		PM		ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay					LOS	Delay	LOS	Delay					LOS	Delay	LOS	Delay					LOS	Delay	LOS	Delay
1	W. Stowell Road / Hanson Way	Stop-Control	**OVERALL**	**A**	**3.6**	**A**	**2.8**	1	W. Stowell Road / Hanson Way	Stop-Control	**OVERALL**	**A**	**3.4**	**A**	**2.7**	1	W. Stowell Road / Hanson Way	Stop-Control	**OVERALL**	**A**	**3.3**	**A**	**2.7**								
			EB	A	1.7	A	1.4				EB	A	1.6	A	1.4				EB	A	1.6	A	1.5								
			WB	A	0.0	A	0.0				WB	A	0.0	A	0.0				WB	A	0.0	A	0.0								
			NB	A	8.7	B	12.3				NB	A	8.9	B	13.4				NB	A	8.9	B	14.3								
			SB	B	11.7	B	14.0				SB	B	13.2	C	15.9				SB	B	13.4	C	18.0								
2	W. Stowell Road / S. Blosser Road	Signal	**OVERALL**	**D**	**35.1**	**D**	**37.2**	2	W. Stowell Road / S. Blosser Road	Signal	**OVERALL**	**E**	**58.8**	**D**	**47.9**	2	W. Stowell Road / S. Blosser Road	Signal	**OVERALL**	**E**	**58.8**	**D**	**50.2**	2	W. Stowell Road / S. Blosser Road	Signal	**OVERALL**	**D**	**37.5**	**D**	**53.3**
			EB	E	57.8	E	61.0				EB	E	56.6	E	67.7				EB	E	56.4	E	71.1				EB	E	67.8	F	81.3
			WB	E	62.0	D	51.0				WB	F	128.5	E	60.7				WB	F	127.8	E	61.3				WB	D	41.6	E	68.8
			NB	C	21.0	C	26.8				NB	C	23.5	D	40.9				NB	C	23.6	D	43.0				NB	C	29.2	D	39.8
			SB	B	19.4	C	23.0				SB	C	25.2	C	32.3				SB	C	25.3	C	33.8				SB	C	30.9	D	35.8
3	W. Stowell Road / Black Road	Stop-Control	**OVERALL**	**A**	**4.7**	**A**	**6.9**	3	W. Stowell Road / Black Road	Stop-Control	**OVERALL**	**A**	**4.7**	**A**	**7.5**	3	W. Stowell Road / Black Road	Stop-Control	**OVERALL**	**A**	**4.7**	**A**	**7.7**								
			WB	B	11.1	C	20.4				WB	B	11.4	C	23.2				WB	B	11.4	C	23.8								
			NB	A	0.0	A	0.0				NB	A	0.0	A	0.0				NB	A	0.0	A	0.0								
			SB	A	3.8	A	5.6				SB	A	3.8	A	5.7				SB	A	3.9	A	5.7								
4	W. Taylor St / N. Blosser Road	Stop-Control	**OVERALL**	**A**	**4.0**	**A**	**2.3**	4	W. Taylor St / N. Blosser Road	Stop-Control	**OVERALL**	**A**	**4.3**	**A**	**2.4**	4	W. Taylor St / N. Blosser Road	Stop-Control	**OVERALL**	**A**	**4.3**	**A**	**2.6**								
			WB	C	15.7	B	14.8				WB	C	16.9	C	15.6				WB	C	17.0	C	16.0								
			NB	A	0.0	A	0.0				NB	A	0.0	A	0.0				NB	A	0.0	A	0.0								
			SB	A	0.3	A	0.4				SB	A	0.3	A	0.4				SB	A	0.3	A	0.4								
5	W. Stowell Road / Broadway	Signal	**OVERALL**	**D**	**43.8**	**E**	**60.3**	5	W. Stowell Road / Broadway	Signal	**OVERALL**	**E**	**66.8**	**F**	**118.5**	5	W. Stowell Road / Broadway	Signal	**OVERALL**	**E**	**67.6**	**F**	**128.1**	5	W. Stowell Road / Broadway	Signal	**OVERALL**	**D**	**52.5**	**F**	**88.0**
			EB	D	47.5	D	58.3				EB	F	86.0	F	144.5				EB	F	86.9	F	157.9				EB	D	53.5	F	94.4
			WB	D	47.4	E	62.1				WB	F	59.5	F	183.0				WB	F	91.7	F	206.3				WB	E	63.4	F	139.8
			NB	D	39.4	E	64.0				NB	D	40.9	F	81.1				NB	D	40.9	F	82.1				NB	D	38.7	D	48.9
			SB	D	43.4	D	55.4				SB	D	54.1	F	84.2				SB	D	54.2	F	85.7				SB	D	54.5	F	83.2
6	Main Street / Black Road	Stop-Control	**OVERALL**	**A**	**4.0**	**A**	**7.8**	6	Main Street / Black Road	Stop-Control	**OVERALL**	**A**	**4.8**	**B**	**11.5**	6	Main Street / Black Road	Stop-Control	**OVERALL**	**A**	**4.8**	**B**	**12.0**								
			EB	A	0.1	A	0.0				EB	A	0.1	A	0.0				EB	A	0.1	A	0.0								
			WB	A	1.4	A	1.3				WB	A	1.5	A	1.4				WB	A	1.5	A	1.4								
			NB	E	35.0	F	65.2				NB	E	44.6	F	100.7				NB	E	44.6	F	105.5								
			SB	D	27.2	E	43.7				SB	D	30.6	F	54.7				SB	D	30.6	F	54.9								
7	W. Stowell Road / S. Bradley Rd	Signal	**OVERALL**	**E**	**59.1**	**E**	**74.0**	7	W. Stowell Road / S. Bradley Rd	Signal	**OVERALL**	**E**	**64.6**	**F**	**84.1**	7	W. Stowell Road / S. Bradley Rd	Signal	**OVERALL**	**E**	**65.0**	**F**	**84.3**	7	W. Stowell Road / S. Bradley Rd	Signal	**OVERALL**	**D**	**42.8**	**E**	**63.0**
			EB	B	16.4	C	21.2				EB	B	17.5	C	22.5				EB	B	17.5	C	22.5				EB	C	20.6	C	24.8
			WB	D	42.3	C	34.2				WB	D	45.2	D	35.6				WB	D	45.4	D	35.8				WB	D	53.7	D	38.1
			NB	F	106.7	F	151.8				NB	F	118.8	F	177.4				NB	F	120.0	F	179.3				NB	D	47.6	F	119.3
			SB	E	55.6	E	63.0				SB	E	57.4	E	67.7				SB	**E**	**57.4**	**E**	**67.7**				SB	D	48.9	D	52.8
8	S. Bradley Rd / Columbia/I-101 SB Off/On Ramp	Signal	**OVERALL**	**C**	**27.4**	**D**	**36.9**	8	S. Bradley Rd / Columbia/I-101 SB Off/On Ramp	Signal	**OVERALL**	**C**	**32.6**	**D**	**47.3**	8	S. Bradley Rd / Columbia/I-101 SB Off/On Ramp	Signal	**OVERALL**	**C**	**33.0**	**D**	**48.6**								
			EB	C	29.7	D	35.9				EB	C	33.4	D	38.7				EB	C	33.7	D	38.7								
			WB	C	25.4	C	30.7				WB	C	29.8	C	31.7				WB	C	30.2	C	31.8								
			NB	C	29.5	D	47.1				NB	D	36.7	E	68.2				NB	D	37.2	E	68.2								
			SB	C	28.4	C	32.2				SB	C	33.0	D	42.1				SB	C	33.5	D	46.6								
9	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp	Stop-Control	**OVERALL**	**A**	**8.7**	**D**	**43.4**	9	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp	Stop-Control	**OVERALL**	**A**	**9.3**	**F**	**75.5**	9	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp	Stop-Control	**OVERALL**	**A**	**9.3**	**F**	**79.5**	9	E Stowell Rd/ Nicholson Ave/I-101 NB On Ramp	Stop-Control	**OVERALL**				
			EB	A	8.6	B	13.2				EB	A	9.0	B	15.4				EB	A	9.0	B	15.7				EB				
			WB	A	0.0	A	0.0				WB	A	0.0	A	0.0				WB	A	0.0	A	0.0				WB				
			NB	F	75.5	F	1599.4				NB	F	101.6	F	2984.1				NB	F	102.2	F	3196.1				NB				
			SB	F	91.0	F	1281.2				SB	F	120.9	F	2474.6				SB	F	121.6	F	2645.5				SB				
																10	W. Stowell Road / Site Access 1	Stop-Control	**OVERALL**	**A**	**0.1**	**A**	**0.0**								
																			EB	A	0.0	A	0.0								
																			WB	A	0.0	A	0.1								
																			NB	A	9.1	B	10.5								
																11	W. Stowell Road / Site Access 2	Stop-Control	**OVERALL**	**A**	**0.0**	**A**	**0.1**								
																			EB	A	0.0	A	0.0								
																			WB	A	7.5	A	0.7								
																			NB	A	0.0	B	11.6								
																12	W. Stowell Road / Site Access 3	Stop-Control	**OVERALL**	**A**	**0.0**	**A**	**1.6**								
																			EB	A	0.0	A	0.0								
																			WB	A	7.6	A	8.3								
																			NB	A	0.0	A	10.8								

Appendix E.1 – 2024 Existing Conditions

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	123	0	0	138	61	0	0	1	87	0	39
Future Vol, veh/h	28	123	0	0	138	61	0	0	1	87	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	130	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	92	92	80	80	92	92	92	80	92	80
Heavy Vehicles, %	36	36	2	2	24	24	2	2	2	16	2	16
Mvmt Flow	35	154	0	0	173	76	0	0	1	109	0	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	249	0	-	-	-	0	396	473	77	319	-	173
Stage 1	-	-	-	-	-	-	224	224	-	173	-	-
Stage 2	-	-	-	-	-	-	173	249	-	147	-	-
Critical Hdwy	4.64	-	-	-	-	-	7.33	6.53	6.93	7.54	-	6.44
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.34	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.74	-	-
Follow-up Hdwy	2.542	-	-	-	-	-	3.519	4.019	3.319	3.652	-	3.452
Pot Cap-1 Maneuver	1121	-	0	0	-	-	551	489	969	591	0	831
Stage 1	-	-	0	0	-	-	759	718	-	793	0	-
Stage 2	-	-	0	0	-	-	829	700	-	806	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1121	-	-	-	-	-	501	473	969	571	-	831
Mov Cap-2 Maneuver	-	-	-	-	-	-	566	526	-	619	-	-
Stage 1	-	-	-	-	-	-	734	694	-	793	-	-
Stage 2	-	-	-	-	-	-	780	700	-	779	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.69	0	8.72	11.99
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	969	668	-	-	-	672
HCM Lane V/C Ratio	0.001	0.031	-	-	-	0.234
HCM Control Delay (s/veh)	8.7	8.3	0.2	-	-	12
HCM Lane LOS	A	A	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	-	0.9



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	125	86	211	139	79	112	515	132	12	366	9
Future Volume (veh/h)	22	125	86	211	139	79	112	515	132	12	366	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1455	1455	1455	1707	1707	1707	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	23	133	91	224	148	84	119	548	140	13	389	10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	30	30	30	13	13	13	9	9	9	9	9	9
Cap, veh/h	25	181	116	237	487	262	145	1454	370	20	1587	41
Arrive On Green	0.02	0.11	0.11	0.15	0.24	0.24	0.09	0.55	0.55	0.01	0.47	0.47
Sat Flow, veh/h	1386	1617	1035	1626	2037	1095	1682	2649	674	1682	3344	86
Grp Volume(v), veh/h	23	112	112	224	116	116	119	346	342	13	195	204
Grp Sat Flow(s),veh/h/ln	1386	1383	1269	1626	1622	1510	1682	1678	1645	1682	1678	1751
Q Serve(g_s), s	1.8	8.6	9.4	15.0	6.5	7.0	7.7	12.9	13.0	0.8	7.6	7.6
Cycle Q Clear(g_c), s	1.8	8.6	9.4	15.0	6.5	7.0	7.7	12.9	13.0	0.8	7.6	7.6
Prop In Lane	1.00		0.82	1.00		0.72	1.00		0.41	1.00		0.05
Lane Grp Cap(c), veh/h	25	155	142	237	388	361	145	921	903	20	797	831
V/C Ratio(X)	0.90	0.72	0.78	0.95	0.30	0.32	0.82	0.38	0.38	0.65	0.24	0.25
Avail Cap(c_a), veh/h	202	302	277	237	388	361	245	921	903	321	797	831
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	53.9	47.2	47.5	46.6	34.3	34.5	49.4	14.1	14.1	54.1	17.2	17.2
Incr Delay (d2), s/veh	31.1	6.3	9.1	43.5	0.4	0.5	4.4	1.2	1.2	12.3	0.7	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(95%),veh/ln	1.5	5.7	5.9	13.6	4.6	4.6	5.9	8.3	8.3	0.8	5.3	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	85.0	53.5	56.6	90.1	34.7	35.0	53.8	15.3	15.3	66.4	17.9	17.9
LnGrp LOS	F	D	E	F	C	C	D	B	B	E	B	B
Approach Vol, veh/h		247			456			807			412	
Approach Delay, s/veh		57.8			62.0			21.0			19.4	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	66.4	20.0	18.3	13.5	58.2	6.0	32.3
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	24.0	16.0	34.0	16.0	24.0
Max Q Clear Time (g_c+I1), s	2.8	15.0	17.0	11.4	9.7	9.6	3.8	9.0
Green Ext Time (p_c), s	0.0	3.3	0.0	0.9	0.1	2.2	0.0	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	35.1
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	43	64	65	52	86	91
Future Vol, veh/h	43	64	65	52	86	91
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	91	91	91	91	91	91
Heavy Vehicles, %	23	23	21	21	24	24
Mvmt Flow	47	70	71	57	95	100

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	389	100	0	0	129	0
Stage 1	100	-	-	-	-	-
Stage 2	289	-	-	-	-	-
Critical Hdwy	6.63	6.43	-	-	4.34	-
Critical Hdwy Stg 1	5.63	-	-	-	-	-
Critical Hdwy Stg 2	5.63	-	-	-	-	-
Follow-up Hdwy	3.707	3.507	-	-	2.416	-
Pot Cap-1 Maneuver	576	901	-	-	1332	-
Stage 1	874	-	-	-	-	-
Stage 2	715	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	532	901	-	-	1332	-
Mov Cap-2 Maneuver	532	-	-	-	-	-
Stage 1	874	-	-	-	-	-
Stage 2	661	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	11.13	0	3.84
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	705	875	-
HCM Lane V/C Ratio	-	-	0.167	0.071	-
HCM Control Delay (s/veh)	-	-	11.1	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0.2	-

Intersection	
Int Delay, s/veh	4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	138	33	194	73	10	242
Future Vol, veh/h	138	33	194	73	10	242
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	-	-	0	175	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	5	5	4	4	6	6
Mvmt Flow	162	39	228	86	12	285

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	536	228	0	0	314	0
Stage 1	228	-	-	-	-	-
Stage 2	308	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.16	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.254	-
Pot Cap-1 Maneuver	500	804	-	-	1224	-
Stage 1	803	-	-	-	-	-
Stage 2	738	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	495	804	-	-	1224	-
Mov Cap-2 Maneuver	495	-	-	-	-	-
Stage 1	803	-	-	-	-	-
Stage 2	731	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	15.73	0	0.32
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	535	1224	-
HCM Lane V/C Ratio	-	-	0.376	0.01	-
HCM Control Delay (s/veh)	-	-	15.7	8	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1.7	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	393	55	104	366	70	109	572	148	120	672	66
Future Volume (veh/h)	92	393	55	104	366	70	109	572	148	120	672	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1752	1752	1752	1752	1752	1752	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	97	414	58	109	385	74	115	602	156	126	707	69
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	10	10	10	5	5	5	5	5	5
Cap, veh/h	238	655	91	238	623	119	248	960	428	326	969	95
Arrive On Green	0.14	0.22	0.22	0.14	0.22	0.22	0.14	0.28	0.28	0.19	0.30	0.30
Sat Flow, veh/h	1668	2934	408	1668	2789	531	1739	3469	1547	1739	3193	311
Grp Volume(v), veh/h	97	234	238	109	228	231	115	602	156	126	384	392
Grp Sat Flow(s),veh/h/ln	1668	1664	1678	1668	1664	1656	1739	1735	1547	1739	1735	1770
Q Serve(g_s), s	5.9	14.2	14.4	6.7	13.8	14.1	6.8	17.0	9.1	7.1	22.2	22.2
Cycle Q Clear(g_c), s	5.9	14.2	14.4	6.7	13.8	14.1	6.8	17.0	9.1	7.1	22.2	22.2
Prop In Lane	1.00		0.24	1.00		0.32	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	238	371	375	238	371	370	248	960	428	326	527	537
V/C Ratio(X)	0.41	0.63	0.64	0.46	0.61	0.62	0.46	0.63	0.36	0.39	0.73	0.73
Avail Cap(c_a), veh/h	238	371	375	238	371	370	248	960	428	326	527	537
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	43.7	39.3	39.4	44.0	39.2	39.3	44.1	35.4	32.6	39.9	34.9	34.9
Incr Delay (d2), s/veh	5.1	7.8	8.0	6.2	7.4	7.7	6.1	3.1	2.4	3.4	8.6	8.5
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(95%),veh/ln	5.0	10.7	10.9	5.7	10.5	10.6	5.9	11.8	6.6	6.0	15.8	16.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.8	47.2	47.4	50.2	46.6	47.0	50.1	38.5	35.0	43.3	43.5	43.4
LnGrp LOS	D	D	D	D	D	D	D	D	C	D	D	D
Approach Vol, veh/h		569			568			873			902	
Approach Delay, s/veh		47.5			47.4			39.4			43.4	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	37.0	20.0	30.0	22.0	40.0	20.0	30.0
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	6.0	* 6	4.0	5.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	25.0	16.0	* 34	16.0	25.0
Max Q Clear Time (g_c+I1), s	9.1	19.0	8.7	16.4	8.8	24.2	7.9	16.1
Green Ext Time (p_c), s	0.0	1.2	0.0	0.5	0.0	1.4	0.0	0.5

Intersection Summary	
HCM 7th Control Delay, s/veh	43.8
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	389	105	72	381	12	54	9	28	2	6	4
Future Vol, veh/h	4	389	105	72	381	12	54	9	28	2	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	480	550	-	-	-	-	400	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	15	15	15	20	20	20	25	25	25	58	58	58
Mvmt Flow	5	447	121	83	438	14	62	10	32	2	7	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	452	0	0	568	0	0	1063	1074	447	1072	1187	445
Stage 1	-	-	-	-	-	-	456	456	-	610	610	-
Stage 2	-	-	-	-	-	-	607	617	-	461	577	-
Critical Hdwy	4.25	-	-	4.3	-	-	7.35	6.75	6.45	7.68	7.08	6.78
Critical Hdwy Stg 1	-	-	-	-	-	-	6.35	5.75	-	6.68	6.08	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.35	5.75	-	6.68	6.08	-
Follow-up Hdwy	2.335	-	-	2.38	-	-	3.725	4.225	3.525	4.022	4.522	3.822
Pot Cap-1 Maneuver	1043	-	-	921	-	-	182	200	566	156	148	511
Stage 1	-	-	-	-	-	-	542	531	-	398	407	-
Stage 2	-	-	-	-	-	-	446	447	-	487	422	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1043	-	-	921	-	-	156	181	566	126	134	511
Mov Cap-2 Maneuver	-	-	-	-	-	-	156	181	-	126	134	-
Stage 1	-	-	-	-	-	-	540	529	-	362	370	-
Stage 2	-	-	-	-	-	-	395	407	-	448	420	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.07	1.44	35.02	27.23
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	159	566	1043	-	-	921	-	-	176
HCM Lane V/C Ratio	0.456	0.057	0.004	-	-	0.09	-	-	0.078
HCM Control Delay (s/veh)	45.4	11.7	8.5	-	-	9.3	-	-	27.2
HCM Lane LOS	E	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	2.1	0.2	0	-	-	0.3	-	-	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	356	154	20	295	314	320	276	222	67	307	103
Future Volume (veh/h)	115	356	154	20	295	314	320	276	222	67	307	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1856	1856	1856	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	147	456	197	26	378	403	410	354	285	86	394	132
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	5	5	5	3	3	3	3	3	3	2	2	2
Cap, veh/h	408	1825	814	59	572	510	324	393	333	114	476	158
Arrive On Green	0.23	0.53	0.53	0.03	0.32	0.32	0.09	0.21	0.21	0.06	0.18	0.18
Sat Flow, veh/h	1739	3469	1547	1767	1763	1572	3428	1856	1572	1781	2623	868
Grp Volume(v), veh/h	147	456	197	26	378	403	410	354	285	86	265	261
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1767	1763	1572	1714	1856	1572	1781	1777	1714
Q Serve(g_s), s	7.8	7.9	4.8	1.6	20.3	25.6	10.4	20.4	16.3	5.2	15.8	16.1
Cycle Q Clear(g_c), s	7.8	7.9	4.8	1.6	20.3	25.6	10.4	20.4	16.3	5.2	15.8	16.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.51
Lane Grp Cap(c), veh/h	408	1825	814	59	572	510	324	393	333	114	322	311
V/C Ratio(X)	0.36	0.25	0.24	0.44	0.66	0.79	1.26	0.90	0.85	0.75	0.82	0.84
Avail Cap(c_a), veh/h	408	1825	814	252	572	510	324	423	359	168	405	391
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	0.70	0.70	0.70	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	14.2	5.6	52.2	31.9	33.7	49.8	42.2	30.2	50.6	43.3	43.5
Incr Delay (d2), s/veh	0.5	0.3	0.7	5.1	5.9	11.8	135.5	15.8	12.6	10.3	10.5	12.2
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(95%),veh/ln	6.0	5.5	4.7	1.4	14.4	16.6	16.3	15.5	11.0	4.8	12.4	12.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.7	14.6	6.3	57.2	37.8	45.5	185.3	58.0	42.9	61.0	53.8	55.7
LnGrp LOS	D	B	A	E	D	D	F	E	D	E	D	E
Approach Vol, veh/h		800			807			1049			612	
Approach Delay, s/veh		16.4			42.3			103.7			55.6	
Approach LOS		B			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	62.2	15.0	24.9	30.1	40.0	11.6	28.2
Change Period (Y+Rc), s	4.3	4.3	4.6	4.9	4.3	4.3	4.6	4.9
Max Green Setting (Gmax), s	15.7	40.7	10.4	25.1	20.7	35.7	10.4	25.1
Max Q Clear Time (g_c+I1), s	3.6	9.9	12.4	18.1	9.8	27.6	7.2	22.4
Green Ext Time (p_c), s	0.0	3.9	0.0	1.8	0.3	3.1	0.0	0.9

Intersection Summary	
HCM 7th Control Delay, s/veh	58.1
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	31	16	325	82	333	16	374	54	232	189	47
Future Volume (veh/h)	44	31	16	325	82	333	16	374	54	232	189	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1781	1781	1781	1870	1870	1870	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	52	36	19	239	296	392	19	440	64	273	222	55
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	8	8	8	2	2	2	3	3	3	5	5	5
Cap, veh/h	150	195	95	492	517	438	55	542	78	315	1130	504
Arrive On Green	0.09	0.09	0.09	0.28	0.28	0.28	0.03	0.18	0.18	0.18	0.33	0.33
Sat Flow, veh/h	1697	2204	1077	1781	1870	1585	1767	3091	447	1739	3469	1547
Grp Volume(v), veh/h	52	27	28	239	296	392	19	250	254	273	222	55
Grp Sat Flow(s),veh/h/ln	1697	1692	1588	1781	1870	1585	1767	1763	1775	1739	1735	1547
Q Serve(g_s), s	2.0	1.0	1.1	7.7	9.4	16.4	0.7	9.4	9.5	10.5	3.2	1.7
Cycle Q Clear(g_c), s	2.0	1.0	1.1	7.7	9.4	16.4	0.7	9.4	9.5	10.5	3.2	1.7
Prop In Lane	1.00		0.68	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	150	150	140	492	517	438	55	309	311	315	1130	504
V/C Ratio(X)	0.35	0.18	0.20	0.49	0.57	0.89	0.35	0.81	0.82	0.87	0.20	0.11
Avail Cap(c_a), veh/h	236	236	221	765	803	681	277	532	536	399	1298	579
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	29.5	29.1	29.2	20.8	21.4	24.0	32.7	27.3	27.4	27.4	16.7	16.3
Incr Delay (d2), s/veh	0.5	0.2	0.3	0.3	0.4	6.7	1.4	1.9	2.0	12.8	0.0	0.0
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(95%),veh/ln	1.5	0.7	0.8	5.2	6.6	10.2	0.6	7.1	7.2	9.0	2.1	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.1	29.3	29.4	21.1	21.8	30.7	34.1	29.2	29.4	40.2	16.8	16.3
LnGrp LOS	C	C	C	C	C	C	C	C	C	D	B	B
Approach Vol, veh/h		107			927			523			550	
Approach Delay, s/veh		29.7			25.4			29.5			28.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.7	16.3		11.5	6.3	26.6		24.5				
Change Period (Y+Rc), s	4.2	4.2		5.4	4.2	4.2		5.4				
Max Green Setting (Gmax), s	15.8	20.8		9.6	10.8	25.8		29.6				
Max Q Clear Time (g_c+I1), s	12.5	11.5		4.0	2.7	5.2		18.4				
Green Ext Time (p_c), s	0.1	0.6		0.1	0.0	0.4		0.7				

Intersection Summary	
HCM 7th Control Delay, s/veh	27.4
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	605	57	7	0	32	4	3	1	1	1	0	517
Future Vol, veh/h	605	57	7	0	32	4	3	1	1	1	0	517
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	-	75	-	-	-	-	-	-	-	215
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	5	5	5	26	26	26	0	0	0	2	2	2
Mvmt Flow	747	70	9	0	40	5	4	1	1	1	0	638

