Downtown Vitalization Specific Plan

Revised Initial Study

prepared by

City of Marina
Community Development Department
211 Hillcrest Avenue
Marina, California 93933
Contact: Guido Persicone, Community Development Director

prepared with the assistance of

Rincon Consultants, Inc.
80 Garden Road, Suite 240
Monterey, California 93940

October 2023

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Environmental Scientists | Planners | Engineers
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Initial Study

1. Project Title

Downtown Vitalization Specific Plan

2. Lead Agency/Sponsor Name and Address

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Marina, California 93933
831-884-1220

3. Contact Person and Phone Number

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831-884-1289

4. Introduction

The *Marina Downtown Vitalization Specific Plan*, hereafter referred to as the Specific Plan, DVSP, or proposed project, focuses on the Downtown area of the City of Marina, establishing a development framework for land use, circulation, utilities and services, resource protection, design, and implementation through:

- A cogent vision for the future;
- Clearly articulated land uses and development regulations; and
- Appropriate design standards and guidelines.

The Specific Plan builds on the goals and objectives established in the City of Marina General Plan, as well as the relevant standards and regulations from the City of Marina Municipal Code. However, amendments to the General Plan land use designations would be required to ensure consistency with those introduced within the Downtown Vitalization Specific Plan. It is required that all subsequent projects including commercial developments and redevelopments, subdivisions, public works projects, and zoning regulations be consistent with the Specific Plan.

The proposed project also incorporates recommendations from the City's *Downtown Vision Plan*, *Downtown Design Guidelines*, and *Pedestrian and Bicycle Master Plan.*

5. Project Location

The City of Marina is located in Monterey County, adjacent to Monterey Bay and along State Route 1, approximately nine miles north of the City of Monterey and 18 miles south of the City of Watsonville. Incorporated as a charter city in 1975, Marina has grown in population from 8,343 to an estimated 21,457 people (California Department of Finance 2022). The city encompasses approximately 9.8 square miles and extends for five miles along the Pacific Ocean, from former Fort Ord land and the California State University Monterey Bay (CSUMB) campus on the south, to the Salinas River on the north, and inland for four miles to the Marina Municipal Airport. The regional site location is shown on Figure 1. The former Fort Ord Army Base, which was closed in 1994, is located in the southern portion of the city. The Plan area does not include any former Fort Ord lands.

The Plan area encompasses approximately 322 acres near the center of the City of Marina, and, as shown on Figure 2, entails an irregular shape. The Plan area is generally bounded:

- On the northeast by parcels along the north side of Reservation Road
- On the south by Reindollar Avenue and various residential north-south secondary roads, such as Sunset Avenue, Carmel Avenue, and Crescent Avenue
- On the east by Salinas Avenue
- On the northwest by Del Monte Boulevard, approximately 0.5 mile east of State Route (SR) 1

6. Setting and Surrounding Land Uses

General Site Characteristics

The Plan area has a pattern of mixed-density housing and low-density retail center commercial development that signifies a community that is highway-oriented. Land uses are characterized by a mixture of single-story commercial and office buildings, single family homes, and one- to two-story multifamily residential units. Buildings date primarily from the postwar era, with several large shopping centers dating from the late 1950s with buildings set back from the road and large parking lots on the street frontage. The Del Monte Boulevard/Reservation Road intersection is the central activity node in Marina. The area is developed with land uses that are considered suburban in scale and intensity.

Existing Land Use

Most land uses in Marina are residential (39 percent by area) or commercial (24 percent). Table 1 summarizes existing land uses by area in the DVSP area.

Table 1 Existing Land Uses by Acreage in the Plan Area

Land Use	Acres	Percent of Plan Area
Multifamily	71.01	22%
Single Family	26.21	8%
Mobile Home Park	11.12	3%
Dwelling Group	9.68	3%
Triplex/Fourplex	3.65	1%
Duplex	2.58	1%
Total Residential	**124.24**	**39%**
Retail/Services	27.35	8%
Office/Other Commercial	50.37	16%
Total Commercial	**77.72**	**24%**
Light Industrial	2.09	1%
Mixed Use	15.70	5%
Institutional	27.71	9%
Recreation	0	0%
Right-of-Way	67.03	21%
Total Public Uses	94.74	30%
Vacant Lots	7.56	2%
Total	**322.05**	**100%**

Surrounding Land Uses

The Plan area is surrounded by single-family residential uses to the north, west, and south, open space adjacent to the Marina Municipal Airport to the northeast, and Locke-Paddon Wetland Community Park to the northwest. Other adjacent uses include multifamily residential and commercial uses. The Marina Municipal Airport is located directly east of the Downtown area along Reservation Road. Photographs of surrounding uses and the existing Specific Plan area are shown in Figure 4.

Figure 1 Regional Location

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Additional data provided by County of Monterey, 2020.

Figure 2 Downtown Vitalization Specific Plan Area

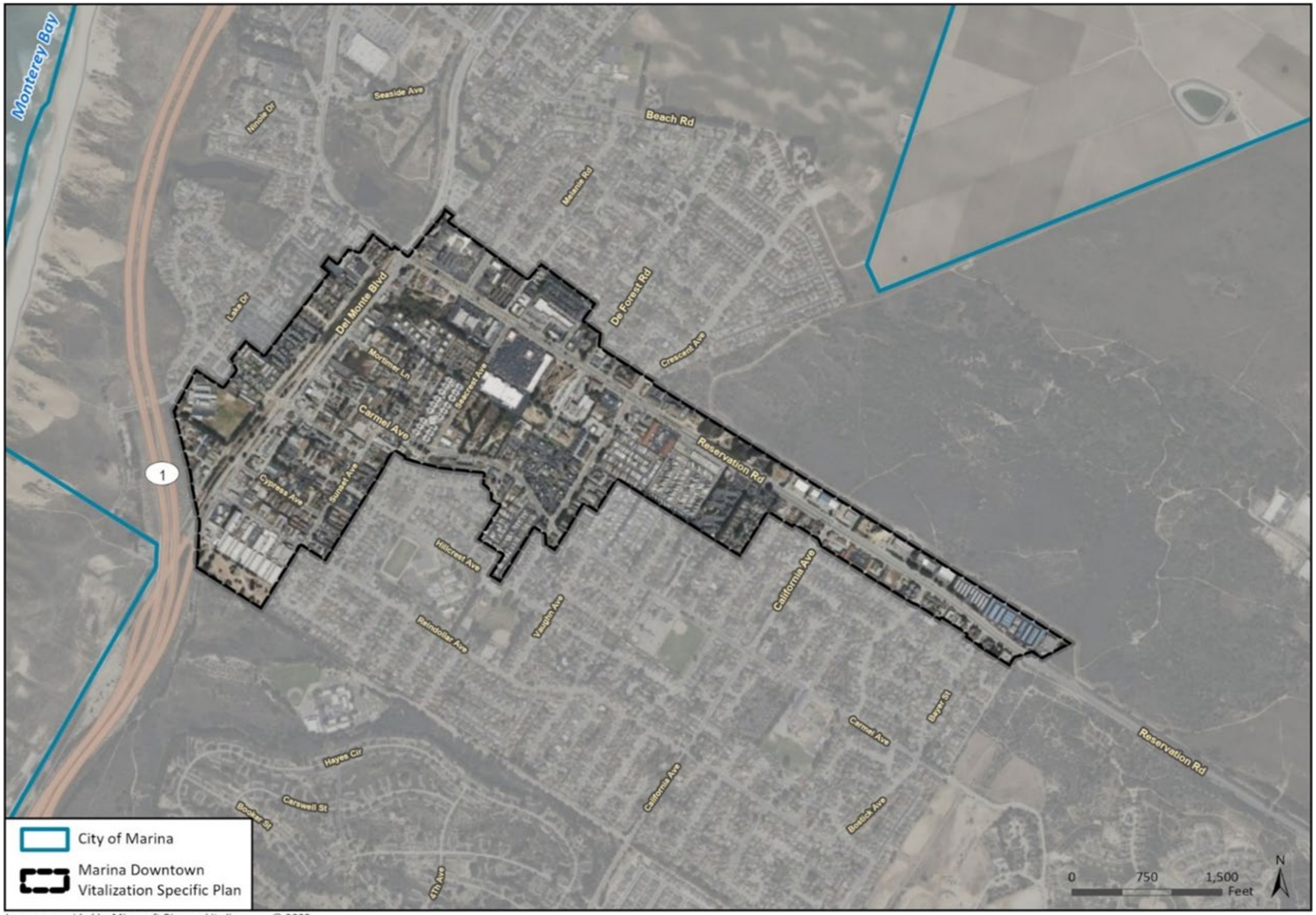

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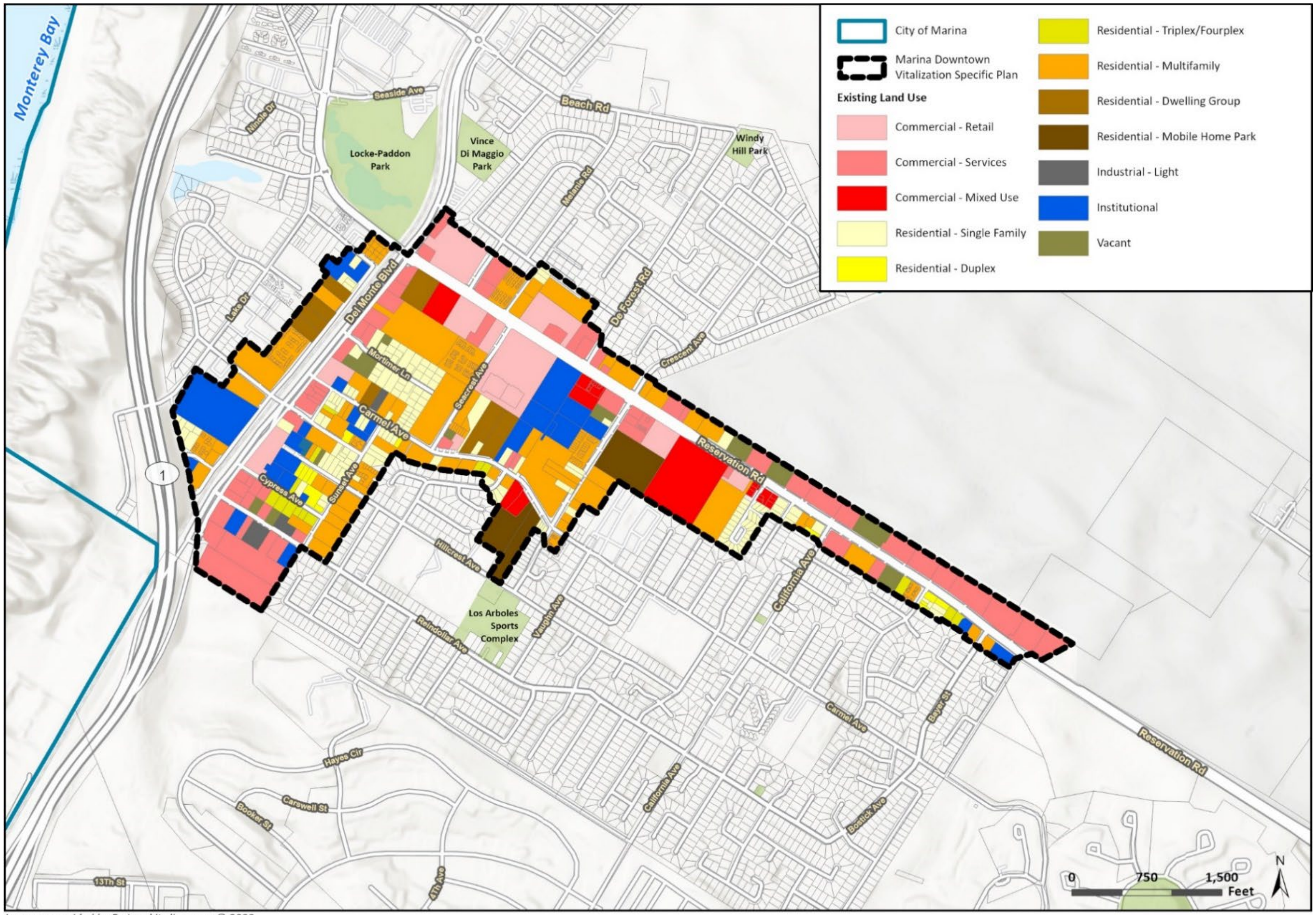
Figure 3 Existing General Plan Land Use Designations



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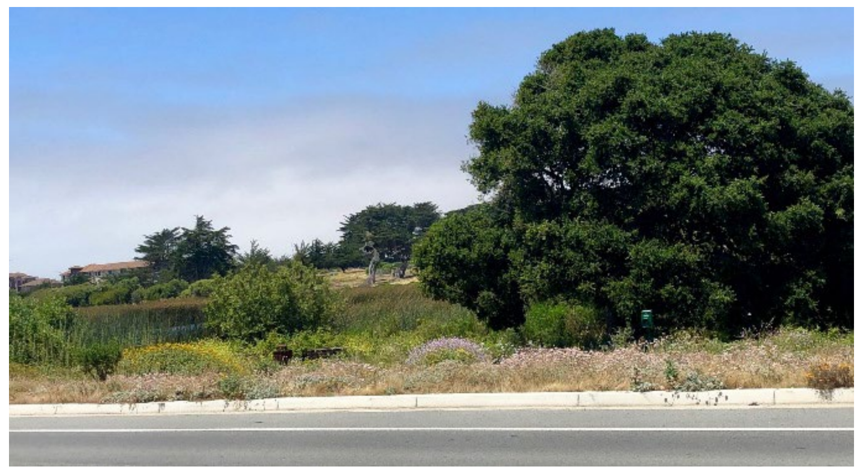
Additional data provided by the City of Marina, 2022.

Figure 4 Site Photographs

Photograph 1. Commercial uses on Del Monte Boulevard

Photograph 2. Intersection of Del Monte Boulevard and Reservation Road

Photograph 3. Monterey-Salinas Transit Station on De Forest Road



Photograph 4. View of Locke-Paddon Wetland Community Park from Reservation Road

Existing development in the Specific Plan area includes approximately 1,005,000 square feet of commercial uses and 2,301 dwelling units. Two-thirds of commercial uses are office-related, representing 16 percent of the total DVSP area. Approximately half of residential uses in the DVSP are multifamily, representing 22 percent of total land use, with the other half consisting of attached and detached single family homes. Remaining land uses in the DVSP area are split between institutional and civic uses, mixed uses, and light industrial. Approximately 2 percent of the DVSP area is vacant lots.

Zoning

The Specific Plan area includes the following existing zoning categories, consistent with the existing General Plan land use designations:

- C-R, Commercial/Multiple-Family Residential District
- C-1, Retail Business District
- C-2, General Commercial District
- PC, Planned Commercial District
- PF, Public Facility District
- R-1, Single-Family Residential District
- R-4, Multiple-Family Residential District
- SP, Specific Plan District
- SP/MST, Specific Plan/Industrial/Special Treatment District
- ST, Special Treatment District
- Affordable Housing Overlay

Mobility

Vehicle Network

Streets in the DVSP area reflect a focus on automobiles with wide travel lanes. Major roadways in the DVSP area include Del Monte Boulevard and Reservation Road, both four-lane arterial roadways, and California Avenue and Reindollar Avenue, both two-lane collector streets. Due to the limited amount of public right-of-way and dispersed roadway network within the Downtown area, vehicular transportation is the primary mode of transportation in the Plan area.

Pedestrian and Bicycle Network

While most collector and arterial roadways within the DVSP area have sidewalks, sidewalks along Del Monte Boulevard, Reservation Road, Reindollar Avenue, and Carmel Avenue are incomplete. Additionally, many sidewalks are too narrow to accommodate simultaneous pedestrian use or have obstructions that partially block pedestrian use.

The bicycle network in the Downtown area includes Class I (paths designated for the exclusive use of bicycle and pedestrian traffic) and Class II (striped bicycle lanes along a street) bikeways. The Monterey Bay Coastal Recreation Trail, accessible via the Downtown area, is a Class I bike path that extends 19 miles along the coast from Castroville to Pacific Grove. There are Class II bike lanes along Reservation Road, Crescent Avenue, and California Avenue. As noted in the DVSP and the City's

Pedestrian and Bicycle Master Plan, the bicycle network in Marina is limited and is not adequate to encourage drivers to use bicycles when commuting.

Transit

Marina and the Downtown area are served by Monterey-Salinas Transit (MST), with the existing MST facility along Reservation Road in the Downtown area known as the Marina Transit Exchange. MST routes currently serving Downtown Marina include:

- Sand City - Marina via Gen Jim Moore (Line 17)
- Sand City - Marina via Monterey Road (Line 18)
- Monterey - Salinas (Line 20)
- Salinas - VA DOD Clinic (Line 61)

MST is also developing a bus rapid transit system within the Monterey Branch Line railroad right-of-way, called SURF!. The SURF! Project would include a station within the DVSP area at the corner of Del Monte Boulevard and Palm Avenue, and is planned to open in 2027.

7. Project Characteristics

Specific Plan Legal Authority/Requirements

A Specific Plan is a regulatory tool that local governments use to implement a General Plan and to guide development in a localized area. While a General Plan is the primary guide for growth and development citywide, a Specific Plan focuses on the unique characteristics of a special area by customizing the planning process and land use regulations to that area. A Specific Plan is enacted pursuant to Section 65450 et seq. of the California Government Code.

The Specific Plan includes the goals, policies, development standards and implementation measures that would guide future development of the Downtown area, in accordance with state law. Background documents incorporated into the Plan as well as the Specific Plan's relationship to the City of Marina General Plan, Housing Element, and Pedestrian and Bicycle Master Plan are discussed below.

Specific Plan Background

From the late 1970s through the 1990s, numerous surveys, workshops, and studies were conducted with the intent of revitalizing the City's existing commercial areas, particularly after the closure of the Fort Ord military base in 1994. In 2001, the Marina City Council identified vitalization of Marina's commercial core as a critical strategic issue.

In August 2005, the City Council adopted the Marina Downtown Vision and Downtown Design Guidelines for developing a vital Downtown core; however, it was determined that in order to fulfill the City's Downtown Vision Plan and Downtown Design Guidelines, future development within the Downtown should be guided by a Specific Plan.

The next iteration of the Plan, the *Downtown Vitalization Specific Plan,* was initiated in 2006. An early draft of the Plan was completed in April 2010. The Draft Environmental Impact Report (EIR) associated with the Plan was completed in March 2011 but was not released for public review nor was it certified. The project then stalled for several years until 2017 when another ad hoc committee was formed to address new issues in the Downtown and complete the long-anticipated

Downtown Vitalization Specific Plan. A Notice of Preparation accompanied by an Initial Study was prepared and circulated for public review in May 2021, but neither the DVSP nor the EIR were released for public review. The project is now proceeding with this revised Initial Study circulated with another Notice of Preparation.

Downtown Vision

The vision of the Specific Plan is to establish Downtown Marina as:

> A place with a unique, small coastal town character where people can work, live, and shop in an environment that creates a feeling of cohesiveness, compactness, and individual community identity; a place with a vibrant economy that accommodates a variety of businesses, residences, and civic uses; and, a place that is architecturally pleasing and sustainable, achieved through attractive storefronts, eco-friendly design, and plentiful landscaping and pedestrian amenities to encourage people to walk along tree-lined streets and socialize in civic and public spaces.

Downtown Vitalization Specific Plan Goals

The goals of the DVSP include:

- **Land Use and Development**—A community with a safe, walkable, and vibrant Downtown, that attracts diverse business opportunities, encourages appropriate mixed uses, and integrates adjoining neighborhoods, parks, and trails.
- **Community Identity**—A Downtown that complements Marina's natural setting, provides opportunities for an attractive and functional built environment, accommodates and reflects the diversity of our community, where people gather for social, cultural, educational, and recreational experiences.
- **Cultural Diversity**—a Downtown where people of all incomes, ages, abilities, races, and cultures feel like they belong.
- **Housing Affordability**—A variety of affordable, high-quality housing options for people to live in Downtown.
- **Environment and Sustainability**—Development in Downtown that employs green building technology, employs net zero building principles, and is designed to create more comfortable indoor and outdoor environments.
- **Economic Vitality**—An environment that attracts and sustains economic activity through innovation, business and social opportunities.
- **Mobility**—A Downtown with safe and efficient pedestrian and vehicular circulation that encourages people to gather, walk, bike, or use public transportation.
- **Public Facilities and Infrastructure**—Ensure that there are adequate public services and public utilities are provided for future development, and enhance the Downtown by planning for future public facilities.

8. Project Description

Intent

The DVSP is intended to guide the future development and ultimate transformation of the City's 320-acre Downtown. The purpose of the DVSP is to create a unique and identifiable Downtown core for Marina that is vibrant and pedestrian oriented, and the plan will be an aspirational policy document and regulatory tool used by the city of the next 20 years. In particular, the Specific Plan aims to reinvigorate the Downtown Marina economy and sense of place through:

- Designation of land uses
- Designation of required access and circulation elements
- Location and sizing of infrastructure
- Financing methods for public improvements
- Standards of development

Specific Plan Organization

The Specific Plan provides:

- **Executive Summary.** An overview of the Specific Plan.
- **Chapter 1 (Introduction).** Project background and the Specific Plan's vision and guiding principles.
- **Chapter 2 (Setting and Existing Conditions).** A summary of Marina's history and a description of existing conditions.
- **Chapter 3 (Downtown Vision).** Establishes the desired identity of Downtown Marina, considers opportunities and includes goals and policies associated with the identity of Downtown.
- **Chapter 4 (Land Use and Development).** Land use goals, policies, and implementation measures for future development Downtown using "core" and "transitional" sections with core being urban and transitional being more suburban.
- **Chapter 5 (Mobility).** Circulation and parking goals, policies, and development standards to help implement multimodal circulation including pedestrian, vehicular and bicycle traffic for Downtown.
- **Chapter 6 (Public Facilities and Infrastructure).** Policies for planned distribution, location, extent, and intensity of water, sewer, and storm drainage infrastructure and solid waste facilities in the Specific Plan area.
- **Chapter 7 (Implementation).** A summary of guidance to facilitate desired development and implement a comprehensive vision for Downtown.
- **Appendix A: Development Code.** A set of procedures for the consistent promotion of high quality, well-designed development to be appropriately located throughout Downtown Marina.
- **Appendix B: Design Guidelines.** A set of design guidelines to provide additional direction for achieving the intended result of the policies of the Specific Plan and the Design Standards established in Appendix A.

Buildout

Based on existing land use designations and underlying zoning requirements, described under General Plan land use designations above, potential buildout of the Specific Plan could include approximately an additional 1,385,000 square feet of new retail and office space and 2,904 new housing units. When added to existing development, the Plan area could include a total of up to approximately 2,390,000 square feet of commercial and retail space and up to 5,205 housing units. However, the pace of future development would largely be determined by market forces, and thus it is difficult to determine at what date buildout would occur. Table 2 shows the existing and maximum buildout projections.

Table 2 Existing and Maximum Land Use Buildout Projections

Zone/Land Use	Existing	Specific Plan Area Proposed	Total (Existing + Proposed)
Residential	2,301 units	2,904 units	5,205 units
Retail	691,705 sf	874,669 sf	1,566,374 sf
Office	314,053 sf[1]	510,528 sf	824,581 sf

sf= square feet

[1] Including office and light manufacturing uses.

Placemaking Framework

The Specific Plan is intended to create a framework for the development of a vibrant Downtown Marina. The following goals outline the desired future conditions of the Specific Plan area:

- **Vibrant, Mixed Use Downtown.** The primary goal of the Specific Plan is to promote land use that emphasizes community; creates a safe, walkable, and vibrant Downtown; attracts diverse business opportunities; encourages appropriate mixed uses; and integrates adjoining neighborhoods, parks, and trails.
- **Transit-oriented Development.** By promoting high-density, mixed-use business and residential neighborhood centers, transit-oriented development is designed to be served by transit and be more walkable.
- **Housing Affordability.** The Specific Plan would encourage the development of multifamily housing which will both contribute to a lively neighborhood through residential development and support the City's share of the Monterey Bay Area's Regional Housing Need.
- **Economic Vitality.** The ultimate goal for Downtown Marina is to have a diversified economic climate that attracts offices and a variety of retail shops, restaurants, entertainment, and mixed uses.
- **Sustainability.** The Specific Plan seeks to establish and reinforce a compact development pattern with the intent to reduce the vehicle miles traveled by Marina residents.
- **Parks and Urban Forest.** The Specific Plan looks to facilitate the development of stormwater retention areas for recreational use, develop mini-parks within vacant land, and incentivize publicly-accessible private open space within Downtown.
- **Gateways**, **Wayfinding, and Signage.** The Specific Plan aims to make Downtown readily identifiable to residents and visitors by establishing gateways at key locations.
- **Public Art.** As Downtown develops, the Specific Plan intends to make public art a consideration for inclusion in public spaces with input from residents.

Land Use Designations and Intent

The goal of the Specific Plan is to establish Marina as a destination that accommodates a mix of commercial, retail, and residential uses served by an improved transportation network. During the planning process, land use designations were established to allow for increased densities throughout the Downtown area. Districts include the Core, which would allow for residential densities of up to 70 units per acre; the Transition district and Mixed-Use Node, which would allow for up to 50 units per acre; and the Multifamily Residential district which would allow for up to 35 units per acre. Of the 2,301 existing residential units in the Downtown area, 1,638 (approximately 71 percent) are located in areas that would be designated as Multifamily Residential, 377 (approximately 16 percent) are located in areas that would be designated as Transition or Mixed-Use, and 286 (approximately 13 percent) are located in areas that would be designated as Core.

Proposed commercial and light industrial uses in the Downtown encompass roughly 860,000 square feet on 88 acres. The Downtown Core includes 407,000 square feet of commercial uses on 36 acres. Another 416,000 square feet of commercial uses can be found on 46 acres in the Transition zone. Area-wide, calculations also assume additional land would be devoted to the public right-of-way in the future.

The development zones to implement the Specific Plan are described in further detail below.

Core

The Core district is generally located to the north and south of Reservation Road, between Del Monte Boulevard and Crescent Avenue, and along the eastern side of Del Monte Boulevard between Reservation Road and Carmel Avenue. It currently provides for 411,864 square feet (sf) (56.42 acres) of office and retail land uses, as well as 286 residential units. This area is projected to grow by 1,372 residential units and 901,500 sf of retail and office space under buildout of the Specific Plan. The intent of the Core district would be to permit and encourage higher density commercial and mixed-use development via a mix of different land use types, including office, retail, and service commercial uses along with multifamily residential uses. The Core is intended to become a vital economic center served by a variety of transportation modes, and compact development around the Marina Transit Exchange would be a guiding concept of this district.

Transition

The Transition district is located along Reservation Road, between Crescent Avenue and Salinas Avenue, and east of Del Monte Boulevard between Reindollar Avenue and Carmel Avenue. It currently provides for 593,894 sf (104 acres) of office/light manufacturing and retail land uses and 377 residential units. This area is projected to grow by 1,378 residential units and 484,000 sf of retail and office space under buildout of the Specific Plan. The intent of the Transition district would be to permit and encourage commercial, multifamily residential, and mixed-use development at about half the density of projects in the Core district. The Transition district would serve as a connection between the Core and lower-density, single-use districts in other parts of the city, especially districts dominated by single-family homes. The Transition district would encompass two prominent gateways to the city (east Reservation Road and the confluence of SR 1 and Del Monte Boulevard). It is intended that land uses would be visually interesting, with screened parking located behind or two the side of buildings and landscaped building setbacks.

Multifamily Residential

The Multifamily Residential district of the Specific Plan currently provides for 1,638 residential units (106.7 acres). This area is projected to grow by 154 residential units under buildout of the Specific Plan. The intent of the Multifamily Residential district would be to permit and encourage residential developments of up to three stories in height with up to 35 units per acre. Multifamily residential uses near the Core are critical for providing an affordable housing supply and population to support businesses Downtown. An additional 154 residential units would are proposed within the Multifamily Residential district.

Mixed-use Node

The Land Use Plan of the DVSP calls for the creation of a mixed-use node at the intersection of Reservation Road and California Avenue. This node, surrounded by the lower-intensity Transition district, would feature multistory mixed-use buildings with retail and commercial space on the ground floor and additional commercial space or residential uses on the floors above, similar to the types of development envisioned in the Core district. The mixed-use node would contribute to a vibrant, urban atmosphere.

The locations of the Downtown development zones are shown in Figure 5.

Design Guidelines

The DVSP would include a Development Code (Appendix A of the DVSP) and Design Guidelines (Appendix B of the DVSP) that provide objective design and development standards, intended to make the requirements that apply to certain eligible residential projects more predictable and easier to interpret. The purpose of the code and design guidelines is for development applications to know beforehand what requirements apply to a proposed development. The design and development standards outlined in the DVSP address design and planning characteristics, including:

- Building Location and Orientation
- Building Articulation, Massing, and Scale
- Architectural Elements
- Materials and Color
- Utility and Service Areas
- Circulation and Access
- Parking

Public Services

Future development projects in the Specific Plan area would be required to provide public improvements deemed necessary during the design process. The public right-of-way in the Specific Plan area encompasses 67 acres, or 21 percent of the total land area. This percentage is low in relation to the average of 30-35 percent in most downtowns. The Specific Plan calls for the creation of smaller, more walkable blocks with mid-block crossings to increase access.

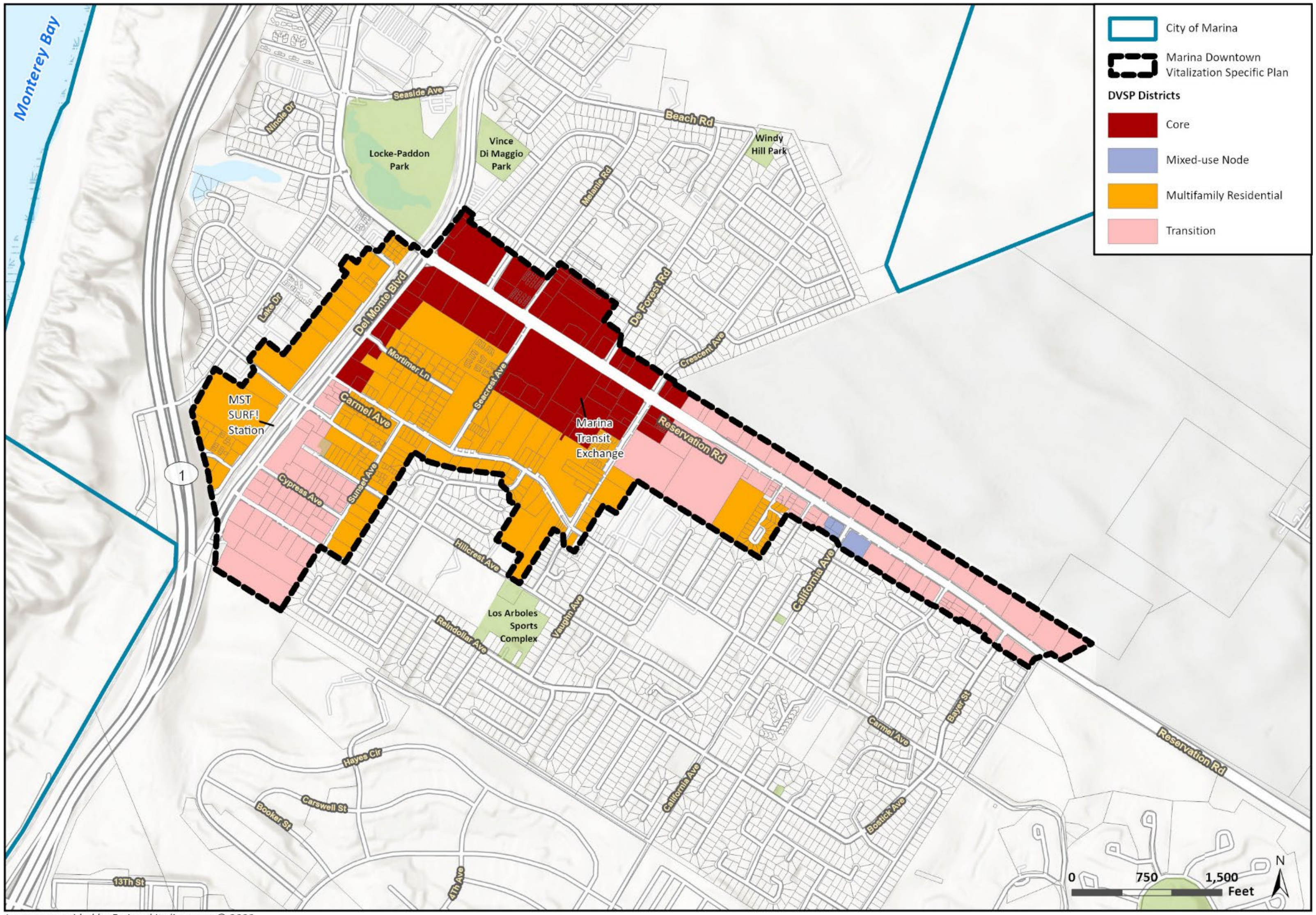
Wastewater

The City of Marina receives wastewater treatment from Monterey One Water (M1W), formerly the Monterey Water Pollution Control Agency, while maintenance of the wastewater collection system is overseen by the Marina Coast Water District (MCWD). Future development in the Specific Plan area would be serviced by the M1W Regional Wastewater Treatment Plant. The M1W Regional Treatment Plant, which is located two miles north of the City of Marina, has been designed to serve over 250,000 people (M1W 2019).

Water

Water to future development in the Specific Plan area would be provided by MCWD, which currently provides potable water to the City of Marina. The primary water sources for MCWD are wells tapping the deep aquifer of the Salinas Valley Groundwater Basin (MCWD 2019).

Figure 5 DVSP Zones



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Additional data provided by the City of Marina, 2023.

Storm Drainage

The City of Marina currently requires all non-residential development to retain storm water runoff on-site and infiltrate into the ground via open percolation ponds or subsurface infiltration facilities. All storm water runoff shall continue to be retained on-site and accommodated by localized retention basins unless the creation of such facilities would pose risks to the public. On-site storm facilities must include Best Management Practices (BMPs) in accordance with Regional Water Quality Control Board (RWQCB) recommendations. Residential development may utilize storm drain systems that terminate in an infiltration facility.

Gas/Electricity

Pacific Gas and Electric Company would provide natural gas service and electricity transmission, while Central Coast Community Energy (3CE) would supply electricity to the development in the Specific Plan area.

Mobility

The Specific Plan would strive to create a pedestrian-friendly Downtown core and would promote an active, engaged, human-oriented streetscape where the automobile is one of many modes to travel around Downtown. The DVSP calls for an investment in traffic calming measures, active transportation facilities and amenities, a holistic approach to parking management, and improved public transit service in Downtown. The DVSP would make several traffic improvements in the Downtown area, including clustering traffic signals in the Core district and constructing roundabouts at major intersections; implementation of protected bike lanes on Reservation Road; filling in gaps along incomplete sidewalks; narrowing vehicle travel lanes; and other improvements. The DVSP would also implement traffic calming measures to reduce vehicle speeds to promote a pedestrian-oriented environment.

9. Other Public Agencies Whose Approval is Required

During the decision-making process, the City of Marina would utilize the information contained in the Initial Study for potential approval of the proposed Specific Plan. Although no permits would be required from other agencies to facilitate Specific Plan adoption, subsequent approvals and permits may be needed from local, regional, state, and federal agencies to allow future development under the Specific Plan, as identified below.

Specific Plan Approvals Required

Approval of the Specific Plan would require the following discretionary and ministerial approvals from the City of Marina:

- Marina Downtown Vitalization Specific Plan Approval
- General Plan Map and Text Amendment
- Zoning Map and Code Amendment

Approvals from other agencies:

- MCWD Water Supply Verification Report

Project -Level Approvals Required

Projects developed pursuant to the Specific Plan would require project-specific approvals from the City of Marina, including but not limited to:

- Review and approve all required permits, including grading and building permits

The following project-specific approvals from other agencies may be required:

- **RWQCB.** Issuance of RWQCB, Central Coast Region, National Pollutant Discharge Elimination System (NPDES) general permit under Section 402 of the Clean Water Act (CWA) for storm water drainage during construction activities for project sites exceeding one acre; and Section 401 Water Quality Certification if a project would impact the pond or riparian habitat.
- **California Department of Fish and Wildlife (CDFW).** Section 1600 Lake and Streambed Alteration Agreement if a project would impact the pond or riparian habitat.
- **US Army Corps of Engineers.** Section 404 Nationwide Permit if a project would impact the pond or riparian habitat.

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Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture and Forestry Resources	■	Air Quality
■	Biological Resources	■	Cultural Resources	☐	Energy
■	Geology/Soils	☐	Greenhouse Gas Emissions	■	Hazards and Hazardous Materials
■	Hydrology/Water Quality	☐	Land Use/Planning	☐	Mineral Resources
■	Noise	☐	Population/Housing	☐	Public Services
■	Recreation	■	Transportation	■	Tribal Cultural Resources
☐	Utilities/Service Systems	☐	Wildfire	■	Mandatory Findings of Significance

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Environmental Checklist

1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	■	☐
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	■	☐
c. 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 a 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?	☐	☐	■	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	■	☐

Senate Bill (SB) 743 was signed into law in 2013 to streamline CEQA analysis for infill development in places determined to be transit priority areas (TPA), sectors within 0.5 mile of an existing major transit stop or one planned for in the Metropolitan Transportation Plan (MTP) (Association of Monterey Bay Area Governments [AMBAG] 2022). For infill development in TPAs, aesthetic resources impacts are considered not to be significant effects under SB 743. AMBAG designates the Specific Plan area as Opportunity Area MA-1, defined as an area "within 0.5 mile of an existing planned 'high-quality transit corridor' (per definition in California Public Resources Code Section 21064.3) that has the potential for transit-oriented development, including mixed-use. High-quality transit is service with headways of 15 minutes or less during peak period or rail service" (AMBAG 2022, 4-10; AMBAG 2022, Appendix I Figure 16).

Monterey-Salinas Transit (MST) provides bus service on Reservation Road and Del Monte Boulevard. The Marina Transit Exchange, at De Forest Road and Reservation Road, is centrally located in the Specific Plan area and is served by MST routes 17, 18, 20, and 61 (MST 2023). Del Monte Boulevard is an arterial roadway that creates an eastern boundary for the Specific Plan area. The planned SURF! Project, as described in the *Project Description,* would include a station within the DVSP area at the corner of Del Monte Boulevard and Palm Avenue Although rapid transit does not currently exist for the Plan area, it is reasonable to assume that with development, increased ridership will result in more frequent headways. The planned SURF! Project, once constructed, would further increase ridership and headways in the Plan area. Therefore, the Specific Plan area qualifies as a TPA under Public Resources Code Section 21099 and is exempt from findings greater than "less than significant" under CEQA. Even with this qualification, however, aesthetics impacts are analyzed herein for the sake of full disclosure.

a. Would the project have a substantial adverse effect on a scenic vista?

A scenic vista is a viewpoint that provides expansive views of a highly valued landscape for the public benefit. The Pacific Ocean is less than one mile from the western edge of the Specific Plan area, but is not visible from within the Plan area due to intervening structures and vegetation. State Route (SR) 1 runs north-south approximately 0.3 mile west of the Plan area, lined by sand dunes on the western side. The dunes are minimally visible from within the Plan area but do not provide scenic vistas.