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	44	0	0	79	0	0	1608	1613	75	1607	1615	-
Stage 1	-	-	-	-	-	-	1569	1569	-	42	42	-
Stage 2	-	-	-	-	-	-	40	44	-	1565	1573	-
Critical Hdwy	4.15	-	-	4.36	-	-	7.1	6.5	6.2	7.12	6.52	-
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.434	-	-	3.5	4	3.3	3.518	4.018	-
Pot Cap-1 Maneuver	1545	-	-	1380	-	-	85	105	992	85	104	0
Stage 1	-	-	-	-	-	-	141	173	-	973	860	0
Stage 2	-	-	-	-	-	-	981	862	-	140	170	0
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1545	-	-	1380	-	-	44	54	992	43	54	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	44	54	-	43	54	-
Stage 1	-	-	-	-	-	-	73	89	-	973	860	-
Stage 2	-	-	-	-	-	-	981	862	-	71	88	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	8.58	0	75.49	90.99
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	57	1545	-	-	1380	-	-	43	-
HCM Lane V/C Ratio	0.108	0.484	-	-	-	-	-	0.029	-
HCM Control Delay (s/veh)	75.5	9.5	-	-	0	-	-	91	0
HCM Lane LOS	F	A	-	-	A	-	-	F	A
HCM 95th %tile Q(veh)	0.3	2.7	-	-	0	-	-	0.1	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	419	0	0	127	48	1	2	5	83	0	19
Future Vol, veh/h	60	419	0	0	127	48	1	2	5	83	0	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	130	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	92	92	79	79	92	92	92	79	92	79
Heavy Vehicles, %	11	11	2	2	24	24	2	2	2	16	2	16
Mvmt Flow	76	530	0	0	161	61	1	2	5	105	0	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	222	0	-	-	-	0	843	904	265	579	-	161
Stage 1	-	-	-	-	-	-	682	682	-	161	-	-
Stage 2	-	-	-	-	-	-	161	222	-	418	-	-
Critical Hdwy	4.265	-	-	-	-	-	7.33	6.53	6.93	7.54	-	6.44
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.34	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.74	-	-
Follow-up Hdwy	2.3045	-	-	-	-	-	3.519	4.019	3.319	3.652	-	3.452
Pot Cap-1 Maneuver	1289	-	0	0	-	-	270	276	734	388	0	844
Stage 1	-	-	0	0	-	-	407	449	-	805	0	-
Stage 2	-	-	0	0	-	-	841	719	-	553	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1289	-	-	-	-	-	244	257	734	356	-	844
Mov Cap-2 Maneuver	-	-	-	-	-	-	319	338	-	429	-	-
Stage 1	-	-	-	-	-	-	379	418	-	805	-	-
Stage 2	-	-	-	-	-	-	817	719	-	508	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.37	0	12.26	15.47
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	504	451	-	-	-	472
HCM Lane V/C Ratio	0.017	0.059	-	-	-	0.274
HCM Control Delay (s/veh)	12.3	8	0.4	-	-	15.5
HCM Lane LOS	B	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.2	-	-	-	1.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	316	118	122	113	145	38	769	102	113	570	15
Future Volume (veh/h)	163	316	118	122	113	145	38	769	102	113	570	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1737	1737	1737	1722	1722	1722	1856	1856	1856	1811	1811	1811
Adj Flow Rate, veh/h	179	347	130	134	124	159	42	845	112	124	626	16
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	11	11	11	12	12	12	3	3	3	6	6	6
Cap, veh/h	206	415	153	160	243	217	58	1431	190	151	1756	45
Arrive On Green	0.12	0.18	0.18	0.10	0.15	0.15	0.03	0.46	0.46	0.09	0.51	0.51
Sat Flow, veh/h	1654	2361	870	1640	1636	1459	1767	3129	415	1725	3428	88
Grp Volume(v), veh/h	179	241	236	134	124	159	42	476	481	124	314	328
Grp Sat Flow(s),veh/h/ln	1654	1650	1580	1640	1636	1459	1767	1763	1781	1725	1721	1795
Q Serve(g_s), s	11.7	15.5	15.9	8.8	7.7	11.4	2.6	22.1	22.1	7.8	12.0	12.0
Cycle Q Clear(g_c), s	11.7	15.5	15.9	8.8	7.7	11.4	2.6	22.1	22.1	7.8	12.0	12.0
Prop In Lane	1.00		0.55	1.00		1.00	1.00		0.23	1.00		0.05
Lane Grp Cap(c), veh/h	206	290	278	160	243	217	58	806	814	151	881	920
V/C Ratio(X)	0.87	0.83	0.85	0.84	0.51	0.73	0.72	0.59	0.59	0.82	0.36	0.36
Avail Cap(c_a), veh/h	241	360	345	239	357	318	257	806	814	329	881	920
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	47.3	43.8	43.9	48.8	43.1	44.7	52.7	22.2	22.2	49.3	16.0	16.0
Incr Delay (d2), s/veh	22.4	12.6	15.2	9.9	1.6	4.7	6.2	3.2	3.1	4.1	1.1	1.1
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(95%),veh/ln	10.0	11.6	11.6	7.2	5.7	7.7	2.2	14.2	14.3	6.2	8.3	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	69.7	56.3	59.2	58.7	44.8	49.5	58.9	25.4	25.3	53.4	17.1	17.1
LnGrp LOS	E	E	E	E	D	D	E	C	C	D	B	B
Approach Vol, veh/h		656			417			999			766	
Approach Delay, s/veh		61.0			51.0			26.8			23.0	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	56.3	14.7	25.3	7.6	62.3	17.7	22.4
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	24.0	16.0	34.0	16.0	24.0
Max Q Clear Time (g_c+I1), s	9.8	24.1	10.8	17.9	4.6	14.0	13.7	13.4
Green Ext Time (p_c), s	0.1	2.4	0.1	1.4	0.0	3.6	0.1	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	37.2
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	6.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	85	62	66	178	156	85
Future Vol, veh/h	85	62	66	178	156	85
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	79	79	79	79	79	79
Heavy Vehicles, %	23	23	18	18	12	12
Mvmt Flow	108	78	84	225	197	108

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	699	196	0	0	309	0
Stage 1	196	-	-	-	-	-
Stage 2	503	-	-	-	-	-
Critical Hdwy	6.63	6.43	-	-	4.22	-
Critical Hdwy Stg 1	5.63	-	-	-	-	-
Critical Hdwy Stg 2	5.63	-	-	-	-	-
Follow-up Hdwy	3.707	3.507	-	-	2.308	-
Pot Cap-1 Maneuver	376	794	-	-	1197	-
Stage 1	789	-	-	-	-	-
Stage 2	567	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	310	794	-	-	1197	-
Mov Cap-2 Maneuver	310	-	-	-	-	-
Stage 1	789	-	-	-	-	-
Stage 2	467	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	20.38	0	5.57
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	417	1126	-
HCM Lane V/C Ratio	-	-	0.446	0.165	-
HCM Control Delay (s/veh)	-	-	20.4	8.6	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	2.2	0.6	-

Intersection	
Int Delay, s/veh	2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	118	12	336	207	8	176
Future Vol, veh/h	118	12	336	207	8	176
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	-	-	0	175	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	2	2	2	2
Mvmt Flow	123	13	350	216	8	183

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	550	350	0	0	566	0
Stage 1	350	-	-	-	-	-
Stage 2	200	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.12	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.218	-
Pot Cap-1 Maneuver	494	691	-	-	1006	-
Stage 1	711	-	-	-	-	-
Stage 2	831	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	490	691	-	-	1006	-
Mov Cap-2 Maneuver	490	-	-	-	-	-
Stage 1	711	-	-	-	-	-
Stage 2	824	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	14.75	0	0.37
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	504	1006	-
HCM Lane V/C Ratio	-	-	0.269	0.008	-
HCM Control Delay (s/veh)	-	-	14.8	8.6	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1.1	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	458	119	136	492	119	195	921	299	119	861	59
Future Volume (veh/h)	144	458	119	136	492	119	195	921	299	119	861	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1796	1796	1796	1796	1796	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	153	487	127	145	523	127	207	980	318	127	916	63
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	244	599	155	244	608	147	254	984	439	334	1024	70
Arrive On Green	0.14	0.22	0.22	0.14	0.22	0.22	0.14	0.28	0.28	0.19	0.30	0.30
Sat Flow, veh/h	1711	2682	695	1711	2725	659	1781	3554	1585	1781	3373	232
Grp Volume(v), veh/h	153	309	305	145	327	323	207	980	318	127	482	497
Grp Sat Flow(s),veh/h/ln	1711	1706	1671	1711	1706	1678	1781	1777	1585	1781	1777	1829
Q Serve(g_s), s	9.4	19.2	19.4	8.9	20.6	20.8	12.6	30.8	20.3	7.0	29.1	29.1
Cycle Q Clear(g_c), s	9.4	19.2	19.4	8.9	20.6	20.8	12.6	30.8	20.3	7.0	29.1	29.1
Prop In Lane	1.00		0.42	1.00		0.39	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	244	381	373	244	381	374	254	984	439	334	539	555
V/C Ratio(X)	0.63	0.81	0.82	0.59	0.86	0.86	0.81	1.00	0.72	0.38	0.89	0.89
Avail Cap(c_a), veh/h	244	381	373	244	381	374	254	984	439	334	539	555
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	45.2	41.3	41.3	45.0	41.8	41.9	46.6	40.4	36.6	39.8	37.3	37.3
Incr Delay (d2), s/veh	11.5	16.9	17.8	10.2	21.3	22.3	24.0	27.8	10.0	3.3	19.9	19.5
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(95%),veh/ln	8.3	14.8	14.8	7.9	16.1	16.1	11.5	23.5	13.8	6.1	21.8	22.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.7	58.1	59.2	55.1	63.1	64.2	70.5	68.3	46.6	43.1	57.2	56.8
LnGrp LOS	E	E	E	E	E	E	E	E	D	D	E	E
Approach Vol, veh/h		767			795			1505			1106	
Approach Delay, s/veh		58.3			62.1			64.0			55.4	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	37.0	20.0	30.0	22.0	40.0	20.0	30.0
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	6.0	* 6	4.0	5.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	25.0	16.0	* 34	16.0	25.0
Max Q Clear Time (g_c+I1), s	9.0	32.8	10.9	21.4	14.6	31.1	11.4	22.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	0.9	0.0	0.3

Intersection Summary	
HCM 7th Control Delay, s/veh	60.3
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	620	138	64	404	12	78	3	59	13	8	5
Future Vol, veh/h	0	620	138	64	404	12	78	3	59	13	8	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	480	550	-	-	-	-	400	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	8	8	8	7	7	7	21	21	21	31	31	31
Mvmt Flow	0	674	150	70	439	13	85	3	64	14	9	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	452	0	0	824	0	0	1257	1265	674	1260	1409	446
Stage 1	-	-	-	-	-	-	674	674	-	585	585	-
Stage 2	-	-	-	-	-	-	583	591	-	676	824	-
Critical Hdwy	4.18	-	-	4.17	-	-	7.31	6.71	6.41	7.41	6.81	6.51
Critical Hdwy Stg 1	-	-	-	-	-	-	6.31	5.71	-	6.41	5.81	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.31	5.71	-	6.41	5.81	-
Follow-up Hdwy	2.272	-	-	2.263	-	-	3.689	4.189	3.489	3.779	4.279	3.579
Pot Cap-1 Maneuver	1077	-	-	785	-	-	135	155	423	128	121	556
Stage 1	-	-	-	-	-	-	415	426	-	450	454	-
Stage 2	-	-	-	-	-	-	467	465	-	399	349	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1077	-	-	785	-	-	113	142	423	97	110	556
Mov Cap-2 Maneuver	-	-	-	-	-	-	113	142	-	97	110	-
Stage 1	-	-	-	-	-	-	415	426	-	410	414	-
Stage 2	-	-	-	-	-	-	412	424	-	336	349	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	1.34	65.22	43.74
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	114	423	1077	-	-	785	-	-	121
HCM Lane V/C Ratio	0.772	0.152	-	-	-	0.089	-	-	0.234
HCM Control Delay (s/veh)	101.8	15	0	-	-	10	-	-	43.7
HCM Lane LOS	F	C	A	-	-	B	-	-	E
HCM 95th %tile Q(veh)	4.3	0.5	0	-	-	0.3	-	-	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	489	253	56	247	107	264	248	434	107	495	155
Future Volume (veh/h)	184	489	253	56	247	107	264	248	434	107	495	155
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	200	532	275	61	268	116	287	270	472	116	538	168
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, %	5	5	5	5	5	5	2	2	2	1	1	1
Cap, veh/h	341	1627	726	89	772	325	327	369	312	212	593	184
Arrive On Green	0.20	0.47	0.47	0.05	0.32	0.32	0.09	0.20	0.20	0.12	0.22	0.22
Sat Flow, veh/h	1739	3469	1547	1739	2378	1002	3456	1870	1585	1795	2689	836
Grp Volume(v), veh/h	200	532	275	61	194	190	287	270	472	116	358	348
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1739	1735	1646	1728	1870	1585	1795	1791	1735
Q Serve(g_s), s	11.5	10.6	8.5	3.8	9.3	9.7	9.0	14.9	18.0	6.7	21.4	21.6
Cycle Q Clear(g_c), s	11.5	10.6	8.5	3.8	9.3	9.7	9.0	14.9	18.0	6.7	21.4	21.6
Prop In Lane	1.00		1.00	1.00		0.61	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	341	1627	726	89	563	534	327	369	312	212	395	383
V/C Ratio(X)	0.59	0.33	0.38	0.68	0.34	0.36	0.88	0.73	1.51	0.55	0.91	0.91
Avail Cap(c_a), veh/h	341	1627	726	248	563	534	327	427	362	212	409	396
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	0.47	0.47	0.47	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	18.3	8.5	51.3	28.2	28.4	49.2	41.4	30.6	45.7	41.8	41.8
Incr Delay (d2), s/veh	2.6	0.5	1.5	8.8	1.7	1.9	12.4	2.6	237.7	2.9	22.8	24.3
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(95%),veh/ln	8.8	7.6	5.3	3.3	7.3	7.3	6.8	10.1	40.3	5.7	17.5	17.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.8	18.9	10.0	60.1	29.9	30.2	61.5	44.1	268.3	48.7	64.6	66.1
LnGrp LOS	D	B	A	E	C	C	E	D	F	D	E	E
Approach Vol, veh/h		1007			445			1029			822	
Approach Delay, s/veh		21.2			34.2			151.8			63.0	
Approach LOS		C			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	55.9	15.0	29.2	25.8	40.0	17.6	26.6
Change Period (Y+Rc), s	4.3	4.3	4.6	4.9	4.3	4.3	4.6	4.9
Max Green Setting (Gmax), s	15.7	40.7	10.4	25.1	20.7	35.7	10.4	25.1
Max Q Clear Time (g_c+I1), s	5.8	12.6	11.0	23.6	13.5	11.7	8.7	20.0
Green Ext Time (p_c), s	0.1	4.8	0.0	0.7	0.3	2.2	0.0	1.6

Intersection Summary	
HCM 7th Control Delay, s/veh	74.0
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	90	92	512	88	181	94	663	107	308	402	89
Future Volume (veh/h)	95	90	92	512	88	181	94	663	107	308	402	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1885	1885	1885	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	103	98	100	626	0	197	102	721	116	335	437	97
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, %	1	1	1	2	2	2	1	1	1	1	1	1
Cap, veh/h	162	161	144	720	0	321	144	791	127	366	1360	606
Arrive On Green	0.09	0.09	0.09	0.20	0.00	0.20	0.08	0.26	0.26	0.20	0.38	0.38
Sat Flow, veh/h	1795	1791	1598	3563	0	1585	1795	3090	497	1795	3582	1598
Grp Volume(v), veh/h	103	98	100	626	0	197	102	418	419	335	437	97
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1781	0	1585	1795	1791	1796	1795	1791	1598
Q Serve(g_s), s	4.3	4.1	4.7	13.2	0.0	8.8	4.3	17.5	17.6	14.2	6.7	3.1
Cycle Q Clear(g_c), s	4.3	4.1	4.7	13.2	0.0	8.8	4.3	17.5	17.6	14.2	6.7	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	162	161	144	720	0	321	144	459	460	366	1360	606
V/C Ratio(X)	0.64	0.61	0.69	0.87	0.00	0.61	0.71	0.91	0.91	0.92	0.32	0.16
Avail Cap(c_a), veh/h	222	222	198	1361	0	605	250	481	482	366	1360	606
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	33.9	34.2	29.9	0.0	28.2	34.8	28.0	28.0	30.2	17.0	15.9
Incr Delay (d2), s/veh	1.5	1.4	2.5	1.3	0.0	0.7	2.4	20.3	20.4	26.5	0.1	0.0
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(95%),veh/ln	3.5	3.3	3.4	9.1	0.0	5.6	3.5	14.8	14.9	13.4	4.7	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.6	35.3	36.7	31.2	0.0	28.9	37.1	48.2	48.3	56.7	17.0	15.9
LnGrp LOS	D	D	D	C		C	D	D	D	E	B	B
Approach Vol, veh/h		301			823			939			869	
Approach Delay, s/veh		35.9			30.7			47.1			32.2	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	24.0		12.4	10.4	33.6		21.1				
Change Period (Y+Rc), s	4.2	4.2		5.4	4.2	4.2		5.4				
Max Green Setting (Gmax), s	5.8	20.8		9.6	10.8	25.8		29.6				
Max Q Clear Time (g_c+I1), s	6.3	19.6		6.7	6.3	8.7		15.2				
Green Ext Time (p_c), s	0.0	0.3		0.2	0.0	0.7		0.5				

Intersection Summary	
HCM 7th Control Delay, s/veh	36.9
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	43.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1048	41	20	0	55	11	9	3	1	0	14	444
Future Vol, veh/h	1048	41	20	0	55	11	9	3	1	0	14	444
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	-	75	-	-	-	-	-	-	-	215
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	15	15	15	0	0	0	4	4	4
Mvmt Flow	1139	45	22	0	60	12	10	3	1	0	15	483

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	72	0	0	66	0	0	2401	2405	55	2390	2410	-
Stage 1	-	-	-	-	-	-	2334	2334	-	66	66	-
Stage 2	-	-	-	-	-	-	67	72	-	2324	2345	-
Critical Hdwy	4.13	-	-	4.25	-	-	7.1	6.5	6.2	7.14	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.14	5.54	-
Follow-up Hdwy	2.227	-	-	2.335	-	-	3.5	4	3.3	3.536	4.036	-
Pot Cap-1 Maneuver	1522	-	-	1457	-	-	23	34	1017	23	32	0
Stage 1	-	-	-	-	-	-	50	71	-	940	836	0
Stage 2	-	-	-	-	-	-	948	839	-	49	68	0
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1522	-	-	1457	-	-	~ 6	8	1017	5	~ 8	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 6	8	-	5	~ 8	-
Stage 1	-	-	-	-	-	-	13	18	-	940	836	-
Stage 2	-	-	-	-	-	-	931	839	-	10	17	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	13.24	0	$ 1499.4	$ 1281.15
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	7	1522	-	-	1457	-	-	8	-
HCM Lane V/C Ratio	2.053	0.748	-	-	-	-	-	1.867	-
HCM Control Delay (s/veh)	$ 1499.4	14	-	-	0	-	-	$ 1281.1	0
HCM Lane LOS	F	B	-	-	A	-	-	F	A
HCM 95th %tile Q(veh)	2.8	7.7	-	-	0	-	-	2.9	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Appendix E.2 – 2027 No-Build Conditions

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	161	0	0	223	65	0	0	1	92	0	41
Future Vol, veh/h	30	161	0	0	223	65	0	0	1	92	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	130	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	92	92	80	80	92	92	92	80	92	80
Heavy Vehicles, %	36	36	2	2	24	24	2	2	2	16	2	16
Mvmt Flow	38	201	0	0	279	81	0	0	1	115	0	51

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	360	0	-	-	-	0	555	636	101	454	-	279
Stage 1	-	-	-	-	-	-	276	276	-	279	-	-
Stage 2	-	-	-	-	-	-	279	360	-	176	-	-
Critical Hdwy	4.64	-	-	-	-	-	7.33	6.53	6.93	7.54	-	6.44
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.34	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.74	-	-
Follow-up Hdwy	2.542	-	-	-	-	-	3.519	4.019	3.319	3.652	-	3.452
Pot Cap-1 Maneuver	1008	-	0	0	-	-	428	395	936	475	0	722
Stage 1	-	-	0	0	-	-	707	681	-	693	0	-
Stage 2	-	-	0	0	-	-	727	626	-	775	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1008	-	-	-	-	-	382	379	936	456	-	722
Mov Cap-2 Maneuver	-	-	-	-	-	-	474	454	-	535	-	-
Stage 1	-	-	-	-	-	-	679	654	-	693	-	-
Stage 2	-	-	-	-	-	-	675	626	-	743	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.58	0	8.85	13.66
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	936	565	-	-	-	581
HCM Lane V/C Ratio	0.001	0.037	-	-	-	0.286
HCM Control Delay (s/veh)	8.9	8.7	0.2	-	-	13.7
HCM Lane LOS	A	A	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	-	1.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	165	96	316	245	214	128	659	226	59	452	11
Future Volume (veh/h)	23	165	96	316	245	214	128	659	226	59	452	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1455	1455	1455	1707	1707	1707	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	24	176	102	336	261	228	136	701	240	63	481	12
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	30	30	30	13	13	13	9	9	9	9	9	9
Cap, veh/h	26	228	126	237	433	364	163	1654	738	80	1484	37
Arrive On Green	0.02	0.13	0.13	0.15	0.26	0.26	0.10	0.49	0.49	0.05	0.44	0.44
Sat Flow, veh/h	1386	1719	948	1626	1670	1407	1682	3357	1497	1682	3346	83
Grp Volume(v), veh/h	24	140	138	336	253	236	136	701	240	63	241	252
Grp Sat Flow(s),veh/h/ln	1386	1383	1285	1626	1622	1454	1682	1678	1497	1682	1678	1752
Q Serve(g_s), s	1.9	10.7	11.5	16.0	15.1	15.8	8.7	14.7	10.7	4.1	10.3	10.3
Cycle Q Clear(g_c), s	1.9	10.7	11.5	16.0	15.1	15.8	8.7	14.7	10.7	4.1	10.3	10.3
Prop In Lane	1.00		0.74	1.00		0.97	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	26	183	170	237	420	377	163	1654	738	80	744	777
V/C Ratio(X)	0.92	0.76	0.81	1.42	0.60	0.63	0.84	0.42	0.33	0.79	0.32	0.32
Avail Cap(c_a), veh/h	202	302	280	237	420	377	245	1654	738	321	744	777
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	53.9	46.0	46.4	47.0	35.8	36.0	48.8	17.9	16.9	51.8	19.9	19.9
Incr Delay (d2), s/veh	32.4	6.5	8.9	212.2	2.4	3.2	9.2	0.8	1.2	6.3	1.2	1.1
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(95%),veh/ln	1.6	7.1	7.2	31.7	10.1	9.7	7.1	9.3	6.7	3.3	7.4	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	86.3	52.5	55.3	259.2	38.2	39.3	58.0	18.7	18.0	58.1	21.0	21.0
LnGrp LOS	F	D	E	F	D	D	E	B	B	E	C	C
Approach Vol, veh/h		302			825			1077			556	
Approach Delay, s/veh		56.5			128.5			23.5			25.2	
Approach LOS		E			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	60.2	20.0	20.6	14.6	54.8	6.1	34.5
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	24.0	16.0	34.0	16.0	24.0
Max Q Clear Time (g_c+I1), s	6.1	16.7	18.0	13.5	10.7	12.3	3.9	17.8
Green Ext Time (p_c), s	0.0	4.2	0.0	1.1	0.1	2.7	0.0	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	58.8
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	46	68	69	55	91	97
Future Vol, veh/h	46	68	69	55	91	97
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	91	91	91	91	91	91
Heavy Vehicles, %	23	23	21	21	24	24
Mvmt Flow	51	75	76	60	100	107

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	413	106	0	0	136	0
Stage 1	106	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Critical Hdwy	6.63	6.43	-	-	4.34	-
Critical Hdwy Stg 1	5.63	-	-	-	-	-
Critical Hdwy Stg 2	5.63	-	-	-	-	-
Follow-up Hdwy	3.707	3.507	-	-	2.416	-
Pot Cap-1 Maneuver	558	894	-	-	1323	-
Stage 1	868	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	513	894	-	-	1323	-
Mov Cap-2 Maneuver	513	-	-	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	645	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	11.4	0	3.84
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	688	871	-
HCM Lane V/C Ratio	-	-	0.182	0.076	-
HCM Control Delay (s/veh)	-	-	11.4	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.2	-

Intersection	
Int Delay, s/veh	4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	146	35	206	77	11	257
Future Vol, veh/h	146	35	206	77	11	257
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	-	-	0	175	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	5	5	4	4	6	6
Mvmt Flow	172	41	242	91	13	302

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	571	242	0	0	333	0
Stage 1	242	-	-	-	-	-
Stage 2	328	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.16	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.254	-
Pot Cap-1 Maneuver	478	789	-	-	1204	-
Stage 1	791	-	-	-	-	-
Stage 2	723	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	472	789	-	-	1204	-
Mov Cap-2 Maneuver	472	-	-	-	-	-
Stage 1	791	-	-	-	-	-
Stage 2	715	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	16.94	0	0.33
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	512	1204	-
HCM Lane V/C Ratio	-	-	0.416	0.011	-
HCM Control Delay (s/veh)	-	-	16.9	8	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	2	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	654	64	133	633	91	118	631	157	129	774	109
Future Volume (veh/h)	159	654	64	133	633	91	118	631	157	129	774	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1752	1752	1752	1752	1752	1752	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	167	688	67	140	666	96	124	664	165	136	815	115
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	10	10	10	5	5	5	5	5	5
Cap, veh/h	238	684	67	238	652	94	248	960	428	326	927	131
Arrive On Green	0.14	0.22	0.22	0.14	0.22	0.22	0.14	0.28	0.28	0.19	0.30	0.30
Sat Flow, veh/h	1668	3064	298	1668	2920	420	1739	3469	1547	1739	3052	431
Grp Volume(v), veh/h	167	373	382	140	379	383	124	664	165	136	463	467
Grp Sat Flow(s),veh/h/ln	1668	1664	1698	1668	1664	1676	1739	1735	1547	1739	1735	1748
Q Serve(g_s), s	10.7	25.0	25.0	8.8	25.0	25.0	7.4	19.2	9.7	7.7	28.4	28.4
Cycle Q Clear(g_c), s	10.7	25.0	25.0	8.8	25.0	25.0	7.4	19.2	9.7	7.7	28.4	28.4
Prop In Lane	1.00		0.18	1.00		0.25	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	238	371	379	238	371	374	248	960	428	326	527	531
V/C Ratio(X)	0.70	1.01	1.01	0.59	1.02	1.02	0.50	0.69	0.39	0.42	0.88	0.88
Avail Cap(c_a), veh/h	238	371	379	238	371	374	248	960	428	326	527	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	45.7	43.5	43.5	44.9	43.5	43.5	44.3	36.2	32.8	40.1	37.1	37.1
Incr Delay (d2), s/veh	15.8	48.0	47.9	10.2	52.1	52.5	7.0	4.1	2.6	3.9	18.6	18.5
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(95%),veh/ln	9.2	21.4	21.8	7.7	22.1	22.4	6.5	13.2	7.0	6.6	20.8	21.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.5	91.5	91.4	55.1	95.6	96.0	51.3	40.3	35.4	44.0	55.6	55.5
LnGrp LOS	E	F	F	E	F	F	D	D	D	D	E	E
Approach Vol, veh/h		922			902			953			1066	
Approach Delay, s/veh		86.0			89.5			40.9			54.1	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	37.0	20.0	30.0	22.0	40.0	20.0	30.0
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	6.0	* 6	4.0	5.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	25.0	16.0	* 34	16.0	25.0
Max Q Clear Time (g_c+I1), s	9.7	21.2	10.8	27.0	9.4	30.4	12.7	27.0
Green Ext Time (p_c), s	0.0	1.2	0.0	0.0	0.0	1.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	66.8
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	420	111	76	407	13	57	10	30	2	6	4
Future Vol, veh/h	4	420	111	76	407	13	57	10	30	2	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	480	550	-	-	-	-	400	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	15	15	15	20	20	20	25	25	25	58	58	58
Mvmt Flow	5	483	128	87	468	15	66	11	34	2	7	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	483	0	0	610	0	0	1138	1149	483	1148	1270	475
Stage 1	-	-	-	-	-	-	492	492	-	650	650	-
Stage 2	-	-	-	-	-	-	646	657	-	498	620	-
Critical Hdwy	4.25	-	-	4.3	-	-	7.35	6.75	6.45	7.68	7.08	6.78
Critical Hdwy Stg 1	-	-	-	-	-	-	6.35	5.75	-	6.68	6.08	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.35	5.75	-	6.68	6.08	-
Follow-up Hdwy	2.335	-	-	2.38	-	-	3.725	4.225	3.525	4.022	4.522	3.822
Pot Cap-1 Maneuver	1016	-	-	887	-	-	161	180	540	137	131	490
Stage 1	-	-	-	-	-	-	518	511	-	377	389	-
Stage 2	-	-	-	-	-	-	424	428	-	463	402	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1016	-	-	887	-	-	136	161	540	108	118	490
Mov Cap-2 Maneuver	-	-	-	-	-	-	136	161	-	108	118	-
Stage 1	-	-	-	-	-	-	515	509	-	340	350	-
Stage 2	-	-	-	-	-	-	371	386	-	422	401	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.06	1.46	44.61	30.57
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	139	540	1016	-	-	887	-	-	155
HCM Lane V/C Ratio	0.554	0.064	0.005	-	-	0.099	-	-	0.089
HCM Control Delay (s/veh)	59.2	12.1	8.6	-	-	9.5	-	-	30.6
HCM Lane LOS	F	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	2.8	0.2	0	-	-	0.3	-	-	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	378	170	29	313	333	347	296	248	71	328	109
Future Volume (veh/h)	122	378	170	29	313	333	347	296	248	71	328	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1856	1856	1856	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	156	485	218	37	401	427	445	379	318	91	421	140
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	5	5	5	3	3	3	3	3	3	2	2	2
Cap, veh/h	390	1761	785	73	572	510	330	412	349	115	500	165
Arrive On Green	0.22	0.51	0.51	0.04	0.32	0.32	0.10	0.22	0.22	0.06	0.19	0.19
Sat Flow, veh/h	1739	3469	1547	1767	1763	1572	3428	1856	1572	1781	2627	865
Grp Volume(v), veh/h	156	485	218	37	401	427	445	379	318	91	283	278
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1767	1763	1572	1714	1856	1572	1781	1777	1715
Q Serve(g_s), s	8.4	8.8	5.7	2.3	21.9	27.7	10.6	22.0	18.2	5.5	16.9	17.2
Cycle Q Clear(g_c), s	8.4	8.8	5.7	2.3	21.9	27.7	10.6	22.0	18.2	5.5	16.9	17.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	390	1761	785	73	572	510	330	412	349	115	338	326
V/C Ratio(X)	0.40	0.28	0.28	0.51	0.70	0.84	1.35	0.92	0.91	0.79	0.84	0.85
Avail Cap(c_a), veh/h	390	1761	785	252	572	510	330	423	359	168	405	391
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	0.65	0.65	0.65	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	15.5	6.4	51.6	32.5	34.4	49.7	41.8	29.4	50.7	42.9	43.0
Incr Delay (d2), s/veh	0.7	0.4	0.9	5.4	7.0	15.0	169.4	18.2	19.1	14.3	12.4	14.1
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(95%),veh/ln	6.5	6.2	5.5	2.0	15.4	18.2	18.8	16.6	12.5	5.3	13.3	13.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.0	15.9	7.2	57.0	39.5	49.5	219.1	60.0	48.5	65.0	55.3	57.1
LnGrp LOS	D	B	A	E	D	D	F	E	D	E	E	E
Approach Vol, veh/h		859			865			1142			652	
Approach Delay, s/veh		17.5			45.2			118.8			57.4	
Approach LOS		B			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	60.1	15.2	25.8	29.0	40.0	11.7	29.3
Change Period (Y+Rc), s	4.3	4.3	4.6	4.9	4.3	4.3	4.6	4.9
Max Green Setting (Gmax), s	15.7	40.7	10.4	25.1	20.7	35.7	10.4	25.1
Max Q Clear Time (g_c+I1), s	4.3	10.8	12.6	19.2	10.4	29.7	7.5	24.0
Green Ext Time (p_c), s	0.0	4.2	0.0	1.7	0.3	2.6	0.0	0.5

Intersection Summary	
HCM 7th Control Delay, s/veh	64.6
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	33	17	356	87	353	17	419	65	246	218	50
Future Volume (veh/h)	47	33	17	356	87	353	17	419	65	246	218	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1781	1781	1781	1870	1870	1870	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	55	39	20	261	324	415	20	493	76	289	256	59
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	8	8	8	2	2	2	3	3	3	5	5	5
Cap, veh/h	141	185	88	513	538	456	56	582	89	327	1202	536
Arrive On Green	0.08	0.08	0.08	0.29	0.29	0.29	0.03	0.19	0.19	0.19	0.35	0.35
Sat Flow, veh/h	1697	2224	1059	1781	1870	1585	1767	3064	470	1739	3469	1547
Grp Volume(v), veh/h	55	29	30	261	324	415	20	283	286	289	256	59
Grp Sat Flow(s),veh/h/ln	1697	1692	1591	1781	1870	1585	1767	1763	1771	1739	1735	1547
Q Serve(g_s), s	2.4	1.2	1.4	9.4	11.4	19.3	0.8	11.8	12.0	12.4	4.0	2.0
Cycle Q Clear(g_c), s	2.4	1.2	1.4	9.4	11.4	19.3	0.8	11.8	12.0	12.4	4.0	2.0
Prop In Lane	1.00		0.67	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	141	141	133	513	538	456	56	335	337	327	1202	536
V/C Ratio(X)	0.39	0.21	0.23	0.51	0.60	0.91	0.36	0.84	0.85	0.88	0.21	0.11
Avail Cap(c_a), veh/h	213	212	200	689	723	613	249	479	481	359	1202	536
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	33.2	32.7	32.8	22.7	23.5	26.3	36.3	29.9	29.9	30.3	17.7	17.0
Incr Delay (d2), s/veh	0.6	0.3	0.3	0.3	0.4	12.4	1.4	6.5	7.0	19.6	0.0	0.0
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(95%),veh/ln	1.8	0.9	0.9	6.4	8.1	12.7	0.7	9.3	9.4	11.0	2.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.9	33.0	33.1	23.0	23.9	38.7	37.7	36.4	37.0	49.9	17.7	17.0
LnGrp LOS	C	C	C	C	C	D	D	D	D	D	B	B
Approach Vol, veh/h		114			1000			589			604	
Approach Delay, s/veh		33.4			29.8			36.7			33.0	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.6	18.7		11.8	6.6	30.7		27.4
Change Period (Y+Rc), s	4.2	4.2		5.4	4.2	4.2		5.4
Max Green Setting (Gmax), s	15.8	20.8		9.6	10.8	25.8		29.6
Max Q Clear Time (g_c+I1), s	4.4	14.0		4.4	2.8	6.0		21.3
Green Ext Time (p_c), s	0.0	0.6		0.1	0.0	0.4		0.7

Intersection Summary	
HCM 7th Control Delay, s/veh	32.6
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	9.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	654	60	7	0	34	4	3	1	1	1	0	557
Future Vol, veh/h	654	60	7	0	34	4	3	1	1	1	0	557
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	-	75	-	-	-	-	-	-	-	215
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	5	5	5	26	26	26	0	0	0	2	2	2
Mvmt Flow	807	74	9	0	42	5	4	1	1	1	0	688

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	47	0	0	83	0	0	1735	1740	78	1734	1742	-
Stage 1	-	-	-	-	-	-	1693	1693	-	44	44	-
Stage 2	-	-	-	-	-	-	42	47	-	1690	1698	-
Critical Hdwy	4.15	-	-	4.36	-	-	7.1	6.5	6.2	7.12	6.52	-
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.434	-	-	3.5	4	3.3	3.518	4.018	-
Pot Cap-1 Maneuver	1541	-	-	1376	-	-	70	88	988	69	87	0
Stage 1	-	-	-	-	-	-	119	150	-	970	858	0
Stage 2	-	-	-	-	-	-	978	860	-	118	148	0
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1541	-	-	1376	-	-	33	42	988	32	41	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	33	42	-	32	41	-
Stage 1	-	-	-	-	-	-	57	72	-	970	858	-
Stage 2	-	-	-	-	-	-	978	860	-	55	70	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	8.96	0	101.57	120.94
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	43	1541	-	-	1376	-	-	32	-
HCM Lane V/C Ratio	0.143	0.524	-	-	-	-	-	0.038	-
HCM Control Delay (s/veh)	101.6	9.9	-	-	0	-	-	120.9	0
HCM Lane LOS	F	A	-	-	A	-	-	F	A
HCM 95th %tile Q(veh)	0.5	3.2	-	-	0	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	64	505	0	0	187	51	1	2	5	88	0	20
Future Vol, veh/h	64	505	0	0	187	51	1	2	5	88	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	130	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	92	92	79	79	92	92	92	79	92	79
Heavy Vehicles, %	11	11	2	2	24	24	2	2	2	16	2	16
Mvmt Flow	81	639	0	0	237	65	1	2	5	111	0	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	301	0	-	-	-	0	1038	1103	320	719	-	237
Stage 1	-	-	-	-	-	-	801	801	-	237	-	-
Stage 2	-	-	-	-	-	-	237	301	-	483	-	-
Critical Hdwy	4.265	-	-	-	-	-	7.33	6.53	6.93	7.54	-	6.44
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.34	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.74	-	-
Follow-up Hdwy	2.3045	-	-	-	-	-	3.519	4.019	3.319	3.652	-	3.452
Pot Cap-1 Maneuver	1202	-	0	0	-	-	197	211	677	308	0	763
Stage 1	-	-	0	0	-	-	345	396	-	731	0	-
Stage 2	-	-	0	0	-	-	766	664	-	505	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1202	-	-	-	-	-	175	194	677	278	-	763
Mov Cap-2 Maneuver	-	-	-	-	-	-	260	285	-	371	-	-
Stage 1	-	-	-	-	-	-	317	363	-	731	-	-
Stage 2	-	-	-	-	-	-	740	664	-	457	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.4	0	13.39	18.11
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	438	405	-	-	-	410
HCM Lane V/C Ratio	0.02	0.067	-	-	-	0.333
HCM Control Delay (s/veh)	13.4	8.2	0.5	-	-	18.1
HCM Lane LOS	B	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.2	-	-	-	1.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	407	132	189	176	240	48	929	192	184	693	17
Future Volume (veh/h)	185	407	132	189	176	240	48	929	192	184	693	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1737	1737	1737	1722	1722	1722	1856	1856	1856	1811	1811	1811
Adj Flow Rate, veh/h	203	447	145	208	193	264	53	1021	211	202	762	19
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	11	11	11	12	12	12	3	3	3	6	6	6
Cap, veh/h	229	502	161	234	341	304	68	1188	530	231	1484	37
Arrive On Green	0.14	0.20	0.20	0.14	0.21	0.21	0.04	0.34	0.34	0.13	0.43	0.43
Sat Flow, veh/h	1654	2455	790	1640	1636	1459	1767	3526	1572	1725	3431	86
Grp Volume(v), veh/h	203	299	293	208	193	264	53	1021	211	202	382	399
Grp Sat Flow(s),veh/h/ln	1654	1650	1595	1640	1636	1459	1767	1763	1572	1725	1721	1796
Q Serve(g_s), s	13.3	19.4	19.7	13.7	11.6	19.2	3.3	29.7	11.3	12.6	17.8	17.8
Cycle Q Clear(g_c), s	13.3	19.4	19.7	13.7	11.6	19.2	3.3	29.7	11.3	12.6	17.8	17.8
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	229	337	326	234	341	304	68	1188	530	231	744	777
V/C Ratio(X)	0.89	0.89	0.90	0.89	0.57	0.87	0.78	0.86	0.40	0.87	0.51	0.51
Avail Cap(c_a), veh/h	241	360	348	239	357	318	257	1188	530	329	744	777
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	46.5	42.5	42.6	46.3	39.1	42.1	52.4	34.0	27.9	46.7	22.8	22.8
Incr Delay (d2), s/veh	28.0	21.6	24.0	29.7	1.9	21.0	6.9	8.2	2.2	12.7	2.5	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(95%),veh/ln	11.5	14.8	14.8	11.8	8.3	13.3	2.8	19.3	7.9	10.2	11.9	12.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	74.5	64.1	66.6	76.0	41.0	63.1	59.3	42.2	30.1	59.4	25.3	25.2
LnGrp LOS	E	E	E	E	D	E	E	D	C	E	C	C
Approach Vol, veh/h		795			665			1285			983	
Approach Delay, s/veh		67.7			60.7			40.9			32.3	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.7	43.1	19.7	28.5	8.2	53.6	19.2	28.9
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	24.0	16.0	34.0	16.0	24.0
Max Q Clear Time (g_c+I1), s	14.6	31.7	15.7	21.7	5.3	19.8	15.3	21.2
Green Ext Time (p_c), s	0.1	0.0	0.0	0.8	0.0	3.9	0.0	0.7

Intersection Summary	
HCM 7th Control Delay, s/veh	47.9
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	7.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	90	66	70	189	166	90
Future Vol, veh/h	90	66	70	189	166	90
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	79	79	79	79	79	79
Heavy Vehicles, %	23	23	18	18	12	12
Mvmt Flow	114	84	89	239	210	114

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	742	208	0	0	328	0
Stage 1	208	-	-	-	-	-
Stage 2	534	-	-	-	-	-
Critical Hdwy	6.63	6.43	-	-	4.22	-
Critical Hdwy Stg 1	5.63	-	-	-	-	-
Critical Hdwy Stg 2	5.63	-	-	-	-	-
Follow-up Hdwy	3.707	3.507	-	-	2.308	-
Pot Cap-1 Maneuver	354	782	-	-	1178	-
Stage 1	779	-	-	-	-	-
Stage 2	548	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	287	782	-	-	1178	-
Mov Cap-2 Maneuver	287	-	-	-	-	-
Stage 1	779	-	-	-	-	-
Stage 2	443	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	23.19	0	5.65
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	391	1103	-
HCM Lane V/C Ratio	-	-	0.504	0.178	-
HCM Control Delay (s/veh)	-	-	23.2	8.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	2.7	0.6	-

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	125	13	357	220	8	187
Future Vol, veh/h	125	13	357	220	8	187
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	-	-	0	175	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	2	2	2	2
Mvmt Flow	130	14	372	229	8	195

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	583	372	0	0	601	0
Stage 1	372	-	-	-	-	-
Stage 2	211	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.12	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.218	-
Pot Cap-1 Maneuver	473	672	-	-	976	-
Stage 1	695	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	469	672	-	-	976	-
Mov Cap-2 Maneuver	469	-	-	-	-	-
Stage 1	695	-	-	-	-	-
Stage 2	814	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	15.6	0	0.36
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	482	976	-
HCM Lane V/C Ratio	-	-	0.298	0.009	-
HCM Control Delay (s/veh)	-	-	15.6	8.7	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1.2	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	736	129	144	805	136	213	993	317	126	938	124
Future Volume (veh/h)	203	736	129	144	805	136	213	993	317	126	938	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1796	1796	1796	1796	1796	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	216	783	137	153	856	145	227	1056	337	134	998	132
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	244	648	113	244	652	110	254	984	439	334	958	127
Arrive On Green	0.14	0.22	0.22	0.14	0.22	0.22	0.14	0.28	0.28	0.19	0.30	0.30
Sat Flow, veh/h	1711	2903	508	1711	2919	494	1781	3554	1585	1781	3155	417
Grp Volume(v), veh/h	216	460	460	153	500	501	227	1056	337	134	562	568
Grp Sat Flow(s),veh/h/ln	1711	1706	1705	1711	1706	1707	1781	1777	1585	1781	1777	1795
Q Serve(g_s), s	13.9	25.0	25.0	9.4	25.0	25.0	14.0	31.0	21.9	7.4	34.0	34.0
Cycle Q Clear(g_c), s	13.9	25.0	25.0	9.4	25.0	25.0	14.0	31.0	21.9	7.4	34.0	34.0
Prop In Lane	1.00		0.30	1.00		0.29	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	244	381	381	244	381	381	254	984	439	334	539	545
V/C Ratio(X)	0.88	1.21	1.21	0.63	1.31	1.31	0.89	1.07	0.77	0.40	1.04	1.04
Avail Cap(c_a), veh/h	244	381	381	244	381	381	254	984	439	334	539	545
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	47.1	43.5	43.5	45.2	43.5	43.5	47.2	40.5	37.2	40.0	39.0	39.0
Incr Delay (d2), s/veh	34.0	115.8	115.9	11.5	158.7	158.8	34.3	50.6	12.2	3.6	50.0	50.1
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(95%),veh/ln	12.8	33.5	33.5	8.3	40.9	40.9	13.3	28.5	14.9	6.4	30.5	30.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	81.1	159.3	159.4	56.7	202.2	202.3	81.4	91.1	49.4	43.5	89.0	89.1
LnGrp LOS	F	F	F	E	F	F	F	F	D	D	F	F
Approach Vol, veh/h		1136			1154			1620			1264	
Approach Delay, s/veh		144.5			183.0			81.1			84.2	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	37.0	20.0	30.0	22.0	40.0	20.0	30.0
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	6.0	* 6	4.0	5.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	25.0	16.0	* 34	16.0	25.0
Max Q Clear Time (g_c+I1), s	9.4	33.0	11.4	27.0	16.0	36.0	15.9	27.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	118.5
HCM 7th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	11.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	662	146	68	435	13	83	3	63	14	8	5
Future Vol, veh/h	0	662	146	68	435	13	83	3	63	14	8	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	480	550	-	-	-	-	400	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	8	8	8	7	7	7	21	21	21	31	31	31
Mvmt Flow	0	720	159	74	473	14	90	3	68	15	9	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	487	0	0	878	0	0	1345	1354	720	1349	1506	480
Stage 1	-	-	-	-	-	-	720	720	-	628	628	-
Stage 2	-	-	-	-	-	-	625	635	-	721	878	-
Critical Hdwy	4.18	-	-	4.17	-	-	7.31	6.71	6.41	7.41	6.81	6.51
Critical Hdwy Stg 1	-	-	-	-	-	-	6.31	5.71	-	6.41	5.81	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.31	5.71	-	6.41	5.81	-
Follow-up Hdwy	2.272	-	-	2.263	-	-	3.689	4.189	3.489	3.779	4.279	3.579
Pot Cap-1 Maneuver	1046	-	-	748	-	-	117	137	398	111	105	531
Stage 1	-	-	-	-	-	-	391	405	-	425	433	-
Stage 2	-	-	-	-	-	-	442	444	-	376	328	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1046	-	-	748	-	-	96	123	398	81	94	531
Mov Cap-2 Maneuver	-	-	-	-	-	-	96	123	-	81	94	-
Stage 1	-	-	-	-	-	-	391	405	-	383	391	-
Stage 2	-	-	-	-	-	-	385	400	-	309	328	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	1.36	100.67	54.69
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	97	398	1046	-	-	748	-	-	101
HCM Lane V/C Ratio	0.968	0.172	-	-	-	0.099	-	-	0.291
HCM Control Delay (s/veh)	162.8	15.9	0	-	-	10.3	-	-	54.7
HCM Lane LOS	F	C	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	5.7	0.6	0	-	-	0.3	-	-	1.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	519	277	68	262	114	288	266	474	114	529	164
Future Volume (veh/h)	195	519	277	68	262	114	288	266	474	114	529	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	212	564	301	74	285	124	313	289	515	124	575	178
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, %	5	5	5	5	5	5	2	2	2	1	1	1
Cap, veh/h	327	1589	709	95	770	327	327	372	315	222	615	190
Arrive On Green	0.19	0.46	0.46	0.05	0.32	0.32	0.09	0.20	0.20	0.12	0.23	0.23
Sat Flow, veh/h	1739	3469	1547	1739	2372	1007	3456	1870	1585	1795	2694	832
Grp Volume(v), veh/h	212	564	301	74	206	203	313	289	515	124	382	371
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1739	1735	1645	1728	1870	1585	1795	1791	1735
Q Serve(g_s), s	12.4	11.6	9.7	4.6	10.0	10.4	9.9	16.1	18.1	7.2	23.0	23.1
Cycle Q Clear(g_c), s	12.4	11.6	9.7	4.6	10.0	10.4	9.9	16.1	18.1	7.2	23.0	23.1
Prop In Lane	1.00		1.00	1.00		0.61	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	327	1589	709	95	563	534	327	372	315	222	409	396
V/C Ratio(X)	0.65	0.35	0.42	0.78	0.37	0.38	0.96	0.78	1.63	0.56	0.93	0.94
Avail Cap(c_a), veh/h	327	1589	709	248	563	534	327	427	362	222	409	396
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	0.29	0.29	0.29	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	19.3	9.2	51.3	28.5	28.6	49.6	41.7	30.2	45.4	41.6	41.7
Incr Delay (d2), s/veh	4.4	0.6	1.9	12.8	1.8	2.0	17.6	2.4	289.1	3.1	28.5	29.9
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(95%),veh/ln	9.5	8.2	6.2	4.2	7.8	7.8	7.0	10.1	46.3	6.1	19.2	19.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	45.7	19.9	11.0	64.1	30.3	30.7	67.2	44.1	319.3	48.5	70.1	71.6
LnGrp LOS	D	B	B	E	C	C	E	D	F	D	E	E
Approach Vol, veh/h		1077			483			1117			877	
Approach Delay, s/veh		22.5			35.6			177.4			67.7	
Approach LOS		C			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	54.7	15.0	30.0	25.0	40.0	18.2	26.8
Change Period (Y+Rc), s	4.3	4.3	4.6	4.9	4.3	4.3	4.6	4.9
Max Green Setting (Gmax), s	15.7	40.7	10.4	25.1	20.7	35.7	10.4	25.1
Max Q Clear Time (g_c+I1), s	6.6	13.6	11.9	25.1	14.4	12.4	9.2	20.1
Green Ext Time (p_c), s	0.1	5.1	0.0	0.0	0.3	2.4	0.0	1.8

Intersection Summary	
HCM 7th Control Delay, s/veh	84.1
HCM 7th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	96	98	556	93	192	100	728	123	327	449	94
Future Volume (veh/h)	101	96	98	556	93	192	100	728	123	327	449	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1885	1885	1885	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	110	104	107	676	0	209	109	791	134	355	488	102
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, %	1	1	1	2	2	2	1	1	1	1	1	1
Cap, veh/h	165	164	147	767	0	341	142	791	134	352	1344	599
Arrive On Green	0.09	0.09	0.09	0.22	0.00	0.22	0.08	0.26	0.26	0.20	0.38	0.38
Sat Flow, veh/h	1795	1791	1598	3563	0	1585	1795	3064	519	1795	3582	1598
Grp Volume(v), veh/h	110	104	107	676	0	209	109	462	463	355	488	102
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1781	0	1585	1795	1791	1792	1795	1791	1598
Q Serve(g_s), s	4.8	4.5	5.2	14.8	0.0	9.6	4.8	20.8	20.8	15.8	7.9	3.4
Cycle Q Clear(g_c), s	4.8	4.5	5.2	14.8	0.0	9.6	4.8	20.8	20.8	15.8	7.9	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	165	164	147	767	0	341	142	463	463	352	1344	599
V/C Ratio(X)	0.67	0.63	0.73	0.88	0.00	0.61	0.77	1.00	1.00	1.01	0.36	0.17
Avail Cap(c_a), veh/h	214	214	190	1310	0	583	241	463	463	352	1344	599
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	35.3	35.6	30.6	0.0	28.6	36.3	29.9	29.9	32.4	18.2	16.8
Incr Delay (d2), s/veh	2.3	1.5	6.1	1.9	0.0	0.7	3.2	41.7	41.7	49.9	0.1	0.0
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(95%),veh/ln	3.9	3.6	4.1	10.1	0.0	6.2	3.9	20.0	20.0	17.1	5.7	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.7	36.7	41.7	32.5	0.0	29.2	39.5	71.5	71.6	82.3	18.3	16.8
LnGrp LOS	D	D	D	C		C	D	E	E	F	B	B
Approach Vol, veh/h		321			885			1034			945	
Approach Delay, s/veh		38.7			31.7			68.2			42.1	
Approach LOS		D			C			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	25.0		12.8	10.6	34.4		22.7				
Change Period (Y+Rc), s	4.2	4.2		5.4	4.2	4.2		5.4				
Max Green Setting (Gmax), s	5.8	20.8		9.6	10.8	25.8		29.6				
Max Q Clear Time (g_c+I1), s	7.8	22.8		7.2	6.8	9.9		16.8				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	0.8		0.5				

Intersection Summary	
HCM 7th Control Delay, s/veh	47.3
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	75.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1125	44	21	0	58	12	10	3	1	0	15	480
Future Vol, veh/h	1125	44	21	0	58	12	10	3	1	0	15	480
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	-	75	-	-	-	-	-	-	-	215
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	15	15	15	0	0	0	4	4	4
Mvmt Flow	1223	48	23	0	63	13	11	3	1	0	16	522

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	76	0	0	71	0	0	2576	2581	59	2565	2586	-
Stage 1	-	-	-	-	-	-	2505	2505	-	70	70	-
Stage 2	-	-	-	-	-	-	71	76	-	2495	2516	-
Critical Hdwy	4.13	-	-	4.25	-	-	7.1	6.5	6.2	7.14	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.14	5.54	-
Follow-up Hdwy	2.227	-	-	2.335	-	-	3.5	4	3.3	3.536	4.036	-
Pot Cap-1 Maneuver	1517	-	-	1451	-	-	17	26	1012	17	25	0
Stage 1	-	-	-	-	-	-	39	58	-	935	833	0
Stage 2	-	-	-	-	-	-	944	836	-	39	56	0
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1517	-	-	1451	-	-	~ 3	5	1012	2	~ 5	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 3	5	-	2	~ 5	-
Stage 1	-	-	-	-	-	-	~ 8	11	-	935	833	-
Stage 2	-	-	-	-	-	-	925	836	-	5	~ 11	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	15.44	0	$ 2984.1	$ 2474.56
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	4	1517	-	-	1451	-	-	5	-
HCM Lane V/C Ratio	3.87	0.806	-	-	-	-	-	3.374	-
HCM Control Delay (s/veh)	$ 2984.1	16.3	-	-	0	-	-	$ 2474.6	0
HCM Lane LOS	F	C	-	-	A	-	-	F	A
HCM 95th %tile Q(veh)	3.2	9.8	-	-	0	-	-	3.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Appendix E.3 – 2027 Build Conditions

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	163	0	0	235	65	0	0	1	92	0	41
Future Vol, veh/h	30	163	0	0	235	65	0	0	1	92	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	130	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	92	92	80	80	92	92	92	80	92	80
Heavy Vehicles, %	36	36	2	2	24	24	2	2	2	16	2	16
Mvmt Flow	38	204	0	0	294	81	0	0	1	115	0	51

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	375	0	-	-	-	0	573	654	102	471	-	294
Stage 1	-	-	-	-	-	-	279	279	-	294	-	-
Stage 2	-	-	-	-	-	-	294	375	-	177	-	-
Critical Hdwy	4.64	-	-	-	-	-	7.33	6.53	6.93	7.54	-	6.44
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.34	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.74	-	-
Follow-up Hdwy	2.542	-	-	-	-	-	3.519	4.019	3.319	3.652	-	3.452
Pot Cap-1 Maneuver	994	-	0	0	-	-	416	386	934	463	0	708
Stage 1	-	-	0	0	-	-	705	679	-	680	0	-
Stage 2	-	-	0	0	-	-	714	616	-	773	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	994	-	-	-	-	-	371	370	934	444	-	708
Mov Cap-2 Maneuver	-	-	-	-	-	-	465	447	-	525	-	-
Stage 1	-	-	-	-	-	-	677	652	-	680	-	-
Stage 2	-	-	-	-	-	-	662	616	-	741	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.58	0	8.86	13.89
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	934	560	-	-	-	570
HCM Lane V/C Ratio	0.001	0.038	-	-	-	0.291
HCM Control Delay (s/veh)	8.9	8.8	0.3	-	-	13.9
HCM Lane LOS	A	A	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	-	1.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	167	96	316	253	214	129	659	226	59	452	13
Future Volume (veh/h)	23	167	96	316	253	214	129	659	226	59	452	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1455	1455	1455	1707	1707	1707	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	24	178	102	336	269	228	137	701	240	63	481	14
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	30	30	30	13	13	13	9	9	9	9	9	9
Cap, veh/h	26	230	126	237	440	360	164	1651	737	80	1473	43
Arrive On Green	0.02	0.13	0.13	0.15	0.26	0.26	0.10	0.49	0.49	0.05	0.44	0.44
Sat Flow, veh/h	1386	1726	942	1626	1693	1387	1682	3357	1497	1682	3331	97
Grp Volume(v), veh/h	24	141	139	336	257	240	137	701	240	63	242	253
Grp Sat Flow(s),veh/h/ln	1386	1383	1286	1626	1622	1458	1682	1678	1497	1682	1678	1749
Q Serve(g_s), s	1.9	10.8	11.6	16.0	15.4	16.0	8.8	14.8	10.7	4.1	10.3	10.4
Cycle Q Clear(g_c), s	1.9	10.8	11.6	16.0	15.4	16.0	8.8	14.8	10.7	4.1	10.3	10.4
Prop In Lane	1.00		0.73	1.00		0.95	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	26	184	171	237	421	379	164	1651	737	80	742	773
V/C Ratio(X)	0.92	0.76	0.81	1.42	0.61	0.63	0.84	0.42	0.33	0.79	0.33	0.33
Avail Cap(c_a), veh/h	202	302	281	237	421	379	245	1651	737	321	742	773
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	53.9	46.0	46.3	47.0	35.8	36.1	48.8	17.9	16.9	51.8	20.0	20.0
Incr Delay (d2), s/veh	32.4	6.5	8.9	212.2	2.6	3.4	9.5	0.8	1.2	6.3	1.2	1.1
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(95%),veh/ln	1.6	7.1	7.3	31.7	10.3	9.9	7.2	9.3	6.7	3.3	7.4	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	86.3	52.5	55.2	259.2	38.4	39.5	58.3	18.7	18.1	58.1	21.2	21.1
LnGrp LOS	F	D	E	F	D	D	E	B	B	E	C	C
Approach Vol, veh/h		304			833			1078			558	
Approach Delay, s/veh		56.4			127.8			23.6			25.3	
Approach LOS		E			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	60.1	20.0	20.7	14.7	54.6	6.1	34.6
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	24.0	16.0	34.0	16.0	24.0
Max Q Clear Time (g_c+I1), s	6.1	16.8	18.0	13.6	10.8	12.4	3.9	18.0
Green Ext Time (p_c), s	0.0	4.2	0.0	1.1	0.1	2.7	0.0	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	58.8
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	46	68	69	56	91	97
Future Vol, veh/h	46	68	69	56	91	97
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	91	91	91	91	91	91
Heavy Vehicles, %	23	23	21	21	24	24
Mvmt Flow	51	75	76	62	100	107