The segment of SR 1 west of the Plan area is eligible to be designated as a state scenic highway (California Department of Transportation [Caltrans] 2019). SR 1 is slightly elevated as it passes by Marina, making the Specific Plan area visible from the highway. The route begins to curve west at this point, however, and viewers traveling north face away from the plan area, toward the ocean. Locke-Paddon Wetland Community Park is situated at the northwest corner of Reservation Road and Del Monte Boulevard, adjacent to the City of Marina Public Library. A public view from the street toward the park occurs from the southeast corner of the intersection, where mature trees and the ocean-influenced horizon are visible (Figure 6). Intervening transportation infrastructure interferes with the quality of the view from some places, particularly at the intersection of major roadways. Views within the Plan area are typical of small city downtown area. Due to the area's flat topography and presence of structures and vegetation, expansive views that would be considered scenic vistas are not present within the Plan area.

Implementation of the Specific Plan would alter views within the Plan area by intensifying development, resulting in a more urbanized viewshed. However, the project would not result in substantial adverse effects to a scenic vista, as no scenic vistas are available or would be blocked or substantially modified as a result of Specific Plan buildout. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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

As described above, SR 1 is eligible to be designated as a state scenic highway that runs north-south between the city and the ocean, offering views of the dunes and the sea at various points looking west. The Specific Plan area is east of SR 1 and at a lower elevation than the highway, such that the rooftops of the single-story structures and planted trees in the distance do not silhouette into the sky. In the far distance, the ridgelines of the mountains are visible.

Specific Plan implementation would allow for redevelopment of an existing urban and suburban area with multi-storied, mixed-use infill that could be visible from SR 1. However, this would not affect any scenic resources, such as trees, rock outcroppings, historic buildings, dunes, or other scenic resources. Valued views from SR 1 are generally the coastal views to the west.

Figure 6 View of Locke-Paddon Wetland Community Park from Del Monte Boulevard

Buildout of the DVSP would intensify development to the east, but development would be limited to an area that is already developed as Marina's Downtown. The overall scenic quality of views from SR 1 would not be substantially or negatively altered by the project. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. *Would the project, 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 a 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?*

The Plan area is an urbanized area with an aesthetic typical of a small city downtown, with a mixture of one-and two-story, single-family homes, mobile home parks, one- and two-story multi-family uses, one- to two-story commercial uses (including office and retail), and hotels and motels (See Figure 7 through Figure 8 for examples).

Public views from roadways in the Plan area are of adjacent structures, parking lots, and minimal landscaping. Development in the Downtown area is currently subject to the Marina Municipal Code, City of Marina Downtown Vision, Downtown Design Guidelines, and the Pedestrian and Bicycle Master Plan (City of Marina 2005a, 2005b, 2010). While these planning documents and design guidelines would still apply, future development in the Downtown area facilitated by the DVSP would be subject to the DVSP's Design Guidelines. The guidelines provide suggestions for exterior architectural designs, such as materials, awnings, and windows; parking locations; gateways and wayfinding signs; street furnishings, public art, and design of public spaces; and landscaping and tree planting.

The design guidelines established by the Specific Plan support establishing a character for the Plan area in keeping with Chapter 17.56 of the Marina Municipal Code, Site and Architectural Design Review process, to which all projects in the Plan area would undergo review by the Design Review Board and the Planning Commission for project approval. This includes improvements that are consistent with the design standards and guidelines within the Specific Plan, providing continuity with surrounding development, improving visual character, and contributing to the general welfare and safety of the community.

Figure 7 Site Photographs

Photograph 1. Single-family use on Carmel Avenue

Photograph 2. Multi-family use on Crescent Avenue

Photograph 3. Mobile home park on Crescent Avenue

Figure 8 Site Photographs

Photograph 4. Commercial use on Del Monte Boulevard at Mortimer Lane

Photograph 5. Commercial use with parking near Reservation Road

Photograph 6. Hotel/motel use on Del Monte Boulevard

Conditions under Specific Plan Buildout

Existing residential uses are located primarily to the west of Del Monte Boulevard, and north and south of the commercial development that fronts Reservation Road. The Specific Plan calls for nearly doubling the density of residential units in the Specific Plan area, adding up to 2,904 new units to the existing 2,301 units. The Specific Plan also calls for the addition of up to 1,385,197 square feet of retail and office space. With just under 1 million square feet of existing retail and office space, Specific Plan implementation would more than double the density of these uses. Overall densities in the Downtown area would intensify and redevelopment would allow for improvements to community identity through consistent streetscape design. Higher densities would distinguish the Specific Plan area from other areas within the City. The character of the area would be defined by three districts: Core, Multifamily Residential, and Transition. The Core district would be located at the intersection of Del Monte Boulevard and Reservation Road and would provide higher densities of commercial, retail and office development. The Multifamily Residential district would be located to the west of Del Monte Boulevard, and along Carmel Avenue, Seacrest Avenue, Crescent Avenue, and Sunset Avenue to the east of Del Monte Boulevard, as well as adjacent to Ocean Terrace south of Reservation Road. The Transition district would be located east of Del Monte Boulevard to the south of Carmel Avenue, and north and south of Reservation Road east of Crescent Avenue. The Mixed-Use Node would be located south of Reservation Road, to the east and west of the California Avenue. The proposed increase in density, gateways, improved pedestrian access, public art, and consistent signage would provide an identifiable development adjacent to lower density development with a suburban character. These proposed changes would alter the character of the area from urban/suburban to more urban in nature.

Implementation of the proposed Specific Plan could include buildings up to 60 feet high or five stories, whichever is less, in the Core district. Buildings currently in the Downtown area are one to two stories, so this change would increase the building height in the core zone by up to 45 feet. Intensified development means that vacant lots, expansive parking lots, and some existing structures would be replaced with a more urbanized, denser development. Pedestrian improvements included in individual projects would make the area more conducive to pedestrian and non-automobile travel. Street-facing buildings in the core zone would be required to provide commercial uses on the ground level with residential or office uses above, with pedestrian access, landscaping, and street trees with minimal setback from the roadway. This would allow for medium to high density mixed-use development and less surface parking. Public gathering places would be encouraged, including paseos with outdoor amenities like benches and public art, such as murals and sculptures.

The Specific Plan design guidelines indicate massing and scale that accentuates the human scale of buildings and avoids large, box-like, uniform buildings. This would be accomplished by means of façade design, architectural details, and other features that break up uniform building styles. Walls that face walkways would be designed to enhance the pedestrian experience and encourage foot traffic. Projects would be encouraged to feature architectural elements that reflect the rich cultural history of Marina in all its diversity. This conforms to the spirit of the Municipal Code and individual projects would be subject to the Architectural and Site Design Review Board evaluation, ensuring that individual project proposals comply with the Specific Plan guidelines, the more general Downtown Guidelines, and the Municipal Code. The full buildout of the Specific Plan would improve existing conditions in alignment with the Downtown Vision that envisions “an attractive, pedestrian-friendly and visitor-serving commercial district [as] key to Marina’s evolving identity and image” (City of Marina 2005a, 1). The more human-scale buildings, attractive streetscape design, and varied, high-quality architecture would improve the visual character of the Downtown and make it an attractive focal point of the city.

Gateways

The Specific Plan includes provisions for monumental signage at gateways, particularly at the intersection of Reservation Road and Del Monte Boulevard. An opportunity is identified for updating the welcome sign style and composition to reflect the overall "branding" of the community as a desirable place to visit, live, shop, and work. Other gateways have been identified at the eastern part of Reservation Road where it intersects California Avenue, and at the area of Del Monte Boulevard where is closest to SR 1. The City of Marina Municipal Code requires a comprehensive signage program that specifies height and lighting restrictions, and for the Specific Plan, gateway signage would be required to adhere to these guidelines.

Landscaping

At this time, the Specific Plan area features some landscaping and trees in the medians with few trees planted along the pedestrian right-of-way area (i.e., near the sidewalks). The trees in the medians are typically non-native species of varying health, located intermittently. The few trees planted in the sidewalk area are unmaintained and contribute to root upheaval along sidewalks. The Specific Plan would allow plantings in public rights-of-way throughout the Plan area, thus increasing Marina's urban forest and creating landscape improvements to the pedestrian environment. Nevertheless, any tree removal or relocation in the city is subject to the provisions of the City's Zoning Ordinance, Section 17.62 et seq., including the tree removal permit process specified in Section 17.62.060.

Conclusion

The Plan area is already urbanized. As such, this analysis focuses on whether the project would conflict with applicable zoning and other regulations governing scenic quality. As discussed above, implementation of the Specific Plan would change the character of the project area substantially, but these changes would be in keeping with applicable plans for revitalizing the Downtown area and creating a sense of place for visitors and residents, in connection with multiple modes of transportation. All development would be subject to Marina Municipal Code and Zoning Ordinance, the DVSP design guidelines, and all other applicable City regulations governing scenic quality. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

The Plan area currently consists mostly of developed parcels, and thus, numerous sources of daytime glare and nighttime light exist. Glare sources include the reflection of the sun on different surfaces:

- Building windows
- Parked car windows
- Walls with light-colored paint or other pale or reflective architectural coatings
- Glass and other shiny reflective surfaces on signs, amenities, and public artworks

Nighttime illumination and associated glare come from stationary and mobile sources. Stationary sources include buildings and structure lighting, parking lot illumination, lighted signs, and streetlights in commercial corridors and mixed-use developments. Mobile nighttime light comes from the headlights of motor vehicles, for the most part. Temporary lighting sources could come from outdoor light shows, spotlights, and other event-related lighting.

Guidelines Applicable to Lighting and Glare for Specific Plan Implementation

The DVSP Design Guidelines would encourage the use of lighting that both provides safety and protects nighttime views. The Design Guidelines state that lamps shall be directed down and shall be shielded to provide sufficient light while not generating excessive glare. Additionally, streetlight poles shall be no taller than 15 feet on local streets and 25 feet on arterial roads. The Planning Commission must approve a lighting design plan for specific project implementation. Lighting design plans must include a site plan with detailed proposals and descriptions of the type of light source for each fixture. The City may require a photometric study if there are concerns about the impacts to surrounding neighborhoods or open space areas.

City of Marina Zoning Ordinance Section 17.46.130 governs illuminated signs in the Specific Plan area. The regulation does not allow unshielded or high-intensity lights that may spill onto adjacent properties or interfere with traffic circulation. The City and its representative review boards and commissions can appeal approvals to reduce the intensity of signage that creates undue glare, annoyance, or hazards after installation.

Conditions under Specific Plan Buildout

Development that would result from implementation of the Specific Plan would create a greater density than what is currently in the Downtown area. New sources of nighttime light and daytime glare would be introduced and could intensify the effects of illumination and glare over existing levels. Potential sources of new and increased nighttime illumination would include indoor and outdoor lighting at residential and commercial development, street and parking lot lighting, and security-related lighting for non-residential uses. Potential new and increased sources of glare would include increased vehicular traffic and new and increased reflective building surfaces. New residential and commercial development would also result in a corresponding increase in vehicular traffic. Augmented public transportation capacity and active transportation facilities would partially alleviate transportation lighting, but some increase in light and glare from motor vehicles would occur. However, because the Plan area already makes up a developed downtown area, conditions would not be substantially altered from existing conditions. New development facilitated by the Specific Plan would be subject to the DVSP Design Guidelines and lighting regulations described above. Therefore, effects on daytime or nighttime views due to new sources of light and glare would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	■
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	■
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	■
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	■

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

b. Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

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

The Plan area is a fully developed urban area that makes up the Downtown of the City of Marina. According to the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program, there is no existing important farmland within the Plan area. The vast majority of the City is designated as "Urban and Built-Up Land." In addition, no parcels within the Plan area are designated for agriculture, used for agricultural production, or under Williamson Act contract (DOC 2016 and Monterey County 2010). As a result, future development pursuant to the Specific Plan would not convert farmland, conflict with agricultural zoning or have the potential to result in the loss or conversion of farmland to non-agricultural use. There would be no impact.

NO IMPACT

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

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

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

The Plan area is a developed and urbanized area and there is no forest land on or adjacent to the site. No parcels in the Plan area are designated or zoned for forest preservation or timber harvesting. Therefore, future development pursuant to the Specific Plan would not conflict with zoning or cause rezoning of forest land or result in conversion of forest land. There would be no impact.

NO IMPACT

3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	■	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	■	☐	☐	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	■	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	■	☐

Air Quality Standards and Attainment

The Plan area lies within the North Central Coast Air Basin (NCCAB), which is comprised of Monterey, Santa Cruz, and San Benito counties and is under the jurisdiction of the Monterey Bay Air Resources District (MBARD).[1] As the local air quality management agency, MBARD is required to monitor air pollutant levels to ensure that state and federal air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the NCCAB is classified as being in “attainment” or “nonattainment.” The NCCAB is designated as nonattainment for the state PM_{10} (particulate matter measuring 10 microns in diameter or less) standard and nonattainment-transitional for the state one-hour and eight-hour ozone standards The NCCAB is in attainment or unclassified for all other federal and state standards (MBARD 2017).

Air Quality Management

Because the NCCAB is designated as nonattainment for the state ozone and PM_{10} standards, MBARD is required to implement strategies to reduce pollutant levels to recognized acceptable standards. In March 2017, MBARD adopted the *2012-2015 Air Quality Management Plan* (2015 AQMP) as an update to the 2012 AQMP. The 2015 AQMP is based on growth forecasts provided by the Association of Monterey Bay Area Governments (AMBAG) and assesses and updates elements of the 2012 AQMP, including the air quality trends analysis, emissions inventory, and mobile source programs. The 2015 AQMP only addresses attainment of the state eight-hour ozone standard because in 2012, the United States Environmental Protection Agency (U.S. EPA) designated the

[1] MBARD was formerly called the Monterey Bay Unified Air Pollution District (MBUAPCD); accordingly, documents authored by the MBUAPCD are cited as authored by MBARD in this document.

NCCAB as in attainment for the current national eight-hour ozone standard of 0.075 parts per million (ppm). In October 2015, the national standard was reduced to 0.070 ppm. However, the NCCAB continues to be in attainment with the federal ozone standard (MBARD 2017).

The following MBARD rules would limit emissions of air pollutants during project construction:

- **Rule 400 (Visible Emissions).** Discharge of visible air pollutant emissions into the atmosphere from any emission source for a period or periods aggregating more than three minutes in any one hour, as observed using an appropriate test method, is prohibited.
- **Rule 402 (Nuisances).** No person shall discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or which endanger the comfort, repose, health, or safety of any such persons or the public; or which cause, or have a natural tendency to cause, injury or damage to business or property.
- **Rule 425 (Use of Cutback Asphalt).** The use of cutback asphalt (asphalt cement that has been blended with petroleum solvents) and emulsified asphalt (an emulsion of asphalt cement and water with a small amount of emulsifying agent) is restricted in order to limit volatile organic compound (VOC) emissions. Rule 425 prohibits the use of rapid cure asphalt, restricts the use of medium cure asphalt to November through March, and limits the content of total distillate in slow cure asphalt and petroleum solvents in emulsified asphalt.
- **Rule 426 (Architectural Coatings).** This rule limits the emissions of volatile organic compounds (VOC) from the use of architectural coatings and sets VOC content limits for a variety of coating categories, including flat, nonflat, nonflat – high gloss, and specialty coatings. Specifically, Rule 426 limits the VOC content of flat coatings to 50 grams per liter and nonflat coatings to 100 grams per liter. Persons are prohibited from manufacturing, blending, repackaging for use, supplying, selling, soliciting, or applying architectural coatings that exceed these limits.
- **Rule 439 (Building Removals).** This rule limits particulate emissions from the removal of buildings by prohibiting all visible emissions from building removal. To achieve compliance with this standard, Rule 439 requires work practice standards, including wetting the structure prior to removal, demolishing the structure inward toward the building pad, and prohibiting the commencement of removal activities when peak wind speeds exceed 15 miles per hour.
- **Rule 1000 (Permit Guidelines and Requirements for Sources Emitting Toxic Air Contaminants)**: This rule regulates toxic air contaminants (TACs) from new or modified stationary sources that have the potential to emit carcinogenic or noncarcinogenic TACs. Rule 1000 requires sources of carcinogenic TACs to install best control technology and reduce cancer risk to less than one incident per 100,000 persons. Sources of noncarcinogenic TACs must apply reasonable control technology (MBARD 2008).

Significance Thresholds

Criteria for determining consistency with MBARD's AQMP are defined in Section 5.5 of the MBARD's *CEQA Air Quality Guidelines* (MBARD Guidelines; 2008). The DVSP would be inconsistent with the MBARD AQMP, and would therefore have a cumulatively considerable (significant) contribution to significant cumulative air quality impacts, if it would result in either of the following (MBARD 2008, Duymich 2018):

- Population growth generated by the DVSP would cause the population of Monterey County to exceed the population forecast for the appropriate five-year increment utilized in the 2015 AQMP; or[2]
- Construction and operational emissions of ozone precursors would exceed the significance thresholds established by MBARD, which are intended to set the allowable limit that a project can emit without impeding or conflicting with the AQMP's goal of attainment ambient air quality standards.

MBARD has issued criteria for determining the level of significance for project-specific impacts within its jurisdiction. Based on criteria set forth in MBARD Guidelines (2008), the DVSP's impacts on criteria air pollution would be significant if the DVSP would result in air pollutant emissions during construction or operation that exceed the thresholds in Table 3.

Table 3 Air Quality Thresholds of Significance

Pollutant	Source	Threshold of Significance
Construction Impacts		
PM_{10}	Direct	82 lbs./day[1]
Operational Impacts		
VOC	Direct and Indirect	137 lbs./day
NO_X	Direct and Indirect	137 lbs./day
PM_{10}	On-site	82 lbs./day[2]
CO	N/A	LOS at intersection/road segment degrades from D or better to E or F or V/C ratio at intersection/road segment at LOS E or F increases by 0.05 or more or delay at intersection at LOS E or F increases by 10 seconds or more or reserve capacity at unsignalized intersection at LOS E or F decreases by 50 or more.
	Direct	550 lbs./day[3]
SO_X, as SO_2	Direct	150 lbs./day

Notes: lbs./day = pounds per day; PM_{10} = particulate matter with a diameter of 10 micrometers or less; VOC = volatile organic compounds (also referred to as ROG, or reactive organic gases); NO_X = oxides of nitrogen; CO = carbon monoxide; SO_X = oxides of sulfur; SO_2 = sulfur dioxide

[1] This threshold only applies if construction is located nearby or upwind of sensitive receptors. In addition, a significant air quality impact related to PM_{10} emissions may occur if a project uses equipment that is not "typical construction equipment" as specified in Section 5.3 of the MBARD CEQA Guidelines.

[2] The District's operational PM_{10} threshold of significance applies only to on-site emissions, such as project-related exceedances along unpaved roads. These impacts are generally less than significant. For large development projects, almost all travel is on paved roads, and entrained road dust from vehicular travel can exceed the significance threshold.

[3] Modeling should be undertaken to determine if the DVSP would cause or substantially contribute (550 lbs./day) to exceedance of CO ambient air quality standards (AAQS). If not, the DVSP would not have a significant impact.

Source: MBARD 2008

[2] In Monterey County, consistency with population forecasts is based on comparing a project's population with countywide forecasts to avoid confusion related to declining population forecasts for cities on the Monterey Peninsula (MBARD 2008).

Carbon Monoxide

The carbon monoxide (CO) thresholds provided by MBARD are designed to screen out projects from further analysis that would have a less than significant impact to CO; however, projects that exceed these screening thresholds would not necessarily result in a hotspot. Localized CO concentrations are primarily the result of the volume of cars along a road and the level of emissions generated by vehicles; restricted vehicular traffic flows can contribute to higher volumes of vehicles on a given roadway in a period of time, but are not the cause of high CO concentrations. Stringent vehicle emission standards in California have reduced the level of CO emissions generated by vehicles over time such that CO hotspots are rarely a concern, except for roadways with very high traffic volumes. Because MBARD only provides screening thresholds for CO hotspot impacts but does not have a standard for assessing whether a project's CO hotspot impacts would be significant, the CO threshold from the Bay Area Air Quality Management District (BAAQMD), which is the air district immediately adjacent to MBARD to the north, is utilized in this analysis. The BAAQMD has established a volume of 44,000 vehicles per hour as the level above which traffic volumes may contribute to a violation of CO standards (BAAQMD 2017). The NCCAB and the San Francisco Bay Area Air Basin (the jurisdiction of the BAAQMD, which is the air district immediately adjacent to MBARD to the north) are both in attainment for the California Ambient Air Quality Standard (CAAQS) and National Ambient Air Quality Standard (NAAQS) for CO and have not reported exceedances of the CO standard at local monitoring stations for the last two decades (California Air Resources Board [CARB] 2020, United States Environmental Protection Agency [USEPA] 2020a, BAAQMD 2017). Therefore, given the similar ambient air quality conditions for CO in both air basins, it is appropriate to use the BAAQMD threshold in this analysis. The BAAQMD threshold is applied in the following impact analysis if the proposed project exceeds the MBARD screening thresholds presented above to determine whether the proposed project would result in an exceedance of CO standards.

Toxic Air Contaminants

A toxic air contaminant (TAC) is an air pollutant that may cause or contribute to an increase in mortality or serious illness or which may pose a present or potential hazard to human health. TACs may result in long-term health effects such as cancer, birth defects, neurological damage, asthma, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation, runny nose, throat pain, and headaches. TACs are considered either carcinogenic or non-carcinogenic based on the nature of the health effects associated with exposure. For carcinogenic TACs, potential health impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Non-carcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

TACs include both organic and inorganic chemical substances. One of the main sources of TACs in California is diesel engines that emit exhaust containing solid material known as DPM; however, TACs may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities.

In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health (Assembly Bill [AB] 1807: Health and Safety Code Sections 39650–39674). The Legislature established a two-step process to address the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process.

The California Air Toxics Program establishes the process for the identification and control of TACs and includes provisions to make the public aware of significant toxic exposures and for reducing risk. Additionally, the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly Bill) was enacted in 1987 and requires stationary sources to report the types and quantities of certain substances routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, identify facilities having localized impacts, ascertain health risks, notify nearby residents of significant risks, and reduce those significant risks to acceptable levels. The Children's Environmental Health Protection Act, California Senate Bill (SB) 25 (Chapter 731, Escutia, Statutes of 1999), focuses on children's exposure to air pollutants. The act requires CARB to review its air quality standards from a children's health perspective, evaluate the statewide air quality monitoring network, and develop any additional air toxic control measures needed to protect children's health.

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

The most recently adopted air quality plan in the MBARD region is the 2015 AQMP. The 2015 AQMP only addresses attainment of the state eight-hour ozone standard because in 2012, the USEPA designated the NCCAB as in attainment for the current federal eight-hour ozone standard of 0.075 ppm. The control measures outlined in the 2015 AQMP focus on MBARD continuing to use grant funding to reduce both volatile organic compounds (VOC) and oxides of nitrogen (NO_X) emissions, primarily from mobile sources. According to MBARD, mobile source emission reductions have been the most effective in achieving progress toward attainment of the state one-hour and eight-hour ozone standards (MBARD 2017). Furthermore, the 2015 AQMP provides *Emission Reduction Strategies* in Section 9.1, which includes land use "planning efforts such as the 'Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, SB 375)…which supports coordinated transportation and land use planning with the goal of developing more sustainable communities'" (MBARD 2017).

The DVSP includes several elements that would reduce VMT and the associated mobile source emissions through integrated transportation and land use planning. The DVSP would allow for higher densities in commercial and mixed-use developments in the Core zone with transit-oriented development, particularly around the MST Marina Transit Exchange. In addition, the DVSP would encourage the development of residential and commercial uses in close proximity in the Transition district. The DVSP also includes a Mixed-Use Node in the Plan area with multi-story mixed-use buildings containing residential and commercial/retail uses. The DVSP also includes objectives to create a safe and efficient pedestrian and bicycle pathway network in the Plan area; improve pedestrian access to transit facilities; and promote compact, mixed-use development that encourages use of transit, walking, and bicycling. These objectives and their corresponding strategies would be consistent with the 2015 AQMP because they would encourage the use of alternative forms of transportation and reduce reliance on automobiles, thereby reducing project emissions of ozone precursors.

A significant impact to air quality would occur if buildout of the DVSP would conflict with or obstruct implementation of the 2015 AQMP. Although any development project would represent an incremental negative impact on air quality in the NCCAB due to increased air pollutant emissions, the primary concern is whether project-related impacts have been properly anticipated in the regional air quality planning process and reduced whenever feasible. MBARD uses growth forecasts provided by the AMBAG to project population-related emissions for the AQMP. When population growth exceeds these forecasts, emission inventories could be surpassed, affecting attainment status.

As discussed in Section 14, *Population and Housing*, the DVSP would accommodate approximately 7,696 new residents. The current population of Monterey County is estimated at 433,716 (California Department of Finance 2022). In addition, the DVSP has the potential to indirectly increase the population of Monterey County by permitting up to approximately 874,669 square feet of additional community retail space and approximately 510,528 square feet of additional office space, thereby providing employment opportunities for which people may relocate to Monterey County. According to the SB 743 Analysis (Appendix G), the DVSP would provide approximately 3,283 additional employment opportunities. Although these future employees likely already live in Monterey County, this analysis conservatively assumes that all employees would be new to the region. Therefore, the DVSP would increase the population of Monterey County to 444,695 persons (433,716 + 7,696 + 3,283).

The population growth projections used in the 2015 AQMP forecast that the population of Monterey County will reach 495,086 residents by 2035 (MBARD 2017).[3] Therefore, buildout of the DVSP would not exceed the 2015 AQMP population growth forecast for Monterey County and is within the applicable assumptions of the air pollutant emissions forecast contained in the 2015 AQMP. The DVSP would not generate air pollutant emissions that would impede or conflict with the 2015 AQMP's goal of achieving attainment of the state ozone standard. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project 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?

The project would facilitate an increase in buildout and population within the DVSP area. The operation of new development and increased vehicle traffic within the DVSP area could result in potentially significant impacts related to criteria pollutant emissions exceeding MBARD thresholds. Checklist item b will be analyzed in detail in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Sensitive receptors are members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. The sensitive receptors closest to the Plan area are existing residential neighborhoods and the Marina Child Development Center located within the Plan area as well as residential neighborhoods located immediately adjacent to the Plan area to the north, west, and south. There are also several schools located within 0.5 mile of the Plan area, including Los Arboles Middle School, Marina Vista Elementary School, Marina La Via Continuation High School, Crumpton Elementary School, Pegasus Montessori School, Marina High School, George Patton Senior Elementary School, and Ione Olson Elementary School.

[3] Although the DVSP has a planning horizon of 2040, the AQMP population forecast for 2035 was utilized because the planning horizon of the AQMP is 2035; therefore, AQMP population forecasts for 2040 are not available for comparison.

Carbon Monoxide Hotspots

Buildout of the DVSP would result in new development or redevelopment that would generate additional vehicle trips on area roadways. Areas with high vehicle density, such as congested intersections, have the potential to create concentrations of CO ("CO hotspots") and could potentially expose sensitive receptors to harmful levels of pollution. The NAAQS for CO is 35.0 ppm and the CAAQS for CO is 20.0 ppm.

As discussed above under *Significance Thresholds*, localized CO concentrations are the result of the volume of cars along a road and the level of emissions generated by vehicles, rather than the flow of traffic, and vehicle CO emissions have declined over time due to stringent state standards for vehicle emissions and would continue to decline as more stringent standards are put in place. As discussed under *Methodology*, the CO threshold from BAAQMD is utilized in this analysis because MBARD only provides screening thresholds for CO hotspot impacts. BAAQMD has determined that a volume of 44,000 vehicles per hour is the level above which traffic volumes may contribute to a violation of CO standards (BAAQMD 2017). As discussed under *Significance Thresholds*, the NCCAB and the San Francisco Bay Area Air Basin (the jurisdiction of the BAAQMD, which is the air district immediately adjacent to MBARD to the north) are both in attainment for the CAAQS and NAAQS for CO and have not reported exceedances of the CO standard at local monitoring stations for the last two decades (CARB 2020, USEPA 2020, BAAQMD 2017). Therefore, given the similar ambient air quality conditions for CO in both air basins, it is appropriate to use the BAAQMD threshold in this analysis.

As shown in Marina Downtown Traffic Study (2019), all of the studied roadway segments would have daily traffic volumes below 44,000 vehicles under buildout of the DVSP; see Appendix F for roadway volumes. Therefore, the DVSP would not result in volumes of traffic that would create, or substantially contribute to, the exceedance of state and federal AAQS for CO. As a result, the DVSP would not expose sensitive receptors to substantial concentrations of CO. Therefore, impacts related to CO hotspots would be less than significant.

Toxic Air Contaminants

The greatest potential for TAC emissions during demolition and construction activities facilitated by the DVSP would be from diesel particulate emissions associated with heavy equipment operations. According to CARB methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk, which is expressed as an estimate of the increased changes of developing cancer due to facility emissions over a 70-year lifetime. Given the short-term construction schedule, the DVSP would not result in a long-term (i.e., 70-year) source of TAC emissions. In addition, there would be no residual emissions or corresponding individual cancer risk after buildout is complete. Therefore, it is not necessary to evaluate long-term cancer impacts from construction activities that occur over a relatively short duration. As such, demolition and construction activities facilitated by the DVSP, including generation of TACs, would not expose sensitive receptors to substantial pollutant concentrations.

CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emission. Typical sources of acutely and chronically hazardous TACs identified by CARB include distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities. MBARD also identifies additional common sources of TACs including diesel-fueled internal combustion engines and parking areas for diesel-fueled heavy-duty trucks and buses.

CARB recommends siting distances both for the development of sensitive land uses in proximity to TAC sources and for the addition of new TAC sources in proximity to existing sensitive land uses.

The DVSP would not include the development of land uses that generate substantial TAC emissions based on review of the air toxic sources listed in MBARD's and CARB's guidelines. It is expected that quantities of hazardous TACs generated on-site by future residents and tenants (e.g., cleaning solvents, paints, landscape pesticides) for the types of proposed land uses would be below thresholds warranting further study under the California Accidental Release Program, which regulates stationary sources of hazardous substances used annually in quantities ranging from 500 to 20,000 pounds. Therefore, the DVSP would not result in the exposure of sensitive receptors to significant amounts of carcinogenic or toxic air contaminants. Impacts related to TAC emissions would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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

During construction activities, temporary odors from vehicle exhaust and construction equipment engines would occur. Construction-related odors would be short-term and would cease upon completion. Land uses typically producing objectionable odors include landfills, rendering plants, chemical plants, agricultural uses, wastewater treatment plants, and refineries (MBARD 2008). The DVSP would not permit any of these uses within the Plan area. In addition, MBARD Rule 402 prohibits the discharge of air contaminants or other materials which would cause a nuisance or detriment to a considerable number of persons or to the public, with the exception of odors from agricultural activities. Therefore, given the nature of land uses under the DVSP and required compliance with MBARD Rule 402, the DVSP would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people during construction and operation. Impacts related to odor would be less than significant.

LESS THAN SIGNIFICANT IMPACT

4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	■	☐	☐	☐
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 the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	■	☐
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?	☐	☐	☐	■

Rincon Biologist Samantha Kehr conducted a field reconnaissance survey of the Specific Plan area on June 17, 2019. The purpose of the survey was to document the existing biological conditions within the Specific Plan area, including plant and wildlife species, vegetation communities, the potential for occurrence of sensitive species and/or habitats, and jurisdictional waters. A Biological Resources Assessment (BRA) was completed by Rincon Consultants, Inc. in July 2019, and is included as Appendix B. The results of the survey subsequent biological resources assessment are presented in the BRA report and summarized below. The following analysis is based on the findings of the BRA.

The Specific Plan area covers 322 acres comprised primarily of existing development. A small component of the Specific Plan area is comprised of vacant lots and small patches of open space, primarily within or surrounded by existing developed areas. As the Specific Plan area is largely developed, it contains very little natural habitat. What natural or semi-natural habitat is present is limited to the eastern edge of the Plan area along reservation Road and south of development at Reindollar Avenue between SR 1 and George Patton Senior Elementary School.

Vegetation Communities and Land Cover Types

The Specific Plan area is predominantly developed, with small, isolated areas of vegetation. Vegetation composition and structure within the Specific Plan area is generally limited to landscape and ruderal vegetation types, with minor areas of natural vegetation and water features (Figure 9). Four land cover types are mapped within the Specific Plan area: 1) Developed; 2) bare ground; 3) demonstration garden; and 4) ruderal. Four vegetation communities were identified in the Plan area: 1) ice plant mat; 2) annual grassland; 3) sandmat manzanita; and 4) willow riparian.

The majority of the Plan area is developed, including paved roads, sidewalks, parking lots, buildings, and basketball courts. Vegetation in this land cover type consists of primarily non-native ornamental plantings in lawns, park strips, parking lots, commercial parks, baseball fields, etc. Tree species found in this community are highly variable and typically non-native or not occurring as part of a natural woodland. The remainder of open space is generally comprised of ruderal weedy vegetation communities and annual grasslands containing non-native grasses and forbs. A large component of invasive ice plant mat also occurs within the Plan area. Small patches of natural habitat occur containing sandmat manzanita (*Arctostaphylos pumila*) and riparian arroyo willow (*Salix lasiolepis*), but these occur only as a minor component of the Specific Plan area.

Potentially Jurisdictional Features

Two small maintained stormwater retention basins located north of Cypress Avenue and southwest of San Pablo Court are not likely to be United States Army Corps of Engineers (USACE) or CDFW jurisdictional, but would potentially be considered a RWQCB jurisdictional stormwater feature under the Porter-Cologne Water Quality Control Act, which regulates discharge to waters of the State, including discharge of stormwater.

A “pond” observed on aerial imagery on private property may be USACE, RWQCB, or CDFW jurisdictional. Additionally, a stormwater drainage runs above ground for approximately 325 feet south of Viking Lane, this feature is potentially USACE, RWQCB, and CDFW jurisdictional.

Figure 9 Vegetation Communities and Land Cover Types

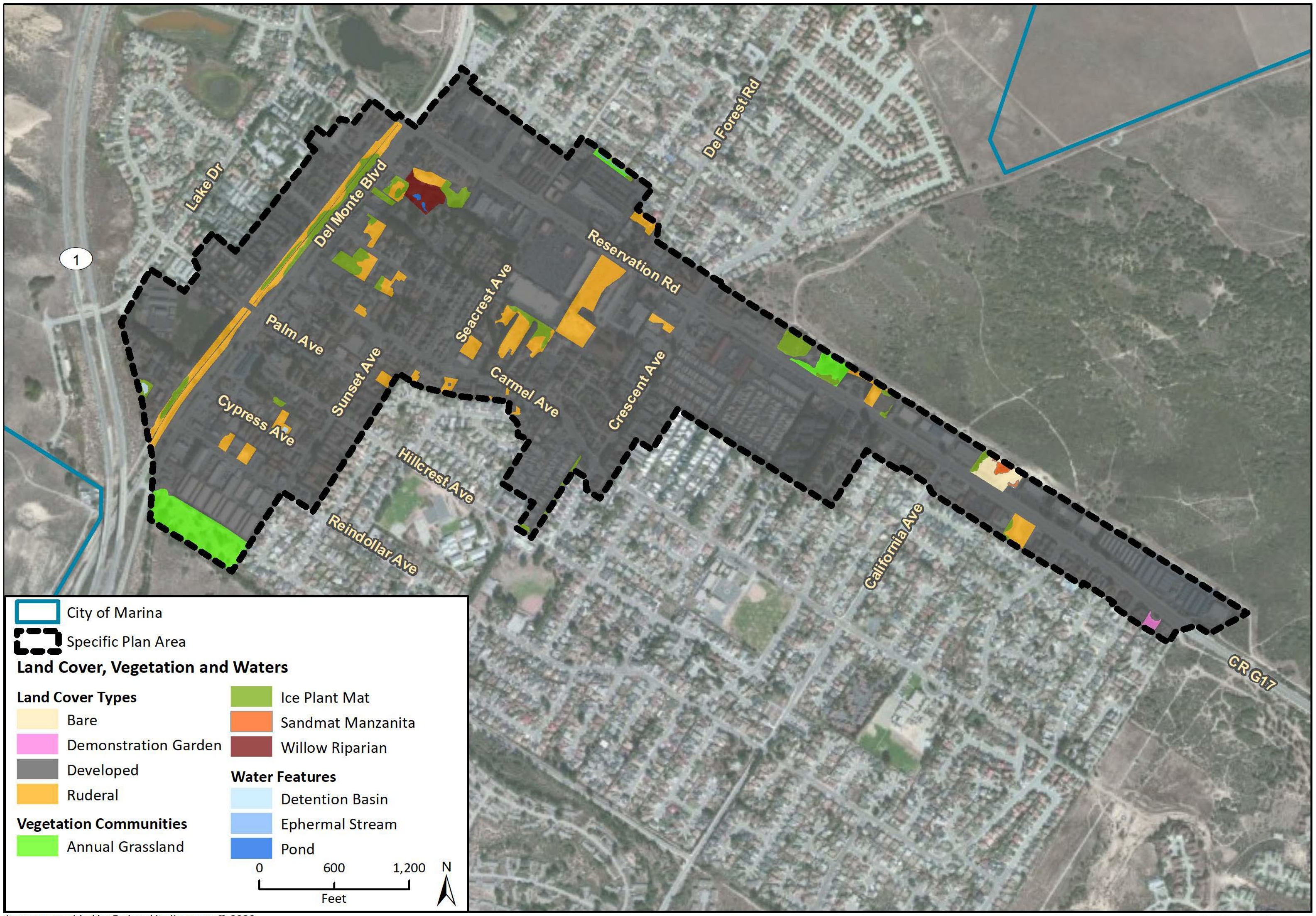

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Fig X Biological Resources_

Special Status Species

Special Status Plants

Three special status plants were observed within the Specific Plan area during the reconnaissance survey. Sandmat manzanita (*Arctostaphylos pumila*) – California Rare Plant Rank (CRPR) 1B.2, was observed in the Specific Plan area and is considered present. Monterey cypress (*Hesperocyparis macrocarpa*) 1B.2, and Monterey Pine (*Pinus radiata*) 1B.1 were also observed in landscaping; however, both the Monterey cypress and Monterey pine have special status only when they occur as part of a natural stand or woodland. The trees are protected by the City of Marina's municipal code, however, which requires a permit for the removal of any tree with a diameter at breast height (DBH) of ten inches or more. No Federal or State listed plants were observed within the Specific Plan area.

The BRA identified an additional 11 special status plant species that are known to occur, or have at least a moderate potential to occur within the vicinity of the Specific Plan area, including:

- Monterey spineflower (*Chorizanthe pungens* var. *pungens*) – Federally Threatened
- Monterey gilia (*Gilia tenuiflora* ssp. *arenaria*) – Federally Endangered, State Threatened
- Robust spineflower (*Chorizanthe robusta* var. *robusta*) – Federally Endangered
- Seaside bird's-beak (*Cordylanthus rigidus* ssp. *littoralis*) – State Endangered
- Yadon's rein orchid (*Piperia yadonii*) – Federally Endangered
- Fort Ord spineflower (*Chorizanthe minutiflora*) – 1B.2
- Eastwood's goldenbush (*Ericameria fasciculata*) – 1B. 1
- Sand-loving wallflower (*Erysimum ammophilum*) – 1B.2
- Kellogg's horkelia (*Horkelia cuneata* var. *sericea*) – 1B.1
- Point Reyes horkelia (*Horkelia marinensis*) – 1B.2
- Northern curly-leaved monardella (*Monardella sinuata* ssp. *Nigrescens*) – 1B.2

Special Status Animals

The BRA identified seven special status species with potential to occur within the Specific Plan area, including:

- Smith's blue butterfly (*Euphilotes enoptes smithi*) – Federally Endangered
- Tricolored blackbird (*Agelaius tricolor*) – State Threatened
- Northern California legless lizard (*Anniella pulchra*) – SSC
- Coast horned lizard (*Phrynosoma blainvillii*) – SSC
- Burrowing owl (*Athene cunicularia*) – SSC
- White-tailed kite (*Elanus leucurus*) – FP
- Monterey shrew (*Sorex ornatus salarius*) – SSC

Sensitive Communities and Critical Habitat

Sandmat manzanita (G1 S1) is considered a sensitive natural community by CDFW; however, the sandmat manzanita observed in the Specific Plan area is largely isolated from adjacent higher quality habitats and is highly disturbed. There are no critical habitats within the Specific Plan area.

Regulatory Setting

Regulatory authority over biological resources is shared by federal, state, and local authorities under a variety of statutes and guidelines. Primary authority for general biological resources lies with the land use control and planning authority of local jurisdictions. The CDFW is a trustee agency for biological resources throughout the state under CEQA and also has direct jurisdiction under the Fish and Game Code of California. Under the State and Federal Endangered Species Acts, the CDFW and the U.S. Fish and Wildlife Service (USFWS) also have direct regulatory authority over species formally listed as Threatened or Endangered. The U.S. Department of Army Corps of Engineers (Corps) has regulatory authority over specific biological resources, namely wetlands and waters of the United States, under Section 404 of the Federal Clean Water Act.

Plants or animals may be considered "special-status" due to declining populations, vulnerability to habitat change, or restricted distributions. Special-status species are classified in a variety of ways, both formally (e.g., State or Federally Threatened and Endangered Species) and informally ("Special Animals"). Species may be formally listed and protected as Threatened or Endangered by the CDFW or USFWS or as California Fully Protected (CFP). Informal listings by agencies include California Species of Special Concern (CSC) a broad database category applied to species, roost sites, or nests, or as USFWS Candidate taxa. CDFW and local governmental agencies may also recognize special listings developed by focal groups (i.e., Audubon Society Blue List, California Native Plant Society (CNPS) Rare and Endangered Plants, U.S. Forest Service regional lists). Section 3503.5 of the Fish and Game Code of California specifically protects birds of prey, and their nests and eggs against take, possession, or destruction. Section 3503 of the Fish and Game Code also incorporates restrictions imposed by the federal Migratory Bird Treaty Act (MBTA) with respect to migratory birds (which consists of most native bird species).

Impact Analysis

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

As described above under *Special Status Species,* there are 11 special status plant species and seven special status animal species that could potentially occur within the DVSP area. Development facilitated by the DVSP could result in direct or indirect substantial adverse effects to these species, which would potentially be significant under CEQA without mitigation. Checklist item (a) will be analyzed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

b. *Would the project 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 the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

A small patch of sandmat manzanita occurs in the eastern portion of the Specific Plan area adjacent to open space as shown on Figure 9. This patch of manzanita is isolated and highly degraded by the surrounding development and incursion of ice plant. This vegetation community has a limited distribution, largely restricted to coastal areas of Monterey County. It is locally common in the vicinity of the Specific Plan area; however, given the higher quality chaparral habitat to the north of Reservation Road and within the Fort Ord National Monument, removal of a small patch of sandmat manzanita would not represent a significant impact to this vegetation community. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. *Would the project 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?*

As described above under *Potentially Jurisdictional Features,* there are potentially jurisdictional stormwater features and one potentially jurisdictional pond within the DVSP area. Development facilitated by the DVSP could result in substantial adverse effects to these features, and impacts to waters of the state or waters of the U.S. could be potentially significant and could require regulatory permitting. Checklist item c will be discussed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

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

The Specific Plan area is effectively a fully developed area, containing no significant wildlife movement corridors. As such, the Specific Plan area does not provide for locally or regionally important wildlife movement or genetic flow. There would be no impacts to wildlife movement from development under the Specific Plan.

NO IMPACT

e. *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

The Specific Plan includes an objective about urban forestry, which outlines the need for preservation of the City's trees while improving accessibility and aesthetics due to root upheaval and improper planting/pruning. The Specific Plan also includes a discussion of the City's Tree Committee and links to the City's recommended street tree species list. The strategies outlined for this objective include developing a street tree plan to ensure suitable species are incorporated into right of way improvements and properly maintained. This strategy also includes encouraging developers to preserve trees onsite. Accordingly, the Specific Plan is consistent with the Marina Municipal Code regarding tree removal and tree protection. Tree removal associated with proposed projects under the Specific Plan would be required to obtain approval from the City of Marina, pursuant to compliance with Chapter 17.51 (Tree Removal, Preservation and Protection) of the Marina Municipal Code. As a result of the Specific Plan's urban forestry objective, street tree planning, and required permitting under Marina Municipal Code, individual projects within the Specific Plan area would not conflict with the local tree policy. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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

There are no habitat conservation plans or natural community conservation plans that have been adopted in the Specific Plan area. Therefore, development facilitated by the Specific Plan would not conflict with any such plans and no impact would occur.

NO IMPACT

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5 Cultural Resources

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

CEQA requires a lead agency determine whether a project may have a significant effect on historical resources (Public Resources Code [PRC], Section 21084.1) and tribal cultural resources (PRC Section 21074 [a][1][A]-[B]). 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 any 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 any 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:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Background Research

Rincon conducted a records search of the California Historical Resources Information System at the Northwest Information Center (NWIC), located at Sonoma State University, on April 8, 2019, and received the results of an updated records search of the NWIC on August 10, 2022. Both records searches were completed for the DVSP Area and a 0.5-mile radius buffer. The searches were performed to identify previously recorded cultural resources (archaeological and historic-era resources), as well as previously conducted cultural resources studies within the Plan area and a 1.6-kilometer (0.5-mile) radius surrounding it. The CHRIS search included a review of available records at the NWIC, as well as the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the Office of Historic Preservation Historic Properties Directory, the California Inventory of Historic Resources, the Archaeological Determinations of Eligibility list, and historic maps.

The NWIC CHRIS search identified 29 cultural resources studies conducted within a 0.5-mile radius of the Plan area (Table 4). Of these 29 reports, 16 included all or portions of the Plan area; of these, four consist of general overviews of the region or large inter-regional projects and do not identify specific cultural resources on or adjacent to the Plan area (S-022657, S-032596, S-045010, and S-048927). Eight of the studies consist of negative survey reports (S-040329, S-047264, S-033677, S-003418, S-049322, S-035072, S-049762, and S-028506).

The remaining four reports were positive for cultural resources. Report S-003345 consisted of a survey of the Monterey Wastewater Treatment System Expansion Project which included improvements to existing treatment systems throughout the Monterey Peninsula. The study identified a single cultural resource approximately five miles southwest of the current Plan area. Report S-028253 consisted of a Historic Property Survey Report that identified seven properties of historic age; all these properties are within the current Plan area and were determined to be ineligible for the NRHP. Report S-045823 consisted of a survey report conducted for the Monterey Peninsula Groundwater Replenishment Project and identified several cultural resources; however, all of these resources are greater than five miles from the current Plan area. Report S-037725 consisted of a survey report for the Monterey Peninsula Light Rail Transit Project and identified two resources; both these resources are greater than four miles from the current Plan area.

Table 4 Previous Cultural Resource Studies within 0.5-Mile of the Plan Area

Report Number	Author	Year	Title	Relationship to Plan Area
S-003345	T. Weber and A. Peak	1976	*Monterey Peninsula Regional Wastewater Treatment System Expansion Project*	**Within**
S-003345a	A. Peak	1976	*Appendix I: Cultural Resource Assessment of the Interceptor Line -- East of Blanco Road and West of Davis Road (Augmentation of Monterey Peninsula Regional Wastewater Treatment System)*	**Within**
S-003345b	A. Peak and M. Peak	1978	Cultural Resource Assessment of the Selected Alternative of the Monterey Regional Wastewater Treatment System, Monterey County, California	Outside
S-003345c	M. Peak	1980	*Test drilling for cultural resources, Monterey Regional Wastewater Treatment Project: Interceptor line from the Salinas Sewage Treatment Plant to the Blanco Road crossing of the Salinas River*	Outside
S-003418	Unknown	1978	*Cultural Resource Assessment of the Proposed Effluent Disposal System, Fort Ord, Monterey County, California*	**Within**
S-014001	A. Runnings and G. Breschini	1992	*Preliminary Cultural Resources Reconnaissance for the MPWMD Desalinization Pipeline, Monterey County, California*	**Within**
S-022657	I. Sawyer, L. Pfeiffer, K. Rasmussen, and J. Berryman	2000	*Phase 1 Archaeological Survey Along Onshore Portions of the Global West Fiber Optic Cable Project*	**Within**
S-028253	A. Kirk	2004	*Crescent Avenue Widening Project, City of Marina, Monterey County, California*	**Within**
S-028506	M. Doane	2004	*Negative Archaeological Survey Report for the Crescent Avenue Widening Project Between Reservation Road and Carmel Avenue in Marina, Monterey County, California*	**Within**
S-032596	R. Milliken, J. King, and P. Mikkelsen	2006	*The Central California Ethnographic Community Distribution Model, Version 2.0, with Special Attention to the San Francisco Bay Area, Cultural Resources Inventory of Caltrans District 4 Rural Conventional Highways*	**Within**
S-033677	M. Doane and T. Haversat	1999	*Preliminary Archaeological Reconnaissance of the Marina Coast Water District Recycled Water Pipeline Project, Monterey County, California*	Outside
S-033677a	M. Doane and T. Haversat	2006	*Phase 1 Archaeological Reconnaissance for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, Northern Segment, In Marina and Seaside, Monterey County, California*	Outside

Report Number	Author	Year	Title	Relationship to Plan Area
S-033677b	M. Doane and G. Breshini	2007	*Phase I Archaeological Reconnaissance for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, in Marina, Ord Community, Seaside and Monterey, Monterey County, California (Revised May 22, 2007)*	Outside
S-033677c	M. Doane and G. Breshini	2006	*Phase 1 Archaeological Reconnaissance for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, in Marina, Ord Community, Seaside and Monterey, Monterey County, California*	**Within**
S-033677d	M. Doane and G. Breshini	2007	*Phase 1 Archaeological Reconnaissance for Two Additional Alignments for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, In Marina, Monterey County, California*	Outside
S-033677e	M. Doane and G. Breshini	2007	*Preliminary Archaeological Reconnaissance for the Marina Coast Water District Well 34 Project, In Marina, Monterey County, California*	Outside
S-035072	M. Doane and G. Breshini	2008	*Preliminary Archaeological Reconnaissance for APN 032-201-004, Marina, Monterey County, California*	**Within**
S-037725	A. Ruby	2010	*Archaeological Survey Report for the Monterey Light Rail Transit Project*	**Within**
S-040329	H. Haas, K. Hunt, and R. Ramirez	2012	*Phase I Cultural Resources Survey for the Reservation Road Bikeways and Pathways Reconstruction Project Marina, Monterey County, California*	Outside
S-045010	A. Pilling	1949	*Tulare Indians at Monterey: Ethnographic notes collected by A.R. Pilling*	**Within**
S-045823	M. Doane and G. Breshini	2014	*Phase I Archaeology Survey for the Proposed Monterey Peninsula Groundwater Replenishment Project, Northern Monterey County, California*	**Within**
S-047264	Michael A. Way	2011	*Cultural Resources Analysis, Marina Post Office Property, Crescent Avenue, Marina, Monterey County, California 93933, EBI Project No. 61114596*	Outside
S-047264a	C. Roland-Nawi	2015	*OHP PRN HUD 2015_0403_001: Multifamily Housing Project Located at 3098 De Forest Road, Marina; OHP PRN HUD 2015_0403_001:HUD-Funded HOME Project; Section 106 Consultation Junsay Oaks Apartments 3098 De Forest Road, Monterey County, California*	**Within**
S-047264b	T. Szymanis	2015	*RE: HUD-Funded HOME Project; Section 106 Consultation*	Outside

Report Number	Author	Year	Title	Relationship to Plan Area
S-048927	D. Crull	1997	*The Economy and Archaeology of Europeanmade Glass Beads and Manufactured Goods Used in First Contact Situations in Oregon, California and Washington*	**Within**
S-049322	H. Koenig	2017	*Cultural Resources Survey Report, Monterey Peninsula Water Supply Project, Monterey County, California*	Outside
S-049322a	P. Michel and J. Polanco	2017	*NOAA_2017_0403_001, Section 106 Consultation for the Monterey Peninsula Water Supply Project, Monterey County, California*	Outside
S-049762	G. Breshini	2017	*Preliminary Archaeological Assessment of Assessor's Parcel 032-171-018, Marina, Monterey County, California*	**Within**
S-053052	H. Koenig	2018	*Cultural Resources Survey and Assessment, Monterey Bay Opportunistic Beach Nourishment Program*	Outside

Source: NWIC 2019, 2022

The NWIC records search conducted for this effort identified 10 previously recorded cultural resources within a 0.5-mile radius of the Plan area; these are listed in Table 5. One prehistoric archaeological site (P-27-000385/CA-MNT-280) has been documented within the records search area but is outside the Specific Plan area. Very little information is provided in the site record as it was recorded based on anecdotal information obtained ten years after the site was identified. CA-MNT-280 is described in the site record as a prehistoric occupation site located somewhere on the Fort Ord base that was destroyed by bulldozer in the early 1940s.

Additionally, seven buildings of historic age were recorded within the current Plan area, all of which were recommended ineligible for the NRHP and CRHR. The previously recorded buildings include a one-story, Contemporary-style single-family residence constructed in 1955 (P-27-003088); a one-story, Ranch-style single-family residence constructed in 195 (P-27-003089); a vernacular, one-story single-family residence constructed in 1940 (P-27-003090); a vernacular, one-story single-family residence constructed in 1937 (P-27-003091); a utilitarian storage shed built in the 1930s (P-27-003092); a one-story, Ranch-style single-family residence completed in 1953 (P-27-003093); and vernacular, one-story commercial building constructed in phases between 1953 and 1979 (P-27-003094).

Table 5 Previously Recorded Resources within 0.5-Miles of the Plan Area

Primary Number	Trinomial	Resource Type	Description	Year(s) and Recorder(s)	NRHP/ CRHR Status	Relationship to Plan Area
P-27-000385	CA-MNT-280	Prehistoric Site	Prehistoric Occupation Site	1950 (A.R. Pilling, UCAS)	Unknown	Outside
P-27-001325	CA-MNT-001288H	Historic-period Site	Marina Beach #2	1984 (Lynn Furnis and Carlys Gilbert); 2016 (Brittney Biasi and Rae Schwaderer)	Unknown	Outside
P-27-003088	–	Historic Building	3100 Crescent Avenue	2003 (Anthony Kirk)	Recommended Ineligible for NRHP and CRHR	**Within**
P-27-003089	–	Historic Building	3109 Crescent Avenue	2003 (Anthony Kirk)	Recommended Ineligible for National Register	**Within**
P-27-003090	–	Historic Building	3115 Crescent Avenue	2003 (Anthony Kirk)	Recommended Ineligible for NRHP and CRHR	**Within**
P-27-003091	–	Historic Building	3117 Crescent Avenue	2003 (Anthony Kirk)	Recommended Ineligible for NRHP and CRHR	**Within**
P-27-003092	–	Historic Building	3128 Crescent Avenue	2003 (Anthony Kirk)	Recommended Ineligible for NRHP and CRHR	**Within**
P-27-003093	–	Historic Building	3137 Crescent Avenue	2003 (Anthony Kirk)	Recommended Ineligible for NRHP and CRHR	**Within**
P-27-003094	–	Historic Building	3146 Crescent Avenue	2003 (Anthony Kirk)	Recommended Ineligible for NRHP and CRHR	**Within**

Source: NWIC 2019

On August 23, 2022, Rincon contacted the Native American Heritage Commission (NAHC) and requested a search of the Sacred Lands File (SLF) for the DVSP area. The NAHC emailed a response on October 4, 2022 stating that the SLF search was negative.

USGS geologic maps indicate that the Plan area is underlain by stabilized dunes and drift sands that date between the terminal Pleistocene and early Holocene (Dibblee and Minch 2007). Humans were known to be present in California as early as the Terminal Pleistocene, thus buried archaeological sites are possible in this area. Soils dating to as far back as the terminal Pleistocene have the potential to contain subsurface archaeological resources, especially in near coastal environments; however, sites dating to this period are generally rare and ephemeral.

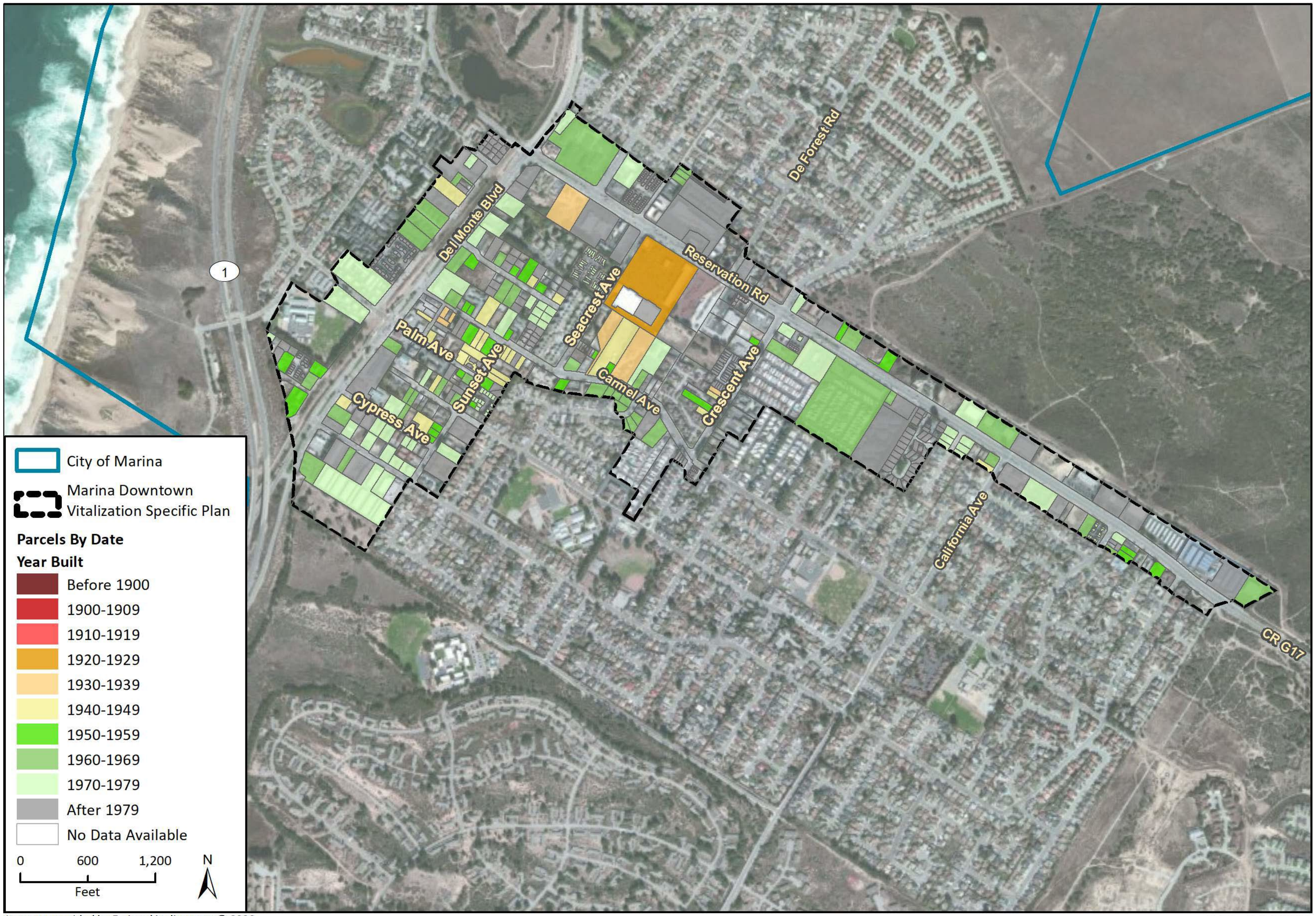
Developmental History of the Specific Plan Area

United States Geological Survey maps indicate the Specific Plan area remained largely undeveloped until around the early 1940s (USGS 1913-1941). An aerial photograph taken in 1941 depicts the area as sparsely developed and generally characterized by moderate-sized residential and/or agricultural properties. However, east of Del Monte Boulevard, a cluster of single-family residential properties was developed along Carmel Avenue and in the vicinity of what is now Palm Avenue. This augmented a handful of what are presumed to have been commercial properties along the east side of Del Monte Boulevard. By 1956, a few properties west of Marina Drive were subdivided for residential use (UCSB Map & Imagery Lab 1941, 1956).

Between the late 1950s and 1971, extensive residential and commercial development took place in Marina. Within the Specific Plan area, new construction was limited, but included several residential properties on the south side of Carmel Avenue (west of Busby Lane) and a pair of mobile home parks on the south side of Reservation Road. Sparse commercial development also occurred along Reservation Road (Netronline 1968; UCSB Map & Imagery Lab 1971). In the 1970s and 1980s the Specific Plan area was built-out approximately to its current extent. New construction in these years included a substantial expansion of commercial properties along Reservation Road and additional commercial construction southeast of the intersection of Del Monte Boulevard and Reindollar Avenue. In addition, new single- and multi-family residential properties appeared west of Del Monte Boulevard and along Cypress Avenue (UCSB Map & Imagery Lab 1989). Since the late 1980s, there has been scattered construction in the Specific Plan area. However, new construction did not substantially change the area's established pattern of development (UCSB Map & Imagery Lab 1989; Netronline 1998, 2005, 2014).

This overall development history is reflected in the project area dates of construction. As shown in Figure 10, according to assessor parcel data, at least 39 percent of the parcels within the project area were constructed between 1977 and the present day (313 out of 805). Another 30 percent of parcels were constructed from the early twentieth century through 1976 (239 out of 804). Year built data was not available for another 250 parcels; these figures are approximate and intended as a general characterization of the historic resources setting for the project area.

Figure 10 Overview of Dates of Construction, by Decade



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a. *Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?*

Future development activities that could be facilitated by adoption of the Specific Plan could have a significant impact on historical resources, if such activities would cause a substantial adverse change in the significance of a historical resource. Impacts would be potentially significant. Checklist item a will be discussed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

b. *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?*

The cultural resources records search and Native American scoping did not result in the identification of known archaeological resources on the Plan area. However, the Plan area has not been fully surveyed for archaeological resources and their presence cannot be ruled out. The Plan area is underlain by soils that date to periods of potential human occupation, thus archaeological sites have the potential to be present both on the surface and subsurface of the Plan area. In addition, previous work has noted buried cultural resources within the region. This impact could result in potentially significant impacts.Checklist item b will be discussed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

c. *Would the project disturb any human remains, including those interred outside of formal cemeteries?*

The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, existing regulations outlined in the State of California Health and Safety Code Section 7050.5 state no further disturbance may occur until the County Coroner has made a determination of origin and disposition pursuant to PRC 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 prehistoric, the coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant (MLD). The MLD must complete the inspection of the site within 48 hours of being granted access and provide recommendations as to the treatment of the remains to the landowner. With adherence to existing regulations, impacts to human remains would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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6 Energy

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

California is one of the lowest per capita energy users in the United States, ranked 48th in the nation, due to its energy efficiency programs and mild climate (United States Energy Information Administration [EIA] 2020. According to the California Energy Commission (CEC), California consumed 279,510 gigawatt-hours (GWh) of electricity and 12,331 million U.S. therms of natural gas in 2020 (CEC 2020a; 2020b). In addition, Californians consume approximately 18.8 billion gallons of motor vehicle fuels per year (Federal Highway Administration 2021). The single largest end-use sector for energy consumption in California is transportation (34.0 percent), followed by industry (24.6 percent), residential (21.8 percent), and commercial (19.6 percent) (EIA 2020).

Most of California's electricity is generated in-state with approximately 34 percent imported from the northwest and southwest regions of the country in 20210 In addition, approximately 30 percent of California's electricity supply comes from renewable energy sources, such as wind, solar photovoltaic, geothermal, and biomass (CEC 2021). Adopted on September 10, 2018, Senate Bill (SB) 100 accelerates the state's Renewables Portfolio Standards (RPS) Program by requiring electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

The City of Marina has not adopted a local plan for renewable energy or energy efficiency nor a climate action plan. However, the Marina General Plan (2010) contains a measure that addresses energy resources, which outlined under item (b) below.

a. Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Demolition and Construction

Demolition and construction activities facilitated by the DVSP would require energy resources primarily in the form of fuel consumption to operate heavy equipment, light-duty vehicles, machinery, and generators. Temporary power may also be provided to construction trailers or electric construction equipment. Future construction would also use building materials that would require energy use during the manufacturing and/or procurement of those materials; however, as Section 15126.2(b) of the *CEQA Guidelines* states, “This [energy] analysis is subject to the rule of reason and shall focus on energy use that is caused by the project.” In addition, it is reasonable to assume that manufacturers of building materials such as concrete, steel, lumber, or other building materials would employ energy conservation practices in the interest of minimizing the cost of doing business. Therefore, the consumption of energy required for the manufacturing and/or procurement of building and construction materials is not within the scope of this analysis.

Table 6 summarizes the anticipated energy consumption from construction equipment and vehicles, including construction worker trips to and from the Plan area. As shown therein, construction of the project would require approximately 4,797,974 gallons of gasoline and 3,747,763 gallons of diesel fuel, or 1,004,441 million British thermal units (MMBtu). Energy use during demolition and construction would be temporary in nature, and construction equipment used would be typical of similar-sized construction projects in the region. In addition, construction contractors would be required to comply with applicable CARB regulations, as well as the provisions of 13 California Code of Regulations Sections 2449 and 2485, which restrict the idling of heavy-duty diesel motor vehicles and govern the accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment. Construction equipment would also be subject to the USEPA Construction Equipment Fuel Efficiency Standard, which would minimize inefficient fuel consumption. Electrical power consumed during demolition and construction activities would be supplied from existing electrical infrastructure in the area.

Table 6 Construction Energy Usage

	Fuel Consumption (Gallons)	
Source	**Gasoline**	**Diesel**
Construction Equipment & Hauling Trips	–	3,747,763
Construction Worker Vehicle Trips	4,797,974	–

Source: Appendix H

Overall, demolition and construction activities would not be expected to have any adverse impact on available electricity supplies or infrastructure. Demolition and construction activities would utilize fuel-efficient equipment consistent with state and federal regulations and would comply with state measures to reduce the inefficient, wasteful, or unnecessary consumption of energy. In addition, per applicable regulatory requirements such as 2022 CALGreen, construction contractors would be required to comply with construction waste management practices to divert a minimum of 65 percent of construction and demolition debris. These practices would result in efficient use of energy necessary to construct development facilitated by the DVSP. Furthermore, in the interest of cost efficiency, construction contractors would not be anticipated to utilize fuel in a manner that is wasteful or unnecessary. Therefore, demolition and construction activities associated with the DVSP would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and impacts would be less than significant.

Operation

Energy demand from operation of development facilitated by the DVSP would include fuel consumed by passenger vehicles; natural gas consumed for heating and cooking in residential and non-residential buildings; and electricity consumed by residential and non-residential buildings including, but not limited to lighting, water conveyance, and air conditioning.

Net new VMT related to the DVSP would require approximately 1,541,706 gallons of gasoline and 419,258 gallons of diesel fuel, which equates to 222,697 MMBtu annually (see Appendix H for energy calculation sheets). The DVSP includes several objectives and strategies intended to reduce the use of automobiles and increase the use of travel by transit, walking, and bicycling through land use and transportation planning. Related strategies include creating high-density and high-intensity multiple use areas, allowing compact form and multiple use patterns of development, and encouraging pedestrian and bicycle linkages to provide better connectivity and more opportunities for active transportation. Furthermore, the overarching goal of the Mobility Chapter is to promote an "active, engaged, human-oriented streetscape where the automobile is simply one of many modes of travel for people to move in and around Downtown to work, shop, and recreate." Related strategies include developing a pedestrian and bicycle network throughout the Plan area, installing bicycle parking at all public facilities and in the right-of-way, encouraging new development to include end-of-trip support facilities for bicyclists, improving pedestrian access to transit facilities, and expanding bus routes within Marina. In addition, the vision for the Core zone of the DVSP is to create transit-oriented development, particularly around the MST Marina Transit Exchange, which houses stops for several bus routes. Therefore, the mixed-use, multi-modal nature of the DVSP and its proximity to transit would reduce residents', employees', patrons', and visitors' reliance on automobiles, thereby minimizing the potential for wasteful or unnecessary consumption of vehicle fuels. Furthermore, vehicles driven by future residents, employees, visitors, and patrons of the Plan area would be subject to increasingly stringent federal and state fuel efficiency standards, further minimizing the potential for the inefficient consumption of vehicle fuels. As a result, vehicle fuel consumption resulting from buildout of the DVSP would not be wasteful, inefficient, or unnecessary.

In addition to transportation energy use, development facilitated by the DVSP would require permanent grid connections for electricity and natural gas. Buildout of the DVSP would consume approximately 27,058,914 kWh, or 92,325 MMBtu of electricity per year for lighting and large appliances, and approximately 94,566 MMBtu of natural gas per year for heating and cooking (see Appendix E for CalEEMod results). Construction of the proposed residential and non-residential buildings would comply with the 2022 California Building Energy Efficiency Standards for Residential and Non-residential Buildings and CALGreen (California Code of Regulations Title 24, Parts 6 and 11), or later versions as they are published. These standards require the provision of electric vehicle supply equipment, water-efficient plumbing fixtures and fittings, recycling services, solar panels on low-rise residential development, solar-readiness on commercial development, and other energy-efficient measures that would reduce the potential for the inefficient use of energy. Furthermore, Goal LU-5 of the DVSP intends support innovation in design and employ green building technology and "net zero" building principles. This goal is supported by objectives and strategies that require the use of low-water landscaping and high-efficiency irrigation systems and encourage the use of energy- and water-efficient building design and renewable energy. These objectives and strategies would help minimize the occurrence of inefficient, wasteful, and unnecessary energy consumption during operation. Furthermore, Central Coast Community Energy, which would be the default electricity provider for the Plan area, provides carbon-free electricity to all of its customers. As a result, operation of development under the DVSP would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Table 7 summarizes the DVSP's consistency with the goals and policies of the Marina General Plan related to energy consumption. As discussed therein, the DVSP would be consistent with the applicable goals and policies related to renewable energy and energy efficiency and would not conflict with or obstruct state or local plans for renewable energy and energy efficiency. Therefore, no impact would occur.

Table 7 Consistency with Marina General Plan Energy-Related Goals and Policies

Marina General Plan Goal/Policy	Discussion
Community Goal 1.18: During the preparation of this General Plan the following goals, phrased in the form of planning principles, provided the basis for developing appropriate land use, infrastructure, and community design proposals for specific areas of the city, and for judging among several citywide General Plan alternatives and providing direction for selecting the preferred alternative. As incorporated into the General Plan, these framework goals provide the overall direction necessary to ensure that, as it grows, the city will be well functioning and attractive; that it will balance the needs of residents and business; and that appropriate use will be made of its natural, human and economic resources: 6. A balanced land use/transportation system which minimizes traffic congestion, noise, excessive energy consumption, and air pollution.	**Consistent.** Policy LU-1.7 included in the DVSP Land Use and Development Chapter aims to "encourage the consolidation of small contiguous lots to allow for more cohesive redevelopment of the Specific Plan area." Related strategies include creating high-density and high-intensity multiple use areas, allowing compact form and multiple use patterns of development, and encouraging pedestrian and bicycle linkages to provide better connectivity and more opportunities for active transportation. Furthermore, the overarching goal of the Mobility Chapter is to promote an "active, engaged, human-oriented streetscape where the automobile is simply one of many modes of travel for people to move in and around Downtown to work, shop, and recreate." Related strategies include developing a pedestrian and bicycle network throughout the Plan area, installing bicycle parking at all public facilities and in the right-of-way, encouraging new development to include end-of-trip support facilities for bicyclists, improving pedestrian access to transit facilities, and expanding bus routes within Marina. In addition, the vision for the Core zone of the DVSP is to create transit oriented development, particularly around the Marina Transit Exchange, which houses stops for several bus routes. Therefore, the DVSP would create a balanced land use/transportation system that would minimize excessive energy consumption.
Housing Policy 2.31: It is the City of Marina's intent to promote construction of new housing that is environmentally and socially responsible and that adheres to the following policies: 10. New housing shall be built to development and construction standards that conserve water and energy.	**Consistent**. The DVSP Land Use and Development Chapter includes Goal LU-5, Environment and Sustainability, which promotes "a Downtown that supports innovation in design and employs Green Building technology, employs Net Zero Building principles, and is designed to create more comfortable indoor and outdoor environments." This goal is supported by Policy 5.2, which states "In addition to meeting the requirements set by Title 24 of the California Building Code, consider additional measures such as energy efficient building design, passive heating/cooling strategies, wastewater technologies, water use reduction, water efficient fixtures, and green building materials. It is important for project applicants to go above and beyond the minimum requirements for energy efficiency set by Title 24 of the California Building Code, recognizing the benefits of green building features for future residents and the community as a whole." This goal and policy are also supported by objectives and strategies that require the use of low-water landscaping and high-efficiency irrigation systems and encourage the use of energy- and water-efficient building design and renewable energy. Furthermore, construction of the proposed buildings would comply with the applicable 2022 California Building Energy Efficiency Standards and CALGreen (California Code of Regulations Title 24, Parts 6 and 11), or later versions as they are published. Therefore, construction of new housing facilitated by the DVSP would be environmentally responsible and built to development and construction standards that conserve water and energy.

Source: City of Marina 2010

NO IMPACT

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7 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	□	□	□	■
2. Strong seismic ground shaking?	□	□	■	□
3. Seismic-related ground failure, including liquefaction?	□	□	■	□
4. Landslides?	□	□	■	□
b. Result in substantial soil erosion or the loss of topsoil?	□	□	■	□
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	□	□	■	□
d. Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	□	□	■	□
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	□	□	□	■
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	■	□	□	□

Topography and Geologic Conditions

Marina encompasses a roughly triangular-shaped area of land along the southeastern shore of a broad, crescent-shaped embayment in the California shoreline that forms Monterey Bay. Topography in the City consists of coastal dunes and low, rolling hills that step up gradually from the coastline to maximum elevations of about 250 feet. A 60 to 120-foot high bluff that forms the southern border of the Salinas River flood plain marks the eastern boundary of the City. To the north, the city extends to the mouth of the Salinas River and incorporates a broad, low-lying flood plain along the southwestern bank of the river. The Specific Plan area is located roughly in the center of Marina, where topography is gently sloped. One soil type occurs in the Specific Plan area: baywood sand at 2 to 15 percent slopes (Figure 11).

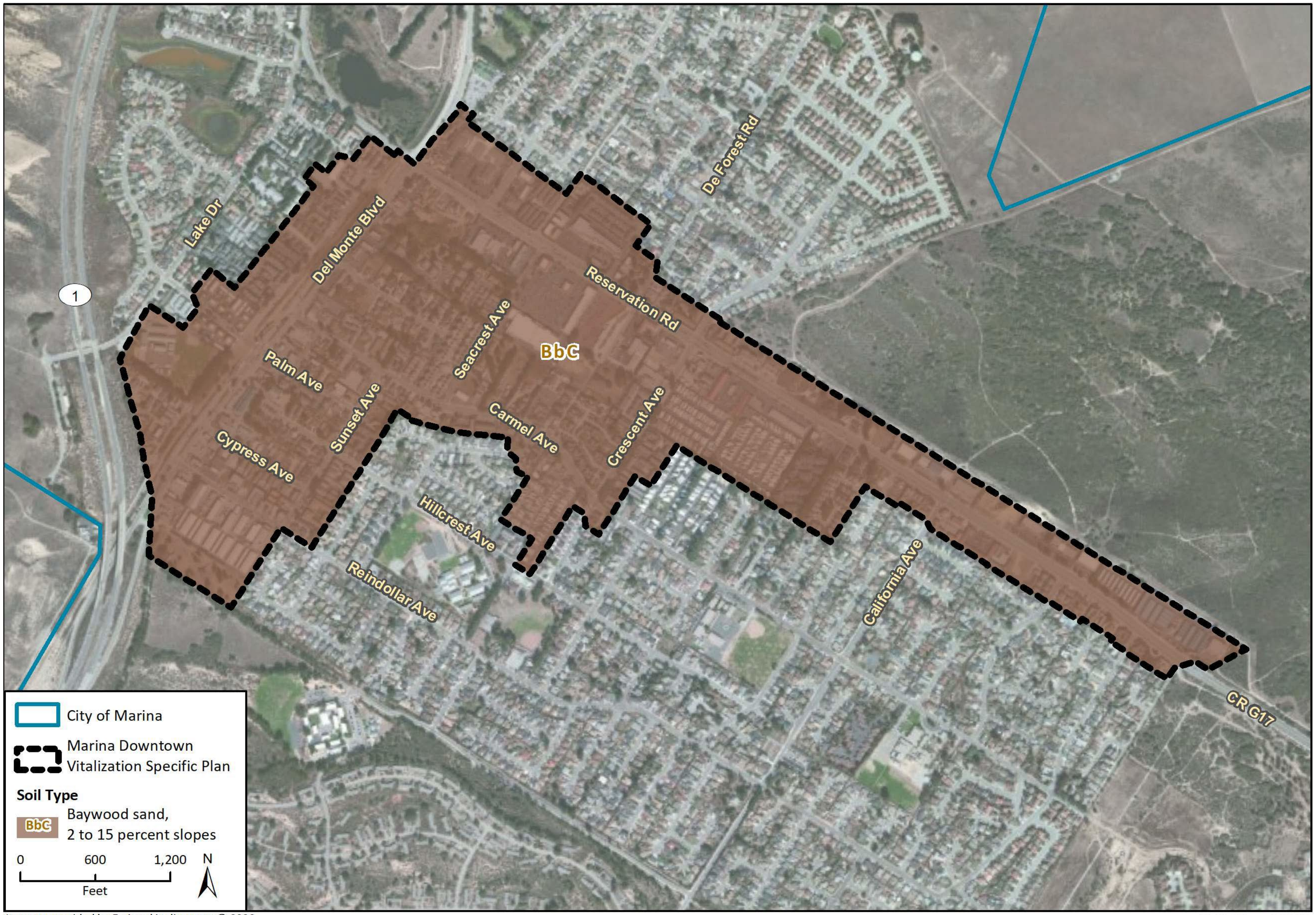
Marina is situated in the central portion of the California Coast Ranges. A large, northwest trending, fault-bounded elongate of prism of granitic and metamorphic basement rocks underlie the City and are known collectively as the Salinian Block. Overlying the granitic and metamorphic basement rocks is a sequence of dominantly marine sediments of Cretaceous to Pliocene age and non-marine sediments of Pliocene to Pleistocene age. All but the youngest of these rocks show evidence of deformation, a result of the active tectonic environment of coastal California.