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	413	107	0	0	137	0
Stage 1	107	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Critical Hdwy	6.63	6.43	-	-	4.34	-
Critical Hdwy Stg 1	5.63	-	-	-	-	-
Critical Hdwy Stg 2	5.63	-	-	-	-	-
Follow-up Hdwy	3.707	3.507	-	-	2.416	-
Pot Cap-1 Maneuver	557	893	-	-	1322	-
Stage 1	868	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	512	893	-	-	1322	-
Mov Cap-2 Maneuver	512	-	-	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	645	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	11.4	0	3.85
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	687	871	-
HCM Lane V/C Ratio	-	-	0.182	0.076	-
HCM Control Delay (s/veh)	-	-	11.4	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.2	-

Intersection	
Int Delay, s/veh	4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	147	35	206	77	11	257
Future Vol, veh/h	147	35	206	77	11	257
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	-	-	0	175	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	5	5	4	4	6	6
Mvmt Flow	173	41	242	91	13	302

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	571	242	0	0	333	0
Stage 1	242	-	-	-	-	-
Stage 2	328	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.16	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.254	-
Pot Cap-1 Maneuver	478	789	-	-	1204	-
Stage 1	791	-	-	-	-	-
Stage 2	723	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	472	789	-	-	1204	-
Mov Cap-2 Maneuver	472	-	-	-	-	-
Stage 1	791	-	-	-	-	-
Stage 2	715	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	16.99	0	0.33
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	512	1204	-
HCM Lane V/C Ratio	-	-	0.418	0.011	-
HCM Control Delay (s/veh)	-	-	17	8	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	2	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	656	64	133	639	91	119	631	157	129	774	110
Future Volume (veh/h)	159	656	64	133	639	91	119	631	157	129	774	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1752	1752	1752	1752	1752	1752	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	167	691	67	140	673	96	125	664	165	136	815	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	10	10	10	5	5	5	5	5	5
Cap, veh/h	238	684	66	238	653	93	248	960	428	326	925	132
Arrive On Green	0.14	0.22	0.22	0.14	0.22	0.22	0.14	0.28	0.28	0.19	0.30	0.30
Sat Flow, veh/h	1668	3066	297	1668	2924	417	1739	3469	1547	1739	3049	434
Grp Volume(v), veh/h	167	375	383	140	383	386	125	664	165	136	464	467
Grp Sat Flow(s),veh/h/ln	1668	1664	1698	1668	1664	1677	1739	1735	1547	1739	1735	1748
Q Serve(g_s), s	10.7	25.0	25.0	8.8	25.0	25.0	7.4	19.2	9.7	7.7	28.5	28.5
Cycle Q Clear(g_c), s	10.7	25.0	25.0	8.8	25.0	25.0	7.4	19.2	9.7	7.7	28.5	28.5
Prop In Lane	1.00		0.17	1.00		0.25	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	238	371	379	238	371	374	248	960	428	326	527	531
V/C Ratio(X)	0.70	1.01	1.01	0.59	1.03	1.03	0.50	0.69	0.39	0.42	0.88	0.88
Avail Cap(c_a), veh/h	238	371	379	238	371	374	248	960	428	326	527	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	45.7	43.5	43.5	44.9	43.5	43.5	44.3	36.2	32.8	40.1	37.1	37.1
Incr Delay (d2), s/veh	15.8	49.0	48.9	10.2	54.7	55.0	7.1	4.1	2.6	3.9	18.7	18.6
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(95%),veh/ln	9.2	21.6	22.0	7.7	22.6	22.8	6.5	13.2	7.0	6.6	20.9	21.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.5	92.5	92.4	55.1	98.2	98.5	51.4	40.3	35.4	44.0	55.8	55.7
LnGrp LOS	E	F	F	E	F	F	D	D	D	D	E	E
Approach Vol, veh/h		925			909			954			1067	
Approach Delay, s/veh		86.9			91.7			40.9			54.2	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	37.0	20.0	30.0	22.0	40.0	20.0	30.0
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	6.0	* 6	4.0	5.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	25.0	16.0	* 34	16.0	25.0
Max Q Clear Time (g_c+I1), s	9.7	21.2	10.8	27.0	9.4	30.5	12.7	27.0
Green Ext Time (p_c), s	0.0	1.2	0.0	0.0	0.0	1.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	67.6
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	420	112	76	407	13	57	10	30	2	6	4
Future Vol, veh/h	4	420	112	76	407	13	57	10	30	2	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	480	550	-	-	-	-	400	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	15	15	15	20	20	20	25	25	25	58	58	58
Mvmt Flow	5	483	129	87	468	15	66	11	34	2	7	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	483	0	0	611	0	0	1138	1149	483	1148	1271	475
Stage 1	-	-	-	-	-	-	492	492	-	650	650	-
Stage 2	-	-	-	-	-	-	646	657	-	498	621	-
Critical Hdwy	4.25	-	-	4.3	-	-	7.35	6.75	6.45	7.68	7.08	6.78
Critical Hdwy Stg 1	-	-	-	-	-	-	6.35	5.75	-	6.68	6.08	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.35	5.75	-	6.68	6.08	-
Follow-up Hdwy	2.335	-	-	2.38	-	-	3.725	4.225	3.525	4.022	4.522	3.822
Pot Cap-1 Maneuver	1016	-	-	886	-	-	161	180	540	137	131	490
Stage 1	-	-	-	-	-	-	518	511	-	377	389	-
Stage 2	-	-	-	-	-	-	424	428	-	463	402	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1016	-	-	886	-	-	136	161	540	108	117	490
Mov Cap-2 Maneuver	-	-	-	-	-	-	136	161	-	108	117	-
Stage 1	-	-	-	-	-	-	515	509	-	340	350	-
Stage 2	-	-	-	-	-	-	371	386	-	422	400	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.06	1.46	44.62	30.61
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	139	540	1016	-	-	886	-	-	154
HCM Lane V/C Ratio	0.554	0.064	0.005	-	-	0.099	-	-	0.089
HCM Control Delay (s/veh)	59.2	12.1	8.6	-	-	9.5	-	-	30.6
HCM Lane LOS	F	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	2.8	0.2	0	-	-	0.3	-	-	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	379	170	29	318	333	349	296	248	71	328	109
Future Volume (veh/h)	122	379	170	29	318	333	349	296	248	71	328	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1856	1856	1856	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	156	486	218	37	408	427	447	379	318	91	421	140
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	5	5	5	3	3	3	3	3	3	2	2	2
Cap, veh/h	390	1761	785	73	572	510	330	412	349	115	500	165
Arrive On Green	0.22	0.51	0.51	0.04	0.32	0.32	0.10	0.22	0.22	0.06	0.19	0.19
Sat Flow, veh/h	1739	3469	1547	1767	1763	1572	3428	1856	1572	1781	2627	865
Grp Volume(v), veh/h	156	486	218	37	408	427	447	379	318	91	283	278
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1767	1763	1572	1714	1856	1572	1781	1777	1715
Q Serve(g_s), s	8.4	8.8	5.7	2.3	22.4	27.7	10.6	22.0	18.2	5.5	16.9	17.2
Cycle Q Clear(g_c), s	8.4	8.8	5.7	2.3	22.4	27.7	10.6	22.0	18.2	5.5	16.9	17.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	390	1761	785	73	572	510	330	412	349	115	338	326
V/C Ratio(X)	0.40	0.28	0.28	0.51	0.71	0.84	1.35	0.92	0.91	0.79	0.84	0.85
Avail Cap(c_a), veh/h	390	1761	785	252	572	510	330	423	359	168	405	391
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	0.65	0.65	0.65	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	15.5	6.4	51.6	32.7	34.4	49.7	41.8	29.4	50.7	42.9	43.0
Incr Delay (d2), s/veh	0.7	0.4	0.9	5.4	7.4	15.0	172.0	18.2	19.1	14.3	12.4	14.1
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(95%),veh/ln	6.5	6.2	5.5	2.0	15.8	18.2	19.0	16.6	12.5	5.3	13.3	13.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.0	15.9	7.2	57.0	40.0	49.5	221.7	60.0	48.5	65.0	55.3	57.1
LnGrp LOS	D	B	A	E	D	D	F	E	D	E	E	E
Approach Vol, veh/h		860			872			1144			652	
Approach Delay, s/veh		17.5			45.4			120.0			57.4	
Approach LOS		B			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	60.1	15.2	25.8	29.0	40.0	11.7	29.3
Change Period (Y+Rc), s	4.3	4.3	4.6	4.9	4.3	4.3	4.6	4.9
Max Green Setting (Gmax), s	15.7	40.7	10.4	25.1	20.7	35.7	10.4	25.1
Max Q Clear Time (g_c+I1), s	4.3	10.8	12.6	19.2	10.4	29.7	7.5	24.0
Green Ext Time (p_c), s	0.0	4.2	0.0	1.7	0.3	2.7	0.0	0.5

Intersection Summary	
HCM 7th Control Delay, s/veh	65.0
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	33	17	356	87	355	17	419	65	247	218	50
Future Volume (veh/h)	47	33	17	356	87	355	17	419	65	247	218	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1781	1781	1781	1870	1870	1870	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	55	39	20	261	324	418	20	493	76	291	256	59
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	8	8	8	2	2	2	3	3	3	5	5	5
Cap, veh/h	141	184	88	515	541	459	56	582	89	329	1204	537
Arrive On Green	0.08	0.08	0.08	0.29	0.29	0.29	0.03	0.19	0.19	0.19	0.35	0.35
Sat Flow, veh/h	1697	2224	1059	1781	1870	1585	1767	3064	470	1739	3469	1547
Grp Volume(v), veh/h	55	29	30	261	324	418	20	283	286	291	256	59
Grp Sat Flow(s),veh/h/ln	1697	1692	1591	1781	1870	1585	1767	1763	1771	1739	1735	1547
Q Serve(g_s), s	2.4	1.2	1.4	9.4	11.5	19.6	0.9	11.9	12.0	12.6	4.0	2.0
Cycle Q Clear(g_c), s	2.4	1.2	1.4	9.4	11.5	19.6	0.9	11.9	12.0	12.6	4.0	2.0
Prop In Lane	1.00		0.67	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	141	140	132	515	541	459	56	335	336	329	1204	537
V/C Ratio(X)	0.39	0.21	0.23	0.51	0.60	0.91	0.36	0.84	0.85	0.89	0.21	0.11
Avail Cap(c_a), veh/h	211	211	198	684	718	609	248	476	478	356	1204	537
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	33.5	33.0	33.0	22.8	23.5	26.4	36.6	30.1	30.2	30.5	17.7	17.1
Incr Delay (d2), s/veh	0.7	0.3	0.3	0.3	0.4	12.9	1.4	6.8	7.3	20.2	0.0	0.0
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(95%),veh/ln	1.8	0.9	1.0	6.5	8.2	13.0	0.7	9.3	9.5	11.2	2.8	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.2	33.3	33.4	23.1	23.9	39.4	38.0	36.9	37.5	50.7	17.8	17.1
LnGrp LOS	C	C	C	C	C	D	D	D	D	D	B	B
Approach Vol, veh/h		114			1003			589			606	
Approach Delay, s/veh		33.7			30.2			37.2			33.5	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	18.8		11.8	6.6	31.0		27.7				
Change Period (Y+Rc), s	4.2	4.2		5.4	4.2	4.2		5.4				
Max Green Setting (Gmax), s	15.8	20.8		9.6	10.8	25.8		29.6				
Max Q Clear Time (g_c+I1), s	4.4	14.0		4.4	2.9	6.0		21.6				
Green Ext Time (p_c), s	0.0	0.6		0.1	0.0	0.4		0.7				

Intersection Summary	
HCM 7th Control Delay, s/veh	33.0
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	9.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	655	60	7	0	34	4	3	1	1	1	0	561
Future Vol, veh/h	655	60	7	0	34	4	3	1	1	1	0	561
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	-	75	-	-	-	-	-	-	-	215
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	5	5	5	26	26	26	0	0	0	2	2	2
Mvmt Flow	809	74	9	0	42	5	4	1	1	1	0	693

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	47	0	0	83	0	0	1738	1743	78	1736	1744	-
Stage 1	-	-	-	-	-	-	1696	1696	-	44	44	-
Stage 2	-	-	-	-	-	-	42	47	-	1692	1700	-
Critical Hdwy	4.15	-	-	4.36	-	-	7.1	6.5	6.2	7.12	6.52	-
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.434	-	-	3.5	4	3.3	3.518	4.018	-
Pot Cap-1 Maneuver	1541	-	-	1376	-	-	69	88	988	69	86	0
Stage 1	-	-	-	-	-	-	119	150	-	970	858	0
Stage 2	-	-	-	-	-	-	978	860	-	118	148	0
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1541	-	-	1376	-	-	33	42	988	32	41	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	33	42	-	32	41	-
Stage 1	-	-	-	-	-	-	56	71	-	970	858	-
Stage 2	-	-	-	-	-	-	978	860	-	55	70	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	8.97	0	102.19	121.63
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	43	1541	-	-	1376	-	-	32	-
HCM Lane V/C Ratio	0.143	0.525	-	-	-	-	-	0.038	-
HCM Control Delay (s/veh)	102.2	9.9	-	-	0	-	-	121.6	0
HCM Lane LOS	F	A	-	-	A	-	-	F	A
HCM 95th %tile Q(veh)	0.5	3.2	-	-	0	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	147	0	1	188	0	2
Future Vol, veh/h	147	0	1	188	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	160	0	1	204	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	160	0	366	160
Stage 1	-	-	-	-	160	-
Stage 2	-	-	-	-	207	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1419	-	633	885
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	828	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1419	-	633	885
Mov Cap-2 Maneuver	-	-	-	-	633	-
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	827	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.04	9.08
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	885	-	-	10	-
HCM Lane V/C Ratio	0.002	-	-	0.001	-
HCM Control Delay (s/veh)	9.1	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	148	1	2	189	0	0
Future Vol, veh/h	148	1	2	189	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	-	-	-	-	-	-
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	161	1	2	205	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	162	0	371	161
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	210	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1417	-	629	884
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	825	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1417	-	628	884
Mov Cap-2 Maneuver	-	-	-	-	628	-
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	824	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.08	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	19	-
HCM Lane V/C Ratio	-	-	-	0.002	-
HCM Control Delay (s/veh)	0	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	148	0	9	191	0	0
Future Vol, veh/h	148	0	9	191	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	-	-	-	-	-	-
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	161	0	10	208	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	161	0	388	161
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	227	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1418	-	615	884
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	811	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1418	-	611	884
Mov Cap-2 Maneuver	-	-	-	-	611	-
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	804	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.34	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	81	-
HCM Lane V/C Ratio	-	-	-	0.007	-
HCM Control Delay (s/veh)	0	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	64	549	0	0	275	51	1	2	5	88	0	20
Future Vol, veh/h	64	549	0	0	275	51	1	2	5	88	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	130	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	92	92	79	79	92	92	92	79	92	79
Heavy Vehicles, %	11	11	2	2	24	24	2	2	2	16	2	16
Mvmt Flow	81	695	0	0	348	65	1	2	5	111	0	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	413	0	-	-	-	0	1205	1270	347	859	-	348
Stage 1	-	-	-	-	-	-	857	857	-	348	-	-
Stage 2	-	-	-	-	-	-	348	413	-	511	-	-
Critical Hdwy	4.265	-	-	-	-	-	7.33	6.53	6.93	7.54	-	6.44
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.34	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.74	-	-
Follow-up Hdwy	2.3045	-	-	-	-	-	3.519	4.019	3.319	3.652	-	3.452
Pot Cap-1 Maneuver	1090	-	0	0	-	-	150	168	649	244	0	658
Stage 1	-	-	0	0	-	-	319	373	-	634	0	-
Stage 2	-	-	0	0	-	-	667	593	-	486	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1090	-	-	-	-	-	131	152	649	218	-	658
Mov Cap-2 Maneuver	-	-	-	-	-	-	225	251	-	329	-	-
Stage 1	-	-	-	-	-	-	290	339	-	634	-	-
Stage 2	-	-	-	-	-	-	642	593	-	434	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.47	0	14.25	20.81
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	398	376	-	-	-	363
HCM Lane V/C Ratio	0.022	0.074	-	-	-	0.377
HCM Control Delay (s/veh)	14.2	8.6	0.6	-	-	20.8
HCM Lane LOS	B	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.2	-	-	-	1.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	437	137	189	235	240	58	929	192	184	693	36
Future Volume (veh/h)	195	437	137	189	235	240	58	929	192	184	693	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1737	1737	1737	1722	1722	1722	1856	1856	1856	1811	1811	1811
Adj Flow Rate, veh/h	214	480	151	208	258	264	64	1021	211	202	762	40
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	11	11	11	12	12	12	3	3	3	6	6	6
Cap, veh/h	240	527	165	234	344	307	82	1159	517	231	1384	73
Arrive On Green	0.15	0.21	0.21	0.14	0.21	0.21	0.05	0.33	0.33	0.13	0.42	0.42
Sat Flow, veh/h	1654	2475	773	1640	1636	1459	1767	3526	1572	1725	3326	175
Grp Volume(v), veh/h	214	319	312	208	258	264	64	1021	211	202	394	408
Grp Sat Flow(s),veh/h/ln	1654	1650	1598	1640	1636	1459	1767	1763	1572	1725	1721	1780
Q Serve(g_s), s	14.0	20.8	21.0	13.7	16.3	19.2	3.9	30.1	11.4	12.6	19.1	19.1
Cycle Q Clear(g_c), s	14.0	20.8	21.0	13.7	16.3	19.2	3.9	30.1	11.4	12.6	19.1	19.1
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	240	351	340	234	344	307	82	1159	517	231	716	741
V/C Ratio(X)	0.89	0.91	0.92	0.89	0.75	0.86	0.78	0.88	0.41	0.87	0.55	0.55
Avail Cap(c_a), veh/h	241	360	349	239	357	318	257	1159	517	329	716	741
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	46.2	42.3	42.4	46.3	40.7	41.9	51.9	34.9	28.6	46.7	24.3	24.3
Incr Delay (d2), s/veh	30.4	25.7	28.1	29.7	8.3	20.0	5.8	9.7	2.4	12.7	3.0	2.9
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(95%),veh/ln	12.1	16.1	16.0	11.8	11.5	13.2	3.3	19.8	8.0	10.2	12.7	13.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	76.6	68.0	70.4	76.0	49.0	61.9	57.6	44.6	31.0	59.4	27.3	27.3
LnGrp LOS	E	E	E	E	D	E	E	D	C	E	C	C
Approach Vol, veh/h		845			730			1296			1004	
Approach Delay, s/veh		71.1			61.3			43.0			33.8	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.7	42.2	19.7	29.4	9.1	51.8	20.0	29.1
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	24.0	16.0	34.0	16.0	24.0
Max Q Clear Time (g_c+I1), s	14.6	32.1	15.7	23.0	5.9	21.1	16.0	21.2
Green Ext Time (p_c), s	0.1	0.0	0.0	0.4	0.0	3.9	0.0	0.9

Intersection Summary	
HCM 7th Control Delay, s/veh	50.2
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	7.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	92	66	70	194	166	90
Future Vol, veh/h	92	66	70	194	166	90
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	79	79	79	79	79	79
Heavy Vehicles, %	23	23	18	18	12	12
Mvmt Flow	116	84	89	246	210	114

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	746	211	0	0	334	0
Stage 1	211	-	-	-	-	-
Stage 2	534	-	-	-	-	-
Critical Hdwy	6.63	6.43	-	-	4.22	-
Critical Hdwy Stg 1	5.63	-	-	-	-	-
Critical Hdwy Stg 2	5.63	-	-	-	-	-
Follow-up Hdwy	3.707	3.507	-	-	2.308	-
Pot Cap-1 Maneuver	352	779	-	-	1171	-
Stage 1	776	-	-	-	-	-
Stage 2	548	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	285	779	-	-	1171	-
Mov Cap-2 Maneuver	285	-	-	-	-	-
Stage 1	776	-	-	-	-	-
Stage 2	443	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	23.78	0	5.67
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	388	1097	-
HCM Lane V/C Ratio	-	-	0.516	0.179	-
HCM Control Delay (s/veh)	-	-	23.8	8.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	2.9	0.7	-

Intersection	
Int Delay, s/veh	2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	135	13	357	225	8	187
Future Vol, veh/h	135	13	357	225	8	187
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	-	-	0	175	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	2	2	2	2
Mvmt Flow	141	14	372	234	8	195

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	583	372	0	0	606	0
Stage 1	372	-	-	-	-	-
Stage 2	211	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.12	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.218	-
Pot Cap-1 Maneuver	473	672	-	-	972	-
Stage 1	695	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	469	672	-	-	972	-
Mov Cap-2 Maneuver	469	-	-	-	-	-
Stage 1	695	-	-	-	-	-
Stage 2	814	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	15.96	0	0.36
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	481	972	-
HCM Lane V/C Ratio	-	-	0.32	0.009	-
HCM Control Delay (s/veh)	-	-	16	8.7	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1.4	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	759	134	144	850	136	223	993	317	126	938	129
Future Volume (veh/h)	205	759	134	144	850	136	223	993	317	126	938	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1796	1796	1796	1796	1796	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	218	807	143	153	904	145	237	1056	337	134	998	137
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	244	647	115	244	657	105	254	984	439	334	953	131
Arrive On Green	0.14	0.22	0.22	0.14	0.22	0.22	0.14	0.28	0.28	0.19	0.30	0.30
Sat Flow, veh/h	1711	2897	513	1711	2945	472	1781	3554	1585	1781	3139	431
Grp Volume(v), veh/h	218	475	475	153	524	525	237	1056	337	134	565	570
Grp Sat Flow(s),veh/h/ln	1711	1706	1704	1711	1706	1711	1781	1777	1585	1781	1777	1793
Q Serve(g_s), s	14.0	25.0	25.0	9.4	25.0	25.0	14.7	31.0	21.9	7.4	34.0	34.0
Cycle Q Clear(g_c), s	14.0	25.0	25.0	9.4	25.0	25.0	14.7	31.0	21.9	7.4	34.0	34.0
Prop In Lane	1.00		0.30	1.00		0.28	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	244	381	380	244	381	382	254	984	439	334	539	544
V/C Ratio(X)	0.89	1.25	1.25	0.63	1.37	1.38	0.93	1.07	0.77	0.40	1.05	1.05
Avail Cap(c_a), veh/h	244	381	380	244	381	382	254	984	439	334	539	544
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	47.2	43.5	43.5	45.2	43.5	43.5	47.5	40.5	37.2	40.0	39.0	39.0
Incr Delay (d2), s/veh	35.3	131.7	131.8	11.5	184.5	184.7	41.1	50.6	12.2	3.6	51.5	51.7
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(95%),veh/ln	13.0	36.2	36.2	8.3	45.3	45.4	14.3	28.5	14.9	6.4	30.9	31.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	82.4	175.2	175.3	56.7	228.0	228.2	88.6	91.1	49.4	43.5	90.5	90.7
LnGrp LOS	F	F	F	E	F	F	F	F	D	D	F	F
Approach Vol, veh/h		1168			1202			1630			1269	
Approach Delay, s/veh		157.9			206.3			82.1			85.7	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	37.0	20.0	30.0	22.0	40.0	20.0	30.0
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	6.0	* 6	4.0	5.0
Max Green Setting (Gmax), s	21.0	29.0	16.0	25.0	16.0	* 34	16.0	25.0
Max Q Clear Time (g_c+I1), s	9.4	33.0	11.4	27.0	16.7	36.0	16.0	27.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	128.1
HCM 7th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	12

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	662	151	68	435	13	85	3	63	14	8	5
Future Vol, veh/h	0	662	151	68	435	13	85	3	63	14	8	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	400	-	480	550	-	-	-	-	400	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	8	8	8	7	7	7	21	21	21	31	31	31
Mvmt Flow	0	720	164	74	473	14	92	3	68	15	9	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	487	0	0	884	0	0	1345	1354	720	1349	1511	480
Stage 1	-	-	-	-	-	-	720	720	-	628	628	-
Stage 2	-	-	-	-	-	-	625	635	-	721	884	-
Critical Hdwy	4.18	-	-	4.17	-	-	7.31	6.71	6.41	7.41	6.81	6.51
Critical Hdwy Stg 1	-	-	-	-	-	-	6.31	5.71	-	6.41	5.81	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.31	5.71	-	6.41	5.81	-
Follow-up Hdwy	2.272	-	-	2.263	-	-	3.689	4.189	3.489	3.779	4.279	3.579
Pot Cap-1 Maneuver	1046	-	-	745	-	-	117	137	398	111	104	531
Stage 1	-	-	-	-	-	-	391	405	-	425	433	-
Stage 2	-	-	-	-	-	-	442	444	-	376	326	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1046	-	-	745	-	-	96	123	398	81	94	531
Mov Cap-2 Maneuver	-	-	-	-	-	-	96	123	-	81	94	-
Stage 1	-	-	-	-	-	-	391	405	-	383	390	-
Stage 2	-	-	-	-	-	-	385	400	-	309	326	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	1.37	105.51	54.89
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	96	398	1046	-	-	745	-	-	101
HCM Lane V/C Ratio	0.992	0.172	-	-	-	0.099	-	-	0.292
HCM Control Delay (s/veh)	169.7	15.9	0	-	-	10.4	-	-	54.9
HCM Lane LOS	F	C	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	5.9	0.6	0	-	-	0.3	-	-	1.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	530	289	68	292	114	303	266	474	114	529	164
Future Volume (veh/h)	195	530	289	68	292	114	303	266	474	114	529	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	212	576	314	74	317	124	329	289	515	124	575	178
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, %	5	5	5	5	5	5	2	2	2	1	1	1
Cap, veh/h	327	1589	709	95	796	305	327	372	315	222	615	190
Arrive On Green	0.19	0.46	0.46	0.05	0.32	0.32	0.09	0.20	0.20	0.12	0.23	0.23
Sat Flow, veh/h	1739	3469	1547	1739	2451	940	3456	1870	1585	1795	2694	832
Grp Volume(v), veh/h	212	576	314	74	222	219	329	289	515	124	382	371
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1739	1735	1657	1728	1870	1585	1795	1791	1735
Q Serve(g_s), s	12.4	11.9	10.3	4.6	10.9	11.3	10.4	16.1	18.1	7.2	23.0	23.1
Cycle Q Clear(g_c), s	12.4	11.9	10.3	4.6	10.9	11.3	10.4	16.1	18.1	7.2	23.0	23.1
Prop In Lane	1.00		1.00	1.00		0.57	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	327	1589	709	95	563	538	327	372	315	222	409	396
V/C Ratio(X)	0.65	0.36	0.44	0.78	0.40	0.41	1.01	0.78	1.63	0.56	0.93	0.94
Avail Cap(c_a), veh/h	327	1589	709	248	563	538	327	427	362	222	409	396
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	0.30	0.30	0.30	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	19.4	9.3	51.3	28.8	28.9	49.8	41.7	30.2	45.4	41.6	41.7
Incr Delay (d2), s/veh	4.4	0.6	2.0	12.8	2.1	2.3	29.0	2.4	289.3	3.1	28.5	29.9
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(95%),veh/ln	9.5	8.4	6.6	4.2	8.4	8.3	8.0	10.1	46.4	6.1	19.2	19.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	45.7	20.0	11.3	64.1	30.9	31.2	78.8	44.2	319.4	48.5	70.1	71.6
LnGrp LOS	D	C	B	E	C	C	F	D	F	D	E	E
Approach Vol, veh/h		1102			515			1133			877	
Approach Delay, s/veh		22.5			35.8			179.3			67.7	
Approach LOS		C			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	54.7	15.0	30.0	25.0	40.0	18.2	26.8
Change Period (Y+Rc), s	4.3	4.3	4.6	4.9	4.3	4.3	4.6	4.9
Max Green Setting (Gmax), s	15.7	40.7	10.4	25.1	20.7	35.7	10.4	25.1
Max Q Clear Time (g_c+I1), s	6.6	13.9	12.4	25.1	14.4	13.3	9.2	20.1
Green Ext Time (p_c), s	0.1	5.3	0.0	0.0	0.3	2.6	0.0	1.8