The Salinian Block is itself cut internally by many smaller faults that divide it into several sub-blocks. Some of the sub-blocks, such as the Santa Lucia Mountains, south of the City, have been uplifted and form young, rugged mountain ranges. Other portions of the Salinian Block are down-dropped and form sedimentary basins. The Specific Plan area rests in the down-dropped basement block that that forms the Monterey embayment. Granitic and metamorphic basement rocks that crop out at elevations of more than 2,000 feet above sea level some ten miles south of the city occur at depths of a few thousand feet or more beneath the planning area. Overlying the granitic basement are Miocene- to Pleistocene-age sedimentary rocks a few thousand feet thick, including the following in ascending order:

- Monterey Foundation (a sequence of marine shale of Miocene age resting on granitic basement)
- Purisima Formation (consisting of Pliocene-age sandstone and siltstone of marine origin)
- Plio-Pleistocene Paso Robles Formation (a sequence of alluvial fan and river deposits)
- Pleistocene-age Aromas Sands (made up of eolian [wind-blown] sand and river deposits)
- Late Pleistocene to Modern fluvial sediment deposited by the Salinas River
- Sand dunes that formed in approximately the last 100,000 years that form the primary, surficial geology in Marina

The U.S. Geological Survey (USGS) defines active faults as those that have had surface displacement within Holocene time (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. Inactive faults have not had surface displacement within the last 1.6 million years. Faults in the immediate vicinity of the City and of the Specific Plan area include the Reliz fault, the Chupines fault, and the Monterey Bay-Tularcitos fault (Figure 12). The Reliz fault and the Ord Terrace segment of the Seaside-Chupines fault abut or cross through the Specific Plan area. The potential for surface rupture from either of these faults is therefore present. Fault rupture from seismic shaking could be harmful as it could cause failure and collapse of poorly built structures or cause non-structural building elements to fall.

Figure 11 Soil Types in the Specific Plan Area



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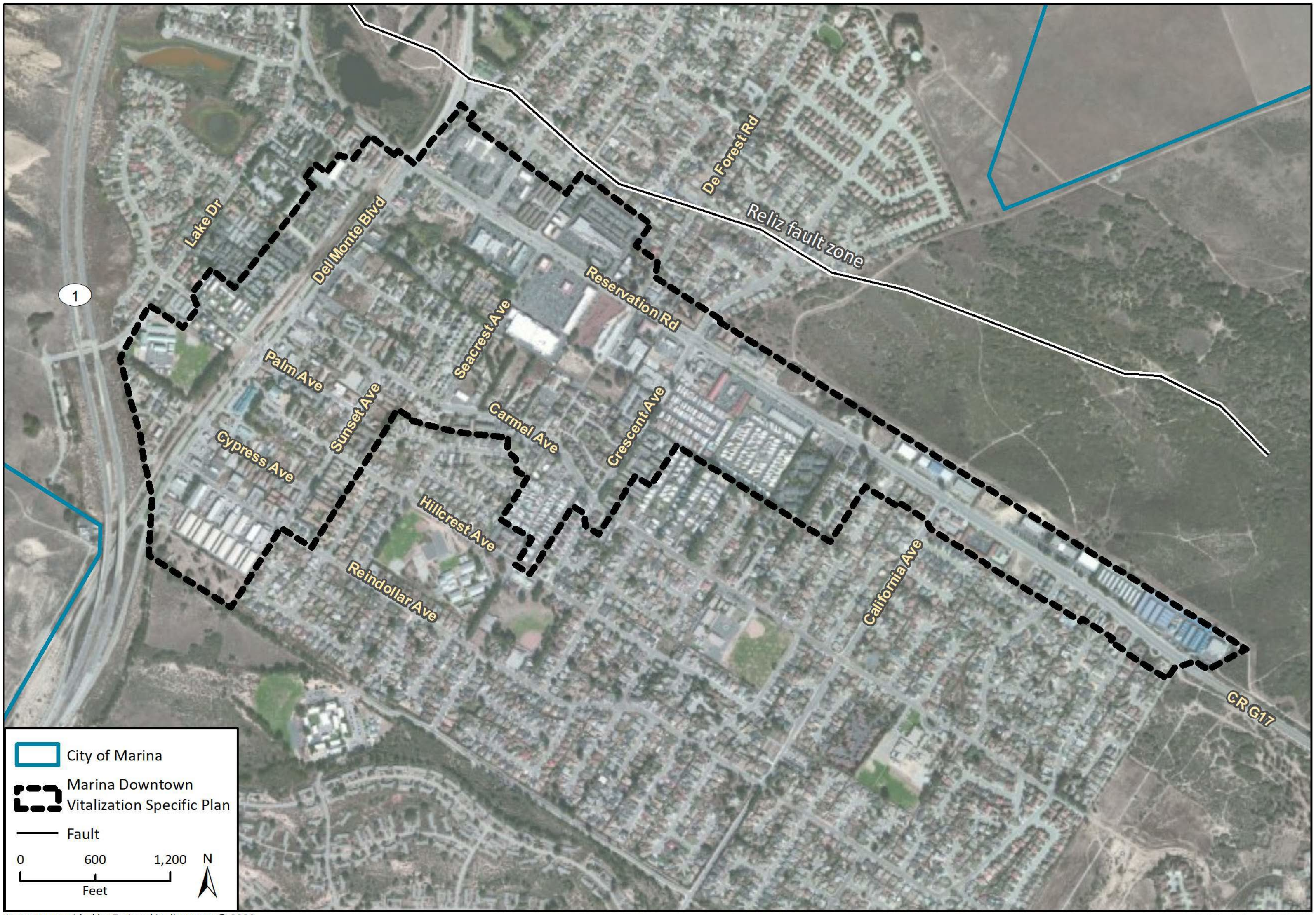
Soils data provided by Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database 2019.

Figure 12 Faults in the Specific Plan Area



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Fault data provided by Bryant, W. A. (compiler), 2005, Digital Database of Quaternary and Younger Faults from the Fault Activity Map of California, version 2.0: CGS.

Fig X Fault Zones_20230330

For example, utility lines (electrical and natural gas) could break and present a hazard to occupants of buildings, vehicles, and pedestrians.

Regulatory Setting

Local

CITY OF MARINA GENERAL PLAN

The Community Land Use element of the Marina General Plan prohibits development on land where a significant potential threat to life or property from very high seismic shaking or seismically induced ground failure, flooding, or landslides (City of Marina 2010). The policies of that element incorporate provisions and policies of the City's certified Local Coastal Program (1982), which is being updated (City of Marina 2019). The Public Health and Safety section of the General Plan further indicates that "new development shall be permitted in areas of high seismic risk only when adequate engineering and design measures can be implemented in accordance with a geotechnical investigation and report" (City of Marina 2010). Finally, the General Plan mandates specific safeguards to address design and engineering to mitigate geologic and seismic hazards in specific locations that include zones in or adjacent to the Specific Plan area.

MARINA MUNICIPAL CODE

Chapter 15 of the Marina Municipal Code adopts the California Building Code (CBC) by reference to cover requirements for seismic safety. As part of the project approval process, the project proponent must prepare a tentative project map that includes, among other items, a soils report prepared by a registered geotechnical engineer that includes test borings upon which the report is based and recommended corrective actions, where necessary. Finally, erosion control and improvements to be constructed are also part of the construction permit application process.

Impact Analysis

a.1. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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?

Faults generally produce damage in two ways: ground shaking and surface rupture. Fault displacement generates seismic ground shaking, the greatest cause of widespread damage during an earthquake. Surface rupture affects a narrow area above an active fault, and ground shaking covers a wide area and is influenced, to a large extent, by the distance of the site to the seismic source, soil conditions, and depth to groundwater. Ground shaking is discussed below under threshold a.2. As shown in Figure 12, the Plan area is near, but not overlapping, the Reliz Fault Zone. Because there are no active faults within the Plan area, there is no potential for risk of loss injury, or death involving rupture of a known earthquake fault. There would be no impact.

NO IMPACT

a.2. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

The Specific Plan area is located in seismically active central Monterey County, but is not located in an Alquist-Priolo Earthquake Fault Zone (California Geologic Survey 2019b). As shown in Figure 12, the Plan area is located approximately 400 feet south and west of the Reliz Fault Zone. Other major active faults capable of producing large magnitude events with a high seismic activity rate in the region include the San Andreas Fault, the Palo Colorado-San Gregorio Fault, and the Monterey Bay Offshore Fault Zone. The Reliz, Chupines, and the Monterey Bay-Tularcitos faults are in Marina's immediate vicinity.

Despite the potential for ground shaking, individual projects implemented under the Specific Plan would be required meet the current CBC seismic-resistance standards that ensure new structures are engineered to withstand the expected ground acceleration at a given location. The City of Marina also has policies and standards in place that regulate construction in areas subject to ground shaking. In accordance with General Plan, new development may be approved only if it can be demonstrated that the project site is physically suitable and the development would neither create nor significantly contribute to geologic instability or geologic hazards in accordance with a geotechnical investigation and report (City of Marina 2010). Compliance with all applicable provisions of state and local construction and designs standards, and implementation of the recommendations of the preliminary geotechnical investigation prepared for the a given project would ensure that potential impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a.3. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

The Specific Plan area is located in a seismically active area and strong seismic shaking is expected to occur within the implementation horizon of the project. Seismic shaking can result in geologic hazards, including liquefaction. Non-saturated dry sands may settle and densify when subjected to earthquake shaking. Liquefaction is a phenomenon in which the strength and stiffness of saturated soil is rapidly reduced, either by seismic shaking or other sudden loading. Severe shaking of the soil can increase the water pressure in the soil, allowing the soil particles to move independently of one another. The soil consequently behaves more like a fluid than a solid, which could result in damage to building foundations and structures. According to the Relative Liquefaction Potential map in the Monterey County General Plan EIR, the entire city of Marina is characterized as having a low relative liquefaction susceptibility (Monterey County 2008). The 2022 CBC includes specific requirements to address liquefaction hazards. New development in accordance with the proposed Specific Plan would conform to the CBC (as amended at the time of permit approval) as required by law. Compliance with the CBC, combined with the low relative liquefaction susceptibility, would result in less than significant impacts related to seismic-related ground failure and liquefaction.

LESS THAN SIGNIFICANT IMPACT

a.4. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Topography in the Specific Plan area is relatively flat. Based on the topography and according to the Marina General Plan EIR, landslide risk is low in the Specific Plan area. The 2022 CBC includes specific requirements to address landslide hazards. New development implemented in accordance with the Specific Plan would conform to the CBC, as amended at the time of permit approval and as required by law. Compliance with the CBC combined with the area's low relative landslide susceptibility would result in less than significant impacts related to landslide.

LESS THAN SIGNIFICANT IMPACT

b. Would the project result in substantial soil erosion or the loss of topsoil?

The coastal areas of Marina are subject to severe erosion problems from highly erosive, windblown sand (County of Monterey 2008a). The coastline is low relief and much of the erosion is due to movement of unstable, wind-blown sand, especially where vegetation is not in place. This erosion can affect beachfront property, particularly during winter storms when high surf and wave action are concentrated and redistribute the sand via littoral drift with no new sand to reform the beach.

The Specific Plan area is nearly 0.5 mile from the coastline. Projects implemented under the Specific Plan would not substantially contribute to coastal soil erosion. Individual projects could have localized soil erosion effects, but such projects would be permitted individually and subject to all applicable erosion control regulations of the Marina Municipal Code. These include Section 8.46.080, which requires erosion prevention and construction site management practices. Therefore, compliance with applicable regulations would reduce soil erosion and topsoil loss impacts to a less than significant level.

LESS THAN SIGNIFICANT IMPACT

c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

d. Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Expansive soils shrink and swell based on moisture level in the clay minerals that make these soils expand and contract. Soils with moderate or high expansion potential are susceptible to shrinking and swelling due to fluctuations in moisture content and are a common cause of foundation deterioration, pavement damage, cracking of concrete slabs, and shifting of underground utilities. According to the CBC, soils with an expansion index exceeding 91 are considered highly expansive; such soils would typically have a liquid limit of 40 or more and a plasticity index exceeding 15. These soils are undesirable for use as engineered fill or subgrade directly underneath foundations or pavement, and must be replaced with non-expansive engineered fill or require treatment to mitigate their expansion potential. Soil liquefaction occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and become fluid, similar to quicksand. Lateral spreading can occur when a liquefied soil moves toward a free slope face during the cyclic earthquake loading. Liquefaction-induced lateral spreading can also occur on mild slopes (flatter than 5 percent) underlain by loose sands and a shallow water table. If liquefaction occurs, the unsaturated overburden soil can slide as intact blocks over the lower, liquefied deposit, creating fissures and scarps.

Implementation of the Specific Plan would result in more dense development, thereby exposing more persons and structures to geological hazards. Landslides resulting in earth and debris flow could result in structural damage or complete loss of structures, as well as injuries or death to persons. The Specific Plan area is relatively flat, however, and development would be located in areas where there is little or no risk of slope instability.

The expansion potential (shrink-swell potential), liquefaction, and lateral spreading risk for the Specific Plan area is low. The only soil type in the Specific Plan area is Baywood Series, with 2 to 15 percent slopes (Figure 11). This soil has a slight to moderate water erosion hazard and when vegetation or other ground cover is removed, is subject to soil blowing and water erosion (United States Department of Agriculture 2014).

The CBC includes requirements to address soil stability-related hazards. Typical measures involve removing, replacing soil with the proper fill selection, and compacting the soil. For individual projects involving substantial ground disturbance, geotechnical engineering reports would be required to ensure conformance with City standards. Therefore, compliance with existing regulations would reduce impacts to a less than significant level with regard to landslide, lateral spreading, subsidence, liquefaction, or collapse.

LESS THAN SIGNIFICANT IMPACT

e. Would the project 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?

Development pursuant to the Specific Plan would not use on-site septic systems for wastewater treatment. Section 19, *Utilities and Service Systems*, discusses the conveyance and treatment of wastewater in the Specific Plan area. There would be no impact regarding the use of septic tanks or alternative wastewater disposal systems.

NO IMPACT

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Ground disturbing activities associated with development facilitated by the Specific Plan could directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature. Impacts could be potentially significant and checklist item (f) will be discussed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

8 Greenhouse Gas Emissions

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

Climate Change and Greenhouse Gases

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. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change, the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-twentieth century.

GHGs are gases that absorb and re-emit infrared radiation in the atmosphere. The gases widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), fluorinated gases such as hydrofluorocarbons and perfluorocarbons, and sulfur hexafluoride. Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Anthropogenic GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and SF_6.

The accumulation of GHGs in the atmosphere regulates Earth's temperature. Without the natural heat-trapping effect of GHGs, Earth's surface would be about 34 degrees Celsius cooler (California

Environmental Protection Agency 2006). However, emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of GHGs in the atmosphere beyond the level of naturally occurring concentrations. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Some of the potential impacts of climate change in California may include loss of snowpack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. While these potential impacts identify the possible effects of climate change at a statewide level, in general, scientific modeling tools are currently unable to predict what impacts would occur locally.

Regulatory Setting

California Global Warming Solutions Act of 2006 (Assembly Bill 32, and Senate Bill 32, and Assembly Bill 1279)

The "California Global Warming Solutions Act of 2006," (Assembly Bill [AB] 32), outlines California's major legislative initiative for reducing GHG emissions. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main state strategies for reducing GHG emissions to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 target of 431 million metric tons (MMT) of carbon dioxide equivalents (CO_2e), which was achieved in 2016. CARB approved the Scoping Plan on December 11, 2008, which included GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among others (CARB 2009). Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since the Scoping Plan's approval.

The CARB approved the 2013 Scoping Plan update in May 2014 (CARB 2014). The update defined the CARB's climate change priorities for the next five years, set the groundwork to reach post-2020 statewide goals, and highlighted California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the state's longer term GHG reduction strategies with other state policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use (CARB 2014).

On September 8, 2016, the governor signed Senate Bill (SB) 32 into law, extending the California Global Warming Solutions Act of 2006 by requiring the state to further reduce GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, the CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation, such as SB 1383 and SB 100 (discussed later). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with statewide per capita goals of six MT CO_2e by 2030 and two MT CO_2e by 2050 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, sub-regional, or regional level), but not for specific individual projects because they include all emissions sectors in the state (CARB 2017).

AB 1279, "The California Climate Crisis Act," was passed on September 16, 2022 and declares the State would achieve net zero GHG emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative GHG emissions thereafter. In addition, the bill states that the State would reduce GHG emissions by 85 percent below 1990 levels no later than 2045. The 2022 Scoping Plan lays out a path to achieve AB 1279 targets (CARB 2022). The actions and outcomes in the 2022 Scoping Plan would achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon.

Methodology and Significance Thresholds

Significance Thresholds

Based on Appendix G of the CEQA Guidelines, impacts related to GHG emissions from the proposed project would be significant if the project would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and/or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

The vast majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to significant cumulative effects, even if individual changes resulting from a project are limited. As a result, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be 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, other current projects, and probable future projects (*CEQA Guidelines* Section 15064[h][1]).

CEQA Guidelines Section 15064.4 recommends that lead agencies quantify GHG emissions of projects and consider several other factors that may be used in the determination of significance of GHG emissions from a project, including the extent to which the project may increase or reduce GHG emissions; whether a project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a plan for the reduction or mitigation of GHG emissions.

CEQA Guidelines Section 15064.4 does not establish a threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies or suggested by other experts, as long as any threshold chosen is supported by substantial evidence (see *CEQA Guidelines* Section 15064.7[c]). The *CEQA Guidelines* also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see *CEQA Guidelines* Section 15130[f]). As a note, the *CEQA Guidelines* were amended in response to SB 97. In particular, the *CEQA Guidelines* were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

Pursuant to *CEQA Guidelines* Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem in the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of GHG emissions (CEQA *Guidelines* Section 15064(h)(3))." Therefore, a lead agency can make a finding of less-than-significant for GHG emissions if a project complies with adopted programs, plans, policies, and/or other regulatory strategies to reduce GHG emissions.

Neither the City of Marina, MBARD, Monterey County, nor any other State or applicable regional agency has adopted a numerical significance threshold for assessing GHG emissions that is applicable to the project. Therefore, the project's potential impacts related to GHG emissions will be determined by evaluating the project's consistency with plans and polices adopted for the purposes of reducing GHG emissions and mitigating the effects of climate change. GHG emissions associated with the proposed project are estimated below for informational purposes only.

In the absence of a CEQA-qualified greenhouse gas reduction plan, the state recommends determining whether a proposed residential or mixed-use residential development would align with the 2022 Scoping Plan by assessing if the project is consistent with all the key project attributes identified in Table 3 of Appendix D of the 2022 Scoping Plan. Attributes identified by Table 3 of Appendix D of the 2022 Scoping Plan and the project's consistency with these attributes are shown in Table 12. According to the 2022 Scoping Plan "Projects that have all the key project attributes should accommodate growth in a manner consistent with State GHG reduction and equity prioritization goals" (CARB 2022a). The 2022 Scoping Plan states that "Lead agencies may determine, with adequate additional supporting evidence, that projects that incorporate some, but not all, of the key project attributes are consistent with the State's climate goals" (CARB 2022).

Methodology

GHG emissions for project construction and operation were calculated using the California Emissions Estimator Model (CalEEMod) version 2022.1.9 CalEEMod allows for the use of default data (e.g., emission factors, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions, and/or user-defined inputs. The input data and subsequent construction and operation emission estimates for the proposed project are summarized below and detailed in Appendix E.

Construction Emissions

Construction facilitated by the DVSP would generate temporary GHG emissions primarily as a result of operation of construction equipment on-site as well as from vehicles transporting construction workers to and from the Plan area and heavy trucks to export earth materials off-site. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling. Construction equipment that would generate GHG emissions would include, but would not be limited to, excavators, graders, haul trucks, and loaders. It is assumed that all construction equipment used would be diesel-powered. Construction equipment and duration of each phase were based on CalEEMod defaults, which are shown in Section 3, *Construction Detail*, of the modeling outputs in Appendix E. The default start dates for each construction phase were adjusted so that all phases (i.e., demolition, site preparation, grading, building construction, paving, and architectural coating) would occur simultaneously in order to estimate conservative, worst-case impacts. Given that buildout of the DVSP would primarily result in redevelopment activities and would not include subterranean parking structures, it is assumed that soil material import and export would be minimal. Therefore, construction emissions modeling does not account for haul truck trips for soil material import and export. The quantity of building square footage that would be demolished as part of buildout of the DVSP is unknown at this time. Therefore, it was conservatively assumed that approximately half of the existing residential units (i.e., 1,151 units, assuming each unit is 1,000 square feet based on CalEEMod defaults) and approximately half of the existing retail and office space (i.e., 502,879 square feet) would be demolished to accommodate redevelopment. This analysis assumes that the DVSP would be required to comply with all applicable regulatory standards, including the operative CALGreen Code, MBARD Rule 426 (Architectural Coatings), and all other applicable MBARD rules. The requirements of Rule 426 were added as "mitigation"[4] in CalEEMod by including the use of low-VOC flat paint (50 grams per liter [g/L]).

Air districts such as SLOAPCD (San Luis Obispo Air Pollution Control District; the air district immediately adjacent to the MBARD to the south) have recommended amortizing construction-related emissions over the life of the project in conjunction with a project's operational emissions. Amortization periods are not based on conditions specific to individual air districts but rather are based on the estimated lifetime of a given development project, which is primarily a function of the type of project (e.g., residential, commercial, industrial), not its location. Land use projects in Monterey County have used the methodologies established by SLOAPCD to assess GHG impacts (County of Monterey 2015). The SLOAPCD recommends amortizing GHG emissions from construction activities over a 50-year period for residential projects and a 25-year period for commercial projects (SLOAPCD 2012). Therefore, given the nature of amortization periods and the recommendations of MBARD, it is appropriate to use the SLOAPCD amortization periods in this analysis. Because the DVSP envisions mixed-use development, this analysis amortizes construction GHG emissions over a 25-year period to provide a conservative estimate of GHG emissions.

Operational Emissions

Operational emissions were estimated for the net increase in development under the DVSP, which is summarized in Table 2. For the purpose of this analysis, it is assumed that the proposed Specific Plan has a planning horizon of 2040. Therefore, buildout of the Specific Plan would occur intermittently over the planning period with full buildout estimated to occur in 2040. As a result, this analysis reasonably assumes that most or all of development facilitated by the DVSP would be operational by 2040 and therefore uses a buildout year of 2040 for the purposes of calculating operational emissions. Operational emissions would be comprised of mobile source emissions, energy emissions, and area source emissions. Area source emissions are generated by landscape maintenance equipment, consumer products, and architectural coating. Emissions attributed to energy use include natural gas consumption for space and water heating. Mobile source emissions are generated by motor vehicle trips to and from the Plan area associated with operation of on-site development. Mobile source emissions were calculated using the forecast net new vehicle miles

[4] CalEEMod is a model for the entire state, and not all air basins or municipalities have the same mandatory regulatory requirements. For the purposes of CalEEMod, "mitigation" is a term of art for the modeling input and is not equivalent to mitigation measures that may apply to the CEQA analysis. While CalEEMod labels compliance with existing regulations as mitigation measures in this context, these are not truly mitigation measures as the term is used in CEQA.

traveled (VMT) estimates for residential and office land uses provided in the SB 743 Analysis prepared by Kimley Horn (Appendix G). As shown in Table 8, based on the SB 743 analysis, the proposed project would result in approximately 89,037 net new daily VMT, or 32,498,505 net new annual VMT, associated with the residential and office land uses. Based on the SB 743 Analysis, the retail uses associated with the proposed project would generate no net new VMT; therefore, mobile source emissions were not estimated for the retail land uses because no net new emissions would be generated as compared to existing conditions in the NCCAB.

Table 8 Residential and Office VMT Estimates[1]

Metric	Existing Conditions	Existing plus Project Conditions	Net Change
Residential VMT			
Dwelling Units[1]	4,707	7,611	+2,904
Number of Residents[2]	12,474	20,169	+7,272
Daily VMT per Capita[1]	12.7	11.7	-1.0
Total Daily VMT[3]	158,414	235,979	+77,565
Office VMT			
Employment[1]	1,364	2,897	+1,533
Daily VMT per Employee[1]	8.5	8.0	-0.5
Total Daily VMT[4]	11,594	23,176	+11,582
Summary			
Total Daily VMT (Residential + Office)	170,008	259,155	89,147

VMT = vehicle miles traveled

[1] Daily VMT is calculated using the per capita and per employee VMT estimates for the 2040 Plus Project scenario because emissions are estimated at the DVSP's buildout year.

Source: SB 743 Analysis (Appendix G)

[2] Assumes an average of 2.65 persons per household in Marina (DOF 2022)

[3] Calculated by multiplying the number of residents by daily VMT per capita

[4] Calculated by multiplying employment by daily VMT per employee

As discussed in the *Project Description*, the DVSP has a planning horizon of approximately 20 years. This analysis estimates operational emissions at year 2030 (i.e., the next State milestone target year) for comparison to the locally-applicable, project-specific 2030 efficiency threshold (discussed further under *Significance Thresholds*) and at year 2040 (i.e., the project's buildout year) for informational purposes.

Building energy use is typically divided into energy consumed by the built environment and energy consumed by uses that are independent of the building, such as plug-in appliances. Non-building energy use, or "plug-in energy use," can be further subdivided by specific end-use (refrigeration, cooking, office equipment, etc.). In California, Title 24 governs energy consumed by the built environment, mechanical systems, and some types of fixed lighting (California Energy Commission 2022). This analysis also accounts for the fact that the project would include solar photovoltaic systems on all low-rise residential buildings (i.e., single- and multi-family residential buildings that are three stories or less) in compliance with Section 110.10 of the 2022 Building Energy Efficiency Standards. The California Long-Term Energy Efficiency Strategic Plan establishes goals for zero net energy (ZNE) new commercial construction by 2030 to be implemented through increasingly stringent iterations of the Title 24 standards (California Public Utilities Commission [CPUC] 2011).[5] Although it is anticipated that these goals would be implemented prior to buildout of the DVSP, these ZNE goals are conservatively not included in the GHG emissions modeling because the timing of implementation is uncertain at this time.

Central Coast Community Energy (3CE), which provides carbon-free electricity, is the default energy provider in the Plan area. However, future residents and tenants of the project could opt out of 3CE and connect to Pacific Gas and Electric (PG&E), which does not provide carbon-free electricity to all customers. According to 3CE, approximately 97 percent of accounts in their service area maintain their enrollment in 3CE; the remaining 3 percent of accounts opt out and connect to PG&E (3CE 2022). Because 3CE procures a greater percentage of its electricity from renewable sources, electricity generated by 3CE produces fewer GHG emissions than electricity generated by PG&E. Therefore, to account for the possibility of dual electricity providers with the Plan area, this analysis assumes that 97 percent of electricity demand generated by the proposed project would be supplied by 3CE and the remaining 3 percent of electricity demand would be supplied by PG&E. Because CalEEMod cannot account for dual electricity providers, CalEEMod was utilized to estimate the amount of electricity demand from the Proposed Project, and the resultant GHG emissions were calculated separately in a standalone document included in Appendix E based on the emission calculation methodology used in CalEEMod (CAPCOA 2017, Appendix A).

3CE's energy intensity factor for CO_2 (i.e., the amount of CO_2 per megawatt-hour [MWh]) is approximately 2 pounds per MWh (3CE 2023). Due to a lack of available data, it was conservatively assumed that the energy intensity factors for CH_4 and N_2O would be the same as those for PG&E in 2040, which are further detailed below and in Table 9.[6] Because 3CE has already achieved carbon-free electricity, it has already met its mandated RPS targets; therefore, it is reasonable to assume that its current energy intensity factors will remain the same through 2040. PG&E's estimated energy intensity factors (i.e., the amount of CO_2, CH_4, and N_2O per MWh) for 2040 are based on the CalEEMod default factors and the regulatory requirements of the RPS. PG&E energy intensity factors that include this reduction are shown in Table 9.

Table 9 Pacific Gas & Electric Energy Intensity Factors

Greenhouse Gas	Energy Intensity Factor (lbs./MWh)[1]
Carbon dioxide (CO_2)	203.93
Methane (CH_4)	0.033
Nitrous oxide (N_2O)	0.004
Source: CalEEMod Version 2022.1	

The amount of water used and the amount of wastewater generated by a project results in indirect GHG emissions. These emissions are a result of the energy used to supply, convey, and treat water and wastewater. In addition to the indirect GHG emissions associated with energy use, the wastewater treatment process itself can directly emit both CH_4 and N_2O. Development facilitated by the DVSP would be subject to 2022 CALGreen (or the most current code at the time of development), which requires a 20 percent increase in indoor water use efficiency. Thus, in order to account for compliance with CALGreen, a 20 percent reduction in indoor water use was included in

[5] A zero net energy building is defined as an energy-efficient building where, on a source energy basis, the actual annual consumed energy is less than or equal to the on-site renewable generated energy (CPUC 2019).
[6] This assumption is conservative because 3CE currently has a greater percentage of renewables procurement than is assumed for PG&E in 2034; therefore, its energy intensity factors for CH_4 and N_2O are likely lower.

the water consumption calculations. In addition to water reductions associated with building code compliance, the GHG emissions from the energy used to transport the water account for compliance with the RPS. The default wastewater assumptions for both the DVSP and the existing use were adjusted to account for the fact that the wastewater generated at the project site is treated by the Monterey One Water treatment facility, which only utilizes anaerobic digestor processes with no facultative lagoons or septic tanks (Monterey One Water 2022). Emissions modelling does not account for the provisions of Assembly Bill 1668, which sets daily indoor residential water use standards of 55 gallons per capita through 2024, 52.5 gallons per capita through 2029, and 50 gallons per capita from 2030 on. The provisions of Assembly Bill 1668 were not included in the GHG emissions modeling because the timing and mechanisms of implementation are uncertain at this time.

For mobile sources, CO_2 and CH_4 emissions were quantified in CalEEMod using the net new vehicle trips and VMT estimates for residential and office land uses provided in the traffic study and SB 743 Analysis prepared by Kimley Horn (Appendix F and Appendix G, respectively). Section 3, *Air Quality*). As detailed in Section 3, *Air Quality*, based on the SB 743 Analysis, the retail uses associated with the proposed project would generate no net new VMT; therefore, mobile source emissions were not estimated for the retail land uses because no net new emissions would be generated as compared to existing conditions in the NCCAB.

Impact Analysis

a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction Emissions

Construction of individual projects facilitated by the DVSP would generate temporary GHG emissions primarily from operation of construction equipment on site, as well as from vehicles transporting construction workers to and from project sites and heavy-duty trucks transporting building materials and soil. As shown in Table 10, construction associated with the proposed project would generate 61,206 MT of CO_2e. Amortized over a 30-year period, construction associated with the project would generate 2,448 MT of CO_2e per year. GHG emissions are cumulative; therefore, total annual emissions include the amortized construction emissions added to operational emissions, which are discussed under "*Operational Emissions*," below, for informational purposes only.

Table 10 Estimated Construction Emissions of Greenhouse Gases

Year	Annual Emissions (MT of CO_2e/year)
2024	4,603
2025	5,474
2026	4,081
2027	4,007
2028	3,949
2029	3,867
2030	3,795
2031	3,725
2032	3,671
2033	3,597
2034	3,539
2035	3,483
2036	3,423
2037	3,367
2038	3,326
2039	3,290
2040	9
Total Construction Emissions	**61,206**
Amortized over 25 years	**2,448**

MT of CO_2e = metric tons of carbon dioxide equivalent

See Appendix E for CalEEMod results.

Operational Emissions

Operation of development facilitated by the project would generate GHG emissions associated with area sources (e.g., landscape maintenance), energy and water usage, vehicle trips, and wastewater and solid waste generation and removal. The annual operational GHG emissions are combined with the amortized construction emissions to determine overall project GHG emissions.

Annual operational emissions resulting from the project, including reductions from project design features are summarized in Table 11. The project would generate approximately 24,134 MT of CO_2e per year. As previously stated, this is provided for informational purposes only and is not used in the environmental impact analysis.

Table 11 Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Project Emissions (MT of CO_2e)[1]
Construction	**2,448**
Area	78
Energy	7,560
Solid Waste	941
Water	413
Mobile	12,694
Total Project Emissions	**24,134**

See Appendix E for CalEEMod results.
[1] Provided for informational purposes only.

As detailed under threshold (b) below, the project would not conflict with local and State GHG reduction plans, and therefore, emissions would be less than significant. Quantified project emissions are provided only for informational purposes.

LESS THAN SIGNIFICANT IMPACT

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

The project's consistency with the 2022 Scoping Plan, AMBAG 2045 MTP-SCS, and Marina General Plan are discussed in the subsections below.

2022 Scoping Plan

There are numerous State plans, policies, and regulations adopted for the purpose of reducing GHG emissions. The principal State plan and policy is AB 32, the California Global Warming Solutions Act of 2006, as well as SB 32. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020 and the goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030.

The 2022 Scoping Plan identifies plans and regulations and strategies that are to be implemented at the State and project level that will reduce GHG emissions consistent with State policies with a target of 85 percent below 1990 levels by 2045 which is the equivalent of carbon neutrality by 2045. As described above in the *Methodology* section, the state recommends determining whether a proposed residential or mixed-use residential development would align with the 2022 Scoping Plan by assessing if the project is consistent with all the key project attributes identified in Table 3 of Appendix D of the 2022 Scoping Plan. The project's consistency with attributes identified in Table 3 of Appendix D of the 2022 Scoping Plan is shown below in Table 12. As discussed therein, the DVSP would not consistent with these attributes and accordingly would be consistent with the 2022 Scoping Plan.

Table 12 2022 Scoping Plan Consistency for GHG Emissions

Key Project Attribute	Consistency
Transportation Electrification	
Provides EV charging infrastructure that, at minimum, meets the most ambitious voluntary standard of the California Green Building Standards Code at the time of project approval.	**Consistent.** Development facilitated by the DVSP would be required to comply with the provision of EV charging infrastructure pursuant to the California Green Building Code. Therefore, the DVSP would be consistent with this policy.
VMT Reduction	
Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently serviced by existing utilities and essential public services (e.g., transit, streets, water, sewer)	**Consistent.** The DVSP would facilitate primarily redevelopment in the already built-out Downtown area, and would facilitate infill development on underutilized lands in the Downtown area. Additionally, the Downtown area is presently served by existing water, sewer, transit, and other public services. Therefore, the DVSP would be consistent with this policy.
Does not result in the loss or conversion of natural and working lands	**Consistent.** As discussed in Section 2, *Agriculture and Forestry Resources,* there are no agricultural or forestry uses in the Downtown area. Marina's downtown area is built-out and does not contain natural or working lands, and the project would not result in the loss or conversion of natural and working lands. Therefore, the DVSP would be consistent with this policy.
Consists of transit-supportive densities (minimum of 20 residential dwelling units per acre), or Is in proximity to existing transit stops (within a half mile,) or Satisfies more detailed and stringent criteria specified in the region's SCS	**Consistent.** The DVSP would facilitate transit-oriented development in the Core zone near the MST Marina Transit Exchange, which is centrally located in the Specific Plan area and is served by MST routes 17, 18, 20, and 61. Therefore, the DVSP would be consistent with this policy.
Reduces parking requirements by: ▪ Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or ▪ Providing residential parking supply at a ratio of less than one parking space per dwelling unit; or ▪ For multi-family development, requiring parking costs to be unbundles from costs to rent or own a residential unit	**Consistent.** The DVSP would facilitate higher-density residential, commercial, and mixed-use development within the City's Downtown area, thereby reducing the need for trips and parking. In addition, the DVSP includes parking development standards which will be reviewed for consistency by the City on a project-by-project basis.
At least 20 percent of units included are affordable to lower-income residents	**Consistent.** The DVSP does not propose specific development, and it would be speculative to determine if development facilitated by the DVSP would include affordable housing. However, Marina Municipal Code Section 17.48.030 includes inclusionary housing requirements which any development under the DVSP would be required to be consistent with. In addition, Goal LU-4 of the DVSP is to provide a variety of affordable, high-quality housing options for people to live in Downtown, and it is a primary goal of the DVSP to provide affordable housing in Marina. While a percentage of affordable units cannot be determined at this time, the goals of the DVSP do not conflict with this policy.

Key Project Attribute	Consistency
Results in no net loss of existing affordable units	**Consistent.** As discussed further in Section 14, *Population and Housing,* implementation of the DVSP would involve demolition of some existing housing in order to develop new units. However, new housing added to the Plan area would support a greater number of residents and would provide a greater number of affordable units. Therefore, there would be no net loss of existing affordable units and the DVSP would be consistent with this policy.
Building Decarbonization	
Uses all-electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking	**Consistent**. The DVSP does not propose specific development, and it would be speculative to determine if development facilitated by the DVSP would eliminate natural gas. However, Policies LU-5.1, -5.2, -5.3, and -5.6 of the DVSP require consistency with Title 24 requirements and encourage decarbonization and energy efficiency. Projects will be reviewed by the City to encourage these policies, while use of all electrical appliances cannot be confirmed at this time, the goals of the DVSP do not conflict with this policy.

AMBAG MTP/SCS and Marina General Plan

In June 2022, AMBAG adopted the 2045 Metropolitan Transportation Plan/Sustainable Community Strategy (MTP/SCS). The key goal of the MTP/SCS is to achieve GHG emission reduction targets through integrated land use and transportation strategies. The DVSP includes several elements that would reduce VMT and the associated mobile source GHG emissions through integrated transportation and land use planning. The DVSP would allow for higher densities in commercial and mixed-use developments in the Core zone with transit oriented development, particularly around the Marina Transit Exchange. In addition, the DVSP would encourage the development of residential and commercial uses in close proximity in the Transition zone. The DVSP would also include two mixed-use nodes in the Plan area with multi-story mixed-use buildings containing residential and commercial/retail uses. Additionally, the DVSP includes objectives to create a safe and efficient pedestrian and bicycle pathway network in the Plan area; improve pedestrian access to transit facilities; and promote compact, mixed-use development that encourages use of transit, walking, and bicycling. Further detail on the DVSP’s consistency with goals contained in the AMBAG MTP/SCS is shown in Table 13, while consistency with goals contained in the Marina General Plan are shown in Table 14. As shown in the tables, the DVSP would be consistent with goals and policies of the AMBAG RTP/SCS and Marina General Plan that are relevant to reducing GHG emissions. Therefore, the project would be consistent applicable plans and policies related to reducing GHG emissions; this impact would be less than significant.

Table 13 AMBAG 2045 MTP/SCS Consistency for GHG Emissions

Policy	Consistency
Access and Mobility. Provide convenient, accessible, and reliable travel options while maximizing productivity for all people and goods in the region	**Consistent** DVSP Policy LU-1.7 aims to "encourage the consolidation of small contiguous lots to allow for more cohesive redevelopment of the Specific Plan area." Related strategies include creating high-density and high-intensity multiple use areas, allowing compact form and multiple use patterns of development, and encouraging pedestrian and bicycle linkages to provide better connectivity and more opportunities for active transportation. Furthermore, the overarching goal of the Mobility Chapter is to promote an "active, engaged, human-oriented streetscape where the automobile is simply one of many modes of travel for people to move in and around Downtown to work, shop, and recreate." Related strategies include developing a pedestrian and bicycle network throughout the Plan area, installing bicycle parking at all public facilities and in the right-of-way, encouraging new development to include end-of-trip support facilities for bicyclists, improving pedestrian access to transit facilities, and expanding bus routes within Marina. In addition, the vision for the Core district of the DVSP is to create transit oriented development, particularly around the Marina Transit Exchange, which houses stops for several bus routes. These project features would facilitate a variety of travel options. Therefore, the DVSP would create a balanced land use/transportation system that would provide convenient, accessible, and reliable travel options, which would be consistent with the Access and Mobility policy.
Environment. Promote environmental sustainability and protect the natural environment.	**Consistent** DVSP Goal LU-5, Environment and Sustainability, promotes "a Downtown that supports innovation in design and employs Green Building technology, employs Net Zero Building principles, and is designed to create more comfortable indoor and outdoor environments." This goal is supported by Policy 5.2, which states "In addition to meeting the requirements set by Title 24 of the California Building Code, consider additional measures such as energy efficient building design, passive heating/cooling strategies, wastewater technologies, water use reduction, water efficient fixtures, and green building materials. It is important for project applicants to go above and beyond the minimum requirements for energy efficiency set by Title 24 of the California Building Code, recognizing the benefits of green building features for future residents and the community as a whole." Furthermore, construction of the proposed residential and non-residential buildings would comply with the 2022 California Building Energy Efficiency Standards for Residential and Non-residential Buildings and CALGreen (California Code of Regulations Title 24, Parts 6 and 11), or later versions as they are published. Therefore, the DVSP would promote environmental sustainability and protect the natural environment and would be consistent with the Environment policy.