Intersection Summary	
HCM 7th Control Delay, s/veh	84.3
HCM 7th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	96	98	556	93	207	100	728	123	339	449	94
Future Volume (veh/h)	101	96	98	556	93	207	100	728	123	339	449	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1885	1885	1885	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	110	104	107	676	0	225	109	791	134	368	488	102
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, %	1	1	1	2	2	2	1	1	1	1	1	1
Cap, veh/h	165	164	147	767	0	341	142	791	134	352	1344	599
Arrive On Green	0.09	0.09	0.09	0.22	0.00	0.22	0.08	0.26	0.26	0.20	0.38	0.38
Sat Flow, veh/h	1795	1791	1598	3563	0	1585	1795	3064	519	1795	3582	1598
Grp Volume(v), veh/h	110	104	107	676	0	225	109	462	463	368	488	102
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1781	0	1585	1795	1791	1792	1795	1791	1598
Q Serve(g_s), s	4.8	4.5	5.3	14.8	0.0	10.5	4.8	20.8	20.8	15.8	7.9	3.4
Cycle Q Clear(g_c), s	4.8	4.5	5.3	14.8	0.0	10.5	4.8	20.8	20.8	15.8	7.9	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	165	164	147	767	0	341	142	463	463	352	1344	599
V/C Ratio(X)	0.67	0.63	0.73	0.88	0.00	0.66	0.77	1.00	1.00	1.04	0.36	0.17
Avail Cap(c_a), veh/h	214	213	190	1309	0	583	241	463	463	352	1344	599
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	35.3	35.6	30.6	0.0	28.9	36.3	29.9	29.9	32.4	18.2	16.8
Incr Delay (d2), s/veh	2.3	1.5	6.1	1.9	0.0	0.8	3.2	41.7	41.8	60.1	0.1	0.0
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(95%),veh/ln	3.9	3.6	4.1	10.1	0.0	6.7	3.9	20.0	20.0	18.7	5.7	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.7	36.8	41.7	32.5	0.0	29.7	39.5	71.6	71.6	92.5	18.3	16.8
LnGrp LOS	D	D	D	C		C	D	E	E	F	B	B
Approach Vol, veh/h		321			901			1034			958	
Approach Delay, s/veh		38.7			31.8			68.2			46.6	
Approach LOS		D			C			E			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	25.0		12.8	10.6	34.4		22.7
Change Period (Y+Rc), s	4.2	4.2		5.4	4.2	4.2		5.4
Max Green Setting (Gmax), s	5.8	20.8		9.6	10.8	25.8		29.6
Max Q Clear Time (g_c+I1), s	7.3	22.8		7.3	6.8	9.9		16.8
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	0.8		0.5

Intersection Summary	
HCM 7th Control Delay, s/veh	48.6
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	79.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1133	46	21	0	58	12	10	3	1	0	15	505
Future Vol, veh/h	1133	46	21	0	58	12	10	3	1	0	15	505
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	-	75	-	-	-	-	-	-	-	215
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	15	15	15	0	0	0	4	4	4
Mvmt Flow	1232	50	23	0	63	13	11	3	1	0	16	549

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	76	0	0	73	0	0	2596	2601	61	2584	2605	-
Stage 1	-	-	-	-	-	-	2524	2524	-	70	70	-
Stage 2	-	-	-	-	-	-	71	76	-	2515	2536	-
Critical Hdwy	4.13	-	-	4.25	-	-	7.1	6.5	6.2	7.14	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.14	5.54	-
Follow-up Hdwy	2.227	-	-	2.335	-	-	3.5	4	3.3	3.536	4.036	-
Pot Cap-1 Maneuver	1517	-	-	1448	-	-	17	25	1009	17	24	0
Stage 1	-	-	-	-	-	-	38	57	-	935	833	0
Stage 2	-	-	-	-	-	-	944	836	-	38	54	0
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1517	-	-	1448	-	-	~ 3	5	1009	2	~ 5	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 3	5	-	2	~ 5	-
Stage 1	-	-	-	-	-	-	~ 7	11	-	935	833	-
Stage 2	-	-	-	-	-	-	925	836	-	5	~ 10	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	15.69	0	$ 3196.08	$ 2645.48
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	4	1517	-	-	1448	-	-	5	-
HCM Lane V/C Ratio	4.118	0.812	-	-	-	-	-	3.581	-
HCM Control Delay (s/veh)	$ 3196.1	16.6	-	-	0	-	-	$ 2645.5	0
HCM Lane LOS	F	C	-	-	A	-	-	F	A
HCM 95th %tile Q(veh)	3.2	10.1	-	-	0	-	-	3.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	364	0	1	160	0	1
Future Vol, veh/h	364	0	1	160	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	-	-	-	-	-	-
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	396	0	1	174	0	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	396	0	572	396
Stage 1	-	-	-	-	396	-
Stage 2	-	-	-	-	176	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1163	-	482	654
Stage 1	-	-	-	-	680	-
Stage 2	-	-	-	-	854	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1163	-	481	654
Mov Cap-2 Maneuver	-	-	-	-	481	-
Stage 1	-	-	-	-	680	-
Stage 2	-	-	-	-	854	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.05	10.52
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	654	-	-	11	-
HCM Lane V/C Ratio	0.002	-	-	0.001	-
HCM Control Delay (s/veh)	10.5	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	355	10	15	156	5	7
Future Vol, veh/h	355	10	15	156	5	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	386	11	16	170	5	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	397	0	593	391
Stage 1	-	-	-	-	391	-
Stage 2	-	-	-	-	202	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1162	-	468	657
Stage 1	-	-	-	-	683	-
Stage 2	-	-	-	-	832	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1162	-	461	657
Mov Cap-2 Maneuver	-	-	-	-	461	-
Stage 1	-	-	-	-	683	-
Stage 2	-	-	-	-	819	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.71	11.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	558	-	-	158	-
HCM Lane V/C Ratio	0.023	-	-	0.014	-
HCM Control Delay (s/veh)	11.6	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	362	0	73	171	0	36
Future Vol, veh/h	362	0	73	171	0	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	393	0	79	186	0	39

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	393	0	738	393
Stage 1	-	-	-	-	393	-
Stage 2	-	-	-	-	345	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1165	-	385	655
Stage 1	-	-	-	-	682	-
Stage 2	-	-	-	-	717	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1165	-	356	655
Mov Cap-2 Maneuver	-	-	-	-	356	-
Stage 1	-	-	-	-	682	-
Stage 2	-	-	-	-	663	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	2.49	10.84
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	655	-	-	539	-
HCM Lane V/C Ratio	0.06	-	-	0.068	-
HCM Control Delay (s/veh)	10.8	-	-	8.3	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

Appendix E.4 – 2027 Build Mitigated Conditions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	167	96	316	253	214	129	659	226	59	452	13
Future Volume (veh/h)	23	167	96	316	253	214	129	659	226	59	452	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1455	1455	1455	1707	1707	1707	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	24	178	102	336	269	228	137	701	240	63	481	14
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	30	30	30	13	13	13	9	9	9	9	9	9
Cap, veh/h	26	221	121	364	564	462	164	1407	627	80	1229	36
Arrive On Green	0.02	0.13	0.13	0.22	0.33	0.33	0.10	0.42	0.42	0.05	0.37	0.37
Sat Flow, veh/h	1386	1726	942	1626	1693	1387	1682	3357	1497	1682	3331	97
Grp Volume(v), veh/h	24	141	139	336	257	240	137	701	240	63	242	253
Grp Sat Flow(s),veh/h/ln	1386	1383	1286	1626	1622	1458	1682	1678	1497	1682	1678	1749
Q Serve(g_s), s	1.9	10.9	11.6	22.2	13.8	14.4	8.8	16.9	12.2	4.1	11.7	11.7
Cycle Q Clear(g_c), s	1.9	10.9	11.6	22.2	13.8	14.4	8.8	16.9	12.2	4.1	11.7	11.7
Prop In Lane	1.00		0.73	1.00		0.95	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	26	177	165	364	540	485	164	1407	627	80	619	646
V/C Ratio(X)	0.92	0.79	0.84	0.92	0.48	0.49	0.84	0.50	0.38	0.79	0.39	0.39
Avail Cap(c_a), veh/h	88	214	199	488	634	570	229	1407	627	138	619	646
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	53.9	46.5	46.9	41.8	29.1	29.3	48.8	23.5	22.1	51.9	25.6	25.6
Incr Delay (d2), s/veh	32.4	15.6	23.5	17.2	0.7	0.8	12.5	1.3	1.8	6.5	1.9	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(95%),veh/ln	1.6	7.9	8.3	15.6	9.1	8.6	7.5	10.7	7.9	3.3	8.4	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	86.3	62.1	70.4	58.9	29.7	30.1	61.3	24.7	23.9	58.3	27.4	27.4
LnGrp LOS	F	E	E	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h		304			833			1078			558	
Approach Delay, s/veh		67.8			41.6			29.2			30.9	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	52.1	28.6	20.1	14.7	46.6	6.1	42.6
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	9.0	31.0	33.0	17.0	15.0	25.0	7.0	43.0
Max Q Clear Time (g_c+I1), s	6.1	18.9	24.2	13.6	10.8	13.7	3.9	16.4
Green Ext Time (p_c), s	0.0	4.2	0.4	0.5	0.1	2.1	0.0	3.0

Intersection Summary	
HCM 7th Control Delay, s/veh	37.5
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	437	137	189	235	240	58	929	192	184	693	36
Future Volume (veh/h)	195	437	137	189	235	240	58	929	192	184	693	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1737	1737	1737	1722	1722	1722	1856	1856	1856	1811	1811	1811
Adj Flow Rate, veh/h	214	480	151	208	258	264	64	1021	211	202	762	40
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	11	11	11	12	12	12	3	3	3	6	6	6
Cap, veh/h	241	495	155	234	322	287	82	1208	539	229	1427	75
Arrive On Green	0.15	0.20	0.20	0.14	0.20	0.20	0.05	0.34	0.34	0.13	0.43	0.43
Sat Flow, veh/h	1654	2475	773	1640	1636	1459	1767	3526	1572	1725	3326	175
Grp Volume(v), veh/h	214	319	312	208	258	264	64	1021	211	202	394	408
Grp Sat Flow(s),veh/h/ln	1654	1650	1598	1640	1636	1459	1767	1763	1572	1725	1721	1780
Q Serve(g_s), s	14.0	21.1	21.4	13.7	16.5	19.5	3.9	29.5	11.2	12.7	18.7	18.7
Cycle Q Clear(g_c), s	14.0	21.1	21.4	13.7	16.5	19.5	3.9	29.5	11.2	12.7	18.7	18.7
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	241	330	320	234	322	287	82	1208	539	229	738	764
V/C Ratio(X)	0.89	0.97	0.98	0.89	0.80	0.92	0.78	0.85	0.39	0.88	0.53	0.53
Avail Cap(c_a), veh/h	286	330	320	239	322	287	154	1208	539	235	738	764
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	46.1	43.6	43.7	46.3	42.1	43.3	51.9	33.5	27.5	46.8	23.2	23.3
Incr Delay (d2), s/veh	22.1	40.5	43.8	29.7	13.5	32.7	5.9	7.4	2.1	28.1	2.8	2.7
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(95%),veh/ln	11.4	17.7	17.8	11.8	12.3	14.5	3.3	19.0	7.8	11.4	12.3	12.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	68.2	84.1	87.5	76.0	55.6	76.0	57.7	40.8	29.6	74.9	26.0	25.9
LnGrp LOS	E	F	F	E	E	E	E	D	C	E	C	C
Approach Vol, veh/h		845			730			1296			1004	
Approach Delay, s/veh		81.3			68.8			39.8			35.8	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.6	43.7	19.7	28.0	9.1	53.2	20.0	27.7
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	15.0	37.0	16.0	22.0	9.6	42.4	19.0	19.0
Max Q Clear Time (g_c+I1), s	14.7	31.5	15.7	23.4	5.9	20.7	16.0	21.5
Green Ext Time (p_c), s	0.0	3.3	0.0	0.0	0.0	4.8	0.1	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	53.3
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	656	64	133	639	91	119	631	157	129	774	110
Future Volume (veh/h)	159	656	64	133	639	91	119	631	157	129	774	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1752	1752	1752	1752	1752	1752	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	167	691	67	140	673	96	125	664	165	136	815	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	10	10	10	10	10	5	5	5	5	5	5
Cap, veh/h	232	857	83	198	757	108	183	1087	485	207	942	134
Arrive On Green	0.14	0.28	0.28	0.12	0.26	0.26	0.11	0.31	0.31	0.12	0.31	0.31
Sat Flow, veh/h	1668	3066	297	1668	2924	417	1739	3469	1547	1739	3049	434
Grp Volume(v), veh/h	167	375	383	140	383	386	125	664	165	136	464	467
Grp Sat Flow(s),veh/h/ln	1668	1664	1698	1668	1664	1677	1739	1735	1547	1739	1735	1748
Q Serve(g_s), s	10.7	23.5	23.5	9.0	24.8	24.8	7.8	18.2	9.2	8.4	28.2	28.2
Cycle Q Clear(g_c), s	10.7	23.5	23.5	9.0	24.8	24.8	7.8	18.2	9.2	8.4	28.2	28.2
Prop In Lane	1.00		0.17	1.00		0.25	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	232	465	475	198	431	434	183	1087	485	207	536	540
V/C Ratio(X)	0.72	0.81	0.81	0.71	0.89	0.89	0.68	0.61	0.34	0.66	0.87	0.87
Avail Cap(c_a), veh/h	232	465	475	198	431	434	183	1087	485	207	536	540
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	46.1	37.5	37.5	47.5	39.9	40.0	48.3	32.6	29.6	47.2	36.5	36.5
Incr Delay (d2), s/veh	17.4	13.9	13.7	19.1	22.8	22.9	18.7	2.6	1.9	15.3	16.9	16.8
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(95%),veh/ln	9.4	16.6	16.9	8.3	18.5	18.6	7.6	12.3	6.5	8.0	20.5	20.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	63.5	51.4	51.3	66.6	62.8	62.9	67.0	35.2	31.5	62.5	53.4	53.3
LnGrp LOS	E	D	D	E	E	E	E	D	C	E	D	D
Approach Vol, veh/h		925			909			954			1067	
Approach Delay, s/veh		53.5			63.4			38.7			54.5	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.3	41.1	17.3	36.3	17.8	40.6	19.6	34.0
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	6.0	* 6	4.0	5.0
Max Green Setting (Gmax), s	13.3	33.1	13.3	31.3	11.8	* 35	15.6	29.0
Max Q Clear Time (g_c+I1), s	10.4	20.2	11.0	25.5	9.8	30.2	12.7	26.8
Green Ext Time (p_c), s	0.0	1.5	0.0	0.7	0.0	1.2	0.0	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	52.5
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	759	134	144	850	136	223	993	317	126	938	129
Future Volume (veh/h)	205	759	134	144	850	136	223	993	317	126	938	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1796	1796	1796	1796	1796	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	218	807	143	153	904	145	237	1056	337	134	998	137
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	199	802	142	168	763	122	223	1320	589	150	981	135
Arrive On Green	0.12	0.28	0.28	0.10	0.26	0.26	0.13	0.37	0.37	0.08	0.31	0.31
Sat Flow, veh/h	1711	2897	513	1711	2945	472	1781	3554	1585	1781	3139	431
Grp Volume(v), veh/h	218	475	475	153	524	525	237	1056	337	134	565	570
Grp Sat Flow(s),veh/h/ln	1711	1706	1704	1711	1706	1711	1781	1777	1585	1781	1777	1793
Q Serve(g_s), s	13.0	31.0	31.0	9.9	29.0	29.0	14.0	29.8	19.0	8.3	35.0	35.0
Cycle Q Clear(g_c), s	13.0	31.0	31.0	9.9	29.0	29.0	14.0	29.8	19.0	8.3	35.0	35.0
Prop In Lane	1.00		0.30	1.00		0.28	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	199	472	472	168	442	443	223	1320	589	150	555	560
V/C Ratio(X)	1.10	1.01	1.01	0.91	1.19	1.19	1.06	0.80	0.57	0.90	1.02	1.02
Avail Cap(c_a), veh/h	199	472	472	168	442	443	223	1320	589	150	555	560
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	49.5	40.5	40.5	50.0	41.5	41.5	49.0	31.5	28.1	50.8	38.5	38.5
Incr Delay (d2), s/veh	92.5	43.0	43.1	49.1	104.2	104.3	78.4	5.2	4.0	50.2	42.5	42.6
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(95%),veh/ln	16.5	25.4	25.4	10.7	36.1	36.2	16.8	19.0	12.2	9.7	29.4	29.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	142.0	83.5	83.6	99.1	145.7	145.8	127.4	36.6	32.1	101.0	81.0	81.1
LnGrp LOS	F	F	F	F	F	F	F	D	C	F	F	F
Approach Vol, veh/h		1168			1202			1630			1269	
Approach Delay, s/veh		94.4			139.8			48.9			83.2	
Approach LOS		F			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	47.6	15.0	36.0	20.0	41.0	17.0	34.0
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	6.0	* 6	4.0	5.0
Max Green Setting (Gmax), s	9.4	39.6	11.0	31.0	14.0	* 35	13.0	29.0
Max Q Clear Time (g_c+I1), s	10.3	31.8	11.9	33.0	16.0	37.0	15.0	31.0
Green Ext Time (p_c), s	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	88.0
HCM 7th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	379	170	29	318	333	349	296	248	71	328	109
Future Volume (veh/h)	122	379	170	29	318	333	349	296	248	71	328	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1856	1856	1856	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	156	486	218	37	408	427	447	379	318	91	421	140
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	5	5	5	3	3	3	3	3	3	2	2	2
Cap, veh/h	333	1560	696	73	527	470	503	443	376	188	520	171
Arrive On Green	0.19	0.45	0.45	0.04	0.30	0.30	0.15	0.24	0.24	0.11	0.20	0.20
Sat Flow, veh/h	1739	3469	1547	1767	1763	1572	3428	1856	1572	1781	2627	865
Grp Volume(v), veh/h	156	486	218	37	408	427	447	379	318	91	283	278
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1767	1763	1572	1714	1856	1572	1781	1777	1715
Q Serve(g_s), s	8.8	9.9	5.8	2.3	23.2	28.7	14.1	21.5	17.7	5.3	16.7	17.0
Cycle Q Clear(g_c), s	8.8	9.9	5.8	2.3	23.2	28.7	14.1	21.5	17.7	5.3	16.7	17.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	333	1560	696	73	527	470	503	443	376	188	352	339
V/C Ratio(X)	0.47	0.31	0.31	0.51	0.77	0.91	0.89	0.86	0.85	0.48	0.81	0.82
Avail Cap(c_a), veh/h	333	1560	696	146	527	470	511	592	502	198	499	482
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	0.65	0.65	0.65	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.5	19.4	6.7	51.6	35.2	37.1	46.0	40.0	27.9	46.3	42.1	42.2
Incr Delay (d2), s/veh	1.0	0.5	1.2	5.4	10.6	23.9	12.0	6.2	6.7	1.9	6.4	7.3
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(95%),veh/ln	6.8	7.2	6.3	2.0	16.8	20.0	10.2	14.7	10.9	4.4	12.5	12.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.5	19.9	7.8	57.0	45.7	61.0	58.1	46.2	34.6	48.3	48.5	49.6
LnGrp LOS	D	B	A	E	D	E	E	D	C	D	D	D
Approach Vol, veh/h		860			872			1144			652	
Approach Delay, s/veh		20.6			53.7			47.6			48.9	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	53.8	20.7	26.7	25.4	37.2	16.2	31.2
Change Period (Y+Rc), s	4.3	4.3	4.6	4.9	4.3	4.3	4.6	4.9
Max Green Setting (Gmax), s	9.1	35.5	16.4	30.9	11.7	32.9	12.2	35.1
Max Q Clear Time (g_c+I1), s	4.3	11.9	16.1	19.0	10.8	30.7	7.3	23.5
Green Ext Time (p_c), s	0.0	4.0	0.1	2.7	0.0	1.1	0.1	2.8

Intersection Summary	
HCM 7th Control Delay, s/veh	42.8
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	530	289	68	292	114	303	266	474	114	529	164
Future Volume (veh/h)	195	530	289	68	292	114	303	266	474	114	529	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	212	576	314	74	317	124	329	289	515	124	575	178
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, %	5	5	5	5	5	5	2	2	2	1	1	1
Cap, veh/h	310	1467	654	95	733	281	386	439	372	221	663	205
Arrive On Green	0.18	0.42	0.42	0.05	0.30	0.30	0.11	0.23	0.23	0.12	0.25	0.25
Sat Flow, veh/h	1739	3469	1547	1739	2451	940	3456	1870	1585	1795	2694	832
Grp Volume(v), veh/h	212	576	314	74	222	219	329	289	515	124	382	371
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1739	1735	1657	1728	1870	1585	1795	1791	1735
Q Serve(g_s), s	12.5	12.6	10.8	4.6	11.3	11.7	10.3	15.4	21.1	7.2	22.5	22.6
Cycle Q Clear(g_c), s	12.5	12.6	10.8	4.6	11.3	11.7	10.3	15.4	21.1	7.2	22.5	22.6
Prop In Lane	1.00		1.00	1.00		0.57	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	310	1467	654	95	519	496	386	439	372	221	441	427
V/C Ratio(X)	0.68	0.39	0.48	0.78	0.43	0.44	0.85	0.66	1.38	0.56	0.87	0.87
Avail Cap(c_a), veh/h	310	1467	654	164	519	496	390	549	465	221	503	488
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	0.30	0.30	0.30	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.3	22.0	10.2	51.3	31.0	31.1	48.0	38.1	28.3	45.4	39.7	39.8
Incr Delay (d2), s/veh	6.1	0.8	2.5	12.9	2.6	2.8	5.6	0.6	178.2	3.2	13.4	14.1
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(95%),veh/ln	9.8	8.9	7.1	4.2	8.7	8.7	6.7	9.5	36.8	6.1	17.0	16.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.3	22.8	12.7	64.2	33.6	34.0	53.6	38.7	206.5	48.6	53.1	53.9
LnGrp LOS	D	C	B	E	C	C	D	D	F	D	D	D
Approach Vol, veh/h		1102			515			1133			877	
Approach Delay, s/veh		24.8			38.1			119.3			52.8	
Approach LOS		C			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	50.8	16.9	32.0	23.9	37.2	18.2	30.7
Change Period (Y+Rc), s	4.3	4.3	4.6	4.9	4.3	4.3	4.6	4.9
Max Green Setting (Gmax), s	10.4	38.2	12.4	30.9	15.7	32.9	11.0	32.3
Max Q Clear Time (g_c+I1), s	6.6	14.6	12.3	24.6	14.5	13.7	9.2	23.1
Green Ext Time (p_c), s	0.0	5.1	0.0	2.5	0.1	2.5	0.0	2.7

Intersection Summary	
HCM 7th Control Delay, s/veh	63.0
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Appendix F – Segment Analysis

HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 AM Existing - EB
Project Description	D1Z1 Delivery Station - W Stowell Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4850
Lane Width, ft	12	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	3.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	90	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	7.70
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.5
Speed Slope Coefficient	3.67204	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.32070	PF Power Coefficient	0.75529
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4850	-	-	57.5

Vehicle Results

Average Speed, mi/h	57.5	Percent Followers, %	19.3
Segment Travel Time, minutes	0.96	Followers Density, followers/mi/ln	0.3
Vehicle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 PM Existing - WB
Project Description	D1Z1 Delivery Station - W Stowell Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4850
Lane Width, ft	12	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	3.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	876	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	7.70
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.52

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.5
Speed Slope Coefficient	3.67204	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.32070	PF Power Coefficient	0.75529
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4850	-	-	54.2

Vehicle Results

Average Speed, mi/h	54.2	Percent Followers, %	69.7
Segment Travel Time, minutes	1.02	Followers Density, followers/mi/ln	11.3
Vehicle LOS	D		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 PM Existing - EB
Project Description	D1Z1 Delivery Station - W Stowell Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4850
Lane Width, ft	12	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	3.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	821	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	7.70
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.48

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.5
Speed Slope Coefficient	3.67204	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.32070	PF Power Coefficient	0.75529
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4850	-	-	54.3

Vehicle Results

Average Speed, mi/h	54.3	Percent Followers, %	68.0
Segment Travel Time, minutes	1.02	Followers Density, followers/mi/ln	10.3
Vehicle LOS	D		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 PM Existing - WB
Project Description	D1Z1 Delivery Station - W Stowell Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4850
Lane Width, ft	12	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	3.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	185	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	7.70
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.5
Speed Slope Coefficient	3.67204	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.32070	PF Power Coefficient	0.75529
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4850	-	-	56.2

Vehicle Results

Average Speed, mi/h	56.2	Percent Followers, %	30.9
Segment Travel Time, minutes	0.98	Followers Density, followers/mi/ln	1.0
Vehicle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 PM Build - EB
Project Description	D1Z1 Delivery Station - W Stowell Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4850
Lane Width, ft	12	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	3.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	94	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	7.70
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.06

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.5
Speed Slope Coefficient	3.67204	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.32070	PF Power Coefficient	0.75529
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4850	-	-	57.5

Vehicle Results

Average Speed, mi/h	57.5	Percent Followers, %	19.8
Segment Travel Time, minutes	0.96	Followers Density, followers/mi/ln	0.3
Vehicle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 PM Build - WB
Project Description	D1Z1 Delivery Station - W Stowell Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4850
Lane Width, ft	12	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	3.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	912	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	7.70
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.54

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.5
Speed Slope Coefficient	3.67204	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.32070	PF Power Coefficient	0.75529
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4850	-	-	54.1

Vehicle Results

Average Speed, mi/h	54.1	Percent Followers, %	70.8
Segment Travel Time, minutes	1.02	Followers Density, followers/mi/ln	11.9
Vehicle LOS	D		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 AM Existing - NB
Project Description	D1Z1 Delivery Station - Black Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	6100
Lane Width, ft	13	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	2.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	251	Opposing Demand Flow Rate, veh/h	0
Peak Hour Factor	0.94	Total Trucks, %	5.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.15

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	35.6
Speed Slope Coefficient	2.09611	Speed Power Coefficient	0.67576
PF Slope Coefficient	-1.09050	PF Power Coefficient	0.76374
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6100	-	-	35.0

Vehicle Results

Average Speed, mi/h	35.0	Percent Followers, %	31.6
Segment Travel Time, minutes	1.98	Followers Density, followers/mi/ln	2.3
Vehicle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 AM Existing - SB
Project Description	D1Z1 Delivery Station - Black Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	6100
Lane Width, ft	13	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	2.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	167	Opposing Demand Flow Rate, veh/h	0
Peak Hour Factor	0.94	Total Trucks, %	5.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	35.6
Speed Slope Coefficient	2.09611	Speed Power Coefficient	0.67576
PF Slope Coefficient	-1.09050	PF Power Coefficient	0.76374
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6100	-	-	35.3

Vehicle Results

Average Speed, mi/h	35.3	Percent Followers, %	24.3
Segment Travel Time, minutes	1.97	Followers Density, followers/mi/ln	1.1
Vehicle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 PM Existing - NB
Project Description	D1Z1 Delivery Station - Black Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	6100
Lane Width, ft	13	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	2.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	116	Opposing Demand Flow Rate, veh/h	0
Peak Hour Factor	0.94	Total Trucks, %	5.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	35.6
Speed Slope Coefficient	2.09611	Speed Power Coefficient	0.67576
PF Slope Coefficient	-1.09050	PF Power Coefficient	0.76374
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6100	-	-	35.5

Vehicle Results

Average Speed, mi/h	35.5	Percent Followers, %	19.0
Segment Travel Time, minutes	1.95	Followers Density, followers/mi/ln	0.6
Vehicle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 PM Existing - SB
Project Description	D1Z1 Delivery Station - Black Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	6100
Lane Width, ft	13	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	2.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	335	Opposing Demand Flow Rate, veh/h	0
Peak Hour Factor	0.94	Total Trucks, %	5.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	35.6
Speed Slope Coefficient	2.09611	Speed Power Coefficient	0.67576
PF Slope Coefficient	-1.09050	PF Power Coefficient	0.76374
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6100	-	-	34.8

Vehicle Results

Average Speed, mi/h	34.8	Percent Followers, %	37.7
Segment Travel Time, minutes	1.99	Followers Density, followers/mi/ln	3.6
Vehicle LOS	B		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 AM Build - NB
Project Description	D1Z1 Delivery Station - Black Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	6100
Lane Width, ft	13	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	2.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	262	Opposing Demand Flow Rate, veh/h	0
Peak Hour Factor	0.94	Total Trucks, %	5.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.15

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	35.6
Speed Slope Coefficient	2.09611	Speed Power Coefficient	0.67576
PF Slope Coefficient	-1.09050	PF Power Coefficient	0.76374
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6100	-	-	35.0

Vehicle Results

Average Speed, mi/h	35.0	Percent Followers, %	32.4
Segment Travel Time, minutes	1.98	Followers Density, followers/mi/ln	2.4
Vehicle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 AM Build - SB
Project Description	D1Z1 Delivery Station - Black Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	6100
Lane Width, ft	13	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	2.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	173	Opposing Demand Flow Rate, veh/h	0
Peak Hour Factor	0.94	Total Trucks, %	5.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	35.6
Speed Slope Coefficient	2.09611	Speed Power Coefficient	0.67576
PF Slope Coefficient	-1.09050	PF Power Coefficient	0.76374
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6100	-	-	35.2

Vehicle Results

Average Speed, mi/h	35.2	Percent Followers, %	24.9
Segment Travel Time, minutes	1.97	Followers Density, followers/mi/ln	1.2
Vehicle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 PM Build - NB
Project Description	D1Z1 Delivery Station - Black Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	6100
Lane Width, ft	13	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	2.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	120	Opposing Demand Flow Rate, veh/h	0
Peak Hour Factor	0.94	Total Trucks, %	5.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	35.6
Speed Slope Coefficient	2.09611	Speed Power Coefficient	0.67576
PF Slope Coefficient	-1.09050	PF Power Coefficient	0.76374
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6100	-	-	35.5

Vehicle Results

Average Speed, mi/h	35.5	Percent Followers, %	19.4
Segment Travel Time, minutes	1.96	Followers Density, followers/mi/ln	0.7
Vehicle LOS	A		

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HCS7 Two-Lane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 PM Build - SB
Project Description	D1Z1 Delivery Station - Black Road	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	6100
Lane Width, ft	13	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	2.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	349	Opposing Demand Flow Rate, veh/h	0
Peak Hour Factor	0.94	Total Trucks, %	5.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.21

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	35.6
Speed Slope Coefficient	2.09611	Speed Power Coefficient	0.67576
PF Slope Coefficient	-1.09050	PF Power Coefficient	0.76374
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6100	-	-	34.8

Vehicle Results

Average Speed, mi/h	34.8	Percent Followers, %	38.6
Segment Travel Time, minutes	1.99	Followers Density, followers/mi/ln	3.9
Vehicle LOS	B		

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HCS7 Multilane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 AM Existing
Project Description	D1Z1 Delivery Station - Blosser Road	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	NB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	41.5		

Direction 1 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 1 Demand and Capacity

Volume(V) veh/h	459	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	244
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1839
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.5
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	6.0
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	244	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	1.99
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
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Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 AM Existing
Project Description	D1Z1 Delivery Station - Blosser Road	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	SB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	41.5		

Direction 2 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 2 Demand and Capacity

Volume(V) veh/h	576	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	306
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1839
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.17

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.5
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	7.6
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	306	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.11
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 PM Existing
Project Description	D1Z1 Delivery Station - Blosser Road	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	NB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	41.5		

Direction 1 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 1 Demand and Capacity

Volume(V) veh/h	730	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	388
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1839
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.21

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.5
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	9.6
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	388	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.23
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2024
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2024 PM Existing
Project Description	D1Z1 Delivery Station - Blosser Road	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	SB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	41.5		

Direction 2 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 2 Demand and Capacity

Volume(V) veh/h	769	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	409
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1839
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.22

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.5
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	10.1
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	409	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.25
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 AM Build
Project Description	D1Z1 Delivery Station - Blosser Road	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	NB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	41.5		

Direction 1 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 1 Demand and Capacity

Volume(V) veh/h	478	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	254
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1839
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.14

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.5
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	6.3
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	254	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.01
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 AM Build
Project Description	D1Z1 Delivery Station - Blosser Road	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	SB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	41.5		

Direction 2 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 2 Demand and Capacity

Volume(V) veh/h	600	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	319
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1839
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.17

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.5
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	7.9
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	319	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.13
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 PM Build
Project Description	D1Z1 Delivery Station - Blosser Road	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	NB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	41.5		

Direction 1 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 1 Demand and Capacity

Volume(V) veh/h	760	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	404
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1839
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.22

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.5
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	10.0
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	404	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.25
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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HCS7 Multilane Highway Report

Project Information

Analyst	NV5	Date	4/29/2024
Agency	NV5	Analysis Year	2026
Jurisdiction	Santa Maria, CA	Time Period Analyzed	2026 PM Build
Project Description	D1Z1 Delivery Station - Blosser Road	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	SB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	6.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	41.5		

Direction 2 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 2 Demand and Capacity

Volume(V) veh/h	800	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	426
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1839
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	40.5
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	10.5
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	1.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	426	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.27
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	B

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Appendix G – Traffic Scoping Memo

UPDATED MEMORANDUM OF UNDERSTANDING

To: City of Santa Maria, CA

From: John Karnowski, PE, PTOE, AICP, NV5 (john.karnowski@NV5.com)
Bethany Judd, NV5 (Bethany.Judd@NV5.com)

cc: Ben Ochoa, Seefried Industrial Development

Date: April 11, 2024

Re: Memorandum of Understanding – Scope for Supplemental Traffic Analysis for a delivery station W Stowell Road

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The purpose of this memo is to confirm the required scope for a proposed delivery station West Stowell Road in Santa Maria, California per the City response provided on April 4, 2024 (attached).

SITE DESCRIPTION AND OPERATIONAL PLAN

The proposed facility is being designed for a package delivery service. It is anticipated that the facility will have two shifts working days and evenings. There may be a third shift added at peak season. Packages arriving at this facility are prepackaged in cardboard boxes and labeled for shipping within local neighborhoods and areas surrounding the facility. The packages are brought into the facility via tractor trailer trucks, who use designated loading dock positions. Once unloaded into the facility, the packages are sorted into more specific locations, put into bins and onto small mobile cards. These carts are rolled out to the loading area, from which the packages are located into vans for final delivery. There is no high by racking/high piled storage in the facility. This facility is purely a sortation operation. There is no storage or stock kept at the facility, and all goods that enter this facility leaven within 24 hours. No hazardous materials will be handled or stored at the facility. The commodity classification is Class I-IV, cartooned, unexpanded Group A plastics.

The purpose of the delivery station is to deliver merchandise that comes from nearby and regional sort centers to local customers. The service area is approximately 125 square miles. The following describes the current and planned operations.

- A large majority of the line-haul deliveries to the site take place between 9 pm and 6 am. On average one to two trucks will access the site during the other hours. Trucks use the site's westernmost driveway on W Stowell Road and the loading docks located on the west side of the building. No trucks/trailers are housed onsite longer than a few hours.

- Amazon employees/contract drivers arrive and depart according to one of the shifts below:
    - 1st Shift 1:20 a.m. to 1:50 p.m. 160 Associates
    - 2nd Shift 9:20 a.m. to 7:30 p.m. 47 Associates
    - 3rd Shift 2:00 p.m. to 6:00 p.m. 19 Associates
    - 4th Shift 4:00 p.m. to 10:30 p.m. 5 Associates
    - Van Drivers 5:40 a.m. to 10:45 p.m. 345 Contract Van Drivers*

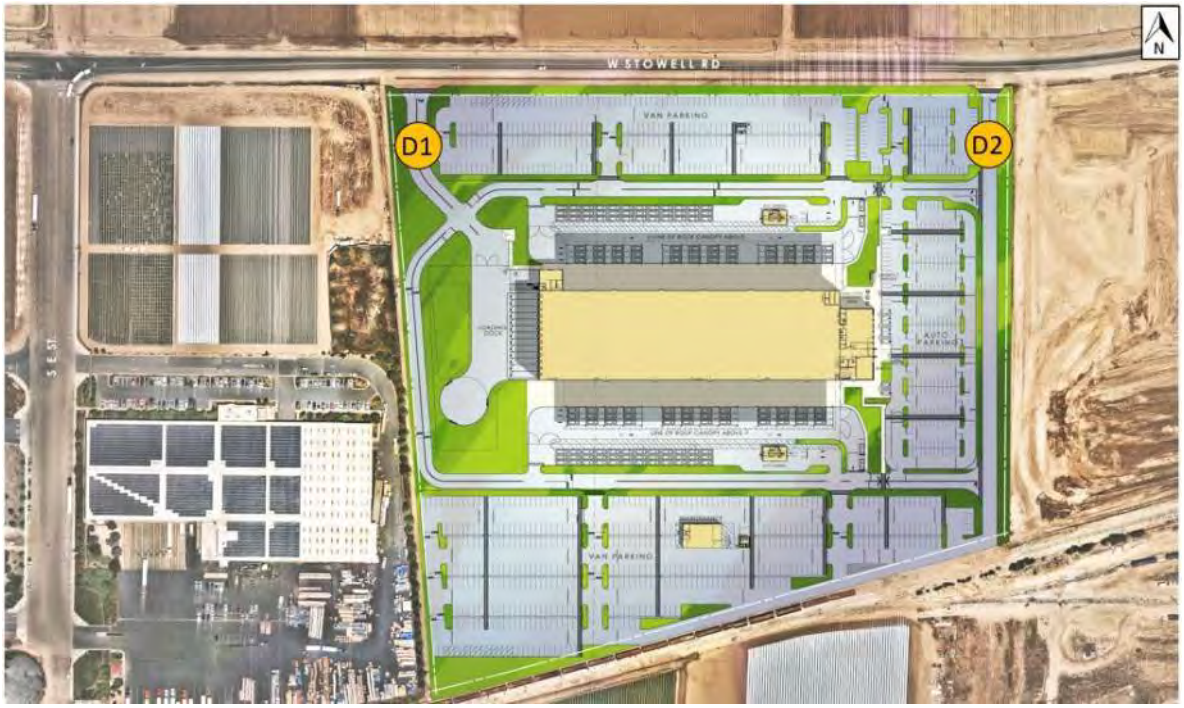
  *Dispatch in 20-minute waves
- An early morning associate shift sorts the packages and prepares them for loading into the delivery vans. Customer orders are assigned to delivery routes in a dynamic and optimal manner, i.e., there are no set daily routes.

- Vans are operated by Delivery Service Providers (DSPs) – independent companies contracted exclusively to Amazon.

- In the late morning, after the typical peak hour of adjacent street traffic, delivery vans arrive at the facility and queue onsite for loading as shown on both the north and southside of the facility. Up to 96 vans at a time can be lined up under roof canopy with an additional 36 queued south of the building. Loading

begins after 10 am and is repeated until all vans have been loaded and dispatched. While the first group of vans is loading, the next group of vans lines up in the staging area outside the building.

Figure 1. Site Location and Access



Site Trip Generation and Distribution

The proposed site is anticipated to generate 2,132 daily, 16 AM and 160 PM Peak Hour trips during the typical commuter peak hours (6:00 – 9:00 a.m. and 4:00 – 6:00 p.m.). The site peak hours are offset from the commuter peak hours. Site peak hours occur from 10:00 -11:00 a.m. (393 trips) and 10:00 – 11:00 p.m. (408 trips). Site operates 24 hours a day with majority of the truck trips occurring between 11:00 p.m. and 6:00 a.m. Line-haul trucks are anticipated to arrive at the site one per hour throughout the day to support operations.

Land Use	Source	Peak Scenarios	Time	AM Peak Hour			PM Peak Hour		
				IN	OUT	TOTAL	IN	OUT	TOTAL
Delivery Station	User Data	Adjacent Street	7:30-8:30 AM & ~~5:00- 6:00 PM~~ 4:30 - 5:30	13	~~3~~ 2	~~16~~ 15	~~63~~ 98	~~97~~ 49	~~160~~ 147
		Site Peak Hrs	10:00 – 11:00 AM & 10:00 – 11:00 PM	201	192	393	204	204	408

The distribution of employee trips will be based on the existing traffic patterns and engineering judgement. Distribution of delivery vehicles is based on the known delivery area and included in the VMT analysis.

Site Access

The site is located along the south side of Stowell Road with two full access driveways. All line-haul trucks will access the site at the westernmost driveway (D1) and all vans and associates will enter at the eastern driveway (D2) as shown in Figure 1. The eastern driveway serves as an internal site access roadway providing circulation separation north and south of the facility to optimize queuing on-site, reduce conflict, and accommodate all required parking.

TRAFFIC STUDY SCOPE OF WORK

Study Intersections

The following intersections will be studied:

1. W. Stowell Road / Hanson Way
2. W. Stowell Road / S. Blosser Road
3. W. Stowell Road / Black Road
4. Taylor / N. Blosser Road
5. W. Stowell Road / Broadway
6. Main Street / Black Road

The two driveways shown in Figure 1 will also be studied.

Data Collection

Existing data collection is proposed for the following:

- New AM (8-11 am) and PM (4-7 pm) turning movement counts (TMCs) shall be conducted on a Tuesday, Wednesday, or Thursday while schools are in session at the following locations:

  1. W. Stowell Road / Hanson Way
  2. W. Stowell Road / S. Blosser Road Signalized
  3. W. Stowell Road / Black Road
  4. Taylor / N. Blosser Road
  5. W. Stowell Road / Broadway Signalized
  6. Main Street / Black Road

  The TMCs shall also include classification of vehicles (autos, vans, or trucks), as well as pedestrian and bicycle volumes.

- New 24-hour classification TMCs will be collected on Stowell Road, Black Road, and Blosser Road.

Background Growth

A background growth rate of 2% will be assumed or as stated in response to this scope.

Analysis Scenarios

Capacity analyses will be completed utilizing Synchro 12® and Highway Capacity Manual, 7th Edition methodology. All study intersections will be analyzed during the adjacent roadways' weekday AM and PM peak hours for the operational conditions. The analysis will be conducted for the Existing Conditions (2024), Existing (2024)+ Project, Cumulative Conditions (2026), and Cumulative + Project (2026) scenarios.

The study will include LOS analysis, trip distribution, and an analysis of road capacity for Stowell Road, Black Road, and Blosser Road.

Measures of effectiveness (MOEs) shall include driveway capacity (LOS, V/C), idling (average delay), and analysis of parking onsite.

Report

A technical report along with figures and illustrations needed to describe the traffic volume and results shall be prepared to the satisfaction of the City Traffic Engineer. The report shall be sealed by a qualified Licensed Professional Engineer or Licensed Professional Traffic Engineer in the state of California.

CITY OF SANTA MARIA
PUBLIC WORKS DEPARTMENT
Engineering Division

110 SOUTH PINE STREET, SUITE #221 ● SANTA MARIA, CALIFORNIA 93458 ● 805-925-0951 Ext. 2225

DEPARTMENT OF PUBLIC WORKS April 4, 2024

NV5
Attn: John Karnowski

SUBJECT: **Draft Memorandum of Understanding – Public Works Comments**

Thank you for providing the Scoping Letter for the proposed delivery station project along West Stowell Road. After review of the scope, the City of Santa Maria Public Works Department has the following comments:

- Provide an analysis of the road capacity for Stowell Road, Black Road, and Blosser Road.
- Provide the trip distribution.
- Provide a level of service (LOS) analysis.
- Provide an analysis for the following traffic scenarios:
  - Existing Conditions
  - Existing + Project
  - Cumulative Conditions
  - Cumulative + Project
- Assume 2% for the background growth rate. The major development list for the City can be obtained at the following website: https://www.cityofsantamaria.org/services/departments/community-development/planning-division/planning-policies-and-regulations/current-development-activity
- The study intersections shall be as follows:
  - W. Stowell Road / Hanson Way
  - W. Stowell Road / S. Blosser Road
  - W. Stowell Road / Black Road
  - Taylor / N. Blosser Road
  - W. Stowell Road / Broadway
  - Main Street / Black Road

Please feel free to contact me if you have any questions/comments.

Best Regards,
-Luis

Luis A. Magallón, P.E., T.E.
805-361-9741
lmagallon@cityofsantamaria.org

Appendix H – 24-Hour Segment Counts

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Black Rd North of W Stowell Rd
SPECIFIC LOCATION:
CITY/STATE: Santa Maria, CA

QC JOB #: 16559414
DIRECTION: NB, SB
DATE: Apr 18 2024

Passenger | Medium Trucks | Heavy Trucks

Start Time	Motorcycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12:00 AM	0	7	3	0	2	0	0	0	0	0	0	0	0	12
01:00 AM	0	8	2	0	1	1	0	0	0	0	0	0	0	12
02:00 AM	0	2	2	0	1	0	0	0	0	0	0	0	0	5
03:00 AM	0	24	8	0	0	0	0	0	1	0	0	0	0	33
04:00 AM	0	29	7	0	2	0	0	1	0	0	0	0	0	39
05:00 AM	0	108	26	4	9	0	0	0	0	0	0	0	0	147
06:00 AM	0	**252**	**79**	17	42	0	0	1	1	0	1	0	0	**393**
07:00 AM	0	132	55	22	58	1	0	13	1	0	2	0	0	284
08:00 AM	**1**	69	54	21	**71**	3	0	11	0	0	8	**1**	0	239
09:00 AM	0	59	60	20	61	3	0	**19**	4	0	4	0	0	230
10:00 AM	0	87	70	29	68	5	0	7	**5**	0	**10**	0	0	281
11:00 AM	0	81	71	**30**	54	**8**	0	15	2	0	6	0	0	267
12:00 PM	**1**	92	66	31	53	3	0	12	3	0	**7**	0	0	268
01:00 PM	1	115	54	**35**	**71**	**5**	0	10	**9**	0	7	0	0	307
02:00 PM	0	189	67	34	48	4	0	**13**	4	0	5	0	0	364
03:00 PM	0	**250**	72	33	53	3	0	7	3	0	3	0	0	**424**
04:00 PM	1	166	**92**	21	49	0	0	9	9	0	3	0	0	350
05:00 PM	0	121	48	7	36	0	0	1	7	0	5	0	0	225
06:00 PM	0	68	25	2	10	0	0	2	7	0	2	0	0	116
07:00 PM	0	70	29	0	9	0	0	0	3	0	0	0	0	111
08:00 PM	0	35	17	0	6	0	0	0	3	0	0	0	0	61
09:00 PM	0	34	13	0	7	0	0	2	0	0	0	0	0	56
10:00 PM	0	16	7	0	4	0	0	0	0	0	0	0	0	27
11:00 PM	0	12	1	0	4	0	0	0	2	0	0	0	0	19
Day Total	4	2026	928	306	719	36	0	123	64	0	63	1	0	4270
Percent	0.1%	47.4%	21.7%	7.2%	16.8%	0.8%	0%	2.9%	1.5%	0%	1.5%	0%	0%	
AM Peak	8:00 AM	6:00 AM	6:00 AM	11:00 AM	8:00 AM	11:00 AM	12:00 AM	9:00 AM	10:00 AM	12:00 AM	10:00 AM	8:00 AM	12:00 AM	6:00 AM
Volume	1	252	79	30	71	8	0	19	5	0	10	1	0	393
PM Peak	12:00 PM	3:00 PM	4:00 PM	1:00 PM	1:00 PM	1:00 PM	12:00 PM	2:00 PM	1:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	3:00 PM
Volume	1	250	92	35	71	5	0	13	9	0	7	0	0	424

ADT 4270



Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: Black Rd North of W Stowell Rd
SPECIFIC LOCATION:
CITY/STATE: Santa Maria, CA

QC JOB #: 16559414
DIRECTION: NB, SB
DATE: Apr 18 2024

Start Time	Motorcycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
Grand Total	4	2026	928	306	719	36	0	123	64	0	63	1	0	4270
Percent	0.1%	47.4%	21.7%	7.2%	16.8%	0.8%	0%	2.9%	1.5%	0%	1.5%	0%	0%	

ADT
4270



Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Volume Data

LOCATION: Black Rd North of W Stowell Rd
QC JOB #: 16559414
SPECIFIC LOCATION:
DIRECTION: NB
CITY/STATE: Santa Maria, CA
DATE: Apr 18 2024 - Apr 18 2024

Start Time	Mon	Tue	Wed	Thu 18 Apr 24	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				10		10			10	
01:00 AM				12		12			12	
02:00 AM				4		4			4	
03:00 AM				8		8			8	
04:00 AM				18		18			18	
05:00 AM				97		97			97	
06:00 AM				**236**		**236**			**236**	
07:00 AM				104		104			104	
08:00 AM				113		113			113	
09:00 AM				104		104			104	
10:00 AM				128		128			128	
11:00 AM				129		129			129	
12:00 PM				113		113			113	
01:00 PM				137		137			137	
02:00 PM				**141**		**141**			**141**	
03:00 PM				109		109			109	
04:00 PM				121		121			121	
05:00 PM				117		117			117	
06:00 PM				53		53			53	
07:00 PM				52		52			52	
08:00 PM				36		36			36	
09:00 PM				28		28			28	
10:00 PM				23		23			23	
11:00 PM				15		15			15	
Day Total				1908		1908			1908	
% Weekday Average				100%						
% Week Average				100%		100%				
AM Peak Volume				6:00 AM 236		6:00 AM 236			6:00 AM 236	
PM Peak Volume				2:00 PM 141		2:00 PM 141			2:00 PM 141	

Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Volume Data

LOCATION: Black Rd North of W Stowell Rd
QC JOB #: 16559414
SPECIFIC LOCATION:
DIRECTION: SB
CITY/STATE: Santa Maria, CA
DATE: Apr 18 2024 - Apr 18 2024

Start Time	Mon	Tue	Wed	Thu 18 Apr 24	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				2		2			2	
01:00 AM				0		0			0	
02:00 AM				1		1			1	
03:00 AM				25		25			25	
04:00 AM				21		21			21	
05:00 AM				50		50			50	
06:00 AM				157		157			157	
07:00 AM				**180**		**180**			**180**	
08:00 AM				126		126			126	
09:00 AM				126		126			126	
10:00 AM				153		153			153	
11:00 AM				138		138			138	
12:00 PM				155		155			155	
01:00 PM				170		170			170	
02:00 PM				223		223			223	
03:00 PM				**315**		**315**			**315**	
04:00 PM				229		229			229	
05:00 PM				108		108			108	
06:00 PM				63		63			63	
07:00 PM				59		59			59	
08:00 PM				25		25			25	
09:00 PM				28		28			28	
10:00 PM				4		4			4	
11:00 PM				4		4			4	
Day Total				2362		2362			2362	
% Weekday Average				100%						
% Week Average				100%		100%				
AM Peak Volume				7:00 AM 180		7:00 AM 180			7:00 AM 180	
PM Peak Volume				3:00 PM 315		3:00 PM 315			3:00 PM 315	

Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Vehicle Classification Data

LOCATION: S Blosser Rd North of W Cypress St
SPECIFIC LOCATION:
CITY/STATE: Santa Maria, CA

QC JOB #: 16559415
DIRECTION: NB, SB
DATE: Apr 18 2024

Passenger | Medium Trucks | Heavy Trucks

Start Time	Motorcycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12:00 AM	0	91	30	1	4	0	0	0	0	0	0	0	0	126
01:00 AM	0	49	15	0	1	0	0	0	1	0	0	0	0	66
02:00 AM	0	36	7	0	2	0	0	0	1	0	0	0	0	46
03:00 AM	0	71	29	3	5	0	0	4	3	0	2	2	0	119
04:00 AM	0	164	72	1	5	3	0	4	3	0	0	0	0	252
05:00 AM	4	587	166	7	28	6	0	18	4	2	**3**	0	0	825
06:00 AM	**10**	**682**	179	14	56	**9**	**2**	28	4	3	0	0	0	987
07:00 AM	5	649	224	**23**	73	8	2	28	8	**6**	3	**6**	0	**1035**
08:00 AM	4	607	**248**	12	**93**	7	2	34	5	3	2	0	**4**	1021
09:00 AM	8	518	204	15	81	3	0	**36**	9	1	2	4	0	881
10:00 AM	9	525	231	16	78	6	1	30	7	2	0	2	1	908
11:00 AM	6	598	226	10	89	5	0	23	**10**	6	2	1	0	976
12:00 PM	4	702	244	15	**81**	10	1	33	**10**	2	0	1	2	1105
01:00 PM	6	782	265	21	76	9	2	27	8	7	4	2	**3**	1212
02:00 PM	8	890	263	20	79	10	2	42	2	2	2	2	0	1322
03:00 PM	13	935	263	17	79	9	2	35	10	**10**	1	2	1	1377
04:00 PM	**20**	952	**280**	**37**	76	**13**	0	43	7	10	**10**	1	1	1450
05:00 PM	14	**1050**	267	23	60	11	2	**44**	8	9	6	**3**	2	**1499**
06:00 PM	11	992	246	7	52	10	**3**	30	5	8	3	0	2	1369
07:00 PM	8	816	235	3	49	10	2	26	9	2	0	2	2	1164
08:00 PM	8	687	185	3	39	1	0	18	4	4	0	0	2	951
09:00 PM	2	534	138	1	19	0	0	6	1	2	0	0	0	703
10:00 PM	2	306	87	0	17	2	0	5	3	0	0	0	0	422
11:00 PM	1	181	55	2	9	1	0	2	4	1	0	0	0	256
Day Total	143	13404	4159	251	1151	133	21	516	126	80	40	28	20	20072
Percent	0.7%	66.8%	20.7%	1.3%	5.7%	0.7%	0.1%	2.6%	0.6%	0.4%	0.2%	0.1%	0.1%	
AM Peak	6:00 AM	6:00 AM	8:00 AM	7:00 AM	8:00 AM	6:00 AM	6:00 AM	9:00 AM	11:00 AM	7:00 AM	5:00 AM	7:00 AM	8:00 AM	7:00 AM
Volume	10	682	248	23	93	9	2	36	10	6	3	6	4	1035
PM Peak	4:00 PM	5:00 PM	4:00 PM	4:00 PM	12:00 PM	4:00 PM	6:00 PM	5:00 PM	12:00 PM	3:00 PM	4:00 PM	5:00 PM	1:00 PM	5:00 PM
Volume	20	1050	280	37	81	13	3	44	10	10	10	3	3	1499

ADT 20072



Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: S Blosser Rd North of W Cypress St
SPECIFIC LOCATION:
CITY/STATE: Santa Maria, CA

QC JOB #: 16559415
DIRECTION: NB, SB
DATE: Apr 18 2024

Start Time	Motorcycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
Grand Total	143	13404	4159	251	1151	133	21	516	126	80	40	28	20	20072
Percent	0.7%	66.8%	20.7%	1.3%	5.7%	0.7%	0.1%	2.6%	0.6%	0.4%	0.2%	0.1%	0.1%	

ADT
20072



Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Volume Data

LOCATION: S Blosser Rd North of W Cypress St | **QC JOB #:** 16559415

SPECIFIC LOCATION: | **DIRECTION:** NB

CITY/STATE: Santa Maria, CA | **DATE:** Apr 18 2024 - Apr 18 2024

Start Time	Mon	Tue	Wed	Thu 18 Apr 24	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				76		76			76	
01:00 AM				40		40			40	
02:00 AM				22		22			22	
03:00 AM				54		54			54	
04:00 AM				121		121			121	
05:00 AM				381		381			381	
06:00 AM				411		411			411	
07:00 AM				459		459			459	
08:00 AM				466		466			466	
09:00 AM				440		440			440	
10:00 AM				472		472			472	
11:00 AM				**483**		**483**			**483**	
12:00 PM				572		572			572	
01:00 PM				562		562			562	
02:00 PM				628		628			628	
03:00 PM				682		682			682	
04:00 PM				712		712			712	
05:00 PM				**730**		**730**			**730**	
06:00 PM				704		704			704	
07:00 PM				618		618			618	
08:00 PM				494		494			494	
09:00 PM				377		377			377	
10:00 PM				232		232			232	
11:00 PM				157		157			157	
Day Total				9893		9893			9893	
% Weekday Average				100%						
% Week Average				100%		100%				
AM Peak Volume				11:00 AM 483		11:00 AM 483			11:00 AM 483	
PM Peak Volume				5:00 PM 730		5:00 PM 730			5:00 PM 730	

Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Volume Data

LOCATION: S Blosser Rd North of W Cypress St | **QC JOB #:** 16559415

SPECIFIC LOCATION: | **DIRECTION:** SB

CITY/STATE: Santa Maria, CA | **DATE:** Apr 18 2024 - Apr 18 2024

Start Time	Mon	Tue	Wed	Thu 18 Apr 24	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				50		50			50	
01:00 AM				26		26			26	
02:00 AM				24		24			24	
03:00 AM				65		65			65	
04:00 AM				131		131			131	
05:00 AM				444		444			444	
06:00 AM				**576**		**576**			**576**	
07:00 AM				576		576			576	
08:00 AM				555		555			555	
09:00 AM				441		441			441	
10:00 AM				436		436			436	
11:00 AM				493		493			493	
12:00 PM				533		533			533	
01:00 PM				650		650			650	
02:00 PM				694		694			694	
03:00 PM				695		695			695	
04:00 PM				738		738			738	
05:00 PM				**769**		**769**			**769**	
06:00 PM				665		665			665	
07:00 PM				546		546			546	
08:00 PM				457		457			457	
09:00 PM				326		326			326	
10:00 PM				190		190			190	
11:00 PM				99		99			99	
Day Total				10179		10179			10179	
% Weekday Average				100%						
% Week Average				100%		100%				
AM Peak Volume				6:00 AM 576		6:00 AM 576			6:00 AM 576	
PM Peak Volume				5:00 PM 769		5:00 PM 769			5:00 PM 769	

Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Vehicle Classification Data

LOCATION: W Stowell Rd East of S E St
SPECIFIC LOCATION:
CITY/STATE: Santa Maria, CA

Passenger | Medium Trucks | Heavy Trucks

QC JOB #: 16559413
DIRECTION: EB, WB
DATE: Apr 18 2024

Start Time	Motorcycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12:00 AM	0	7	4	1	1	0	0	0	9	0	0	0	0	22
01:00 AM	0	17	1	0	1	0	0	0	3	0	0	0	0	22
02:00 AM	0	4	1	0	0	1	0	0	3	0	0	0	0	9
03:00 AM	0	21	4	0	1	0	0	0	2	0	0	0	0	28
04:00 AM	0	42	13	0	1	0	0	1	3	0	0	0	0	60
05:00 AM	0	224	47	9	9	0	0	1	4	0	0	0	0	294
06:00 AM	**2**	**650**	**162**	35	43	3	0	3	6	0	2	2	0	**908**
07:00 AM	0	152	50	42	60	2	0	6	12	0	0	2	0	326
08:00 AM	1	115	60	31	55	**13**	0	6	12	0	0	2	0	295
09:00 AM	0	94	55	50	55	5	0	6	22	0	**3**	2	**1**	293
10:00 AM	1	123	58	**55**	**70**	5	**1**	**7**	16	0	1	2	0	339
11:00 AM	1	158	84	50	61	1	0	7	**24**	0	2	**6**	0	394
12:00 PM	4	160	78	55	58	**5**	0	**9**	26	0	1	**3**	0	399
01:00 PM	1	222	89	**62**	43	2	0	5	30	0	0	2	0	456
02:00 PM	2	317	119	45	65	4	0	7	29	0	1	2	0	591
03:00 PM	**6**	**566**	**172**	54	**103**	3	0	7	**31**	**1**	1	2	0	**946**
04:00 PM	0	302	147	33	79	0	0	7	25	0	0	0	0	593
05:00 PM	1	165	57	18	38	3	0	5	28	0	**2**	0	0	317
06:00 PM	2	97	28	9	18	1	0	2	30	0	1	0	0	188
07:00 PM	0	83	34	2	8	1	0	3	28	0	0	0	0	159
08:00 PM	0	42	25	0	9	2	0	2	28	0	0	0	0	108
09:00 PM	2	49	15	1	11	0	0	1	16	0	0	0	0	95
10:00 PM	1	12	7	0	0	1	0	1	11	0	0	0	0	33
11:00 PM	0	28	5	0	4	0	0	0	8	0	0	0	0	45
Day Total	24	3650	1315	552	793	52	1	86	406	1	14	25	1	6920
Percent	0.3%	52.7%	19%	8%	11.5%	0.8%	0%	1.2%	5.9%	0%	0.2%	0.4%	0%	
AM Peak	6:00 AM	6:00 AM	6:00 AM	10:00 AM	10:00 AM	8:00 AM	10:00 AM	10:00 AM	11:00 AM	12:00 AM	9:00 AM	11:00 AM	9:00 AM	6:00 AM
Volume	2	650	162	55	70	13	1	7	24	0	3	6	1	908
PM Peak	3:00 PM	3:00 PM	3:00 PM	1:00 PM	3:00 PM	12:00 PM	12:00 PM	12:00 PM	3:00 PM	3:00 PM	5:00 PM	12:00 PM	12:00 PM	3:00 PM
Volume	6	566	172	62	103	5	0	9	31	1	2	3	0	946

ADT 6920



Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: W Stowell Rd East of S E St
SPECIFIC LOCATION:
CITY/STATE: Santa Maria, CA

QC JOB #: 16559413
DIRECTION: EB, WB
DATE: Apr 18 2024

Start Time	Motorcycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
Grand Total	24	3650	1315	552	793	52	1	86	406	1	14	25	1	6920
Percent	0.3%	52.7%	19%	8%	11.5%	0.8%	0%	1.2%	5.9%	0%	0.2%	0.4%	0%	

ADT 6920



Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Volume Data

LOCATION: W Stowell Rd East of S E St
QC JOB #: 16559413
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Santa Maria, CA
DATE: Apr 18 2024 - Apr 18 2024

Start Time	Mon	Tue	Wed	Thu 18 Apr 24	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				13		13			13	
01:00 AM				17		17			17	
02:00 AM				5		5			5	
03:00 AM				5		5			5	
04:00 AM				13		13			13	
05:00 AM				30		30			30	
06:00 AM				85		85			85	
07:00 AM				159		159			159	
08:00 AM				131		131			131	
09:00 AM				141		141			141	
10:00 AM				190		190			190	
11:00 AM				**222**		**222**			**222**	
12:00 PM				222		222			222	
01:00 PM				265		265			265	
02:00 PM				423		423			423	
03:00 PM				**772**		**772**			**772**	
04:00 PM				454		454			454	
05:00 PM				197		197			197	
06:00 PM				114		114			114	
07:00 PM				88		88			88	
08:00 PM				68		68			68	
09:00 PM				57		57			57	
10:00 PM				25		25			25	
11:00 PM				28		28			28	
Day Total				3724		3724			3724	
% Weekday Average				100%						
% Week Average				100%		100%				
AM Peak Volume				11:00 AM 222		11:00 AM 222			11:00 AM 222	
PM Peak Volume				3:00 PM 772		3:00 PM 772			3:00 PM 772	

Comments:

Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: W Stowell Rd East of S E St
QC JOB #: 16559413
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Santa Maria, CA
DATE: Apr 18 2024 - Apr 18 2024

Start Time	Mon	Tue	Wed	Thu 18 Apr 24	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				9		9			9	
01:00 AM				5		5			5	
02:00 AM				4		4			4	
03:00 AM				23		23			23	
04:00 AM				47		47			47	
05:00 AM				264		264			264	
06:00 AM				**823**		**823**			**823**	
07:00 AM				167		167			167	
08:00 AM				164		164			164	
09:00 AM				152		152			152	
10:00 AM				149		149			149	
11:00 AM				172		172			172	
12:00 PM				177		177			177	
01:00 PM				**191**		**191**			**191**	
02:00 PM				168		168			168	
03:00 PM				174		174			174	
04:00 PM				139		139			139	
05:00 PM				120		120			120	
06:00 PM				74		74			74	
07:00 PM				71		71			71	
08:00 PM				40		40			40	
09:00 PM				38		38			38	
10:00 PM				8		8			8	
11:00 PM				17		17			17	
Day Total				3196		3196			3196	
% Weekday Average				100%						
% Week Average				100%		100%				
AM Peak Volume				6:00 AM 823		6:00 AM 823			6:00 AM 823	
PM Peak Volume				1:00 PM 191		1:00 PM 191			1:00 PM 191	

Comments:

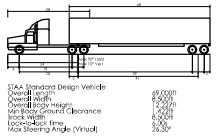
Report generated on 4/26/2024 2:04 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Appendix I – Auto-Turn Turning Templates

WEST STOWELL ROAD



0 20 40 60 feet

1"=20'

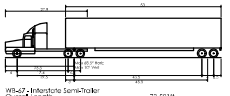
1680 STOWELL ROAD

TRUCK TURNING TEMPLATE

C5

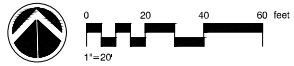
rrm design group

WEST STOWELL ROAD



WB-67 - Interstate Semi-Trailer

Overall Length	73.00ft
Overall Width	8.50ft
Overall Body Height	13.46ft
Min Ground Clearance	1.34ft
Max Track Width	8.50ft
Lock-to-Lock Time	6.0s
Max Steering Angle (Virtual)	28.40°

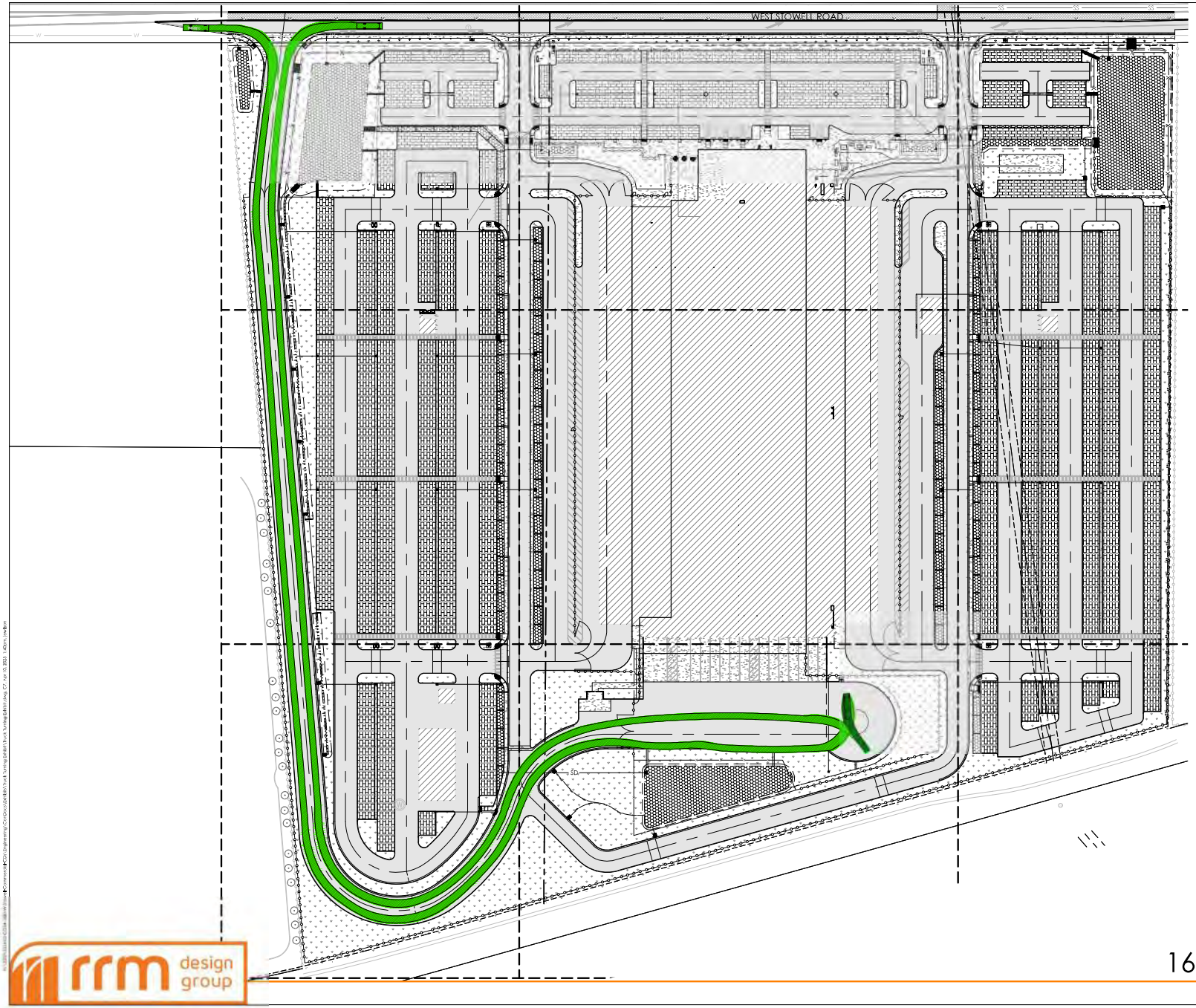


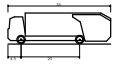
1680 STOWELL ROAD

TRUCK TURNING TEMPLATE

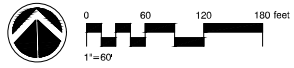
C6

rrm design group





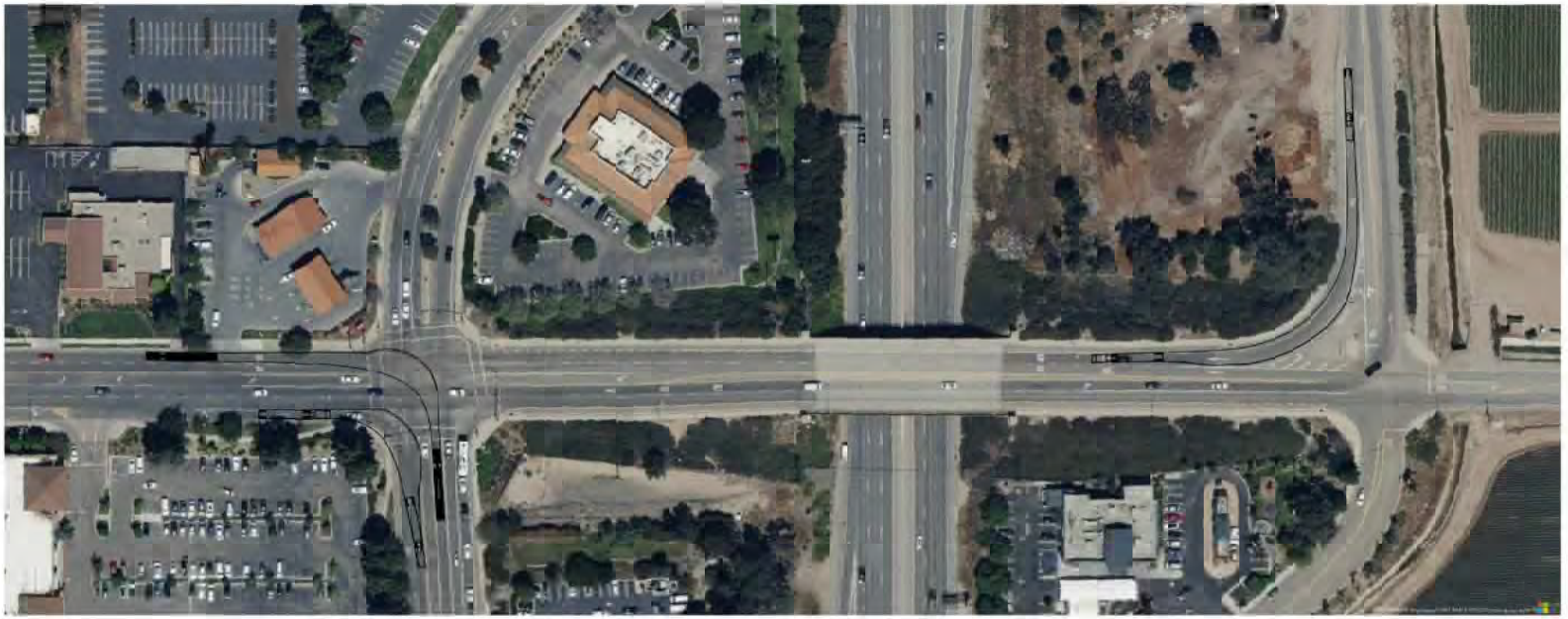
Rear-Load Garbage Truck	
Overall Length	35.000ft
Overall Width	8.315ft
Overall Body Height	10.546ft
Min Body Ground Clearance	1.000ft
Track Width	6.375ft
Lock-to-Lock time	6.0s
Curb to Curb Turning Radius	29.300ft



1680 STOWELL ROAD

TRUCK TURNING TEMPLATE

C7







rrm design group

1680 STOWELL ROAD

TRUCK TURNING TEMPLATE

C7

Appendix D

Vehicle Miles Traveled Analysis

VEHICLE MILES TRAVELED (VMT) ANALYSIS FOR

W. STOWELL ROAD DELIVERY STATION

DATE:
July 9, 2025

LOCATION:
Santa Maria, California

PREPARED FOR:
City of Santa Maria

PREPARED BY:
NV5 Engineers & Consultants
15092 Avenue of Science, Suite 200
San Diego, CA 92128

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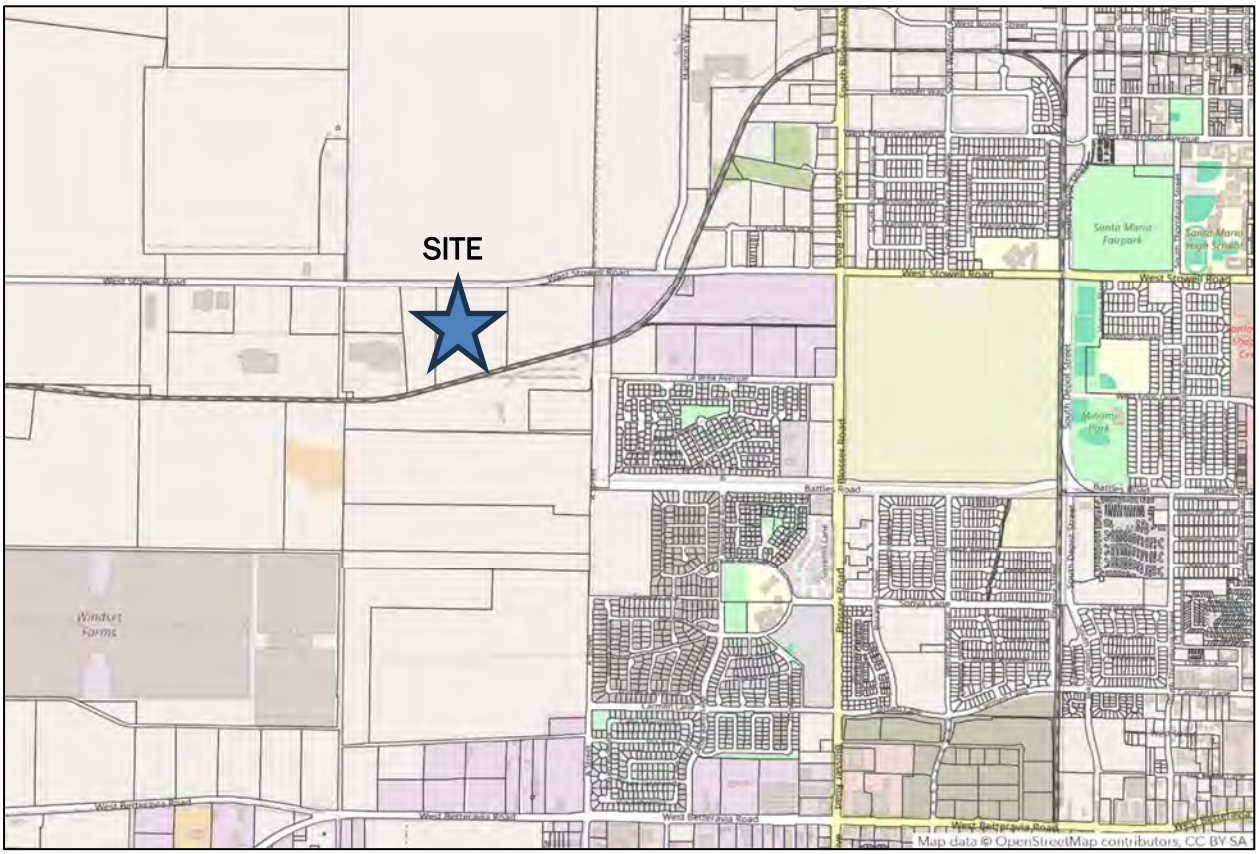
Attachment C – VMT Resources

A. Introduction

A new 169,104 square-foot e-commerce delivery station is planned for construction on an undeveloped parcel along West Stowell Road in Santa Maria, California. The proposed site will include a delivery station, a delivery van queueing area, and surface parking lots (the "Project"). Figure 1 depicts the site location in Santa Maria. Figure 1 shows the location of the Project.

The Project site is designated for Planned Development in the West Stowell Specific Plan and is zoned Commercial Manufacturing/Agriculture Overlay (CM/AG). To adhere to local and state policies, the following vehicle miles traveled (VMT) study was prepared for purposes of determining whether the Project may have significant transportation impacts.

Figure 1. Vicinity Map



B. Analysis Guidelines

State Requirements

The California Environmental Quality Act, known as CEQA, was enacted in 1970. In 2013, Governor Brown signed Senate Bill (SB) 743 to better align CEQA with State policies that promote public health, improve air quality, encourage infill development, promote multimodal transportation, and help reduce greenhouse gas emissions to achieve climate action goals.

In December 2018, the Natural Resources Agency certified amendments to the CEQA Guidelines to implement SB 743. Pursuant to the new CEQA Guidelines, as of July 1, 2020, transportation impacts under CEQA are no longer analyzed using LOS and instead use the VMT metric.

Section 15064.3 of the CEQA Guidelines states that "a lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project."

Local Requirements

The City of Santa Maria's Environmental Procedures and Guidelines require a VMT analysis for many discretionary development projects, except for certain categories of projects. Consistent with CEQA Guidelines Section 15064.7, Thresholds of Significance, the City of Santa Maria has adopted the countywide baseline average and thresholds set at 85% of these countywide baseline averages for determining whether a project's VMT will be significant. The countywide baseline average for VMT per employee is 11.08 (one-way). 85% (15% below) the countywide baseline average is 9.41 VMT per employee (one-way). Projects that exceed these thresholds may have a significant effect on the environment and may require project revisions and/or mitigation measures may be implemented to reduce the impact to less than significant.

C. Project Trip Generation

Delivery stations are the last-mile connection between the tenant's fulfillment process and their customers. Packages are transported to delivery stations via line-haul (tractor trailer) trucks from fulfillment and/or sortation centers, and are further sorted by delivery routes, organized, and loaded into delivery vehicles. Delivery stations operate 24/7 to support delivery of packages to customer locations between approximately 10:00 AM and 9:00 PM. The operations, including delivery van departure and return windows, are designed to minimize traffic impacts by shifting primary trips outside of standard peak hours (7:00–9:00 AM, 4:00–6:00 PM) and avoiding rush hour periods. The first wave of delivery drivers arrives in their personal vehicles at the delivery station around 9:20 AM, and begin queuing for loading. Starting at 9:55 AM and ending at 11:10 AM, up to 345 delivery vans will load and depart from the delivery station at a rate of up to 72 vans per 15 minutes to facilitate a regulated traffic flow into the surrounding area. The first wave of delivery vans leaves at 10:10 AM. The final wave of delivery vans (57) leaves the facility at 11:10 AM. Approximately 8-10 hours after dispatch, delivery routes are completed, and the vans return to the station between 7:10 PM and 9:10 PM. The drivers park all delivery vans onsite, and depart using a personal vehicle or other mode of transport.

At the proposed delivery station, up to 34 line-haul trucks are expected to deliver packages to the delivery station each day. The line-haul trucks will primarily arrive at the site between the hours of 10:00 PM and 8:00 AM. Trucks enter the site via W. Stowell Road on the north side of the building. Once trucks are unloaded, the trucks continue to the next delivery station and do not return to the site. The customer packages are sorted by address groupings, assigned to the delivery routes, placed onto movable racks, and staged for dispatch.

The delivery station will also use private carriers (primarily individual passenger vehicles) to deliver packages from this location. The tenant anticipates up to 97 passenger vehicles entering the facility, staggered between 4:30 PM and 6:00 PM daily. Private carrier vehicles will load and depart every 15 minutes. They will not return to the station that same day. Table 1 shows the anticipated traffic volume by vehicle type.

Table 1: Project Trip Generation - Traffic Volume by Vehicle Type

Traffic	Number of Vehicles	Daily Trips
Auto - Employees	588	1,176
Delivery Vans	345	690
Auto – Private Carrier	97	194
Line-Haul Trucks	34	68
Total	**1,064**	**2,128**

Based on Tenant Specified Schedule provided in Attachment B. Note that no adjustments have been made to the numbers to account for passenger equivalency of line-haul trucks.

Table 2: Employee Shifts

Employee Shift	# of Employees
Sort Center/C1 Shift	160
Operations	12
Managers Shift	47
Same Day Shift	19
Return to Station Shift	5
Drivers	345
TOTAL	**588**

D. Project Level VMT Analysis

Based on the anticipated daily trip generation for the Project, there are four types of vehicle trips:

- Line-haul truck trips
- Employee commute trips
- Delivery van trips
- Personal delivery vehicles (private carrier) trips

Line-haul Truck Trips

Note: Section 15064.3 of the CEQA Guidelines states that VMT for transportation impacts refers to "… the amount and distance of automobile travel…" Per guidance provided by the California Institute of Transportation Engineers (ITE) SB 743 Task Force (April 2021), SB 743 does not apply to the movement of goods (i.e. trucks). Therefore, line-haul truck trips are not considered in VMT impact calculations.

While not germane to measuring site impacts, line-haul VMT is used in the air quality analysis, and is therefore calculated for inclusion in other studies. Table 3 show the estimated VMT for line-haul trips. The likely fulfillment/sort centers to serve the site include:

- Fulfillment Center, Shafter, CA 93263 (121 miles from site)
- Sort Center, Oxnard, CA 93030 (103 miles from site)

Table 3: Freight Vehicle Miles Travels (VMT) for New Delivery Station

Traffic	Number	Daily Trips	Average Delivery Miles	Daily VMT
Line-Haul*	34	68	112	7,616

*Not used in site VMT calculations; included for air quality analysis

The total VMT for the site is the sum of the different vehicle types (except line-haul trucks). The methodology and assumptions for determining the VMT for each vehicle type other than line-haul trucks are provided below. The below analysis provides both the Project generated VMT (per vehicle type and in total), as well as the Project's effect on VMT. The Project's effect on VMT is analyzed through determining changes to VMT by locating delivery operations closer to customers to reduce overall miles traveled.

Commuter Trips

The analysis assumes that employees (onsite workers and delivery drivers) will live within a reasonable commuting distance of the site and likely follow the same trends as those that are now employed within the same area. Both the California Emissions Estimator Model (CalEEMod, Version: CalEEMod.2020.4.0) and the Santa Barbara County Association of Governments Regional

Transportation Demand Model estimate the commute distance for industrial employees who work in Santa Maria to be 6.6 miles each way, or 13.20 vehicle-miles per day.

Employment_VMT = (Number of Employees * Average Employee VMT)

The Employment VMT is 588 * 13.20 = 7,762 vehicle miles per day.

Delivery Van Trips

The Project tenant delivers packages to zones much like the U.S. Postal Service (the "USPS"), except that the routes the vans take vary by day and are optimized for the most efficient movement. The analysis estimates the VMT for delivery vehicles (via GIS) by finding the distance from the site to the furthest point within the delivery zone and multiplying by the number of vehicles bound for those zones. The furthest point within the zone is assumed to account for circuitous travel as packages are dropped off throughout a route. (Note: not every van will travel to the furthest point within a zone). The total number of delivery vans is shown in Table 1.