Policy	Consistency
Healthy Communities. Protect the health of our residents; foster efficient development patterns that optimize travel, housing, and employment choices and encourage active transportation.	**Consistent** The DVSP includes several provisions that promote active lifestyles, including a policy to implement bicycle and pedestrian networks throughout the Plan area. The overarching goal of the Mobility Chapter includes creating a downtown that promotes an “active, engaged, human-oriented streetscape where the automobile is simply one of many modes of travel for people to move in and around Downtown to work, shop, and recreate.” Related strategies include developing a pedestrian and bicycle network throughout the Plan area, installing bicycle parking at all public facilities and in the right-of-way, encouraging new development to include end-of-trip support facilities for bicyclists, and improving pedestrian access to transit facilities. Furthermore, the mixed-use nature of the DVSP would encourage residents and employees to actively commute between destinations due to the close proximity of different uses. By developing a land use plan that encourages the use of active transportation, the DVSP would reduce residents’ and employees’ reliance on automobiles, thereby minimizing the associated mobile source criteria air pollutant and GHG emissions as well as health impacts. As a result, the DVSP would be consistent with the Healthy Communities policy.
System Preservation and Safety. Preserve and ensure a sustainable and safe regional transportation system.	**Consistent** The overarching goal of the Mobility Chapter of the DVSP is to promote an “active, engaged, human-oriented streetscape where the automobile is simply one of many modes of travel for people to move in and around Downtown to work, shop, and recreate.” Related strategies include developing a pedestrian and bicycle network throughout the Plan area, installing bicycle parking at all public facilities and in the right-of-way, encouraging new development to include end-of-trip support facilities for bicyclists, improving pedestrian access to transit facilities, and expanding bus routes within Marina. The Mobility Chapter also involves implementation of the City’s Pedestrian and Bicycle Master Plan, which includes continuous sidewalks on both sides of the street on all downtown streets and bikeways on key thoroughfares. Therefore, the DVSP would promote a sustainable and safe transportation system in the Plan area. As a result, the DVSP would be consistent with the System Preservation and Safety policy.

Source: AMBAG 2022

Table 14 Marina General Plan Policy Consistency for GHG Emissions

Marina General Plan Policy	Discussion
Community Goal 1.18: During the preparation of this General Plan the following goals, phrased in the form of planning principles, provided the basis for developing appropriate land use, infrastructure, and community design proposals for specific areas of the city, and for judging among several citywide General Plan alternatives and providing direction for selecting the preferred alternative. As incorporated into the General Plan, these framework goals provide the overall direction necessary to ensure that, as it grows, the city will be well functioning and attractive; that it will balance the needs of residents and business; and that appropriate use will be made of its natural, human and economic resources: 6. A balanced land use/transportation system which minimizes traffic congestion, noise, excessive energy consumption, and air pollution.	**Consistent** DVSP Policy LU-1.7 aims to "encourage the consolidation of small contiguous lots to allow for more cohesive redevelopment of the Specific Plan area." Related strategies include creating high-density and high-intensity multiple use areas, allowing compact form and multiple use patterns of development, and encouraging pedestrian and bicycle linkages to provide better connectivity and more opportunities for active transportation. Furthermore, the overarching goal of the Mobility Chapter is to promote an "active, engaged, human-oriented streetscape where the automobile is simply one of many modes of travel for people to move in and around Downtown to work, shop, and recreate." Related strategies include developing a pedestrian and bicycle network throughout the Plan area, installing bicycle parking at all public facilities and in the right-of-way, encouraging new development to include end-of-trip support facilities for bicyclists, improving pedestrian access to transit facilities, and expanding bus routes within Marina. In addition, the vision for the Core district of the DVSP is to create transit oriented development, particularly around the Marina Transit Exchange, which houses stops for several bus routes. Therefore, the DVSP would create a balanced land use/transportation system that would minimize excessive energy consumption and associated criteria air pollutant and GHG emissions.
Community Land Use Policy 2.4(2): The City shall prevent under-utilization of land within its Urban Growth Boundary (UGB) that is appropriate for community development, in order to ensure that development proceeds in an orderly and consistent manner and to minimize the dispersal of future growth in Monterey County to outlying areas with potentially higher natural resource value. With respect to phasing and timing, whenever feasible, the City shall encourage new development to locate within the existing developed portion of Marina and Marina's former Fort Ord in preference to the development of currently vacant, undeveloped lands located within the City's UGB.	**Consistent** The DVSP would facilitate new development and redevelopment within the UGB, thereby avoiding the dispersal of future growth to outlying areas that could result in high VMT per person. Therefore, the DVSP would be consistent with Community Land Use Policy 2.4(2).
Housing Policy 2.31: It is the City of Marina's intent to promote construction of new housing that is environmentally and socially responsible and that adheres to the following policies: 10. New housing shall be built to development and construction standards that conserve water and energy.	**Consistent** DVSP Goal LU-5, Environment and Sustainability, promotes "a Downtown that supports innovation in design and employs Green Building technology, employs Net Zero Building principles, and is designed to create more comfortable indoor and outdoor environments." This goal is supported by Policy 5.2, which states "In addition to meeting the requirements set by Title 24 of the California Building Code, consider additional measures such as energy efficient building design, passive heating/cooling strategies, wastewater technologies, water use reduction, water efficient fixtures, and green building materials. It is important for project applicants to go above and beyond the minimum requirements for energy efficiency set by Title 24 of the California Building Code, recognizing the benefits of green building features for future residents and the community as a whole." Furthermore, construction of the proposed

Marina General Plan Policy	Discussion
	buildings would comply with the applicable 2022 California Building Energy Efficiency Standards and CALGreen (California Code of Regulations Title 24, Parts 6 and 11), or later versions as they are published. Therefore, construction of new housing facilitated by the DVSP would be environmentally responsible and built to development and construction standards that conserve water and energy.
Community Infrastructure 3.3.1: Develop future areas of the City, and redevelop existing developed areas, in patterns and to densities that make the provision of frequent regional and local transit economically feasible. **Transportation Policy 3.23 (Design for Transit)**: All future development and redevelopment shall be designed to promote cost-effective local and regional transit service and minimize dependency on the private automobile for work, shopping, recreation, and other trip purposes by requiring bus stops and/or bays in appropriate locations where there are direct transit access routes for pedestrians and bicyclists.	**Consistent** DVSP Policy LU-1.7 aims to "encourage the consolidation of small contiguous lots to allow for more cohesive redevelopment of the Specific Plan area." Related strategies include creating high-density and high-intensity multiple use areas and allowing compact form and multiple use patterns of development. In addition, the vision for the Core district of the DVSP is to create transit oriented development, particularly around the Marina Transit Exchange, which houses stops for several bus routes. Furthermore, strategies in the Mobility include developing a pedestrian and bicycle network throughout the Plan area, installing bicycle parking at all public facilities and in the right-of-way, improving pedestrian access to transit facilities, and expanding bus routes within Marina. Therefore, the DVSP would redevelop existing developed areas in patterns and to densities that would facilitate the provision of frequent, cost-effective regional and local transit.
Transportation Policy 3.32: To ensure the feasibility of future transit service, 80 percent or more of the City's residential growth shall be located within the transit-served corridors designated in Figure 3.2. Furthermore, all future residential development within 1,500 feet (approximately 1/4 mile) of designated transit routes shall be governed by minimum density requirements. For new development within already-developed portions this minimum density shall be 6.5 units per net acre (i.e., the area of platted lots, exclusive of all streets and public facilities). The minimum density for newly developing or redeveloping areas of the City shall be 7 units per gross acre (i.e., total development area excluding major roads, public facilities and open space, but including local streets and local open space features and amenities). See the Community Land Use and Development Element (Chapter 2) for other related policies and guidelines.	**Consistent** The Plan area is focused on two transit-served corridors along Reservation Road and Del Monte Boulevard. The DVSP allows residential densities of up to 70 units per acre in the Core zone, up to 50 units per acre in the Transition zone, and up to 37 units per acre in the Multifamily Residential zone. Therefore, the DVSP would be consistent with the requirements of Transportation Policy 3.32 and would ensure the feasibility of future transit service.

Marina General Plan Policy	Discussion
Community Infrastructure 3.3.2: Reduce the length and travel time of work trips generated by local residents by maximizing opportunities for residents to work within the community. **Community Infrastructure Policy 3.3.4**: Reduce the number and length of vehicular trips and limit overall traffic congestion by promoting land use patterns which allow for multipurpose trips and trip deferral during peak travel times. **Transportation Policy 3.34.6** **(New Development and Redevelopment)**: New development and redevelopment within the City of Marina should be designed with a network of streets to disperse traffic loads evenly and provide route options and direct travel for pedestrians and bicyclists.	**Consistent** DVSP Policy LU-1.7 aims to “encourage the consolidation of small contiguous lots to allow for more cohesive redevelopment of the Specific Plan area.” Related strategies include creating high-density and high-intensity multiple use areas and allowing compact form and multiple use patterns of development. By co-locating residential and commercial development, the DVSP would reduce the length of work trips and allow for multipurpose trips by providing commercial space and employment opportunities in close proximity to residences. The Mobility Chapter also involves implementation of the City’s Pedestrian and Bicycle Master Plan, which includes continuous sidewalks on both sides of the street on all downtown streets and bikeways on key thoroughfares. Therefore, the DVSP would provide route options and direct travel for pedestrians and bicyclists.
Community Infrastructure Policy 3.3.5: The City of Marina shall ensure that walking and bicycling routes are integral parts of street design and form a safe and preferred transportation network. **Community Infrastructure Policy 3.3.8**: Link existing and future areas of the City with an integrated system of roads, transit, footpaths and bikeways that connects neighborhoods, commercial areas, schools, parks, and other major community-serving destinations. **Community Infrastructure Policy 3.3.16**: The City of Marina shall consider incorporating facilities, such as bikeways, sidewalks and recreational trails for non-vehicular users, when constructing or improving transportation facilities and when reviewing new development and redevelopment proposals. **Transportation Policy 3.34.1** **(Pedestrian Network Map)**:The City of Marina shall implement the Pedestrian Network Map shown in Figure 3-3. **Transportation Policy 3.34.2** **(Bicycle Network Map)**: The City of Marina shall implement the Bicycle Network Map shown in Figure 3-4. **Transportation Policy 3.38.2** **(Pedestrian Connections)**: The City of Marina shall encourage maximum linkages for pedestrian connections, especially to provide access to parks, schools and employment centers. Enhanced pedestrian connections and crossings shall also be provided at appropriate locations within one-half mile radius of future rapid transit hubs. **Transportation Policy 3.38.3** **(Pedestrian Amenities)**: Pedestrian amenities should be provided in pedestrian activity areas. These include but are not limited to seating, news	**Consistent** The overarching goal of the Mobility Chapter of the DVSP is to promote an “active, engaged, human-oriented streetscape where the automobile is simply one of many modes of travel for people to move in and around Downtown to work, shop, and recreate.” Related strategies include developing a pedestrian and bicycle network throughout the Plan area, installing bicycle parking at all public facilities and in the right-of-way, encouraging new development to include end-of-trip support facilities for bicyclists, improving pedestrian access to transit facilities, and expanding bus routes within Marina. The Mobility Chapter also involves implementation of the City’s Pedestrian and Bicycle Master Plan, which includes continuous sidewalks on both sides of the street on all downtown streets and bikeways on key thoroughfares. The Design Standards and Guidelines include guidelines to design primary pedestrian entries that are accessible directly from public streets and sidewalks, strategically locate wayfinding signs throughout the Plan area, place pedestrian amenities in the Furnishings Zone or Frontage Zone to avoid interference with the Throughway Zone of sidewalks, and install pedestrian amenities (e.g., benches, trash receptacles) at regular intervals along major corridors and at key locations. Therefore, the DVSP would integrate walking and bicycling routes into street design to form a safe and preferred land use plan and transportation network that would encourage the use of walking and bicycling as alternatives to automobiles, thereby reducing GHG emissions from mobile sources.

Marina General Plan Policy	Discussion
racks, water fountains, way finding aids and public art. The City shall ensure that where provided these facilities are placed and organized to minimize interruptions to the flow of people walking. **Transportation Policy 3.38**: Whenever existing roadways are improved or when new roadways are approved or constructed, sidewalks should be included. **Transportation Policy 3.38.4 (Pedestrian Entrances)**: New non-residential development and redevelopment shall be designed such that direct pedestrian access to easily identifiable building entrances is provided from the street-side.	
Community Infrastructure Policy 3.3.12: Minimize the consumption of water for urban purposes and make maximum possible use of recycled water. **Water Supply and Management Policy 3.53**: The City of Marina, in conjunction with MCWD, shall continue to promote and require water-saving devices. Specifically, the following measures shall be required: 1. All new multi-family units shall be required to install water meters for each unit. 2. A study shall be undertaken to determine the feasibility of requiring separate metering of spaces within new commercial and industrial buildings and existing duplexes, triplexes, and other multifamily structures. Metering shall be required if found to be physically and economically feasible. 3. All new construction shall use low-flow water fixtures and ultralow-flush toilets. The MCWD and the City should continue to require that all existing residential units and commercial properties be retrofitted with low-flow fixtures upon resale. 4. The City shall support MCWD rebate programs to replace older, more water-consumptive fixtures.	**Consistent** DVSP Goal LU-5, Environment and Sustainability, promotes “a Downtown that supports innovation in design and employs Green Building technology, employs Net Zero Building principles, and is designed to create more comfortable indoor and outdoor environments.” This goal is supported by Policy 5.2, which states “In addition to meeting the requirements set by Title 24 of the California Building Code, consider additional measures such as energy efficient building design, passive heating/cooling strategies, wastewater technologies, water use reduction, water efficient fixtures, and green building materials. It is important for project applicants to go above and beyond the minimum requirements for energy efficiency set by Title 24 of the California Building Code, recognizing the benefits of green building features for future residents and the community as a whole.” Furthermore, construction of the proposed buildings would comply with the applicable 2022 CALGreen (California Code of Regulations Title 24, Part 11), or later versions as they are published. Therefore, the DVSP would minimize the consumption of water for urban purposes and make maximum possible use of recycled water.
Community Infrastructure Policy 3.3.15: Promote reductions in the generation of non-recyclable solid waste.	**Consistent** Strategies in the Public Facilities and Infrastructure of the DVSP include working with the private solid waste collection company to increase recycling opportunities downtown, encouraging restaurants to participate in food compost waste programs, and providing trash enclosures that accommodate all recyclable needs. Therefore, the DVSP would promote reductions in the generation of non-recyclable solid waste.

Source: City of Marina 2010

LESS THAN SIGNIFICANT IMPACT

9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	□	□	■	□
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	□	□	■	□
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	■	□	□	□
d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	■	□	□	□
e. For a project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	□	□	■	□
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	□	□	■	□
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	□	□	■	□

a. *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

b. *Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

The Specific Plan would facilitate the construction of new residential and commercial land uses that could involve the use, storage, disposal, or transportation of hazardous materials. Use of hazardous materials would generally consist of solvents, paints, chemicals used for cleaning and building maintenance, and landscaping supplies. Use of such materials would be similar to existing conditions in the Plan area, which is currently developed.

Projects facilitated by the Specific Plan would be subject to applicable local, State, and federal hazardous material regulations that minimize impacts related to hazardous materials. Hazardous materials would be required to be transported under Department of Transportation regulations. Specific Plan buildout would be subject to regulatory programs such as those overseen by the County of Monterey Health Department, RWQCB, and the Department of Toxic Substances Control (DTSC). These agencies require applicants for development of potentially contaminated properties to perform investigation and cleanup under their oversight if the properties are found to be contaminated with hazardous substances. Therefore, compliance with existing laws and regulations governing the transport, use, storage, disposal, or release of hazardous materials and wastes would reduce impacts to a less than significant level.

LESS THAN SIGNIFICANT IMPACT

c. *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?*

d. *Would the project be located on a site that is included on a list of hazardous material 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?*

Redevelopment of portions of the Specific Plan area with known or potential contamination of soil, groundwater, and/or soil vapor (subsurface contamination) may result in the disturbance of hazardous materials, presenting a risk of human exposure. New development could also present potential risk of exposure to contamination associated with commercial and/or industrial land use. Hence, development and redevelopment pursuant to the Specific Plan could increase the potential for exposure to subsurface contamination hazards. Impacts could be potentially significant and checklist items c and d will be analyzed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

e. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?*

The Marina Municipal Airport is located just outside the northeast border of the Specific Plan area. The Marina Municipal Airport Land Use Compatibility Plan (ALUCP) contains standards and policies including allowable land uses and development within the airport and in designated approach and traffic pattern zones. The 2019 ACLUP (Monterey County Airport Land Use Commission 2019) indicates that the Specific Plan area is located within safety zone 7, Airport Influence Area (AIA), but is outside all other safety zones. The AIA zone (zone 7) includes all other portions of regular aircraft traffic patterns based upon the Section 14 of the Code of Federal Regulations Part 77 conical surface from the 2018 airport layout plan. The aircraft accident risk level is considered to be low within the AIA zone.

Implementation of the Specific Plan would intensify development near the Marina Municipal Airport, but the land use types and proximity of development to the airport would be similar to existing conditions. The Plan area is currently developed as the City's Downtown area. Buildout of the Specific Plan would not introduce prohibited uses for the AIA zone, such as hazards to flight or outdoor stadiums (Monterey County Airport Land Use Commission 2019). Other development conditions would be reviewed and disclosed as part of certain real estate transactions, as required by state law. Given the type of development facilitated by the DVSP and pursuant to compliance with existing requirements, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The proposed project would intensify development within the City's Downtown area, which could result in an increase in traffic that could interfere with emergency response. However, as described in Section 14, *Population and Housing*, the project would not result in unplanned population growth. The DVSP includes strategies to improve circulation within the Plan area and reduce congestion, but would not alter circulation routes or connectivity. The City would require public improvements as part of the permitting process for individual projects in order to prevent compromise of emergency response access. Therefore, the project would result in a less than significant impact regarding emergency response and evacuation.

LESS THAN SIGNIFICANT IMPACT

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

A wildfire is an uncontrolled fire in an area of combustible vegetation. Wildfires differ from other fires in that they take place outdoors in grassland, woodlands, brushland, scrubland, peatland, and other wooded areas that act as a source of fuel, or combustible material. Topography, slope, vegetation type and condition, and weather and atmospheric conditions are the primary factors in determining an area's susceptibility to wildfire.

As discussed in Section 20, *Wildfire*, the Plan area is not within an area associated with a high degree of wildfire hazards. The facilitation of development projects within the existing downtown area would not exacerbate the existing degree of wildfire hazards in the Plan area. Nor would the project add new development in areas that are highly susceptible to wildfires. The Plan area is limited to a currently developed area. Therefore, impacts associated with exposure of people or structures to wildfires would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	□	□	■	□
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	■	□	□	□
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) Result in substantial erosion or siltation on- or off-site;	□	□	■	□
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	□	□	■	□
(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	□	□	■	□
(iv) Impede or redirect flood flows?	□	□	■	□
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	□	□	■	□
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	■	□	□	□

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

The Plan area is currently developed. Implementation of the Specific Plan would facilitate redevelopment but would not substantially alter the amount of impervious surface area. Stormwater runoff would continue to connect to the City's stormwater drainage system at similar volumes to existing conditions.

Individual projects would be required to comply with Chapter 8.46, Urban Storm Water Quality Management and Discharge Control, of Marina Municipal Code. Chapter 8.46 requires elimination of illegal discharges, protection of watercourses, and includes BMP guidance for construction sites and permitted activities. Compliance with existing regulations would reduce impacts to a less than significant level.

LESS THAN SIGNIFICANT IMPACT

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The proposed project would result in an increase in water demand in the Plan area, which could result in a potentially significant impact related to groundwater supplies and sustainable groundwater management. Therefore, thresholds b and e will be analyzed in detail in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

c.(i) Would the project 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 result in substantial erosion or siltation on- or off-site?

c.(ii) Would the project 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

c.(iii) Would the project 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 that would 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?

c.(iv) Would the project 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 impede or redirect flood flows?

As described above, the Plan area is developed and consists mostly of impervious surface area. Redevelopment of parcels pursuant to the Specific Plan would not substantially alter the amount of impervious surface area, and thus would not substantially alter the area's drainage patterns. Redeveloped parcels would connect to the City's stormwater drainage system similar to existing conditions. The DVSP would include Goal PF-1 and associated Policies PF-1.1 through PF-1.4, which would aim to ensure that there is adequate water service, wastewater service, and stormwater and drainage facilities in the Downtown area. Furthermore, the Specific Plan includes design guidelines to increase percolation and prevent water pollution, including requirements for the use of permeable materials and requirements for street trees and planted park strips ("Sidewalk and Plazas" Design Guideline). Implementation of the Specific Plan would not alter the course of a stream or river or otherwise result in substantial effects related to water quality or stormwater drainage. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

The Plan area is approximately 0.5 mile from the Pacific Ocean. Dunes on the west site of SR 1 buffer the City of Marina from the ocean. According to tsunami inundation mapping by the California Department of Conservation, the Plan area is not within a tsunami inundation zone (DOC 2023). No other large body of water exists in the proximity of the Plan area that could result in a seiche. The majority of the Plan area is classified by the Federal Emergency Management Agency (FEMA) as Zone X, Area of Minimal Flood Hazard. Portions of the Plan area west of Del Monte Boulevard are classified as Zone A and Zone AE, Special Flood Hazard Areas (FEMA 2017).

Implementation of the Specific Plan would intensify development within the Plan area, thus adding structures and other materials that could increase the amount of pollutants released in the event of flood inundation. However, the overall impact of pollutant release due to a flood event would be similar to existing conditions, as the Plan area is currently entirely developed as Downtown Marina. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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11 Land Use and Planning

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

a. Would the project physically divide an established community?

Specific Plan implementation would facilitate development in the City's Downtown area to revitalize and enhance it by increasing commercial and residential mixed uses in key areas. Increased density and mixed-use development would integrate with the adjacent land uses and be accessible from them by established roadways and bicycle routes; furthermore, all uses would be increasingly accessible by pedestrian traffic with Specific Plan implementation. Thus, buildout under the Specific Plan would not physically divide an established community; rather there would be increased integration of the Downtown area and adjacent uses. There would be no impact relating to division of an established community.

NO IMPACT

b. Would the project 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?

Existing development in the Specific Plan area consists of mostly residential and commercial uses, with some light industrial and visitor-serving uses along Del Monte Boulevard and Reservation Road. Commercial areas are generally located along Reservation Road and Del Monte Boulevard, where land use designations include Retail/Service on the southeast side of Del Monte Boulevard and Retail/Service along both sides of Reservation Road, intermixed with Multi-Family Residential. Commercial development in these corridors consists of single-story strip-mall format shopping centers, some of which are fronted by large parking areas. Residential uses generally occur outward from these commercial areas, including southeast and northeast of Del Monte Boulevard and Reservation Road. In brief, a mix of uses characterizes the Downtown area as it appears on the existing land use map, from the intersection of Del Monte Boulevard and Reservation Road, from extending roughly south and east along each roadway respectively. The rest of the area is designated for single-family and public facilities uses to the boundaries of the Downtown region.

The boundaries of the Specific Plan area are shown in Figure 2 under Project Location. Situated as it is in a central part of the city, the Specific Plan area includes and is surrounded by a mix of uses as diverse single- and multi-family residential, commercial, open space, research, and visitor-serving.

More specifically, the Plan area is bordered by single-family residential uses to the north, west, and south; open space adjacent to the Marina Municipal Airport to the northeast, and Locke-Paddon Park to the northwest. Other adjacent uses include multi-family residential and commercial. The Marina Municipal Airport is directly east of the Downtown area, along Reservation Road.

Implementation of the Specific Plan would revitalize the Downtown area of the city in an orderly manner, integrating urban-style, mixed-use development in a core area and transitional, more suburban sections at the edges. The primary goal of the Specific Plan is to establish the Downtown area of Marina as a vital destination with a mix of residential, commercial, retail, dining, and entertainment uses, served by an improved transportation network. Over the planning horizon of approximately 20 years, Specific Plan implementation would contribute to the city's ability to capture economic opportunities that otherwise might be filled by neighboring jurisdictions. To achieve this goal, the Specific Plan encourages a mix of new uses within 0.5 mile of transit centers that would further encourage pedestrian and other non-automobile travel within the area. The Specific Plan would nearly double the number of residential units in the Downtown area, compared to existing densities. It would also more than double the retail and office space square footage. Both would be accomplished through greater densities and building heights, condensing land uses and making streetscapes an attractive component of the overall design. Table 15 shows the existing and proposed densities under the Specific Plan, with their percentage increase.

Table 15 Specific Plan Land Use Densities

Existing Densities by Use	Proposed Densities by Use	Total Densities by Use	% Increase*
Residential			
2,301 units	2,904 units	5,205 units	126%
Commercial			
691,705 sf	874,669 sf	1,566,374 sf	126%
Office & Light Manufacturing			
314,053 sf	510,528 sf	824,581 sf	263%

* numbers rounded to the nearest percentage point

Consistency Analysis

The following provides a consistency analysis for the land use plans, policies, and regulations applicable to the Specific Plan area and its implementation.

General Plan Consistency

The City of Marina approved a resolution to amend its General Plan in 2008, including changing Policy 5.11 "to require preparation of a Specific Plan for Downtown Vitalization Area" and including an overlay to the Central Marina Sub Area (City of Marina 2010a). The resolution also removed Policy 2.41.6 that required development in the proposed "Core Retail Area" to prepare a separate specific plan, and added Policy 2.63.51 defining the Downtown Vitalization Area.

The proposed Specific Plan is designed to build on the goals and objectives of the City of Marina General Plan, the recommendations of the City's Downtown Vision Plan, Downtown Design Guidelines, and the policies of the Pedestrian and Bike Master Plan.

When implemented fully, the Specific Plan would create a unique Downtown core with pedestrian-oriented development to serve residents and visitors to the city. The City has determined that the Downtown area "never fully developed as a traditional downtown," and the Specific Plan would address this shortcoming. Table 16 below lists General Plan policies in place to avoid or mitigate environmental effects and discusses Specific Plan consistency with these policies.

As shown above, the Specific Plan advances the goals and policies of the General Plan in regard to avoidance and mitigation of environmental effects. By concentrating growth within Downtown Marina and progressing towards more dense, walkable, development, implementation of the Specific Plan would not conflict with the City's sustainability and conservation goals.

Metropolitan Transportation Plan/Sustainable Communities Strategy

AMBAG developed the Moving Forward Monterey Bay 2045 MTP/SCS as a blueprint for sustainable growth in the Monterey Bay area. It is built on a set of integrated policies designed to maintain and improve the transportation system throughout the region, through 2045. The MTP/SCS advocates for overall land use patterns that provide a diverse mixture of goods and services in combination with residential uses as this approach has been shown to reduce vehicles miles traveled and thereby reduce greenhouse gas emissions (AMBAG 2022). Increased density combined with access to transit has been demonstrated to result in a higher likelihood that people would choose to use transit instead of drive. Furthermore, streets that are friendly for pedestrians and bicycles, along with cars and buses, in what are called "complete streets," are encouraged in local planning processes throughout the region.

The MTP/SCS identifies what it calls "Opportunity Areas," zones within 0.5 mile of an existing or planned high-quality transit corridor, as defined by the California Public Resources Code Section 21155(a), with the potential for transit-oriented development, including mixed-use. AMBAG designates the Specific Plan area as Opportunity Area MA-1 (AMBAG 2022, Appendix I Figure 16). MST services the area currently, with bus service on Reservation Road and Del Monte Boulevard. The Marina Transit Exchange, at De Forest Road and Reservation Road, is centrally located in the Specific Plan area, and forms a terminus for MST lines 16, 20, and 27, among others (MST 2019). Del Monte Boulevard is an arterial roadway that creates an eastern boundary for the Specific Plan area and is planned for bus rapid transit service via the SURF! project.

The development planned throughout the Specific Plan area is in proximity to the transit corridors indicated above, and would be designed and implemented specifically to encourage the kind of transit use described in the MTP/SCS. Thus, the Specific Plan supports the goals and objectives set forth by AMBAG in the MTP/SCS.

City of Marina Pedestrian and Bicycle Master Plan

The City of Marina Pedestrian and Bicycle Master Plan has three primary purposes: providing guidelines for pedestrian and bicycle facilities improvements, positioning the City for grants to finance improvements, and playing a role in the City's work to reduce greenhouse gas emissions (City of Marina 2010b). The Plan provides a published set of pedestrian and bicycle facility design guidelines that are applicable to typical situations, including guidelines for sidewalks, crosswalks, pedestrian orientation, pedestrian amenities, bikeways, end-of-trip bicycle facilities, bicycling promotion and funding, street design, parking, roundabouts, and safety. The Plan provides a list of prioritized projects and a summary of future funding sources for pedestrian and bicycle facilities.

Table 16 Goals and Policies Comparison

Marina General Plan	Specific Plan	Comparison	Consistency
Primary Policies (GP)	**Primary Goals**		
2.4.1 The City shall provide a land supply within its Urban Growth Boundary sufficient in size and appropriately located to accommodate a fair share of the future population and employment growth within Monterey County.	The Specific Plan area encompasses 322 acres in central Marina. This is about 5% of the total acreage of the city (6,086 acres).	The Specific Plan area encompasses a developed area of the city center where mixed-use, multi- and single-family residences, and commercial/retail/office uses are adjacent to single-family neighborhoods. Vitalization of the area can contribute to fulfillment of the City's vision statement to "grow and mature from a small town bedroom community to a [diversified and vibrant] small city" (City of Marina 2019).	Consistent
Community and Land Use Policies (GP)	**Land Use Goals**		
2.26 The General Plan's commercial and industrial land use policies are intended to attract a substantial number of jobs for future City residents. The land area set aside in the General Plan for commercial and industrial uses is capable of accommodating an estimated 28,600 additional jobs, substantially in excess of the likely 2020 local work force, estimated at 17,700. **2.27** Unless a major imbalance of jobs and housing is avoided, regional traffic congestion can be expected to worsen due to the generation of increasingly longer commute trips between housing (outside Marina environs) and new jobs in the city. A major imbalance between jobs and housing would also help accelerate the pressure to convert prime agricultural lands in the county for housing development. Conversely, construction of new housing commensurate with new jobs in the city limits will provide ample opportunity for Marina residents to live and work in their community and avoid or substantially reduce the adverse environmental and social effects associated with an imbalance.	*Land Use and Development Goals:* **LU-1: Land Use and Development**. Land use that emphasizes community, creates a safe, walkable and vibrant Downtown, attracts diverse business opportunities, encourages appropriate mixed uses, and integrates adjoining neighborhoods, parks, and trails. *Policy LU-1.3:* Implement objective design and development standards that emphasize pedestrian orientation and scale, move parking areas to the rear of buildings, active streetscapes, and common open spaces to enhance the appearance of and contribute positively to the visual character of the Core District. *Policy LU-5.1:* Encourage compact, high-density urban form by allowing developments with a variety of uses at the ground floor as well as on upper stories of buildings in the Core, and Transition districts that serve the local community and reduce car dependence for daily needs.	Implementation of the Specific Plan would provide space for job growth and increase residential capacity through the establishment of urban-style, mixed-use development adjacent to existing single-family residential neighborhoods. Transit-oriented development, infill and mixed-use with multi-family residential uses would encourage pedestrian and bicycle or other non-automobile modes of travel and thus alleviate the increase in commuter trips, along with traffic congestion and associated effects to the environment.	Consistent

Marina General Plan	Specific Plan	Comparison	Consistency
2.31 Housing Policies Promote construction of new housing that is environmentally and socially responsible (detailed further in individual sub-policies 2.31.1 through 2.31.11	**LU-5: Environment and Sustainability.** A Downtown that supports innovation in design and employs Green Building technology, employs Net Zero Building principles, and is designed to create more comfortable indoor and outdoor environments. *Policy LU-5.2*: In addition to meeting the requirements set by Title 24 of the California Building Code, consider additional measures such as energy efficient building design, passive heating/cooling strategies, wastewater technologies, water use reduction, water efficient fixtures, and green building materials. It is important for project applicants to go above and beyond the minimum requirements for energy efficiency set by Title 24 of the California Building Code, recognizing the benefits of green building features for future residents and the community as a whole.	The Specific Plan meets or exceeds the detailed policies in the General Plan including mandates for integration into the fabric of the city, conservation standards, and the development of walkable, attractive neighborhoods.	Consistent
Throughout the General Plan Land Use Element, alternative forms of transportation are encouraged, including pedestrian and transit.	*Land Use and Development Goal:* **LU-1: Land Use and Development**. Land use that emphasizes community, creates a safe, walkable and vibrant Downtown, attracts diverse business opportunities, encourages appropriate mixed uses, and integrates adjoining neighborhoods, parks, and trails. *Policy LU-5.1:* Encourage compact, high-density urban form by allowing developments with a variety of uses at the ground floor as well as on upper stories of buildings in the Core, and Transition districts that serve the local community and reduce car dependence for daily needs.	The strategies in the Specific Plan meet and exceed the General Plan's encouragement for pedestrian and transit-oriented development.	Consistent

Sources: Marina General Plan (2010) and Marina Downtown Vitalization Specific Plan (2023) (Notes: listed goals and policies are summarized. For full text refer to the Marina General Plan and the Specific Plan.

The Specific Plan goal to create visually pleasing Downtown pedestrian and vehicle circulation that encourages people to walk and bike is consistent with the City's Pedestrian and Bicycle Master Plan. Specifically, Objective 2 of the Mobility goal to create a visually pleasing Downtown pedestrian circulation system seeks to "balance the demands of local and regional traffic while seeking to minimize congestion and address the needs of people who walk, bike, and take transit." Due to its overall focus on dense development and improvement of Downtown Marina's alternative transportation system, the Specific Plan would be consistent with the City of Marina Pedestrian and Bicycle Master Plan.

City of Marina Zoning Code

The Specific Plan states that the requirements in the Land Use chapter "replace the requirements of the Marina Municipal Code, Title 17, Zoning for Downtown Marina." When the Specific Plan is adopted, the land uses and development standards tailored for Downtown would be in effect and would supersede the existing zoning code within the Plan area. The Specific Plan would not conflict with existing zoning code regulations in effect to avoid or mitigate environmental effects, but would reflect the City's goals and policies for development within the Plan area.

Implementation of the Specific Plan would modify the City's development standards within the Plan area, but would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

12 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	□	□	□	■
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?	□	□	□	■

a. *Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

b. *Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

The Marina General Plan discusses the presence of mineral resources at two locations within the City: west of SR 1, where sand mining operations have previously occurred; and east of SR 1 within the Armstrong Ranch portion of the City's sphere of influence (Marina 2010). Neither of these areas are within the Specific Plan area. No mineral extraction occurs within the Plan area and no land in the area is zoned or designated for such a use. Implementation of the Specific Plan would not affect the availability of known mineral resources. There would be no impact.

NO IMPACT

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13 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	■	□	□	□
b. Generation of excessive groundborne vibration or groundborne noise levels?	□	□	■	□
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	□	□	■	□

Environmental Setting

Fundamentals of Noise

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; dividing the energy in half would result in a 3 dB decrease (Crocker 2007). It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible (8 times the sound energy); and that an increase (or decrease) of 10 dBA sounds twice (half) as loud (10.5x the sound energy) (Crocker 2007).

Noise levels from a point source typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance (e.g., construction, industrial machinery, ventilation units). Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013a). Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this “shielding” depends on the size of the object and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, and man-made features such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight would provide at least a 5-dBA reduction in source noise levels at the receiver (Federal Highway Administration [FHWA] 2018). Structures can substantially reduce exposure to noise as well. The FHWA's guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.

The time of day when noise occurs and the duration of the noise are also important factors of project noise impact. One of the most frequently used noise metrics is the equivalent noise level (L_{eq}); it considers both duration and sound power level. L_{eq} is defined as the single steady A-weighted level equivalent to the same amount of energy as that contained in the actual fluctuating levels over time. Typically, L_{eq} is summed over a one-hour period. L_{max} is the highest root mean squared (RMS) sound pressure level within the sampling period, and L_{min} is the lowest RMS sound pressure level within the measuring period (Crocker 2007). Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (L_{DN}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime hours (10:00 p.m. to 7:00 a.m.); it is also measured using Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. (Caltrans 2013a). Noise levels described by L_{DN} and CNEL usually differ by about 1 dBA. The relationship between the peak-hour L_{eq} value and the L_{DN}/CNEL depends on the distribution of traffic during the day, evening, and night.

Some land uses are more sensitive to ambient noise levels than other uses due to the amount of noise exposure and the types of activities involved. For example, residences, motels, hotels, schools, libraries, churches, nursing homes, auditoriums, museums, cultural facilities, parks, and outdoor recreation areas are more sensitive to noise than commercial and industrial land uses.

VIBRATION

Vibration is a unique form of noise because its energy is carried through buildings, structures, and the ground, whereas sound is simply carried through the air. Thus, vibration is generally felt rather than heard. Some vibration effects can be caused by noise (e.g., the rattling of windows from passing trucks). This phenomenon is caused by the coupling of the acoustic energy at frequencies that are close to the resonant frequency of the material being vibrated. Typically, ground-borne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases.

Baseline Noise Environment

ROADWAYS

The major source of noise in the Plan area is vehicle traffic. The main roadways that would generate noise include Reservation Road and Del Monte Boulevard, as well as SR 1, which would generate noise to the western portion of the Plan area. Carmel Avenue, Palm Avenue, Reindollar Avenue, Seacrest Avenue, Crescent Avenue, Cypress Avenue, Hillcrest Avenue, Bayer Street, Salinas Avenue, Vista Del Camino Circle, Sunset Avenue, Mortimer Lane, and California Avenue would also contain noise-generating vehicle traffic; however, the lower speed limits and traffic volumes on these roadways would lead to relatively low levels of noise generated compared to the main roadways.

Marina Municipal Airport

Future noise contours for the Marina Municipal Airport are in the ALUCP Update for the airport (Monterey County Airport Land Use Commission 2019). As shown on the 20-Year Forecast Noise Contours in the ALUCP, the 60 CNEL noise contour is well outside of the Plan area (approximately 3,000 feet at the closest point).

Sensitive Noise Receivers

Sensitive noise receivers are areas of human habitation or substantial use where the intrusion of noise has the potential to adversely impact the occupancy, use, or enjoyment of the environment. These can include residences, schools, hospitals, parks, and places of business requiring low levels of noise. Sensitive noise receptors in Marina include single- and multi-family residences, schools, churches, and parks.

Sound Level Measurements

To characterize ambient sound levels at and near the Plan area, seven 15-minute sound level measurements were conducted in the DVSP area on June 18, 2019. In addition, a follow up site visit took a 24-hour sound level measurement and two 15-minute sound level measurement (Noise Measurement [NM] 2 was repeated) on June 20 through June 21, 2019. Figure 13 shows the noise measurement locations, Table 17 summarizes the results of the noise measurements. Detailed sound level measurement data are included in Appendix D.

Figure 13 Noise Measurement Locations

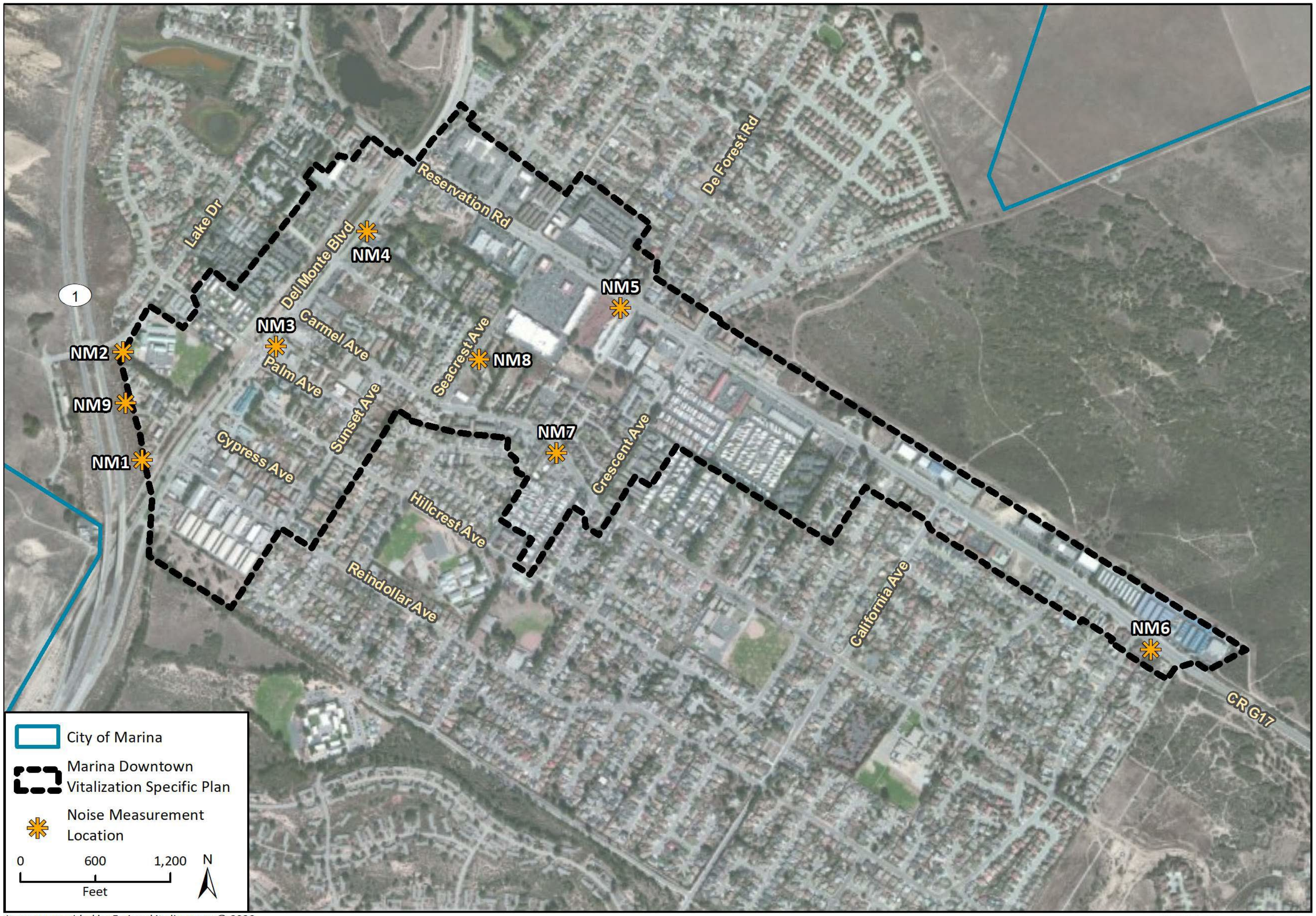

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Fig 6 Noise Measurement Locations

Table 17 Project Vicinity Sound Level Monitoring Results

Measurement Location	Measurement Location	Sample Times	Approximate Distance to Primary Noise Source	Leq (dBA)	Lmin (dBA)	Lmax (dBA)
1	San Pablo Court	June 20, 12:58 – 1:13 p.m.	200 feet from Highway 1	58.0	53.4	62.9
2a	Adjacent to Lake Drive, near Highway 1	June 18, 10:30 – 10:45 a.m.	50 feet to Lake Drive centerline	59.5	45.7	69.0
2b	Adjacent to Lake Drive, near Highway 1	June 20, 1:22 – 1:37 p.m.	50 feet to Lake Drive centerline	61.9	55.9	67.5
3	Del Monte Boulevard and Palm Drive	June 18, 10:56 – 11:11 a.m.	50 feet to roadway centerline	68.8	50.8	83.6
4	Reservation Road and Mortimer Lane	June 18, 11:20 – 11:35 a.m.	50 feet from centerline of Reservation Road	68.7	47.6	79.6
5	Reservation Road and De Forest Road	June 18, 11:59 a.m. – 12:14 p.m.	150 feet from Reservation Road centerline	59.9	49.7	74.8
6	Reservation Road and Bayer Street	June 18, 12:30 – 12:45 p.m.	100 feet from Reservation Road centerline	71.8	48.1	82.4
7	Seacrest Avenue	June 18, 1:04 – 1:19 p.m.	50 feet from roadway centerline	61.5	49.0	75.9
8	Carmel Avenue	June 18, 1:32 – 1:47 p.m.	50 feet from roadway centerline	60.8	47.3	74.8
9	End of San Pablo Court, near Highway 1	June 20, 12:52 p.m. – June 21, 12:52 p.m.	200 feet from Highway 1	60.9	48.6	80.5

See Figure 15 for Noise Measurement Locations.

Detailed sound level measurement data are included in Appendix D.

During the site measures, the types of vehicles were also counted (automobiles, medium trucks, and heavy trucks), as can be seen in Appendix D. The percentage of medium trucks and heavy trucks ranged from zero percent to three percent in the measurements, which one measurement showing four percent heavy trucks. The truck counts on the smaller collector streets were generally lower.

Regulatory Setting

The following discussion summarizes federal, State and local regulatory authorities pertaining to noise.

City of Marina Municipal Code

Chapter 9.24 of the Marina Municipal Code contains regulations pertaining to noise, prohibiting excessive, unnecessary or unusually loud noises and vibrations in the community. This applies to any noise whose volume, level, or duration disturbs, injures or endangers the comfort, repose, health, peace or safety of Marina residents. Section 9.24.040 lists specific nuisances. Included in this list are many hand-powered, fuel-powered, and electric-powered tools that could be used during construction projects. Section 9.24.040 limits the operation of the listed equipment to after 7:00 a.m. and before 7:00 p.m. on a daily basis except for Sundays and holidays when their use is prohibited before 10:00 a.m. and after 7:00 p.m. During daylight savings, this equipment may be operated until 8:00 p.m.

Chapter 15.04 of the Marina Municipal Code establishes that noise levels from construction are restricted to no more than 60 dB for twenty-five percent of an hour at any receiving property line. In addition, when construction is performed adjacent to residential uses, construction may only occur between 7:00 a.m. and 7:00 p.m. on weekdays and Saturdays and between ten a.m. and seven p.m. on Sundays and holidays.

The Marina Municipal Code does not specify quantitative operational noise standards (these standards are included in the City of Marina General Plan, as shown in Table 19).

City of Marina General Plan

The City of Marina General Plan's noise element ensures that noise control is incorporated into the planning process. The noise element contains various policies to help Marina achieve and maintain consistent noise levels for existing and proposed land uses; relevant policies to the project are included below.

Policy 4.106: The land use policies contained in the Community Land Use Element are designed to avoid conflicts between noise-sensitive uses (in particular, residences and schools) and major noise sources. Accordingly, land designated for such noise-sensitive purposes has been limited to locations which are unlikely to be exposed to excessive noise. At such time that future development of residences, schools and parks is proposed, more site-specific noise analysis shall be conducted for parcels that are in close proximity to major roadways or that lie in areas affected by aircraft-generated noise. If specific uses are found to be affected by noise levels greater than the standards set forth in Table 4.1 of the General Plan [Table 18 herein], or the mitigation measures identified in the following sections shall be required.

Policy 4.107: The maximum allowable exterior noise exposure, as measured in L_{dn} (dBA) shall not exceed the "acceptable use" standards shown in Table 4.1 of the General Plan [Table 18 herein]. Where existing or projected exterior noise levels exceed the acceptable limit, construction shall be conditionally permitted only when appropriate mitigation measures are employed.

Policy 4.108: These measures must reduce interior noise to the maximum allowable limits shown in Table 4.1 of the General Plan [Table 18 herein]. In such instances, the developer of a new building shall provide the City with proof from a professional acoustical consultant that exterior noise levels have been mitigated such that building occupants will not be subject to interior noise levels greater than those in Table 4.1. If the City finds the project to be in the public interest, the City may approve a project where the exterior noise level exceeds the conditionally acceptable level. Such approval shall be contingent upon a detailed analysis by a qualified acoustical engineer showing that specific measures included in the project will reduce interior noise to the maximum interior levels shown in Table 4.1.

Policy 4.111: New and modified stationary noise sources adjoining or in close proximity to residential and other noise-sensitive uses shall adhere to the standards in Table 4.2 of the General Plan (Table 18 herein).

Table 18 City of Marina Allowable Noise Standards Measured in Ldn (dBA)

Land Use	Maximum Acceptable Exterior	Maximum Conditionally Acceptable Exterior	Maximum Acceptable Interior[1]
Residential	60	70	45
Live/Work	65	75	50
Hotel/Motel	65	75	50
Office	67	77	55
Other Commercial	70	80	60
Industrial/Agriculture	70	80	60
Schools, Libraries, Theaters, Churches, Nursing Homes	60	70	45
Parks and Playfields	65	70	NA
Golf Courses, Riding Stables, Cemeteries	70	75	NA

[1] It is preferred that the interior noise standard be attained with open windows. However, where the interior noise standard is attainable only with closed windows and doors, mechanical ventilation shall be required.

Source: City of Marina 2000

Table 19 City of Marina Noise Standards for Stationary Sources

Duration	Maximum Allowable Noise (dBA))	
	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Hourly L_{eq}	50	45
L_{max}	70	65
L_{max}, impulsive	65	60

[1] As determined at the property line of the receiver. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property-line noise mitigation measures.

Source: City of Marina 2000

Methodology

Construction

The primary source of temporary noise associated with implementation of the project would be construction activities. Construction for each project in the DVSP would typically involve several stages including grading, foundation construction, and finish construction. Noise generated by construction equipment can vary in intensity and duration during each phase of construction. The potential noise levels associated with typical construction equipment that may be used during construction of the proposed project are identified in Table 20. As shown in the table, construction noise levels at 50 feet from individual equipment would range from approximately 73 to 83 dBA L_{eq}, depending on the type of construction equipment.

Table 20 Typical Construction Equipment Noise Levels

Equipment	Usage Per Day (Percentage)	Maximum Noise Level at 50 Feet (dBA L_{eq})
Backhoe	40	74
Compactor	20	76
Concrete Saw	20	83
Dozer	40	78
Dump Truck	40	73
Excavator	40	77
Generator	50	78
Loader	40	75
Paver	40	80

Source: FHWA 2008

Reasonable conservative construction scenarios would be from the simultaneous operation of an excavator, loader, and dump truck during grading, which is the construction activity that typically generates the highest noise levels. These pieces of equipment would be used during grading to remove or modify soil, with the loaders and dump trucks removing the debris. These three pieces of equipment would generate a noise level of 79.9 dBA L_{eq} at 50 feet, with a 60 dBA L_{eq} noise contour located at 500 feet (see Appendix D for calculation details).

Vibration

Marina does not have defined thresholds for vibration. Vibration impacts are analyzed using the thresholds from Caltrans' Transportation and Construction Vibration Guidance Manual and the FTA's Transit Noise and Vibration Impact Assessment Manual (Caltrans 2013b; FTA 2018). From these documents, the applicable thresholds for the vibration analysis are 0.4 peak particle velocity (PPV) inches per second at residential structures and the human "distinctly perceptible" threshold of 0.24 PPV inches per second.

Traffic Noise

Baseline traffic noise levels from major roadways within the DVSP area were calculated using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model, RD-77-108. The FHWA Model is an analytical method utilized for traffic noise prediction. The FHWA Model assumes a clear view of traffic with no shielding (e.g., from buildings or topography) at the receiver location; In reality, varied topography, in combination with the presence of buildings and other barriers, would reduce the distance from the noise source to the dB contours in many instances. Therefore, the traffic noise levels presented in this analysis should therefore be considered conservative estimates of future roadway noise levels.

Volumes used for modeling traffic noise from the project were estimated using peak hour intersection data from the Marina Downtown Traffic Study (Appendix F)The PM peak hour trip rates were used due to generally higher traffic volumes in that timeframe. Table 21 shows the peak hour traffic volumes under baseline and future conditions, and the roadway miles per hour (mph) entered into the model. Per site measurement observations, vehicle composition was assumed as 96 percent automobiles, 2 percent medium trucks, and 2 percent heavy trucks on Reservation Road and Del Monte Boulevard, and 98.5 percent automobiles, 1 percent medium trucks, and 0.5 percent heavy trucks on the rest of the streets. The defaults of 84 percent traffic during the day and 16 percent during the night were also used.

Table 21 Baseline and Future Traffic Volumes

		Traffic Counts (Peak Hour PM Trips)		
Roadway	Segment	MPH	Baseline (2019) [1,2]	Future (included DVSP buildout)
Del Monte Blvd	SR 1 to Reindollar Ave	35	2,135	2,493
	Reindollar Ave to Palm Ave	35	1,663	1,959
	Palm Ave to Reservation Rd	35	1,510	1,714
Reservation Rd	Del Monte Blvd to Vista Del Camino Cir	35	1,763	2,139
	Vista Del Camino Cir to Seacrest Ave	35	1,759	2,018
	Seacrest Ave to De Forest Rd	35	1,696	1,995
	De Forest Rd to Crescent Ave	35	1,720	1,993
	Crescent Ave to California Ave	40	1,669	1,917
	California Ave to Salinas Ave	40	1,515	1,840
	Salinas Ave to out of DVSP	40	1,518	1,880
Reindollar Ave	Del Monte Blvd to east	25	678	945
Cypress Ave[1]	Del Monte Blvd to east	25	177	248
Palm Ave	Del Monte Blvd to east	25	177	248
Carmel Ave[1]	Del Monte Blvd to east	25	678	945
Mortimer Ln[1]	Del Monte Blvd to east	25	177	248
Vista Del Camino Cir	Reservation Road to north	25	584	757
Seacrest Ave	Reservation Road to south	25	550	774
De Forest Rd	Reservation Road to north	25	225	322
Crescent	Reservation Road to north	25	203	246
	Reservation Road to south	25	422	584
California Ave	Reservation Road to south	35	378	547
Lynscott Dr[1]	Reservation Road to south	25	378	547
Bayer St[1]	Reservation Road to south	25	378	547
Salinas Ave	Reservation Road to south	25	34	136
Sunset Avenue[1]	Reindollar Ave to Carmel Ave	25	177	248
Hillcrest Ave[1]	End of street towards Zanetta Dr	25	177	248

[1] Traffic volumes for these roadways were not provided in the traffic study; volumes on these roadways were assumed to be similar to the nearest, similar-sized collector street.

Source: Kimley-Horn and Associates 2019

Stationary Noise

The project buildings would likely use commercial-sized heating, ventilation, and air conditioning (HVAC) units. For the purposes of this analysis, the specifications for Carrier 48PG 14-ton HVAC units, which have a sound power level (SWL) of 83.3 dBA, are used to analyze the noise impact from the proposed project buildings. The manufacturer's noise data for the HVAC units is provided below in Table 22; more detailed data can be found in Appendix D. Modeling for these HVAC units was performed in Trane Acoustics Program (TAP).

Table 22 HVAC Noise Data

Product	Nominal Tons	Noise Levels in Decibels[1] (dB) Measured at Octave Frequencies							Overall Noise Level in dBA[1]
		125 Hz	250 Hz	500 Hz	1 KHz	2 KHz	4 KHz	8 KHz	
Carrier 48PG	14	85.9	85.3	81.8	78.2	72.2	67.9	59.9	83.3

[1] Sound Power Levels (S_{WL})
KHz = kilohertz; Hz = hertz
Source: Appendix D

a. *Would the project 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?*

Construction of development facilitated by the DVSP would involve the use of heavy construction equipment adjacent to existing development and noise sensitive receivers. Construction noise could therefore result in potentially significant noise impacts. Checklist item a will be discussed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

b. *Would the project result in generation of excessive groundborne vibration or groundborne noise levels?*

Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be anticipated to be used for typical residential, retail, and office building uses established pursuant to the Specific Plan. The greatest anticipated source of vibration during general construction activities in the DVSP would be from a vibratory roller, which may be used during paving activities and may be used within 25 feet of the nearest off-site structures. A vibratory roller would create approximately 0.210 in./sec. PPV at a distance of 25 feet (Caltrans 2013b). This would be lower than what is considered a distinctly perceptible impact for humans of 0.24 in./sec. PPV, and the structural damage impact to residential structures of 0.4 in./sec. PPV. Therefore, although a vibratory roller may be perceptible to nearby human receivers, temporary impacts associated with the roller (and other potential equipment) would be less than significant.

The proposed uses in the DVSP do not include any substantial vibration sources associated with operation. Therefore, operational vibration impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

The DVSP area is located approximately 3,000 feet south of the outer edge of the 60 CNEL contour for the Marina Municipal Airport (Monterey County Airport Land Use Commission 2019). Therefore, the Plan area would not be expected to be exposed to excessive noise from the airport, and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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14 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	□	□	■	□
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	□	□	■	□

a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The Specific Plan calls for a maximum of up to 2,904 new residential units in Downtown Marina. According to the California Department of Finance (2022), there is an average of 2.65 persons per household in Marina. Therefore, full buildout of the Specific Plan would result in an estimated 7,696 new residents in the Plan area.

The City of Marina has a population of 21,457. Population growth estimates for the City of Marina by AMBAG (2022) are shown below in Table 23. The planning horizon for the Specific Plan is 2040, and the AMBAG population estimate for the City in 2040 is 28,433. AMBAG periodically updates population forecasts, having done so most recently in 2022. A draft of the Downtown Vitalization Specific Plan was completed in 2010. AMBAG's most recent population estimates, prepared in 2022, incorporated discussions with each member jurisdiction, including Marina, regarding population growth estimates. Therefore, the Specific Plan is accounted for in regional growth projections, although the current Specific Plan indicates a slightly higher maximum number of added residents than AMBAG projected in 2022. Specific Plan buildout would be accounted for in future updated AMBAG projections.

Table 23 Marina Population Projections

2020	2025	2030	2035	2040
22,321	23,723	25,126	26,713	28,433

Source: AMBAG 2022

While additional new residential development may occur outside of the Plan area during Specific Plan buildout, the Specific Plan represents an intention to focus growth within the Downtown area. Furthermore, the DVSP has been in progress for many years, having been initiated in 2006 (see Project Description under *Specific Plan Background*), and the projected growth within the Plan area is accounted for in AMBAG projections, as described above. Therefore, the proposed project would not result in substantial unplanned population growth. Impacts would be less than significant.

LESS THAN SIGNIFICANT

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Implementation of the Specific Plan would involve demolition of some existing housing in order develop new units. However, any displacement of people or housing would be temporary, and new housing added to the Plan area would support a greater number of residents than existing housing. Therefore, the project would not result in the need for new housing elsewhere, as the Specific Plan would result in a concentration of the City's housing stock within higher density development within Downtown Marina. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

15 Public Services

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:				
1 Fire protection?	☐	☐	■	☐
2 Police protection?	☐	☐	■	☐
3 Schools?	☐	☐	■	☐
4 Parks?	☐	☐	■	☐
5 Other public facilities?	☐	☐	■	☐

a.1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The Marina Fire Department (MFD) provides fire protection, medical emergency response, natural disaster preparedness, and hazardous materials mitigation services to the Plan area. MFD operates two fire stations, one located within the Plan area at 211 Hillcrest Avenue and one located within the Marina Municipal Airport.

The MFD maintains three Type 1 engines and 17 uniformed staff members, which include three firefighters, six engineers, six captains, one division chief, and one fire chief. In addition, there are seven reserves. MFD currently staffs one engine company with three people at the Hillcrest Station and one squad with two people at the Airport Station (Selai Lesu 2023). MFD's service area boundaries are limited to the Marina city limits. In 2022, MFD received 3,033 calls for service (MFD 2022).

According to MFD staff, providing service for the City upon full buildout of the DVSP would require three additional firefighters, two division chiefs, another fire station, ladder truck and engine company. Neither the current station on Hillcrest Avenue nor the station at the Marina Municipal Airport would meet the needs of a full buildout of the DVSP. Station location studies performed by

MFD show that, to serve the Plan area at full buildout, the Hillcrest Station may need to be moved north near the intersection of Del Monte Boulevard and Beach Road. MFD would also need an additional station in the southern portion of the city to accommodate for growth not facilitated by the DVSP and due to the relocation of the Hillcrest Station (Lesu 2023). Although the MFD has existing deficiencies in service, the City participates in a mutual aid agreement with all fire departments in Monterey County to enhance fire protection services and reduce response times (City of Marina 2000).

Specific locations for new MFD fire station(s) have not been determined; however, the DVSP includes Program PF-3, which would aim to identify the timing, location, and funding source for a new fire station to support growth within the Specific Plan area. Additionally, should the MFD propose to expand or construct new facilities in the future, such facilities would be subject to subsequent environmental review under CEQA in which potential environmental impacts would be addressed accordingly. It should be noted that the allocation of funding for MFD staffing is the responsibility of the City of Marina and would be addressed as specific projects are proposed in the future. In addition, future projects under the DVSP would be required to pay impact mitigation fees pursuant to the City of Marina's developer fee schedule. Payment of impact mitigation fees would constitute funding equivalent to the provision of fire protection services to offset potential impacts associated with development facilitated by the proposed DVSP.

As described in Section 14, *Population and Housing*, buildout of the DVSP would not cause substantial unplanned population growth. Rather, the project would facilitate the City's planned population growth within the existing Downtown area. Furthermore, buildout of the Specific Plan would occur incrementally over an estimated 20-year period. As discussed throughout this Initial Study, the Plan area is currently developed, and construction or expansion of fire facilities within the Plan area would be infill development and would not be expected to result in significant impacts. Impacts associated with land use changes and construction activity, including construction or expansion of fire facilities, are addressed throughout this Initial Study. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a.2. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The Plan area receives police protection services from the Marina Police Department (MPD). The Marina Police Station is located within the Specific Plan area at 211 Hillcrest Avenue. MPD provides preventative patrol, traffic control, crime prevention, investigations, drug enforcement, abuse prevention, and civil order services. As of 2020, the MPD staffs 29 sworn officers and eight non-sworn personnel. Based on the 2022 population estimate for the City of 21,457 (see Section 14, *Population and Housing*), the ratio of residents to police personnel is approximately 580 to 1. The project could result in an estimated maximum of 7,696 new residents, which would require the hire of approximately 13 new police personnel, and potentially a need for new facilities. However, according to MPD staff, service ratios and response times would be reassessed and adjusted as the population grows in an ongoing process over the course of the DVSP buildout (Police Chief Tina Nieto 2020). Additionally, as described above, DVSP buildout would occur over approximately 20 years and would not represent substantial unplanned population growth, and impacts associated with land use changes and construction are addressed throughout this Initial Study. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a.3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

The Monterey Peninsula Unified School District (MPUSD) provides public education in the City of Marina. MPUSD operates five public schools in Marina: J.C. Crumpton Elementary School (grades K-5), Marina Vista Elementary School (grades K-5), Ione Olson Elementary School (grades K-5), Los Arboles Middle School (grades 6-8), and Marina High School (grades 9-12). All five of these schools serve the Plan area. Table 24 displays 2021-2022 student enrollment and existing capacity levels for these schools.

Table 24 Marina School Enrollment and Capacity

School Name	Public/Private	Grades	Classrooms	2021-2022 Enrollment	Capacity
J.C. Crumpton Elementary	Public	K-5	23	527	481
Marina Vista Elementary	Public	K-5	23	473	495
Ione Olson Elementary	Public	K-5	20	409	441
Los Arboles Middle	Public	6-8	27	390	668
Marina High	Public	9-12	32	672	800
Total		**K-12**	**145**	**2,471**	**2,885**

Source: Diffenbaugh 2019, California Department of Education 2022

There is currently construction underway on some schools to increase capacities. It is possible that during the buildout period for the DVSP new or expanded schools would be required in Marina. However, as described above, DVSP buildout would occur over approximately 20 years and would not represent substantial unplanned population growth. Furthermore, a school impact fee is collected for each residential unit that is constructed. As stated in California Government Code Section 65996, payment of school impact fees is deemed to constitute full and complete mitigation for potential impacts to schools caused by development. Therefore, impacts related to the need for new school facilities as a result of implementing the Specific Plan would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a.4. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

As described in Section 16, *Recreation*, the City of Marina General Plan establishes a standard of 5.3 acres of City park and recreation land for every 1,000 residents. The DVSP does not specify new park sites within the Plan area, which is served by various nearby parks within the City. Although new parks could be added within the Plan area, buildout of the Specific Plan would not result in the direct or immediate need for new or altered parks. As discussed in Section 16, *Recreation*, implementation of the Specific Plan would not result in a significant impact related to parkland ratios due to the presence of nearby parks and other planned parkland throughout the City. Impacts related to parks would be less than significant; refer to Section 16, *Recreation*, for further discussion.

LESS THAN SIGNIFICANT IMPACT

a.5. Would the project result in substantial adverse physical impacts associated with the provision of other new or physically altered public facilities, or the need for other new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The Marina Library provides library services to the Specific Plan area. The Marina Library is located at 188 Seaside Circle, less than one mile from the Plan area, and is run by the City of Marina and the Monterey County Free Libraries (MCFL) system. The Marina Library was moved to its present location in 2007 to accommodate the City's growth (Marina 2010). According to library staff, the facility is large enough to accommodate population growth facilitated by the Specific Plan (Mejia 2019).

The proposed DVSP would not result in the need for new or altered libraries or other public facilities. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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?	□	□	■	□
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?	□	□	■	□

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The City of Marina General Plan establishes a standard of 5.3 acres of City park and recreation land for every 1,000 residents (Marina 2010). The City's Parks and Recreation Master Plan identifies a more ambitious goal of 10 acres of park and recreation land per 1,000 residents. The present ratio of parkland to residents is 5.3 acres per 1,000 residents (Marina 2010), consistent with the standard established in the General Plan. This excludes undeveloped open space areas within the former Fort Ord. Additionally, Marina's recreational assets are augmented by over 650 acres of nearby state and regional coastal parkland. According to the General Plan, the City's parkland ratio is expected to grow to over 10 acres per 1,000 residents at full General Plan buildout after the improvement of former Fort Ord lands.

Currently, there are no public parks, open space areas, or land zoned or designated for park/recreation purposes within the Plan area, excepting a parcel at the easternmost point of the Plan area that is designated Habitat Preserve & Other Open Space. Parks nearby to the Plan area include Locke-Paddon Park, adjacent to the intersection of Del Monte Boulevard and Reservation Road to the northwest; Vince DiMaggio Park, immediately adjacent to Locke-Paddon Park across Del Monte Boulevard; and Marina City Park, approximately 0.32 mile east of Del Monte Boulevard.

As described in Section 14, *Population and Housing*, the Specific Plan could result in an estimated increase of up to 7,696 residents in the Plan area. The Specific Plan does not identify specific parcels to be converted to park use, but does discuss the possibility of either developing a main park or several smaller parks. The plan notes that currently vacant parcels could be converted to park use. While the plan does not specifically designate new parks, the City plans to develop new park space elsewhere, including on former Fort Ord lands (Marina 2010). Several new developments within the City, such as the University Village and Sea Haven residential developments, have been built to include public open space and public use parks. Additionally, the Fort Ord Regional Trail and

Greenway (FORTAG) is proposed as a 30-mile regional network of paved recreational trails and greenways connecting communities, including the City of Marina, to open space.

The Plan area is served by multiple parks in close proximity, and the plan establishes active transportation goals to improve access to parks from within the Plan area. New development in the Plan area would be required to pay impact fees to contribute to park maintenance and development of new parkland to meet the City's parkland ratio standard. Because there are sufficient parks available near the Plan area and because future development pursuant to the DVSP would be required to pay applicable impact fees for park maintenance and development, Specific Plan buildout would not 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. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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?

As described above, the DVSP does not specifically identify any new parks to be developed, although it is possible that implementation of the Specific Plan may include new parks. The potential environmental effects that could occur as a result of land use changes pursuant to implementation of the Specific Plan, including development of new parks, are discussed throughout this Initial Study and additional impacts are not anticipated. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

17 Transportation

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

a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

d. Would the project result in inadequate emergency access?

Buildout in accordance with the proposed Specific Plan would result in an increase in vehicle trips and vehicle miles travelled in the Specific Plan area. The anticipated increase in vehicle miles traveled could conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).The Specific Plan also includes goals and policies related to the provision of transit, bicycle, and pedestrian facilities, which could conflict with existing programs, plans, or ordinances addressing the circulation system. Therefore, the DVSP could result in potentially significant impacts related to transportation. This issue area will be analyzed in detail in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

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18 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	■	□	□	□
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	■	□	□	□

a. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is 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)?*

b. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is 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?*

Ground disturbance associated with projects facilitated by the Specific Plan has the potential to significantly impact tribal cultural resources. Checklist items a and b will be discussed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

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19 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
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?	■	□	□	□
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	■	□	□	□
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	□	■	□	□
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	□	■	□	□
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	□	■	□	□

a. Would the project require or result in the relocation or construction of new or expanded wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

c. Would the project 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?

The DVSP would facilitate buildout in the downtown area, which would result in an increase in population and accordingly an increase in water demand. Checklist item a, as it pertains to water supply, will be addressed in the EIR. Other components of this item and checklist item c are discussed below.

The City of Marina receives potable water service from the Marina Coast Water District; wastewater treatment from Monterey One Water (M1W); natural gas service and electricity transmission from Pacific Gas and Electric Company (PG&E); electricity supply from 3CE; and telecommunication service from various providers.

The Plan area consists of the Downtown portion of the City, which is currently developed and connected to utilities. New connections to electric power, natural gas, and telecommunications facilities would increase demand of these utilities over the Specific Plan's approximately 20-year planning horizon. However, as discussed in Section 6, *Energy*, the project would not result in wasteful or unnecessary energy use or conflict with a plan for renewable energy. Connecting new development to water, wastewater, stormwater, electric gas, and telecommunication infrastructure would require ground disturbance and Specific Plan buildout would also contribute to the need for new facilities that provide these utilities. Environmental effects associated with ground disturbance are discussed in Section 4, *Biological Resources*, Section 5, *Cultural Resources*, and Section 7, *Geology and Soils*. Ground disturbance associated with utility connections would be minor, as the Plan area is developed and presently connected to utilities, and redevelopment would be compact, allowing for efficiency.

Sanitary sewage from the Plan area is conveyed to the M1W Regional Treatment Plant (RTP) approximately two miles north of the City. The RTP serves a population of approximately 250,000 and treats 18.5 million gallons per day (mgd) (M1W 2020). The RTP is designed for an average dry weather flow of 29.6 mgd; thus, remaining daily capacity is approximately 11.1 mgd (Central Coast RWQCB 2014). As discussed in Section 14, *Population and Housing*, full buildout of the Specific Plan could result in up to 7,696 new residents in the Plan area. Conservatively estimating water use of 100 gallons per day per person, and all water use being treated as wastewater, wastewater treatment demand for the project would be approximately 769,600 gallons per day. This represents approximately seven percent of available capacity at the RTP. Therefore, Specific Plan buildout would be served by a wastewater treatment provider with sufficient capacity. Furthermore, individual projects would be permitted individually and would occur intermittently over the DVSP's approximately 20-year planning horizon. Therefore, the project would not require the relocation or construction of new or expanded utility facilities. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a. Would the project require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects?

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

The project would result in an increase in development and population in the DVSP area, which would generate additional demands for water supply. Therefore, the DVSP could result in potentially significant impacts related to water supply. Checklist item a, as it pertains to water supply, and checklist item b will be analyzed in detail in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The City receives solid waste collection service by GreenWaste Recovery and landfill service by ReGen Monterey (formerly the Monterey Regional Waste Management District).. Solid waste is delivered to the Monterey Peninsula Landfill (MPL), approximately 2.5 miles north of the Plan area. To comply with CALGreen, ReGen Monterey must divert at least 65 percent of its solid waste from landfills. In addition, Assembly Bill 341 (AB 341) sets a statewide 75 percent recycling goal by 2020, and Senate Bill 1383 requires 75 percent of organic waste to be diverted from landfills by 2025. AB 341 also requires businesses generating more than four cubic yards of solid waste to recycle and requires owners of multi-family housing with five or more units to provide recycling for their tenants.

The MPL is owned and operated by ReGen Monterey. The landfill is permitted to receive a maximum throughput of 3,500 tons per day (CalRecycle 2019). The landfill has remaining capacity of 49,700,000 cubic yards and is estimated to have capacity for 100 years of use at current disposal rates. The MPL receives approximately 200,000 tons of solid waste per year, or 548 tons per day (CalRecycle 2019 and ReGen Monterey 2020). Therefore, remaining daily available capacity is approximately 2,952 tons per day.

Based on CalRecycle estimates, Californians generate approximately 4.7 pounds of solid waste per day (CalRecycle 2016). Buildout of the proposed Specific Plan would result in 7,696 new residents within the Plan area. Therefore, solid waste generation by new residents would total an estimated 36,171pounds per day, or 18.1 tons per day.

Additionally, Specific Plan buildout could result in an additional 1,386,000 square feet of commercial retail and office uses in the Plan area. CalRecycle estimates a generation rate of .046 pounds of solid waste per square foot per day for commercial retail uses[7] (CalRecycle 2019), resulting in an additional 63,756 (1,386,000 x .046) pounds per day, or 31.9 tons per day, for these uses.

In total, the DVSP would result in estimated additional 99,927 pounds, or 50 tons, of solid waste per day delivered to the MPL. This represents approximately 1.7 percent of the available daily capacity at MPL. This landfill demand would be reduced by requiring diversion of 75 percent of organic waste and 65 percent of solid waste for recycling. Furthermore, this estimate represents a full buildout scenario at the end of the Specific Plan’s 20-year planning horizon. Therefore, the Specific Plan would not result in this much solid waste generation in the near-term. Because Specific Plan buildout would not generate solid waste in excess of local standards or landfill capacity, impacts would be less than significant.

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[7] CalRecycle provides various estimates for solid waste generation, based on different project-based analyses. The estimate provided herein is a selected mid-range estimate.

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20 Wildfire

	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?	☐	☐	■	☐
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	■	☐
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	■	☐
d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	■	☐

a. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

b. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

c. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

d. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project 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?

The California Department of Forestry and Fire Protection (CAL FIRE) does not designate any moderate, high, or very high fire hazard severity zones (VHFHSZs) within the City of Marina. The entirety of the City and all land bordering the City is within an area designated as a Local Responsibility Area (CAL FIRE 2007). The nearest land in a State Responsibility Area is in the Carmel Valley approximately seven miles south of the Plan area. The nearest VHFHSZ is approximately 3.7 miles southeast of the Plan area along Reservation Road, outside of Marina city limits.

The Plan area is within an urbanized portion of the City, consisting primarily of lots developed with structures and pavement. The entire western boundary of the Plan area is less than one mile from the Pacific Ocean. Open space areas with trees and other vegetation that could serve as wildfire fuel exist to the north and southeast of the Plan area.

The proposed project would facilitate development within an urbanized area. By intensifying development, exposure of people and structures to wildfire hazards would increase. However, the overall exposure to wildfire hazards would be similar to existing conditions because the project would not add development to new areas or affect fuel amounts. Because the Plan area is not within a state responsibility area, is not classified as a VHFHSZ, and would not exacerbate existing fire hazards, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Does the project:				
a. 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?	■	□	□	□
b. 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)?	■	□	□	□
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	■	□	□	□

a. 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?

The DVSP would facilitate development in the downtown area, which contains habitat for special status species and known cultural resources. Development facilitated by the DVSP could result in substantial adverse impacts to these resources. Impacts could be potentially significant, and checklist item a will be discussed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

b. 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)?

Because the DVSP would be built out over several years, development facilitated by the DVSP would occur concurrently with other development projects in Marina and in the region. Accordingly, impacts associated with the DVSP could result in a considerable contribution to cumulative impacts. Cumulative impacts could be potentially significant and will be discussed in the EIR.

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c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

In general, impacts to human beings are associated with air quality, hazards and hazardous materials, and noise impacts. As detailed in Section 13, *Noise,* the development facilitated by the Specific Plan would not result, either directly or indirectly, in significant air quality or noise impacts. Similarly, as discussed in Section 8, *Hazards and Hazardous Materials,* impacts from development of projects would not result in any adverse hazards related to hazardous materials. Compliance with applicable rules and regulations related to hazards and hazardous materials would reduce potential impacts on human beings to a less than significant level. However, as discussed in Section 1, *Air Quality,* the project would result in potentially significant impacts. Impacts to human beings as they relate to air quality will be discussed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

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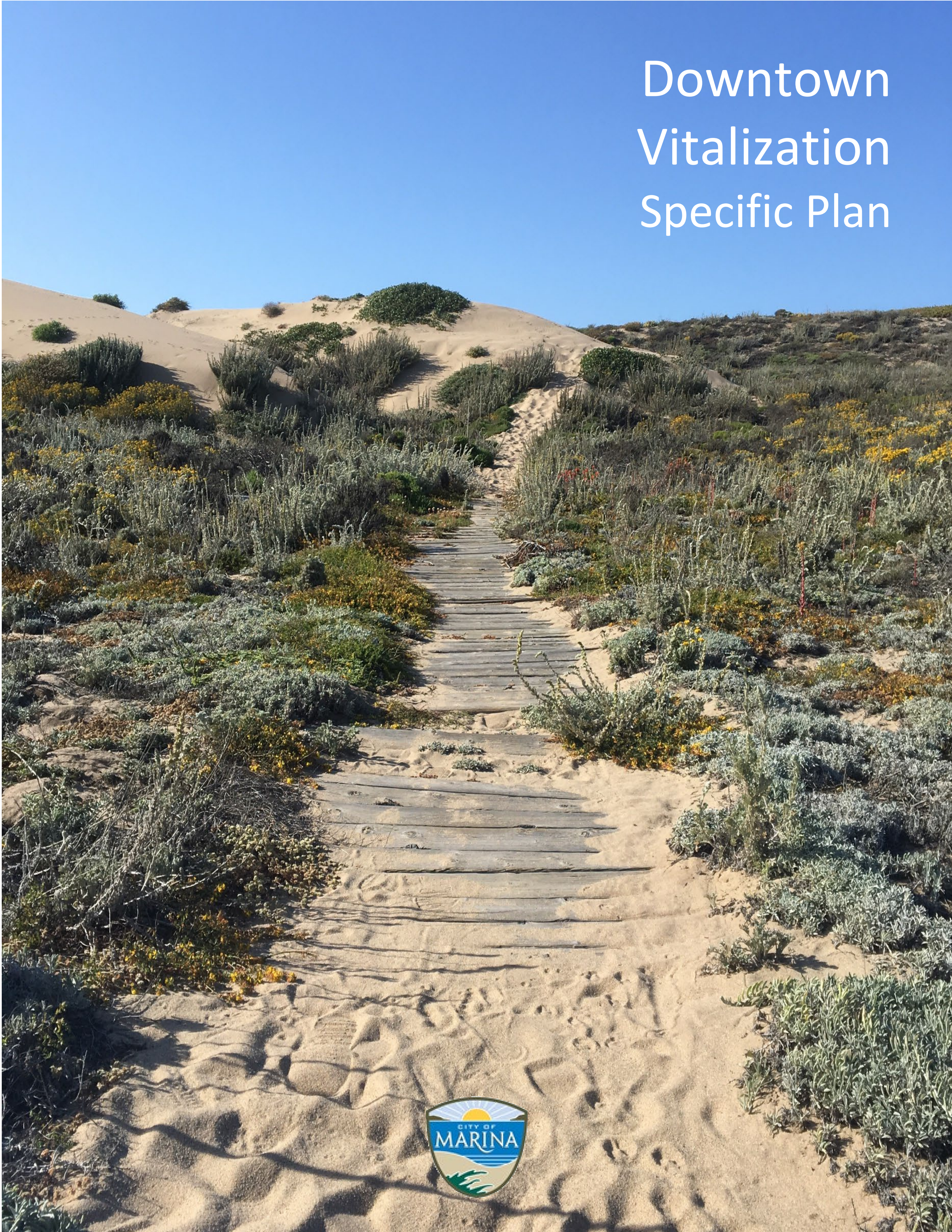
Appendix A

City of Marina Downtown Vitalization Specific Plan

Downtown Vitalization Specific Plan



CITY OF MARINA

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Specific Plan Organization

The Downtown Vitalization Specific Plan (DVSP) has been organized as follows:

Specific Plan

Chapter 1 Introduction contains project background, a review of community engagement efforts, and considers opportunities and constraints present in the Downtown.