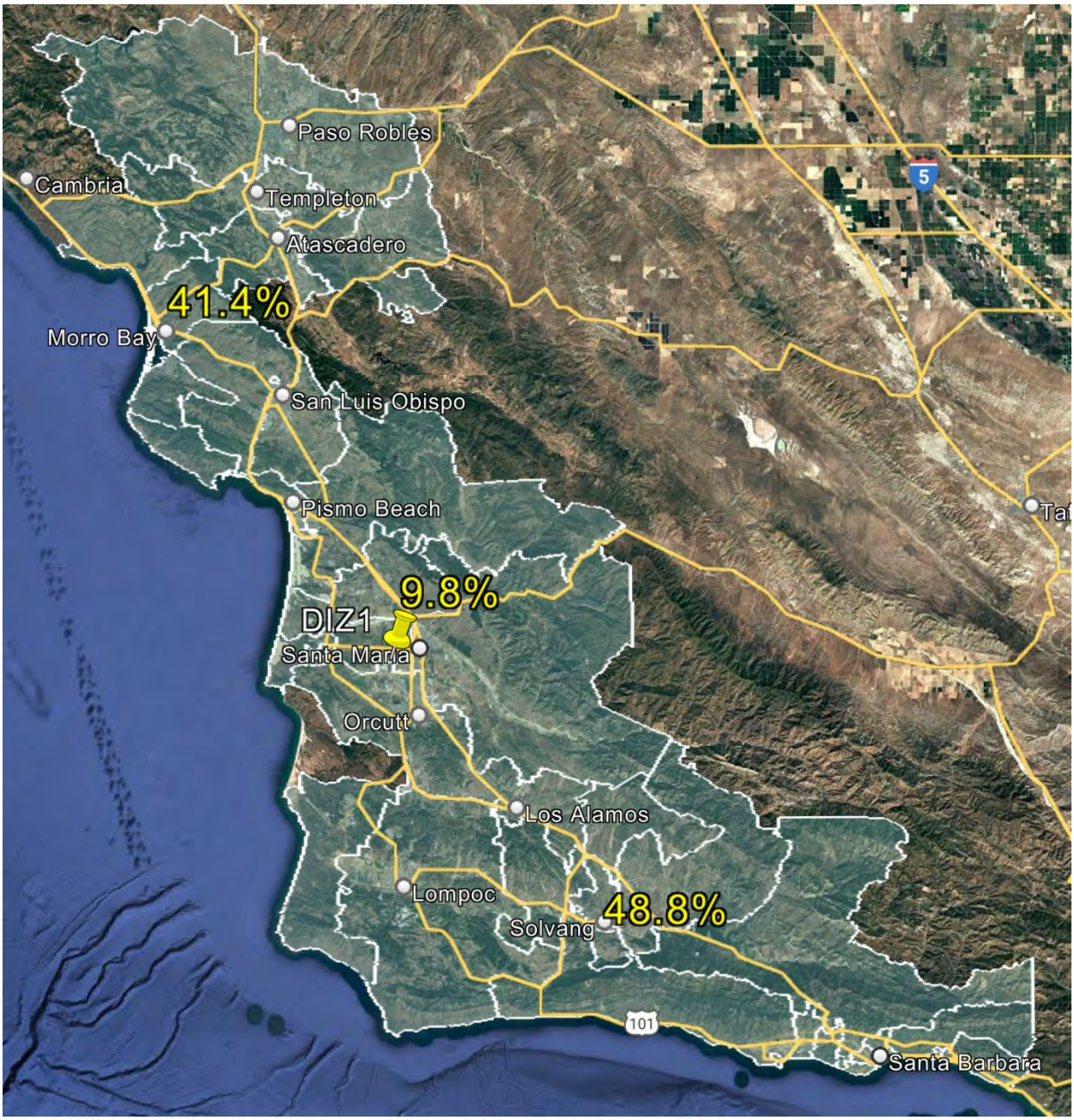
Some of the customers from the new delivery station (i.e. the Project) are currently being served by an existing delivery station and some by the U.S. Postal Service.

Since all vans leave the site and then return, the VMT would be doubled to account for the return trip. The future van VMT is calculated as such:

Van_VMT = $\sum$ (Van Trips to Zip Code * Dist. To Zip Code * 2)

With the addition of the Santa Maria delivery station, the two-way VMT will be 33,472 miles per day. This would equate to 97.02 VMT per person (driver) per day.

Figure 2. Percentage of Deliveries within Future Service Area



Private Carrier Trips

Private carrier trips are made by private contractors who deliver packages in their own automobiles. These individuals, called private carriers, are managed via a mobile application which instructs them when to arrive at the delivery station and how many packages they will be delivering. They are routed from the site to their delivery zones in the same manner as the delivery vans. The primary difference is that the private carrier vehicles do not return to the delivery station. Many private carrier drivers work for ridesharing companies or are professional drivers, but some are independent drivers who work at locations nearby and deliver packages after their day shift before returning home. Their trips are often part of a trip chain and their origins are mostly unknown; therefore their movements before and after their delivery shift are unaccountable.

The delivery zones are the same as for the delivery vans, so the methodology for determining VMT is similar, except that because the private carrier vehicles do not return to the delivery station, the VMT is not doubled. The future VMT for the new site is calculated thusly:

Private Carrier_VMT = $\sum$ (private carrier Trips to Zip Code * Dist. To Zip Code).

The future daily VMT for the private carrier operations is 4,705 per day or 48.5 per driver per day.

Total Site VMT

The future total VMT for the site, including employee trips, is calculated as follows:

Total_VMT = EMP_VMT + Van_VMT + private carrier_VMT

VMT/person = Total_VMT / $\sum$ (All Commuters, Vans, and Private Carriers)

The total future VMT for the proposed delivery station is 7,762 + 33,472 + 4,705 = 45,939. The per capita VMT is 45,939 divided by 1,030 personnel or 44.60 per person per day. The VMT calculation results are shown in Table 4.

Table 4: Project VMT Results

Traffic	Personnel	Daily Trips	VMT per Day	VMT per Person per Day
Commuter Trips*	588	1,176	7,762	13.2
Delivery Vans	345	690	33,472	97.0
Private Carrier	97	97	4,705	48.5
Total	**1,030**	**1,963**	**45,939**	**44.6**

*Per capita travel is based on 588 people – warehouse workers plus van and delivery personnel

Note, on-site personnel (243) and van drivers (345) are both 'commuters', so their VMT is combined in Table 4. Delivery van VMT per capita is the based on 345 van drivers and private carrier VMT per capita is based on 97 drivers. Total VMT per capita is total VMT divided by 1,030 people.

VMT Thresholds

Per the City of Santa Maria Environmental Procedures and Guidelines, 2020, employment generating projects (commercial, industrial, manufacturing, etc.) are required to generate less than 9.41 VMT per employee one-way trip or 18.82 two-way trips. The results show that the proposed Project's VMT is more than the targeted Regional VMT, resulting in a potentially significant impact on VMT. See Table 5.

Many of the customers in zip codes that will be served by the new delivery station in Santa Maria are currently served by the USPS. Because the USPS delivers to every address, there are no VMT savings associated with these new station trips.

Table 5: VMT Significance

Description	Project VMT per Capita per Day	City of Santa Maria Threshold[1]	Compared to Threshold	Impact Significance
Commuter Trips	13.2	18.82	30% lower	Not Significant
Delivery Vans	97.0	18.82	515% higher	Potentially Significant
Private Carrier Delivery	48.5	18.82	258% higher	Potentially Significant
TOTAL	**44.60**	**18.82**	**237% higher**	**Potentially Significant**

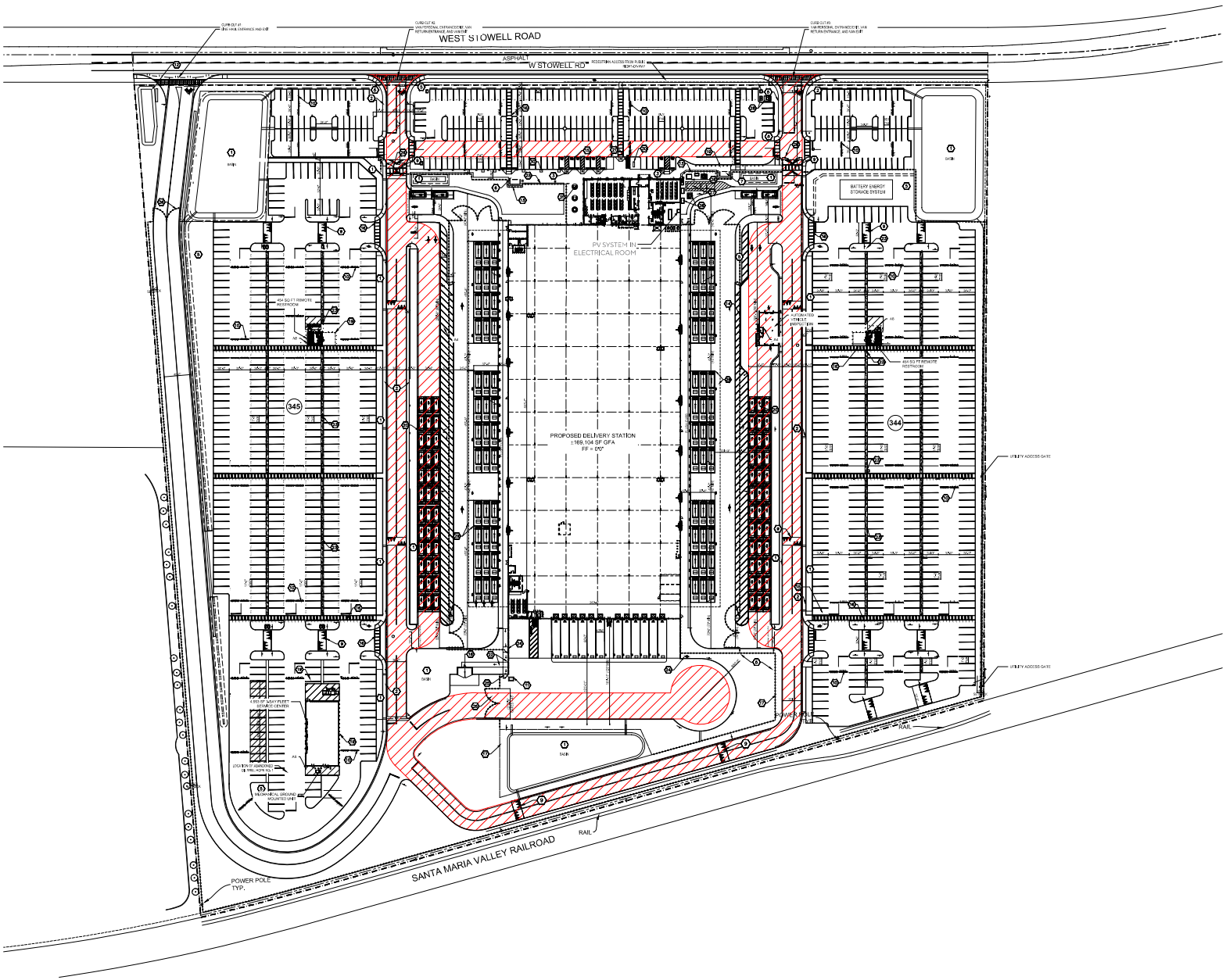
[1]The significance threshold is 9.41 for one-way trips.

The commuter VMT is 7,762 per day and the per capita VMT is 13.2 per day.

E. Mitigation

The VMT for the delivery station can be viewed in two parts: 1) the VMT associated with the employees (warehouse workers, van drivers, private carrier drivers) who commute to the site (the "commuter VMT"); and, 2) the VMT associated with the operations of the delivery station (i.e. the van and private carrier deliveries) (the "delivery operations VMT"). The commuter VMT is fairly low at 13.20 per person per day and is due to the relatively close proximity of the workforce expected for industrial uses in Santa Maria. The only potentially feasible mitigation measure to reduce commuter VMT is using transportation demand management (TDM) techniques such as increased bicycle use, carpooling, vanpooling, or transit use. For this project, however, a TDM plan would only result in de minimis VMT reductions. For example, if 20% of the onsite employees carpooled the average 6.6 miles to work (i.e. a 10% reduction of those trips), it would equate to a VMT per capita of 41.44, or a 0.46 VMT per capita reduction. There are also no feasible mitigation measures to reduce delivery operations VMT. This VMT could only be reduced by reducing delivery service, which would defeat the primary purpose of the Project. Therefore, no VMT mitigation is feasible for the Project, and the VMT impact will remain significant and unavoidable.

Attachment A – Site Plan



KEYNOTES

1	STORMWATER MANAGEMENT AS REQUIRED BY CODE	21	EMPLOYEE MUSTER AREA SIGNAGE PER SIGNAGE AND STRIPING PLAN
2	CONCRETE SIDEWALK	22	BIKE RACKS
3	ACCESSIBLE CURB RAMP	23	5' WIDE CONCRETE SIDEWALK (5% MAX SLOPE) WITH GUARDRAILS AND LANDINGS AS REQUIRED
4	RIDE SHARE DROP-OFF		
5	LANDSCAPE	23	TRASH CAN ON CONCRETE PAD
6	PREFABRICATED SMOKING SHELTER	24	RETAINING WALL WITH GUARD RAIL, AS REQUIRED, PER STRUCTURAL PLANS
7	RIDE-SHARE SHELTER	25	5' WIDE MAIN GATE WITH LOCKING HARDWARE
8	WHEEL STOP	26	PAIR OF 8'-0"H GALVANIZED MANUAL SWING GATES WITH DROP ROD AND LOCKING HARDWARE. IS REQUIRED, PROVIDE GATE WITH RUBBER ROLLERS OR TIRED. IN-GROUND TRACK SYSTEMS ARE NOT ALLOWED
9	SPEED HUMP / PEDESTRIAN TABLE		
10	SPEED BUMP		
11	4'x6' TRUCK YARD SPILL KIT SHED (BY TENANT) ON 6'X8' CONCRETE PAD		
12	SIGNAGE PER SIGNAGE AND STRIPING PLAN		
13	PEDESTRIAN BARRIER FENCE PER SITE DETAILS	27	EMERGENCY MOBILE GENERATOR PARKING
14	STRIPED TRAFFIC SEPARATION WITH JERSEY BARRIERS (OR EQUAL)	28	ELECTRICAL EQUIPMENT WITH BOLLARD PROTECTION PER ELECTRICAL PLANS
15	ACCESSIBLE PARKING STALL	29	BUILDING CANOPY AND COLUMNS PER ARCHITECTURAL PLAN
16	STRIPED PEDESTRIAN ACCESS	30	BENCH
17	YARD PERIMETER SECURITY FENCE	31	OUTDOOR BREAK AREA
18	TRASH ENCLOSURE	32	LOADING ZONE SECURITY FENCE
19	BOLLARDS PER SITE PLAN ENLARGEMENTS AND SITE DETAILS	33	42" HIGH CABLE RAILING FENCE
		34	8' HIGH BLACK TUBULAR FENCE

LEGEND:

- 42" HIGH CABLE RAILING FENCE
- 8' HIGH BLACK TUBULAR FENCE
- PROPERTY LINE
- 30'-0" (TYPICAL) WIDE FIRE LANE (HATCHED), 24'-0" AT NORTH ELEVATION, EXTENT OF FIRE LANE CONTINUOUS CURB PAINTED RED & MARKED WITH "FIRE LANE NO PARKING" PER THE FIRE DEPARTMENT HAVING JURISDICTION

REQUIRED PARKING

WAREHOUSE	157,507 SF	1 PER 1,040 SF	151	STALLS
OFFICE	11,597 SF	1 PER 260 SF	45	STALLS
TOTALS	169,104 SF		196	STALLS REQUIRED

PROPOSED PARKING

STANDARD STALLS (9' x 19')	210	STALLS
EV CAPABLE STALLS*	54	STALLS
HANDICAP STALLS	8	STALLS
TOTAL PARKING PROVIDED	272	STALLS

*ELECTRONIC VEHICLE CHARGING STATIONS (EVCS) 25% OF OVERALL EV CAPABLE STALLS 14 STALLS

DELIVERY VAN PARKING

VAN STALLS (11' x 27')	504 STALLS
EVCS VAN STALLS (11' X 27')	202 STALLS
TOTAL DELIVERY VAN PARKING	706 STALLS

SEMI TRUCK PARKING

DOCK POSITIONS (53') 12 STALLS

HEIGHT LIMIT

MAXIMUM: 40'-0" PER SANTA MARIA ZONING
PROPOSED: *MAXIMUM HEIGHT OF ±45'-0"

*REQUEST FOR A MODIFICATION TO THE MAX BUILDING HEIGHT.

SEEFRIED INDUSTRIAL PROPERTIES

DISTRIBUTION CENTER

Santa Maria, CA

SITE PLAN

0 60' 120'

AO Architecture. Design. Relationships.

A1

Scale 1" = 60'-0"
Job No. 2024-0141
Date 2025-04-16

Attachment B – Tenant Specified Trip Schedule

Santa Maria Delivery Facility

Time	Autos			Trucks			Vans			Total		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
0:00	0	0	0	1	1	2	0	0	0	1	1	2
0:30	0	0	0	1	1	2	0	0	0	1	1	2
1:00	160	0	160	1	1	2	0	0	0	161	1	162
1:30	0	0	0	1	1	2	0	0	0	1	1	2
2:00	0	0	0	1	1	2	0	0	0	1	1	2
2:30	0	0	0	1	1	2	0	0	0	1	1	2
3:00	0	0	0	1	1	2	0	0	0	1	1	2
3:30	0	0	0	1	1	2	0	0	0	1	1	2
4:00	0	0	0	1	2	3	0	0	0	1	2	3
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5:00	0	0	0	1	2	3	0	0	0	1	2	3
5:30	0	0	0	2	1	3	0	0	0	2	1	3
6:00	0	0	0	1	1	2	0	0	0	1	1	2
6:30	0	0	0	1	1	2	0	0	0	1	1	2
7:00	0	0	0	1	1	2	0	0	0	1	1	2
7:30	0	0	0	1	1	2	0	0	0	1	1	2
8:00	12	0	12	0	1	1	0	0	0	12	1	13
8:30	0	0	0	0	1	1	0	0	0	0	1	1
9:00	0	0	0	0	1	1	0	0	0	0	1	1
9:30	144	0	144	0	1	1	0	0	0	144	1	145
10:00	72	47	119	0	0	0	0	72	72	72	119	191
10:30	129	0	129	0	0	0	0	72	72	129	72	201
11:00	0	0	0	0	0	0	0	144	144	0	144	144
11:30	0	0	0	0	0	0	0	57	57	0	57	57
12:00	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0	0	0	0	0
13:30	19	0	19	0	0	0	0	0	0	19	0	19
14:00	0	160	160	1	0	1	0	0	0	1	160	161
14:30	0	0	0	0	1	1	0	0	0	0	1	1
15:00	0	0	0	1	0	1	0	0	0	1	0	1
15:30	5	0	5	0	1	1	0	0	0	5	1	6
16:00	0	0	0	1	0	1	0	0	0	1	0	1
16:30	36	12	48	0	1	1	0	0	0	36	13	49
17:00	61	36	97	1	0	1	0	0	0	62	36	98
17:30	0	61	61	0	1	1	0	0	0	0	62	62
18:00	0	19	19	1	0	1	0	0	0	1	19	20
18:30	0	0	0	1	0	1	0	0	0	1	0	1
19:00	0	0	0	1	0	1	0	0	0	1	0	1
19:30	0	0	0	1	0	1	0	0	0	1	0	1
20:00	0	0	0	1	1	2	72	0	72	73	1	74
20:30	0	144	144	1	1	2	72	0	72	73	145	218
21:00	0	72	72	1	1	2	144	0	144	145	73	218
21:30	0	129	129	1	1	2	57	0	57	58	130	188
22:00	0	0	0	1	1	2	0	0	0	1	1	2
22:30	0	5	5	1	1	2	0	0	0	1	6	7
23:00	47	0	47	1	1	2	0	0	0	48	1	49
23:30	0	0	0	1	1	2	0	0	0	1	1	2
Total	**685**	**685**	**1370**	**34**	**34**	**68**	**345**	**345**	**690**	**1064**	**1064**	**2128**

SC/CI Shift:	1:20	13:50	160	Assoc.	27%
Operations:	8:30	16:00	12	Assoc.	2%
Managers Shift:	23:30	10:00	47	Assoc.	8%
PFSD Shift:	14:00	18:00	19	Assoc.	3%
RTS Shift:	16:00	22:30	5	Assoc.	1%
Drivers:	5:40	22:45	345	Drivers	59%

Attachment C – VMT Resources

City of Santa Maria Environmental Procedures and Guidelines







Environmental Procedures and Guidelines
City of Santa Maria, California

Adopted by City Council Resolution 2001-186, November 6, 2001
Amended by City Council Resolution 2020-111, November 3, 2020

City Council:

Alice Patino, Mayor
Gloria Soto
Michael Moats
Mike Cordero
Etta Waterfield

Prepared by:

Community Development Department

Chuen Ng, Director
Ryan Hostetter, Planning Manager
Dana Eady, Principal Planner

City Attorney's Office

Thomas T. Watson, City Attorney
Heather Whitham, Assistant City Attorney

2. Affordable housing projects where a minimum of 20 percent of the units are deed restricted for low or very low income residents.

3. Small discretionary development projects that would generate or attract fewer than 110 daily trips (per CEQA). Examples include a project with 11 or fewer single family residential units, 20 or fewer multi-family units, or an office of 6,800 square feet or less.

4. Residential and non-residential land uses located in the green Transportation Analysis Zone (TAZ) areas of the Countywide Average Home-Based VMT per Capita and per Employee Maps (Appendix A and B) are expected to generate VMT at 85 percent or less of the baseline average rate and are presumed to have less than significant VMT impacts.

5. Infrastructure projects listed in Appendix C[1].

Discretionary development projects that do not meet any of the above screening criteria will require VMT Analysis. The City of Santa Maria can require a VMT analysis for discretionary development projects that trigger one or more of the above screening criteria if there are concerns regarding the VMT generating impacts of a given development.

Thresholds of Significance:

Consistent with CEQA Guidelines Section 15064.7, Thresholds of Significance, the City of Santa Maria has adopted the *countywide baseline average* (Appendix A for Residential Uses and Appendix B for Employment Generating Uses) and thresholds set at 85% of these countywide baseline averages for determining whether a project's VMT will be significant. The thresholds will be periodically updated as necessary during normal updates of the model baseline (approximately every five years).

Projects that comply with the applicable threshold will normally have a less than significant effect on the environment. Projects that exceed or otherwise do not comply with the applicable threshold may have a significant effect on the environment and, as a result, may require project modifications or mitigation measures to avoid or reduce those effects to less than significant levels. The following thresholds reflect this general guidance as well as the specific guidance set forth in CEQA Guidelines Section 15064.3 regarding estimating VMT, and developing thresholds of significance for VMT and transportation impacts.

Employment generating projects (commercial, industrial, manufacturing, etc.) are required to generate less than 9.41 VMT per employee (one-way trip). New residential projects (single family, multi-family, mobile home) are required to generate less than 6.17 VMT per person (one-way trip). Projects that exceed these thresholds may have a significant effect on the environment and will require project revisions and/or mitigation measures may be implemented to reduce the impact to less than significant. Mitigation strategies would be specific to the particular project and could include alternative transportation opportunities, pedestrian and/or transit network improvements, and traffic calming measures.

[1] The City of Santa Maria can require a VMT analysis if there are concerns regarding the VMT generating impacts of a given infrastructure project.



2024 RTIP

Regional Transportation Improvement Program

Santa Barbara County

Prepared and Submitted By:

SBCAG
SANTA BARBARA COUNTY ASSOCIATION OF GOVERNMENTS

Member Agencies:

Buellton ● Carpinteria ● Goleta ● Guadalupe ● Lompoc
Santa Barbara ● Santa Maria ● Solvang ● Santa Barbara County

A. Regional Level Performance Indicators and Measures (per Appendix B of the STIP Guidelines).

Use the following Table B1 to indicate quantitatively the overall regional level performance of your Regional Transportation Plan (RTP). For regions outside a MPO, a second Table B1(a) may be used as a replacement to Table B1. Table B1(a) is included on the next page.

Table B1
Evaluation – Regional Level Performance Indicators and Measures

Goal	Indicator/Measure	Current System Performance (Baseline)	Projected System Performance (2050 Future Baseline)	Projected System Performance (2050 Preferred Scenario)
Congestion Reduction	Vehicle Miles Traveled (VMT) per capita.	22.81 (2015)	26.20	22.12
	Percent of congested VMT (at or below 35 mph)	12.7% (2015)	19.1%	15.5%
	Commute mode share (travel to work or school)	86.84% (2015)	93.37%	86.21%
Infrastructure Condition	Percent of distressed state highway lane-miles	Good: 0% Fair 96.8% Poor 3.2% (2021 HPMS data, based on 2020 APCS inspection)	Good: 0% Fair 85.2% Poor 14.8% 10-year 'Do Nothing' scenario (2022-2032)	Good: 17.8% Fair: 76.9% Poor: 5.3% 10-year invested scenario (2022-2032)
	Pavement Condition Index (local streets and roads)	N/A	N/A	N/A
	Percent of highway bridges by deck area classified in Poor condition	Poor 14.7% (2021 National Bridge Inventory data)	Poor 18.1% 10-year 'Do Nothing' scenario (2022-2032)	Poor 0% 10-year invested scenario (2022-2032)
	Percent of transit assets that have surpassed the FTA useful life period	N/A	N/A	N/A
System Reliability	Highway Buffer Index (the extra time cushion that most travelers add to their average travel time when planning trips to ensure on-time arrival)	N/A	N/A	N/A
	Accessibility and on-time performance for rail and transit	N/A	N/A	N/A

UNDERSTANDING REGIONAL TRAVEL PATTERNS



January 2024

SBCAG
SANTA BARBARA COUNTY ASSOCIATION OF GOVERNMENTS

Miles Traveled

This analysis considers miles traveled by jurisdiction and sub region for two time periods: fall 2022 and fall 2019, both for a typical weekday. The two periods enable a view of pre-pandemic and post-pandemic conditions. It is broken down by vehicle miles traveled, bicycle miles traveled, and transit miles traveled. It should be noted that transit data is not available for the small operators in the region being Guadalupe, Lompoc, and Santa Ynez Valley. Data is provided for trips originating in jurisdiction or sub region and includes all trip purposes.

Table 147: Vehicle Miles Traveled

Jurisdiction	Fall 2022	Fall 2019	% Change 2022-2019
Buellton	270,180	280,670	-3.7%
Carpinteria	274,040	332,050	-17.5%
Goleta	863,500	912,920	-5.4%
Guadalupe	133,340	118,950	12.1%
Lompoc	623,000	606,090	2.8%
Santa Barbara	1,900,600	1,996,800	-4.8%
Santa Maria	1,763,200	1,959,600	-10.0%
Solvang	185,760	250,200	-25.8%
North County	4,203,600	4,763,000	-11.7%
South County	4,166,400	4,389,000	-5.1%
County	8,370,000	9,190,800	-8.9%

The following table considers population to provide vehicle miles traveled per capita. Population figures are Census 2020 which doesn't account for change, but it provides a reference point.

Table 148: Vehicle Miles Traveled Per Capita

Jurisdiction	Population (2020)	VMT/Capita Fall 2022	VMT/Capita Fall 2019	% Change 2022-2019
Buellton	5,161	52.4	54.4	-3.7%
Carpinteria	13,264	20.7	25.0	-17.5%
Goleta	32,690	26.4	27.9	-5.4%
Guadalupe	8,057	16.5	14.8	12.1%
Lompoc	44,444	14.0	13.6	2.8%
Santa Barbara	88,665	21.4	22.5	-4.8%
Santa Maria	109,707	16.1	17.9	-10.0%
Solvang	6,126	30.3	40.8	-25.8%
North County	239,868	17.5	19.9	-11.7%
South County	208,361	20.0	21.1	-5.1%
County	448,229	18.7	20.5	-8.9%

The following table provides bicycle miles traveled by jurisdiction and sub area. All values are for a typical weekday and for bike trips originating in the stated jurisdiction or sub area.

DIZ1 - Santa Barbara-North of Santa Ynez County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

DIZ1

Santa Barbara-North of Santa Ynez County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	127.00	1000sqft	2.92	127,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.1	**Precipitation Freq (Days)**	37
Climate Zone	4			**Operational Year**	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Large Parking area

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

DIZ1 - Santa Barbara-North of Santa Ynez County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.2325	0.2800	1.9919	3.9000e-003	0.4533	3.0000e-003	0.4563	0.1214	2.8100e-003	0.1242	0.0000	360.9581	360.9581	0.0262	0.0195	367.4180
Unmitigated	0.2325	0.2800	1.9919	3.9000e-003	0.4533	3.0000e-003	0.4563	0.1214	2.8100e-003	0.1242	0.0000	360.9581	360.9581	0.0262	0.0195	367.4180

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	499.11	815.34	646.43	1,203,003	1,203,003
Total	499.11	815.34	646.43	1,203,003	1,203,003

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
General Heavy Industry	6.60	5.50	6.40	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.506430	0.055863	0.206798	0.143793	0.025842	0.006469	0.011207	0.006259	0.000953	0.000560	0.028990	0.003362	0.003474