Chapter 2 Setting and Existing Conditions contains an overview of background conditions such as Marina's history, regional context, economic context, existing land use, and existing transportation network and facilities.

Chapter 3 Downtown Vision puts forth a desired vision of Downtown Marina (Downtown) that will result with the implementation of the Specific Plan and enumerates the Specific Plan's main goals.

Chapter 4 Land Use describes land use goals, policies, and implementation measures to guide future development within the Downtown. The mixed-use portions of the area are divided into "core" and "transitional" areas, with the core being more urban in design and transitional moving towards suburban. The land use districts identified in this plan are intended to function as implementing zoning in accordance with Appendix A (Development Code).

Chapter 5 Mobility describes the circulation and parking goals, policies, and development standards to help implement the vision for Downtown Marina. This chapter also establishes the basis for the plan's proposed multimodal circulation system that integrates an interconnected network of vehicular, pedestrian, and bicycle traffic.

Chapter 6 Public Facilities and Infrastructure includes policies for the planned distribution, location, extent, and improvement of water, sewer, and storm drainage infrastructure and solid waste disposal facilities.

Chapter 7 Implementation provides a framework to successfully implement the Plan and ensure its objectives are integrated effectively with the goals of existing documents, including the City's General Plan and Municipal Code.

Development Code and Design Guidelines

The Downtown Vitalization Specific Plan (DVSP) relies on Appendix A (Development Code) and Appendix B (Design Guidelines) to guide buildout of the community.

Appendix A Development Code sets forth objective design and development standards for the consistent promotion of high-quality, well-designed development throughout the Downtown. Adopted by Ordinance, these standards are composed of written statements and graphic illustrations that establish standards for permitted uses and development standards (property line setbacks, building height, etc.) and design standards that are required of all proposed developments in the Downtown.

Appendix B Design Guidelines are adopted by Resolution and provide design guidance for various community attributes that influence appearance of the public realm. This includes additional design guidance for new development as well as guidance for public rights of way and civic spaces.

Dunes west of Marina. Source: Monterey County Convention & Visitors Bureau

1 Introduction

What is a Specific Plan?

A Specific Plan is a policy and regulatory tool that local governments use to implement a General Plan and to guide development in a localized area. While a General Plan is the primary guide for growth and development citywide, a specific plan focuses on the unique characteristics of a defined area by customizing the planning process and land use regulations to that area. This Specific Plan includes goals, policies, and programs to guide decision-making and implementation of recommended improvements, as well as design and development standards and guidelines to provide direction to private development in the area.

1.1 Purpose and Intent

The City of Marina Downtown Vitalization Specific Plan is a community-initiated plan intended to guide the future development and ultimate transformation of the City's 320-acre downtown. The Specific Plan process involved extensive citizen participation and input guided by City staff.

For years, residents of Marina have expressed a desire to make Downtown a destination with a distinct identity. They envision Downtown as the figurative heart of the community—a place where people gather for special events like farmers markets, street performances, and community events. Downtown will be home to outdoor dining, public art, gathering spaces, and attractive streetscapes. Residents envision wide sidewalks filled with people, activity, and a creative mixture of land uses.

This Specific Plan can be thought of as a road map to these desired destinations. In particular, the Specific Plan aims to reinvigorate the Downtown Marina economy and sense of place through:

- A cogent vision for the future;
- Clearly articulated land uses and development regulations; and,
- Tailored design standards and guidelines.

This Specific Plan builds on the goals and objectives established in the City of Marina General Plan, as well as the relevant standards and regulations from the City's Municipal Code. It also implements elements of the City's Downtown Vision and Pedestrian and Bicycle Master Plan.

The purpose of the Downtown Vitalization Specific Plan (hereafter "Specific Plan") is to create a unique and identifiable Downtown core for Marina that is vibrant and pedestrian oriented. This Specific Plan will be an aspirational policy document and regulatory tool used by the City of Marina to guide development in the Downtown for the next 20 years. While the City's General Plan is the primary guide for growth and development within Marina, this Specific Plan focuses on the Downtown area in more detail, establishing a development framework for land use, circulation, utilities and services, resource protection, design, and implementation. The guiding question for this document is "What do we want Downtown Marina to look like in the future?"

In the case of Marina, the word "vitalization" is used in place of "revitalization" to suggest an area that never fully developed as a traditional downtown.

The word "revitalization" suggests returning life or vibrancy to an area in decline. Some communities utilize redevelopment agencies and area-specific revitalization plans to reinvigorate struggling neighborhoods. In the case of Marina, the word “vitalization” is used in place of “revitalization” to suggest an area that never fully developed as a traditional downtown. Marina’s relatively recent incorporation, coupled with its history as a housing and services center for people stationed or working at Fort Ord, reflects a young city without the urban form of density and mixed use characteristics of a traditional downtown (**Figure 1-1**). Thus, the Downtown Vitalization Specific Plan aims to bring life and vitality to the proposed Downtown area through identifying goals, policies, and programs that will lead to desired development patterns. This plan will be considered successful when people know where the Downtown Core of Marina is—and want to be there.

Figure 1-1. Marina Plumbing and Friendly Food Market, late 1960s; suburban development typical to Marina then and now.

1.2 Project Background and Community Engagement

Even before its incorporation in 1975, Marina was making plans for a vibrant Downtown. In 1962, a Monterey County policy document known as the Marina Master Plan initiated the concept and vision of a central business district in Marina.

Since incorporation in 1975, the City has facilitated a number of surveys, public workshops, and studies in an effort to vitalize Marina’s existing commercial areas. In 1978, the City’s first General Plan—Marina 2000—reaffirmed the concept of a central business district. An update of the General Plan in 1982 identified the need for additional commercial land in Marina, established the goal of developing “viable community retail and service commercial centers”, and designated portions of the land in the Specific Plan area as “Community Commercial” and “Multifamily Residential”.

The push for a vibrant Downtown was reinforced multiple times since the City’s incorporation including the establishment of a Redevelopment Project Area in 1986, a 1990 report by the City Council (acting as the Redevelopment Agency Board), and a 1998 study that found substantial retail leakage in Marina, with residents going to neighboring cities to procure goods and services.

Vitalization of Marina’s commercial core was identified by the Marina City Council in 2001 as a critical strategic issue. A Plan of Action was completed and approved by the City Council in August of the same year. The Council recognized that the creation of an attractive pedestrian-friendly and visitor-serving commercial district was key to establishing Marina’s identity and image.

Vitalization was to be facilitated through the establishment of a Downtown encompassing the Reservation Road corridor from the intersection at Del Monte Boulevard to De Forest Road, including the Marina Post Office and Monterey Salinas Transit (MST) Exchange. The boundaries of Downtown were determined by the 2002 Ad Hoc Marina Downtown Committee, which was comprised of 37 Marina residents, planning commissioners, and business and property owners. The Committee called for the City to complete a strategic development plan and form a Strategic Downtown Committee to implement the goals of the report (Revitalizing Marina's Retail Commercial Areas, 2002). Public outreach continued through 2003.

> *The future [Downtown] should be strategically located, anchored by existing or planned community retail, civic, and public transit uses that are within walking distance of higher density residential. (The Report of the Ad Hoc Marina Downtown Committee—Revitalizing Marina's Retail Commercial Areas (2002)).*

In August 2005, the City Council adopted the Marina Downtown Vision and Downtown Design Guidelines for developing a vital Downtown core. Ultimately, it was determined that in order to fulfill the City's Downtown Vision and Downtown Design Guidelines, future development within the Downtown should be guided by a Specific Plan, which would include land uses, goals, policies, and programs for implementation. The Downtown Vitalization Specific Plan was initiated in 2006. The stated goal of the plan was to "transform Central Marina and its two major corridors, Reservation Road and Del Monte Boulevard, into a unique, vibrant, and pedestrian-friendly Downtown with diverse shopping venues and increased housing opportunities" (City Newsletter, March 2011).

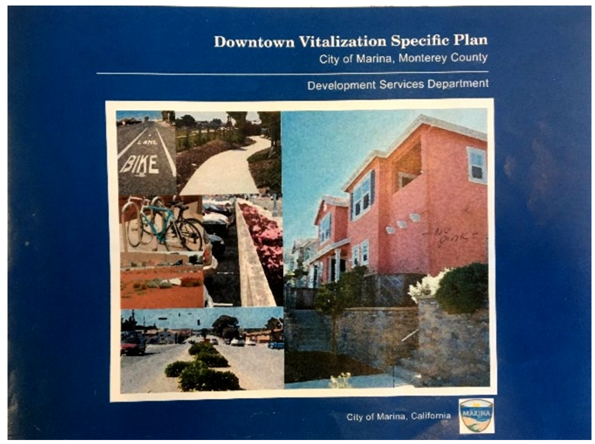


Figure 1-2. 2010 Downtown Vitalization Specific Plan draft.

Later in 2006, the City conducted a traffic feasibility study in the Downtown. A major discussion point centered on reducing the number of through lanes on Reservation Road to two and installing roundabouts at key intersections. Discussion about transportation, land use intensity, and possible locations for a new civic center and parks continued for several years.

In September 2007, Planning Staff presented the traffic feasibility study to the City Council as well as a Retail Sales Leakage Analysis, which included a preliminary recommendation of supportable retail and select services for Downtown, and a Proposed Land Use Concept. Together, these analyses and concepts were central to formulating the recommendations of the Specific Plan. Around this same time, Monterey—Salinas Transit adopted a specific plan which called for a larger presence in the form of a transit center and more consistent service in Downtown Marina.

An early draft of the Downtown Vitalization Specific Plan was presented publicly in March 2011 (**Figure 1-2**). The project stalled for several years until 2017 when another Ad Hoc Committee was formed to address new issues in the Downtown and complete the long-anticipated Specific Plan.

Figure 1-3. Ad Hoc Committee members participate in a streetscape study (left) and discussion group (right).

1.2.1 Community Engagement

Community involvement has been a critical part of the Specific Plan process. Over the course of a year, the Ad Hoc Committee met at least once monthly for the purposes of establishing a vision for the Downtown, identifying overarching goals and policies concerning development, creating a list of appropriate zones and land uses, and developing design standards and guidelines (**Figure 1-3**). Ad Hoc Committee members included elected and appointed officials, business owners, residents, and other interested parties. The Ad Hoc Committee developed an areawide vision for the Downtown, discussed land use alternatives, and reviewed development standards, design guidelines, and implementation programs. Community input was received at public hearings before the Planning Commission and City Council. The views and recommendations expressed during meetings of the Ad Hoc Committee, Planning Commission, and City Council, in addition to previous guiding documents (General Plan, Downtown Vision Plan, Downtown Design Guidelines, Pedestrian and Bicycle Master Plan), have been utilized during preparation of the Specific Plan.

A community open house for the Specific Plan was held in December 2018. At the open house, staff presented a draft version of the plan for people to review. Over 100 people attended and provided input (**Figure 1-4**).

Figure 1-4. Community members meet to discuss the Downtown Vitalization Specific Plan at an open house (right). An informational display at the open house (left).

Table 1-1 summarizes the dates and topics of various meetings of the Ad Hoc Committee, Planning Commission, and City Council with regards to the Downtown Vitalization Specific Plan. Public comment was welcomed at each of these meetings.

Table 1-1. Public meetings held during the development of the Downtown Vitalization Specific Plan

Date	Location	Topic
Ad Hoc Committee		
11/28/2017	Airport Conference Room	Previous planning efforts in the Downtown; strengths, weaknesses, threats, and opportunities analysis
1/3/2018	Airport Conference Room	Visual preference survey; map exercise
1/29/2018	Airport Conference Room	Community outreach strategy
2/20/2018	Airport Conference Room	Vision and goal statements
3/10/2018	Downtown Marina	Walk through Downtown to assess conditions
3/19/2018	Airport Conference Room	Findings from community walkabout
4/30/2018	Airport Conference Room	Street right-of-way cross section exercise; Downtown traffic study results
5/21/2018	Airport Conference Room	Street right-of-way cross section exercise
6/25/2018	Airport Conference Room	Bike lanes; street right-of-way presentations; districts and land uses
7/16/2018	Airport Conference Room	Districts and zoning; land use matrix
8/13/2018	Airport Conference Room	Design standards and guidelines
8/27/2018	Airport Conference Room	Design standards and guidelines; Del Monte Blvd extension
9/24/2018	Airport Conference Room	Development, parking, and landscaping standards
11/5/2018	Airport Conference Room	Review of draft Specific Plan
11/19/2018	Airport Conference Room	Review of draft Specific Plan
Public Open House		
12/10/2018	Vince DiMaggio Park	Open house for public to provide comment on draft of Specific Plan

Design Review Board		
12/19/2018	City Council Chambers	Introduce plan; schedule
1/16/2019	City Council Chambers	Onsite design standards; development standards
Planning Commission		
12/13/2018	City Council Chambers	Introduce plan; schedule
1/24/2019	City Council Chambers	Community identity; land use and development; economics
2/9/2019	City Council Chambers	Mobility; public facilities and infrastructure; environment
2/28/2019	City Council Chambers	Development standards; zoning
3/14/2019	City Council Chambers	Design standards and guidelines; Specific Plan appendix
4/25/2019	City Council Chambers	Baseline conditions, project description
City Council		
3/26/2019	City Council Chambers	Introduce plan; schedule (joint meeting with Planning Commission)
4/17/2019	City Council Chambers	Approval of funding for EIR, WSA, and water/sewer modeling

1.3 Opportunities and Constraints

Members of the Ad Hoc Committee identified strengths, weaknesses, opportunities, and threats associated with the Downtown (**Figure 1-5**). Committee members felt that downtown already attracts unique businesses and exhibits strong business retention. They said they enjoy the local activities hosted Downtown like the well-established farmers market and the Labor Day parade, as well as the attractive street banners in the area. In addition, they felt that Downtown is safe and generally clean. The broader City was praised for being a diverse and welcoming community, and Marina's central location in the Monterey Bay area was seen as a strength.

Threats to the development and sustainability of a diverse, inclusive Downtown include a regional lack of affordable housing, the disconnected street network in the Downtown area, and the limited connectivity between existing development in Downtown and new development at the former Fort Ord. The auto-oriented design of Marina's Downtown was identified as a major weakness. The commercial portion of the Downtown is focused on Reservation Road and Del Monte Boulevard as they form the backbone of the City's indeterminate Downtown. Given the absence of a platted city with established blocks and required block standards, development occurred along established roads, and regularly spaced cross streets were never constructed. Dead-end driveways and lanes provided access to lots and limited the possibility of vehicular and pedestrian connectivity throughout the Downtown area. Many buildings in the Downtown area need refurbishment. Most of the architecture reflects suburban commercial design from the mid-20th Century to the present. There are no parks, no clearly defined business district, and few places to gather and meet. Large parking lots fronting Reservation Road and Del Monte Boulevard create a suburban environment incompatible with a traditional Downtown.

Even so, great opportunities are already built into the Downtown. With effort and time, these opportunities can contribute to the overall strength of the Downtown area. Opportunities include defined gateways and medians on major roads, wide rights-of-way on Del Monte Boulevard and Reservation Road, and key areas that are ripe for redevelopment.

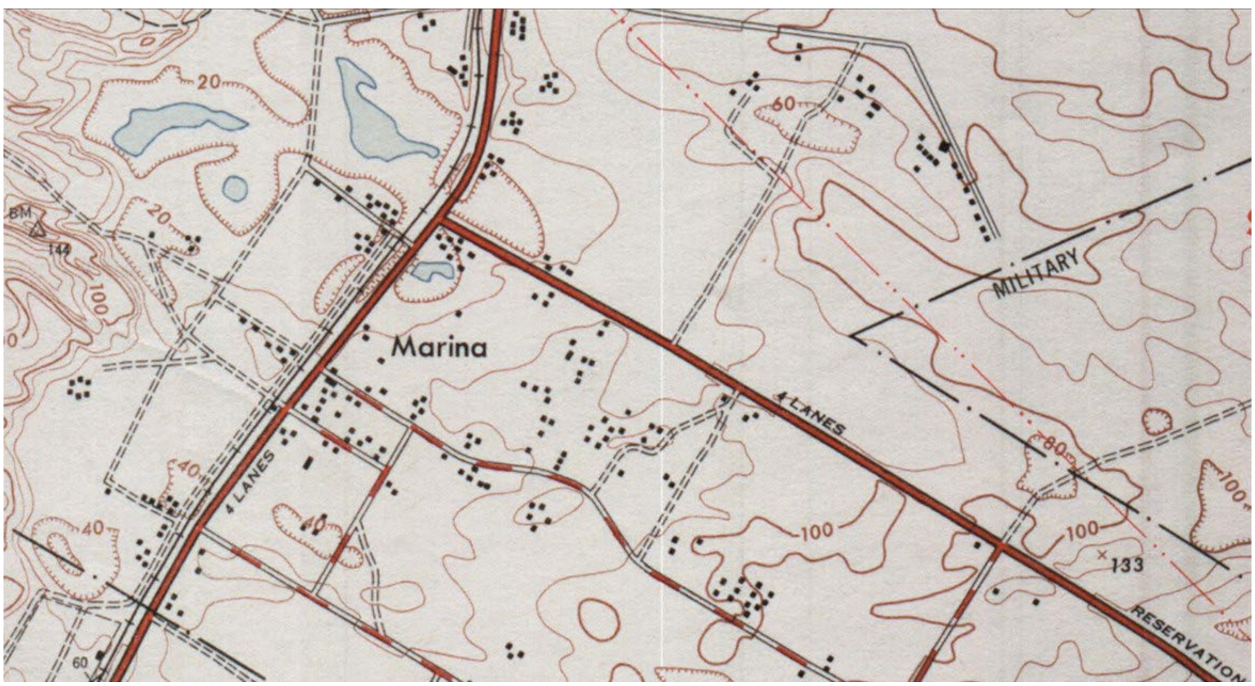
STRENGTHS	WEAKNESSES
Diverse/welcoming community Centrally located in the Bay Downtown is safe, generally clean Established farmers market Attractive banners Strong business retention Unique businesses Budding tourist economy Municipal airport Higher education institutions MST Transit Center	Poorly designed downtown Auto oriented/not walkable Blight Large parking lots fronting streets No parks downtown No business district Lack of spaces to gather/meet Commuter traffic Poor imageability/sense of place Lack of mixed uses City seen as unfriendly to business
Gateways/medians on major roads Wide ROWs on arterial roads Key areas primed for redevelopment Regional trail system improvements Underutilized land for redevelopment Urban growth boundary	Lack of affordable housing Limited connectivity via street grid Disjointedness of Central, South Marina Online retail competition
OPPORTUNITIES	THREATS

Figure 1-5.

2 Setting and Existing Conditions

2.1 Marina's History

Starting around the 6th Century CE, the Ohlone people inhabited California's Central Coast and established fixed villages throughout the region, including the village of Wacharon in the area between present-day Marina and Moss Landing. Much of the area in what is today incorporated Marina was used by various ranching operations in the 19th Century. After a brief stint as Bardin, then Locke-Paddon Colonies, then Paddonville, the area including Downtown and much of the rest of the city was formally named Marina in 1918. Marina became an early flag stop on the Southern Pacific Railroad for visitors from San Francisco. As the town developed, land was set aside for a school, church, and other necessary civic buildings. Marina's first post office was established in the Downtown in April 1919, housed in connection with a general store and gasoline pump. **Figure 2-1** compares the urban form of Marina between 1948 and 1983. shows the evolution of one of Marina's prominent businesses, Mortimer's, from 1948 to the present day.



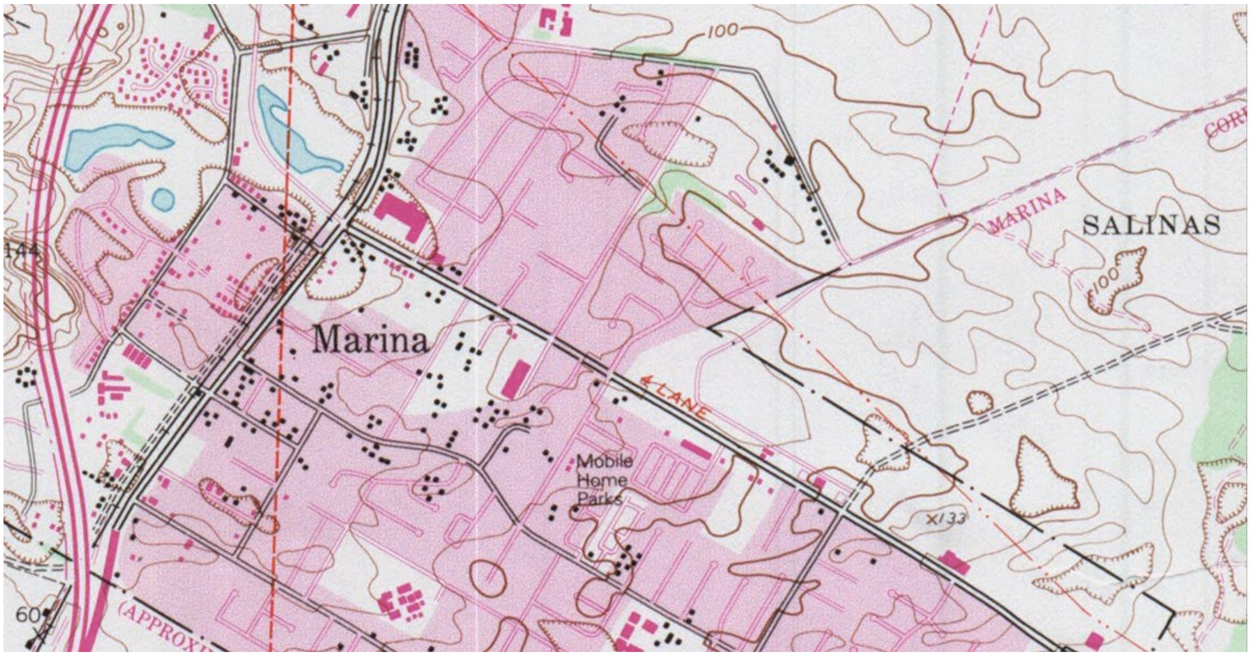


Figure 2-1 Downtown Marina in 1948 (above) and 1983 (below).
Source: United States Geological Survey

Marina continued to grow as Camp Clayton, Camp Gigling, and finally Fort Ord brought thousands of soldiers and their families to the region (**Figure 2-2**). Between the 1930s and 1950s, new schools, churches, businesses, a community center, and hundreds of homes were constructed, many within the Downtown area. Del Monte Boulevard was the City's primary commercial corridor.

Figure 2-2. Mortimer's through the years (top to bottom): 1948, 1950s, 1994, 2018.

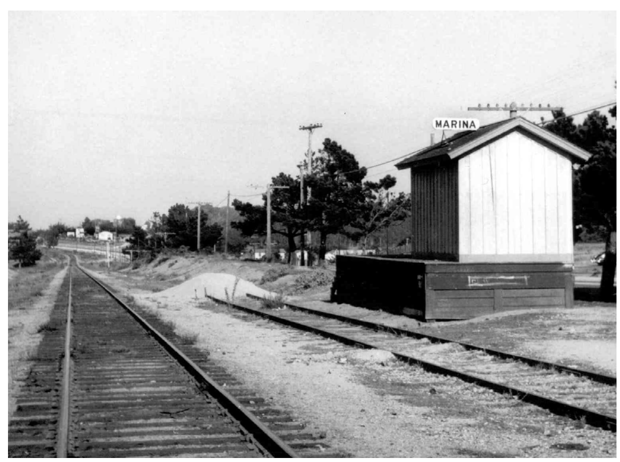
In 1986, the City established a Redevelopment Project Area in the central commercial core of Marina along Reservation Road and Del Monte Boulevard. That same year, the Seacrest Shopping Plaza—Marina's first major retail grocery store in over 20 years—was completed. Seacrest Plaza increased retail tax revenue and jobs, but the shopping center was auto-oriented and eliminated opportunities for some street connections in the Downtown, reinforcing the large-block pattern in Marina.

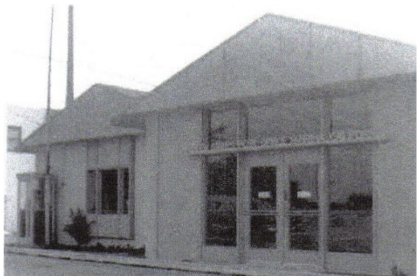
Fort Ord (**Figure 2-3**) was downsized and then fully decommissioned in 1994. The closure of the fort had an immediate effect on the demographics and economy of Marina. The City's population fell by 9,000 and nearly 23,000 jobs in the region were lost, greatly impacting the development Downtown.

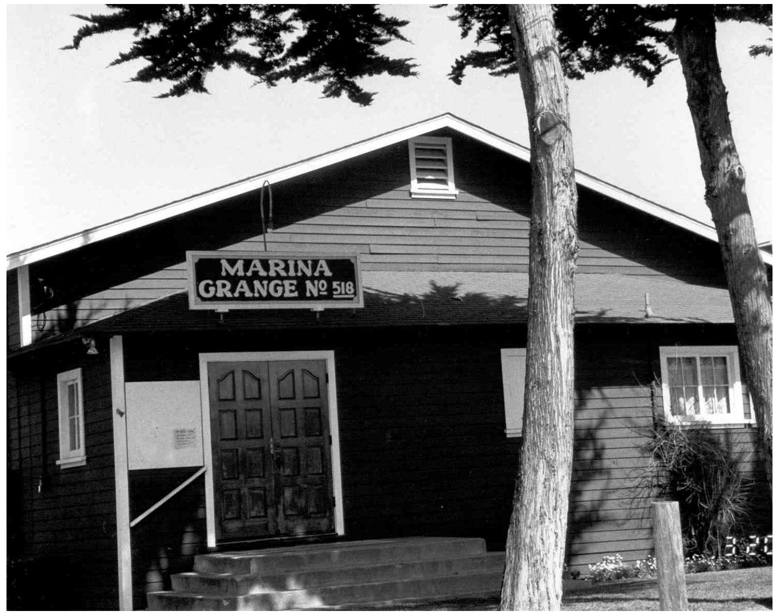
By the late 1990s and early 2000s, interest in the Downtown was surging. Residents participated on committees aimed at downtown vitalization, and Monterey-Salinas Transit proposed designs for a major transit facility in Marina.

Figure 2-3. Fort Ord as it appeared in 1941.
Source: Wikimedia Commons.

Historic images of Downtown Marina (clockwise, from top left): Pavia's Italian Dinner (1994; near Reservation Rd. and Ocean Terrace), Church of Christ (Cypress Ave.), Marina Grange (Carmel Ave.), Marina's first grocery store (early 1940s), Marina Post Office, Southern Pacific Flag Stop 117, Marina Fire Department (1964), Marina's first subdivision (centered around Vista del Camino), Pavia's Club House (Source: City of Marina collection).






MARINA
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DYES

2.2 Regional Context

Marina is situated in northwestern Monterey County along State Route 1 adjacent to the Monterey Bay, approximately eight miles north of the City of Monterey (**Map 2-1**). The City's 2017 population of 22,145 makes Marina the fifth largest city in Monterey County (behind Salinas, Seaside, Monterey, and Soledad), but it is expected to surpass Monterey and Soledad in population by 2045 (AMBAG, 2018).

Marina is unique in the Monterey Bay region, as it is entirely built upon the ancient sand dune soils at the southeast edge of the Bay. Its character is strongly influenced by this geography—from its climate and its rolling, low elevation topography, to its vegetation and landscaping dominated by Monterey Cypress and other coastal vegetation. Open views of ocean, dunes, and maritime chaparral help define Marina as a place rooted in the ecology of the Monterey Bay region.

The City of Marina encompasses 6,086 acres and extends for five miles along the Pacific Ocean, from the City of Seaside on the south to the Salinas River on the north, and inland for four miles along the river to the municipal airfield.

The Specific Plan area is shown in **Map 2-2**. Downtown is centrally located in the City of Marina and encompasses approximately 320 acres. Downtown is generally bounded:

- To the north by the northern property line of parcels along the north side of Reservation Road;
- To the west by the properties generally west of Del Monte Boulevard;
- To the south by Reindollar Avenue, then east along Sunset Avenue to Carmel Avenue, hence east on Crescent Avenue and north along Crescent to the southerly property line of the El Rancho Shopping Center and abutting commercial properties along Reservation Road; and
- To the east by Salinas Avenue and the Monterey Peninsula Movers parcel at 503 Reservation Road.

Arterial roads in the Downtown are Reservation Road and Del Monte Boulevard. Public facilities include the Marina City Hall and Community Center, Police and Fire Station, Community Development and Public Works facilities, and the Marina Child Development Center. Locke-Paddon Park, the City of Marina's primary open space, is located immediately northwest of the Downtown.

A brief overview of Marina's history, demographics, natural setting, and economic climate helps to explain the factors that led to the creation of the Downtown Vitalization Specific Plan.

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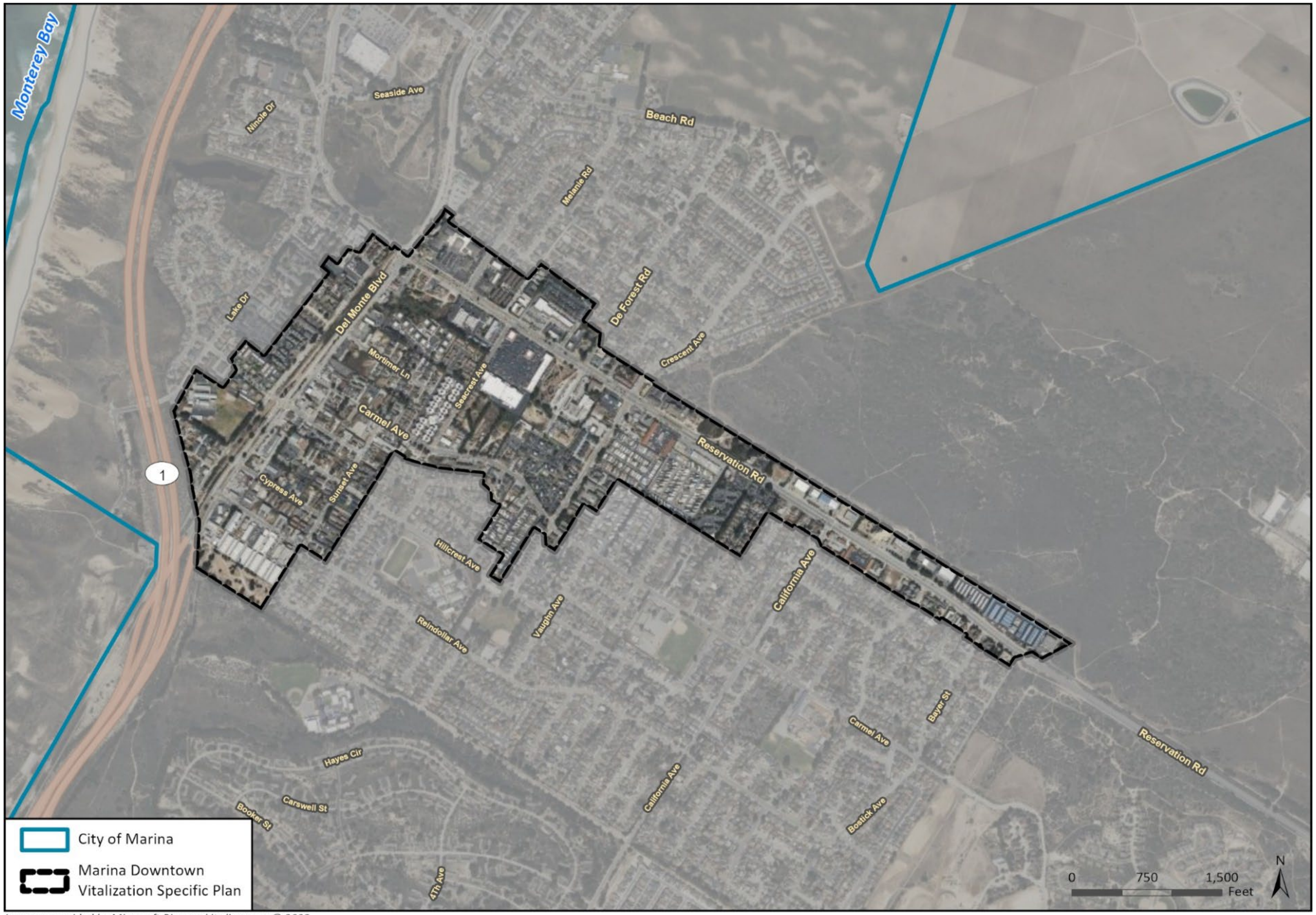
Additional data provided by County of Monterey, 2020.

Map 2-1. Regional Context.



Imagery provided by Microsoft Bing and its licensors © 2023.

Map 2-2. Specific Plan area.

2.3 Demographics

Although the French were the early settlers of Marina, with names such as Barbier, Lievre, and Teulier, the City's name is Spanish, and the current population mix is represented by people from almost every country. The stationing of American G.I.s at Fort Ord after World War II contributed to the ethnic diversity of Marina and established a large Asian-American community in the city. Prominent ethnic groups include Filipino, German, Korean, Vietnamese, Japanese, Chinese, Hawaiian, Guamanian, Puerto Rican, Mexican, and Samoan, along with others representing various Pacific islands including Okinawa and the Marianas.

In 1970, five years before Marina was incorporated as a charter city, the population was 8,343. In 1980, there were 20,647 people living in Marina, representing a growth rate of 147% over the course of a decade. The city continued to grow through the mid-1990s. At its peak, around 27,000 people lived in Marina.

The population declined following the closure of Fort Ord in 1994. Between 2000 and 2010, Marina lost 21% of its population, bottoming out at 19,718 residents. For the past several years, the city has enjoyed slow but sustained growth, reaching 22,246 residents in 2021. Projections indicate Marina will continue to grow, reaching a forecasted population of 30,510 by 2040 (AMBAG 2018).

Marina's population is aging. The median age was 26.7 in 1990 and 32.3 in 2000. The 2021 American Community Survey estimates the median age in Marina was 34.9, consistent with the median age of Monterey County (34.9) but higher than the neighboring City of Salinas (31.3). Approximately 14 percent of Marina's residents were 65 or older in 2021 compared to 11% in 2010 and 8% in 2000.

Table 2-1. Demographic profile of the City of Marina

	1990 Census	2000 Census	2010 Census	2021 ACS
Total population	26,436	25,101	19,718	22,246
Median age (years)	26.7	32.3	34	34.9
Under 18 years	7,674 (29.0%)	5,356 (21.3%)	4,773 (24.2%)	5,448 (24.4%)
65 years and older	1,165 (4.4%)	1,978 (7.9%)	2,244 (11.4%)	3,247 (14.6%)
Total housing units	8,261	8,537	7,200	8,051
Occupied units	7,908	6,745	6,845	7,676
Vacant units	353	1,792	355	375
Owner-occupied	2,728 (34.5%)	3,088 (45.8%)	2,963 (43%)	3,153 (41.1%)
Renter-occupied	5,180 (65.5%)	3,657 (54.2%)	3,882 (57%)	4,523 (58.9%)
Average household size	3.05	2.79	2.75	2.72
Average family size	3.30	3.25	3.26	3.32
White	13,263 (50.2%)	9,500 (37.8%)	7,112 (36.1%)	11,003 (49.5%)
Black or African American	4,797 (18.1%)	3,494 (13.9%)	1,413 (7.2%)	1,500 (6.7%)
American Indian	194 (0.7%)	125 (0.5%)	60 (0.3%)	29 (0.1%)
Asian	5,374 (20.3%)	3,976 (15.8%)	3,826 (19.4%)	3,583 (16.1%)
Pacific Islander		505 (2.0%)	507 (2.6%)	441 (2.0%)
Some other race	40 (0.2%)	265 (1.1%)	46 (0.2%)	2,603 (11.7%)
Two or more races	NA	1,414 (5.6%)	1,382 (7.0%)	3,087 (13.9%)
Hispanic or Latino (any race)	2,768 (10.5%)	5,822 (23.2%)	5,372 (27.2%)	6,286 (28.3%)

A significant subset of Marina's aging population are veterans. Approximately 9% of Marina residents are veterans, double the rate of Monterey County. Seven percent of Marina's population under the age of 65 has a disability, compared to approximately 6 percent in Monterey County.

Though the City is aging, there is a growing student population living in Marina. Since 1995, California State University—Monterey Bay (CSUMB) has operated on former Fort Ord lands straddling Marina and Seaside. In 2015, there were an estimated 1,020 CSUMB students living in Marina. The student population is expected to increase to more than 6,300 by 2040, an increase of 518%. Students will account for 21% of Marina's population in 2040 compared to roughly 5% of the City's total population today.

While student population will be concentrated on and around the CSUMB campus, an increasing number of students are expected to take advantage of living accommodations in Downtown. The City therefore needs to be conscious of two major population groups—residents over the age of 65 who seek to age in place and students—as it works to create a Downtown that accommodates individuals and families of all ages and abilities.

The City should also be conscious of the various ethnic minorities that make up the population of Marina. The City's rich diversity is reflected in a variety of stores and restaurants—Chinese, El Salvadoran, Filipino, German, Hawaiian, Korean, Mexican, Thai, and Vietnamese—within the Downtown. According to the ACS, 49 percent of Marina's population identifies as white. Sixteen percent identify as Asian, while 7 percent identify as Black or African American, 2% as Pacific Islander, and less than 1% as American Indian. Approximately 26 percent identify as some other race or two or more races. Approximately 28 percent identify as Hispanic or Latino.

Figure 2-4. California State University—Monterey Bay.

Figure 2-5. The Asian Filipino Market, one of many diverse businesses in Downtown Marina. *Source: Asian Filipino Market*

The median household income in Marina is $78,795, lower than the countywide median household income of $82,013. The proportion of people renting their homes in Marina has been on the rise since the turn of the century. It is important to create opportunities for homeownership in and around Downtown by encouraging a variety of housing options, including condominiums as well as affordable rental options.

2.4 Economics

Marina is a mid-sized coastal city that traditionally provided support services to people stationed at or working in the former Fort Ord. The city historically provided housing for working class families with jobs on the Peninsula, but Marina was greatly affected by the closure of Fort Ord in 1994. Though services remain an important part of the local economy, there are still opportunities to develop the city's economic base in Downtown.

Commercial and light industrial uses in the Downtown encompass roughly 860,000 square feet on 88 acres. The Downtown Core includes 407,000 square feet of commercial uses on 36 acres. Another 416,000 square feet of commercial uses can be found on 46 acres in the Transition zone.

Tax valuation varies wildly for properties in each zone. The average property tax value per acre in the Core, where buildings are generally older and properties have generally been owned for longer periods of time, is $1,339,750. This compares to an average per-acre property tax value of $1,613,578 in the Transition zone. Altogether, commercial and light industrial uses in Downtown Marina account for around $51 million in total land valuation and $78 million in improved valuation., or $129 million total.

Over the course of the development of the Specific Plan, the City has commissioned multiple economic studies and analyses to better understand the market conditions influencing Downtown and Marina more broadly. The various economic conditions analyses revealed the following key findings:

- The Downtown District is largely built out and has relatively few vacant or underutilized lots;
- Significant changes to the development pattern of Downtown would require substantial redevelopment of sites to achieve the Plan's development targets; and,

Economic development goals and strategies included:

- Maintain and grow existing businesses in the city;
- Attract new businesses and startups to the City's existing and developing commercial areas with a focus on sustainable industries;
- Develop destination related activities and facilities;
- Support regional efforts that increase the availability of a skilled workforce for Marina's businesses.
- Capitalize on the opportunity to provide necessary goods in services within Marina to limit retail "leakage" including general retail merchandise; clothing, apparel, and shoes, restaurants, including casual dining, fast casual, and quick service concepts, and building materials and supplies.
- Help facilitate the reuse of vacant shops and restaurants in the Downtown;
- Host special events in addition to the Farmers Market;
- Support appropriate residential development within and adjacent to the Downtown; and,
- Invest in strategic infrastructure projects through the City's capital improvement program (CIP) to upgrade pavement and enhance traffic circulation.

2.5 Land Use

Development in Marina reached a peak in the decades following World War II. Like most communities in those years, Marina's development was spread out, oriented toward the automobile, and characterized by low densities. Land uses were segregated, requiring most residents to drive to shopping, employment, and recreation destinations. Most buildings were only one or two stories in height. This remains the dominant development pattern in Marina today.

Downtown Marina is generally suburban in nature, dominated by a mixture of single-story retail commercial and office buildings, single-family homes, and one- to two-story multifamily residential units. The existing retail and office commercial uses are located primarily along Reservation Road and Del Monte Boulevard and are predominantly oriented in a strip mall configuration with the buildings behind large surface parking lots.

Marina’s suburban character is influenced by its historic function as a housing and services center for the former Fort Ord military installation. A pattern of mixed-density housing and strip-retail center commercial development signifies a community that is highway-oriented. Buildings date primarily from the postwar era, with significant shopping centers dating from the late 1950s (**Figure 2-6**).

Figure 2-6. Marina Village Shopping Center, late 1960s.

2.5.1 Existing Land Uses

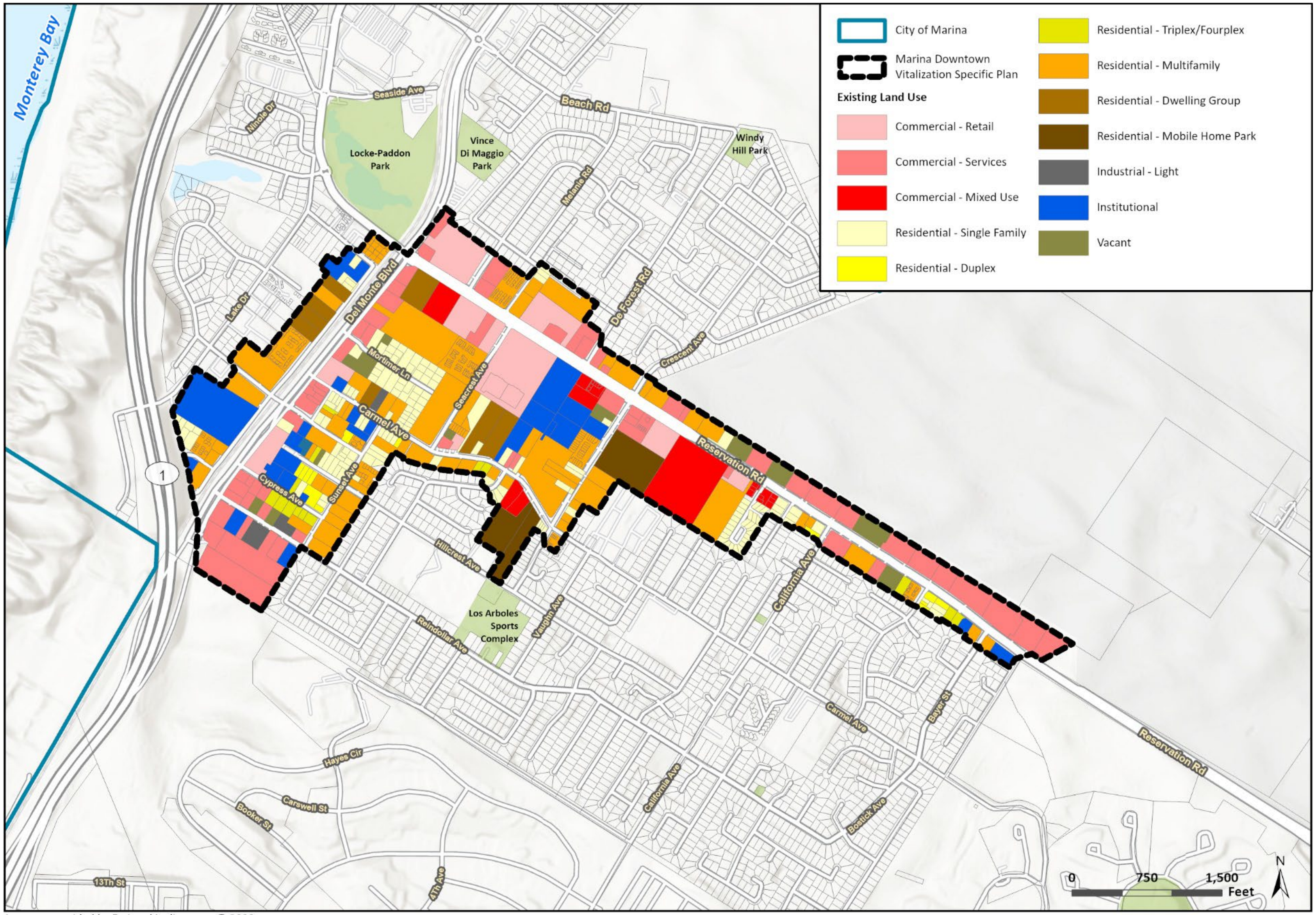
The Specific Plan area covers approximately 320 acres in Central Marina. While the downtowns of many cities benefit from mixed land uses that promote pedestrian activity and efficient use of space, single uses dominate most parcels in Downtown Marina (**Map 2-3**).

A majority of land in this area is devoted to residential (39 percent) and commercial uses (24 percent) **Table 2-2** summarizes the distribution of existing land uses in the Specific Plan area. Multifamily uses alone represent more than half of all residential land use in the Specific Plan area (and 22 percent of total land use). Eight percent of total land area is devoted to single-family homes, with 3 percent each to dwelling groups and mobile home parks. Duplexes, triplexes, and fourplexes together make up just over 2 percent of total land area. There are currently a total of approximately 2,300 housing units and 1 million square feet of commercial space in the Specific Plan area.

Two-thirds of commercial uses are office-related, representing 16 percent of total land area. Retail and visitor-serving uses take up 8 percent of the total land area. Remaining land uses are split between institutional and civic (9 percent), mixed (2 percent), and light industrial (1 percent). There are no recreational uses in Downtown. Vacant lots, which comprise 2 percent of land area, could provide an opportunity for the development of parks and other recreational facilities.

Table 2-2. Existing land uses by acreage in the Downtown Vitalization Specific Plan area

Land Use	Acres	%
Multifamily	71.01	22%
Single Family	26.21	8%
Mobile Home Park	11.12	3%
Dwelling Group	9.68	3%
Triplex/Fourplex	3.65	1%
Duplex	2.58	1%
Total Residential	**124.24**	**39%**
Retail/Services	27.35	8%
Office/Other Commercial	50.37	16%
Total Commercial	**77.72**	**24%**
Light Industrial	2.09	1%
Mixed Use	15.70	5%
Institutional	27.71	9%
Recreation	0	0%
Right-of-Way	67.03	21%
Total Public Uses	**94.74**	**30%**
Vacant Lots	7.56	2%
TOTAL	**322.05**	**100%**



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Additional data provided by the City of Marina, 2022.

Map 2-3. Existing land uses in Downtown Marina.

2.6 Mobility

Street conditions in the Downtown reflect a mid-20th Century focus on the automobile at the expense of other forms of transportation (**Figure 2-7**). Travel lanes are wide, right turn lanes are prevalent, and curb radii are typically large, allowing drivers to make sweeping turns without stopping. There are significant gaps in the sidewalk network and where they are present, sidewalks are often narrow and poorly maintained. For example, a two-block stretch of Del Monte Blvd between Palm Ave and Mortimer Lane is mostly devoid of sidewalks, and pedestrians are forced to walk on asphalt directly adjacent to high-speed vehicular traffic. These issues make walking to destinations in the Specific Plan area more dangerous and unpleasant for pedestrians.

Figure 2-7. Typical portion of Del Monte Blvd with wide travel lanes for automobiles and missing sidewalks.

2.6.1 Existing Vehicle Network

The existing network of roadways throughout Downtown Marina is shown in **Table 2-3**. The network comprises expressways, arterials, collectors, and local streets, as defined below, and shown in **Map 2-4**.

Table 2-3. Roadway Classifications within the Downtown Vitalization Specific Plan area

Classification	Roadway
Four-Lane Expressway	• Del Monte Boulevard (near Highway 1 interchange)
Four-Lane Arterial	• Del Monte Boulevard • Reservation Road
Two-Lane Collector	• California Avenue • Carmel Avenue • Crescent Avenue • De Forest Road • Palm Avenue • Reindollar Avenue • Salinas Avenue • Seacrest Avenue • Sunset Avenue • Vista Del Camino

Classification	Roadway	
Local Street	• Bayer Street • Bennett Court • Busby Lane • Carmel Circle • Casa de Bolea • Crestview Court • Cypress Avenue • Debbie Drive • Elm Avenue • Eucalyptus Street • Hillcrest Avenue	• Lynscott Drive • Marina Drive • Mortimer Lane • Ocean Terrace • Ocean View Court • Paddon Place • Rose Lane • San Pablo Court • Terry Circle • Viking Lane • Zanetta Drive

Expressways: Circulation on expressways is limited to major intersecting streets with large traffic volumes. Intersections along expressways contain full protected left-turn lanes and should contain exclusive right-turn lanes.

Arterial: Arterials are major thoroughfares that provide efficient connections to major destination points and to primary gateways in and out of the city (**Figure 2-8**). Arterials carry moderate to large traffic volumes but have lesser capacity than expressways. In most downtown districts arterials serve as major bicycle routes and generally do not contain exclusive right-turn lanes in an effort to be more pedestrian friendly.

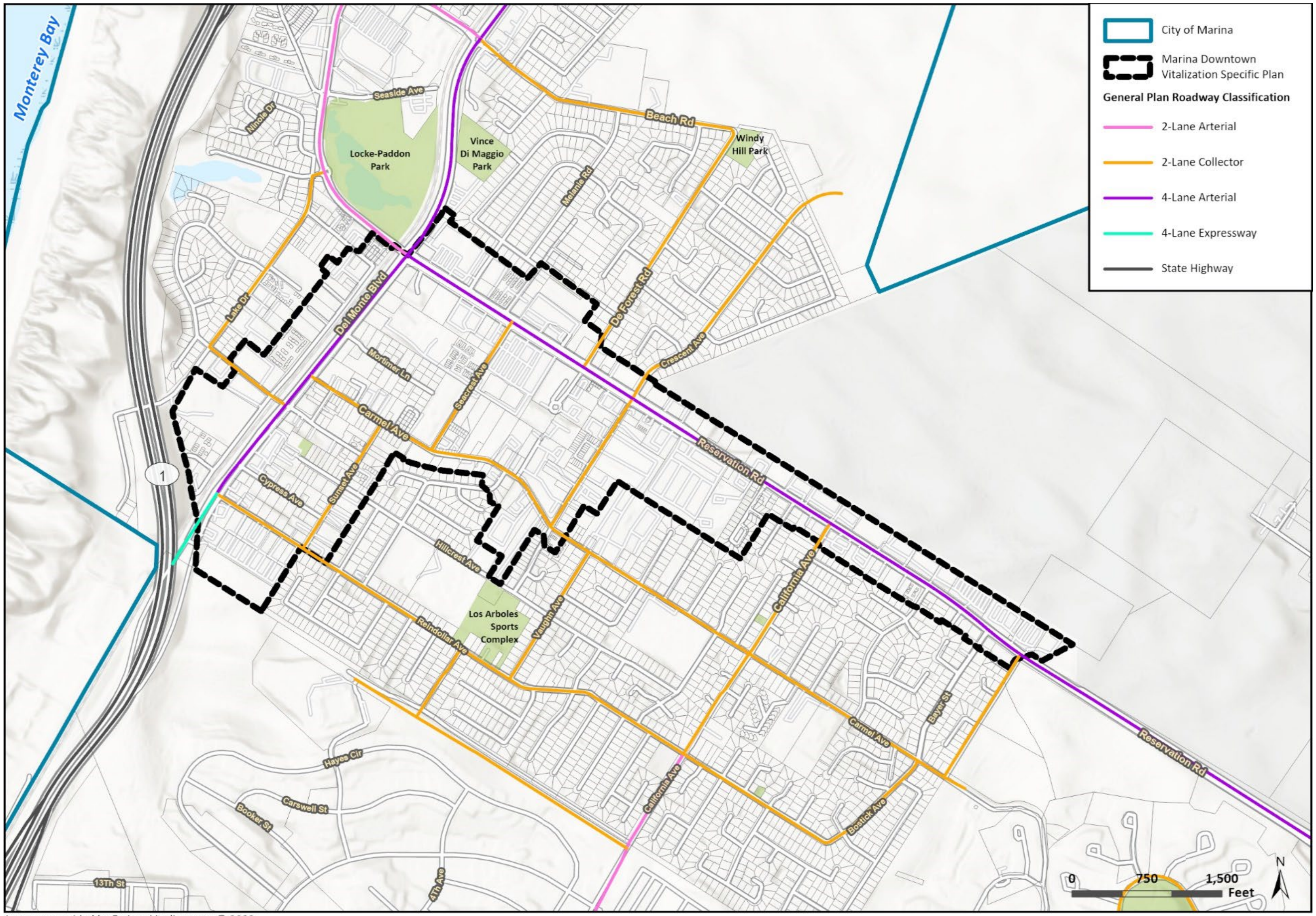
Figure 2-8. Reservation Road functions as an arterial street.

Collector: Collectors function to gather vehicular trips from local streets within a residential neighborhood or commercial district and distribute the trips to the City's major streets. They carry a moderate level of traffic volumes at moderate speeds.

Local Streets: Local streets accommodate vehicular and non-vehicular traffic to and from dwellings and facilities within neighborhoods at low speeds. Traffic flow control utilizes stop signs, narrower widths, and curved alignments.

2.6.2 Connectivity

Typically, a downtown consists of a well-connected street grid that comprises around 30 – 35 percent of the total land area and this connectivity makes the area more walkable and bikeable. The public right-of-way in the Specific Plan area encompasses 62 acres, or 20 percent of the total land area. This is an unusually small percentage of land for a downtown area. Problems associated with limited connectivity of the street grid include traffic congestion, speeding, and increased pollution. Residents of communities with a low connectivity street network often drive more because fewer destinations are accessible within comfortable walking or biking distance.



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Additional data provided by the City of Marina, 2022.

Map 2-4. Roadway Classifications.

The number of three– and four-way intersections in a given area (known as intersection density) is one way to quantify the connectivity of a street network. When compared to other communities in the Monterey Bay region, the number of intersections in Downtown Marina is dwarfed by the number of intersections in the downtown areas of other cities. **Table 2-4** compares the intersection density of Downtown Marina with other Central Coast communities. The street grids of Marina and other cities in the region are compared in **Figure 2-9**. In a 160-acre portion of Downtown, Marina has only nine intersections, compared to 25 in Seaside, 29 in Salinas, 31 in Monterey, and 80 in Pacific Grove.

Table 2-4. Number of three– and four-way intersections in a 160-acre portion of downtown.

City	Number of Intersections	City	Number of Intersections
Marina	**9**	Paso Robles	22
Carmel-by-the-Sea	39	Salinas	29
Gilroy	24	San Juan Bautista	27
Gonzales	24	San Luis Obispo	29
Greenfield	19	Santa Cruz	28
Hollister	39	Santa Maria	21
King City	22	Seaside	25
Monterey	31	Soledad	22
Pacific Grove	80	Watsonville	22

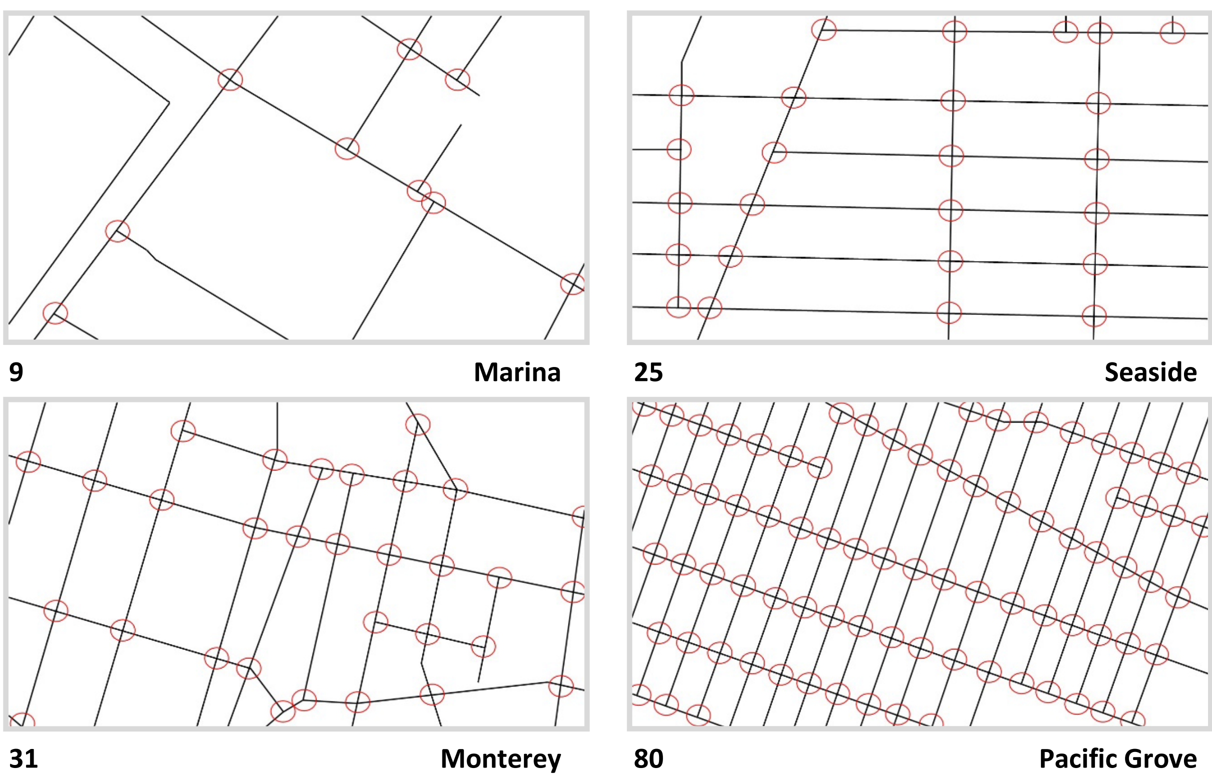


Figure 2-9. Number of three– and four-way intersections in regional downtowns.

2.6.3 Pedestrian and Bicycle Network

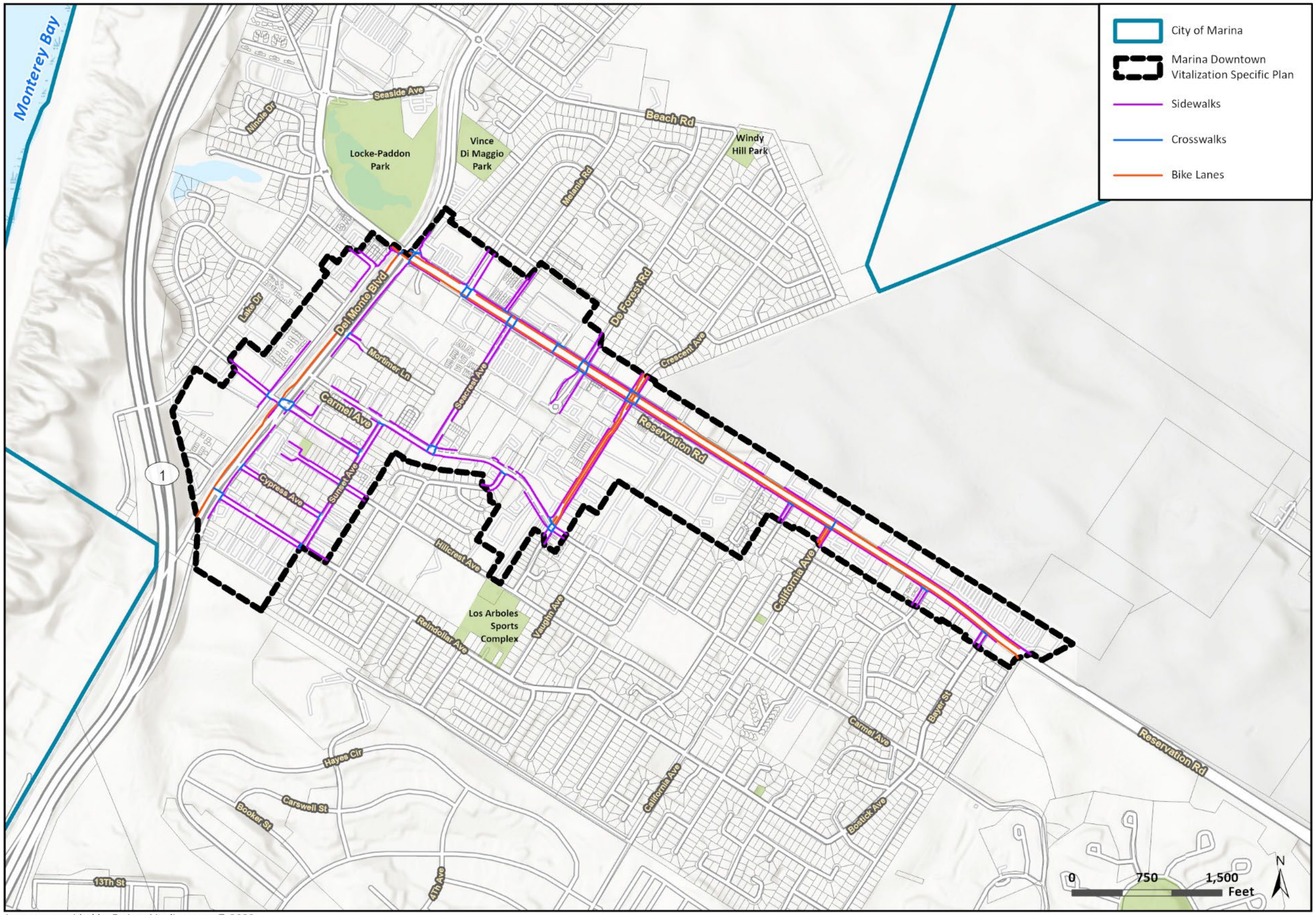
The pedestrian sidewalk network within Downtown Marina is fairly well developed, with existing sidewalks on collector and arterial roadways, as well as along most local streets. However, sidewalks along Del Monte Boulevard, Carmel Avenue, Reindollar Avenue, Reservation Road, and Seacrest Avenue are incomplete. In addition, many sidewalks are not wide enough for simultaneous pedestrian use or have obstructions that partially block pedestrian flow. **Map 2-5** shows existing pedestrian and bicycle infrastructure in the Specific Plan area.

Figure 2-10. Monterey Bay Coastal Bike Path.

The bicycle network in Downtown Marina includes Class I and Class II bikeways. Class I bikeways are generally referred to as bicycle paths and provide a completely separated right-of-way for the exclusive use of bicycle and pedestrian traffic. Class II bikeways, commonly called bicycle lanes, provide a striped lane for one-way bike travel on a street or highway.

There is one Class I bikeway within Downtown: the Monterey Bay Coastal Bike Path (**Figure 2-10**), which currently extends 19 miles from Castroville to Pacific Grove. There are Class II bikeways along Reservation Road, Crescent Avenue, and California Avenue.

As noted in the City's Pedestrian and Bicycle Master Plan, the existing bicycle network provides limited connections for cyclists within City limits, including the Downtown. The Monterey Bay Coastal Bike Path provides connections for those who commute to areas outside of the city and for those who use the trail for recreational purposes. The existing bicycle path network is not adequate to meaningfully encourage drivers to use bicycles when commuting within the city or Downtown.



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Additional data provided by the City of Marina, 2022.

Map 2-5. Network of sidewalks, street crossings, and bike lanes in Downtown Marina.

2.6.4 Parking

The Specific Plan area has nearly 8,000 parking spaces. As shown in **Table 2-5**, roughly three-quarters of all available parking (6,144 spaces) is off-street in private lots, including residential, commercial, and industrial areas. Three percent of the area's parking supply—276 spaces—is located off-street in parking lots available to the public, including state court, school, post office, and civic facilities. The remaining 20% of parking (1,570 spaces) is located on the street and is generally accessible to all visitors and residents of Downtown.

In September of 2022, Kimley Horn conducted a parking occupancy study in the Seacrest and Marina Square shopping centers. The study found that peak weekday parking demand was roughly 50% of the provided parking supply. In addition, assuming a realistic percentage of trips are made from within the Specific Plan area and via alternative transportation, the study estimated that buildout of the Specific Plan would result in a total peak parking demand of 6,764 - 8,880 spaces.

Table 2-5. Parking spaces in the Downtown Vitalization Specific Plan area

Parking Spaces	Number of Spaces	Percent of Total Spaces
Off-street in private lots	6,144	77%
Off-street in public lots	276	3%
Total off-street parking	6,420	80%
On-street parking	1,570	20%
TOTAL PARKING	**7,990**	**100%**

2.6.5 Transit Facilities

The Monterey-Salinas Transit (MST) facility within Downtown Marina is known as the Marina Transit Exchange. It is located on the south side of Reservation Road at the intersection with De Forest Road (**Figure 2-11**). The Transit Exchange was constructed in accordance with the Marina Transit Center Specific Plan (October 2006) which, in addition to guiding the development of the Transit Exchange itself, looks to facilitate the development of a small-scale, transit and community-oriented mixed-use center in Downtown Marina.

Figure 2-11. Monterey-Salinas Transit Exchange.

MST routes currently serving Downtown Marina include:

- Sand City - Marina via Gen Jim Moore (Line 17)
- Sand City - Marina via Monterey Road (Line 18)
- Monterey – Salinas (Line 20)
- Salinas - VA DOD Clinic (Line 61)

2.6.6 Regional Mobility Framework

In June of 2022, the Association of Monterey Bay Area Governments (AMBAG) published Moving Forward: Monterey Bay 2045 (**Figure 2-12**) the region's Governments Metropolitan Transportation Plan and Sustainable Communities Strategy (MTP/SCS). The MTP/SCS was completed through collaboration with AMBAG staff, Transportation Agency for Monterey County (TAMC) staff, and staff from local jurisdictions in the Monterey Bay Area. The plan focuses on two key areas: 1) improved mobility, accessibility, and coordinated transportation, and 2) a land use strategy that houses the region's future population while preserving the most important agricultural lands and natural areas. These strategies aim to reduce vehicle miles traveled (VMT) and greenhouse gas emissions (GHG) through improved coordination between regional transportation and local land use planning. By drawing attention to these regional goals, the MTP/SCS highlights the value of coordination and resource sharing among Monterey Bay Area localities.

The following goals for the MTP/SCS were adopted by the AMBAG Board of Directors:

- Access and Mobility – Provide convenient, accessible, and reliable travel options while maximizing productivity for all people and goods in the region.
- Economic Vitality – Raise the region's standard of living by enhancing the performance of the transportation system.
- Environment – Promote environmental sustainability and protect the natural environment.
- Healthy Communities – Protect the health of our residents; foster efficient development patterns that optimize travel, housing, and employment choices and encourage active transportation.
- Social Equity – Provide an equitable level of transportation services to all segments of the population.
- System Preservation and Safety – Preserve and ensure a sustainable and safe regional transportation system.

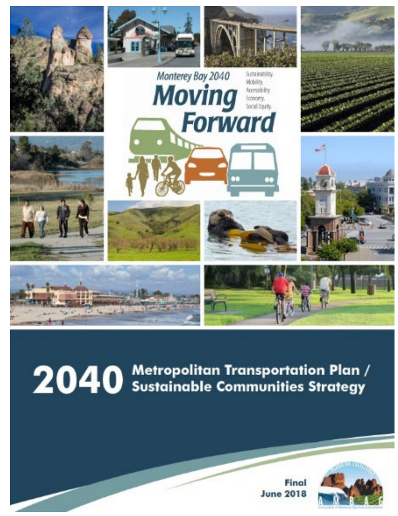


Figure 2-12. Metropolitan Transportation Plan / 2045 Sustainable Communities Strategy

2.6.7 Monterey Peninsula Light Rail Transit and SURF! Bus Rapid Transit System

TAMC completed an environmental review for a proposed fixed guideway service to and from the Monterey Peninsula. The project would have provided light rail transit service using the existing Monterey Branch Line alignment, which was purchased by TAMC in 2003 for $9.3 million. The 16-mile corridor extends between Monterey and Castroville on the publicly owned tracks adjacent to Highway 1. A planned first phase of the project would have run between Monterey and Marina with key stations in Monterey, Seaside, Sand City, and Marina/CSUMB, and connecting bus service to Pacific Grove and Carmel to the south and Salinas to the east. Later phases were to extend service to the proposed commuter rail station in Castroville and to increase the frequency of trains. Rail service was to begin by 2015 with two light rail stations Downtown, both on the west side of Del Monte Boulevard at Reservation Road and Palm Avenue although funding for this project has not yet been secured.

While the construction of a light rail system is still the long-term goal for TAMC, MST is working to develop a bus rapid transit system utilizing the existing Monterey Branch Line right of way. MST SURF! is estimated to cost $50 million to complete as opposed to the Monterey Peninsula Light Rail project's $145 million estimate. TAMC is providing $15 million in project support through Monterey County's Transportation Safety & Investment Plan (Measure X) funds approved by Monterey County voters in 2016. The SURF! Project is slated to open to the public in 2027 and includes a station within the Specific Plan area at the corner of Del Monte Boulevard and Palm Avenue.

3 Downtown Vision

Exceptional downtowns integrate a city's natural setting and built environment to create opportunities for human interaction. These downtowns have a distinct identity. They are places people want to stop and visit rather than places to simply pass through. Much of the work in creating a memorable downtown involves adopting effective design standards for developments and civic space. In Central Marina, building on existing strengths, recognizing weaknesses and threats, and pursuing opportunities will help to achieve the vision for Downtown.

The Marina Downtown Vision was adopted by the City Council in July 2005. The Vision was intended to supplement the General Plan by encouraging development in the Downtown area. The Vision provides direction for the physical design of Downtown Marina and calls for new development that meets or exceeds the City's policies and standards. Issues addressed include community identity, fiscal health, infrastructure, safety and security, services, design, and sources of funding. The underlying intent of the Vision has been incorporated into the Downtown Vitalization Specific Plan and will be implemented by the various goals, policies, and design standards included in this plan.

The Vision of the Specific Plan is to establish Downtown Marina as:

> ***A place with a unique, small coastal town character where people can work, live, and shop in an environment that creates a feeling of cohesiveness, compactness, and individual community identity; a place with a vibrant economy that accommodates a variety of businesses, residences, and civic uses; and, a place that is architecturally pleasing and sustainable, achieved through attractive storefronts, eco-friendly design, and plentiful landscaping and pedestrian amenities to encourage people to walk along tree-lined streets and socialize in civic and public spaces.***

The long-term viability of the vision hinges on attracting a regional customer base, including tourists and shoppers from neighboring communities, fostering a vibrant community within downtown by providing much needed housing, and establishing a clear identity for Downtown. This is to be achieved through the implementation of the policies and programs discussed throughout the Specific Plan.

Pedestrian right-of-way with outdoor dining.

The Downtown Ad Hoc Committee called for a "strategically located" town center, anchored by retail, civic, and public transit uses within walking distance of high-density residential uses. Development was to be pedestrian focused and family friendly with opportunities for social interaction placed throughout the Downtown. Reservation Road was highlighted as the preferred location for the highest intensity retail activity and high intensity residential densities, and traffic calming was identified as crucial for improving pedestrian access along Reservation Road.

The Downtown Vitalization Specific Plan incorporates many of the objectives of AMBAG's 2045 MTP/SCS by designing for and encouraging walkability, encouraging higher-density development near transit facilities, and promoting sustainable design and construction practices.

Greater density and building heights will distinguish Downtown from other areas of the City and create visual interest. An overarching aim is to consolidate important land uses and make Downtown an identifiable area with attractive streetscapes.

3.1 Plan Goals

The Specific Plan seeks to establish a direct connection between the City of Marina's General Plan and opportunities for vitalization and enhancement within Downtown Marina. An overall goal is the orderly development of Downtown Marina in a method consistent with the City's General Plan and, more specifically, with the community's vision as developed through the community outreach process. The Goals of the Specific Plan include:

Land Use and Development—A community with a safe, walkable, and vibrant downtown, that attracts diverse business opportunities, encourages appropriate mixed uses, and integrates adjoining neighborhoods, parks, and trails.

Community Identity—A Downtown that complements Marina's natural setting, provides opportunities for an attractive and functional built environment, accommodates and reflects the diversity of our community, where people gather for social, cultural, educational, and recreational experiences.

Cultural Diversity—A Downtown where people of all incomes, ages, abilities, races, and cultures feel like they belong.

Housing Affordability—A variety of affordable, high-quality housing options for people to live in Downtown.

Environment and Sustainability—Development in Downtown that employs green building technology, employs net zero building principles, and is designed to create more comfortable indoor and outdoor environments.

Economic Vitality—An environment that attracts and sustains economic activity through innovation, business, and social opportunities.

Mobility—A Downtown with safe and efficient pedestrian and vehicular circulation that encourages people to gather, walk, bike, or use public transportation.

Public Facilities and Infrastructure— Ensure that there are adequate public services and public utilities are provided for future development, and enhance the Downtown by planning for future public facilities.

The Specific Plan can be viewed as a springboard to a better Downtown. Change will not be immediate, but implementing the goals, policies, programs, and development standards in the Specific Plan can ensure future development will coalesce into an attractive and functional Downtown. Since planning is an active process, this document should not be seen as unchangeable.

Built environment.
Source: Google Earth, 2022

4 Land Use and Development

The primary goals of this Specific Plan are to establish Downtown Marina as a vital destination center that accommodates a mix of commercial, retail, dining, entertainment, parks, and residential uses and to maximize the City's ability to capture future economic opportunities that otherwise might be lost to neighboring jurisdictions. The Specific Plan promotes these goals by creating a land use policy framework that will guide development within the plan area to create a thriving downtown over the next approximately 20 years.

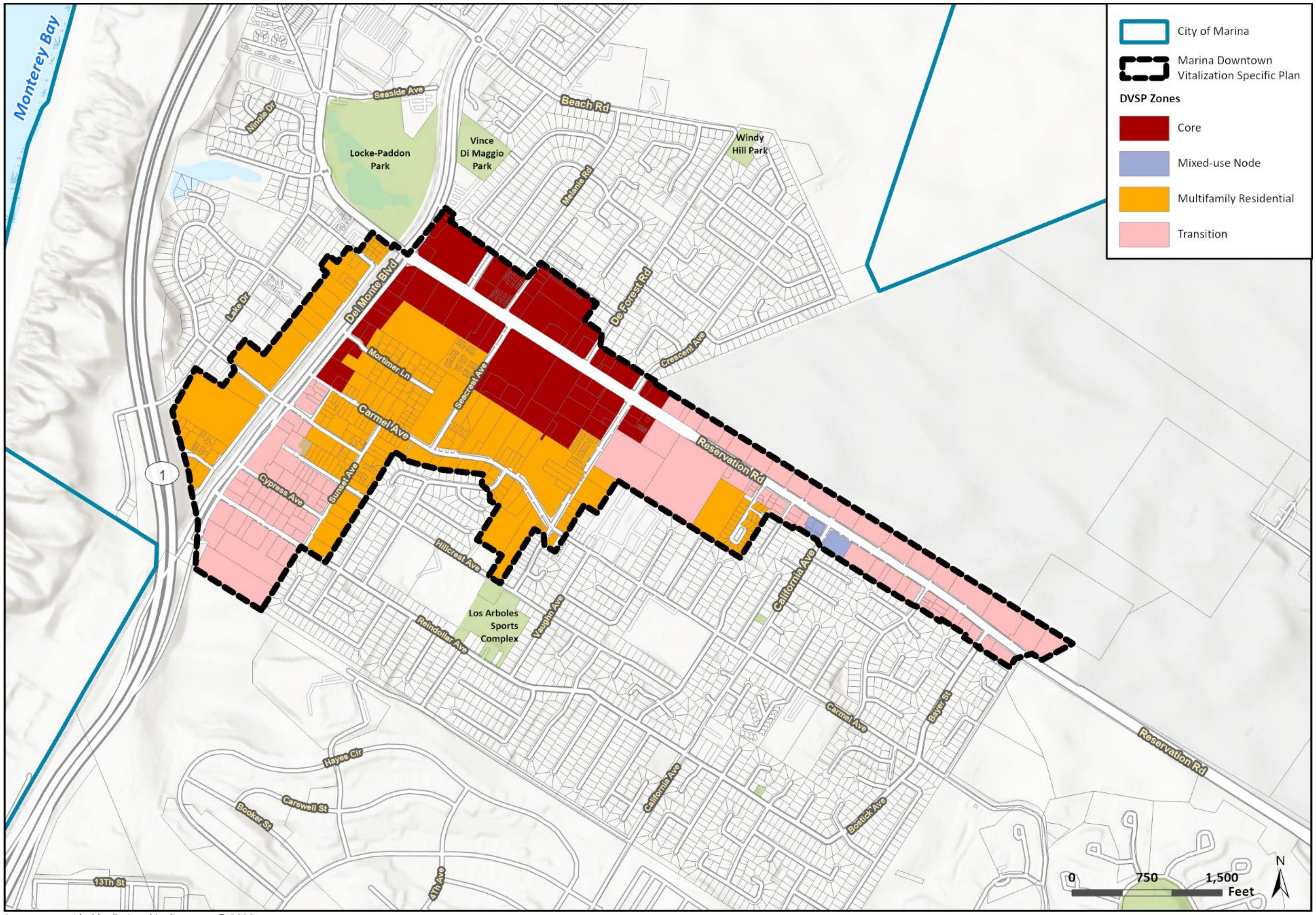
This chapter discusses land use designations and development potential, as well as policies and programs to develop a unique identity and sense of place in the public realm. The land use policies discussed in this chapter, along with design and development standards and permitted uses in **Appendix A: Development Code** and **Appendix B: Design Guidelines**, form a complete set of policies that will steer future land development and redevelopment within the Downtown. The following land use policies are intended to create and reinforce the desired urban image of Downtown and improve the overall aesthetic appearance and functionality of the street network. When implemented with standards in the Development Code, these policies and standards create predictability and therefore incentive for private investment in Downtown.

4.1 Land Use Plan

The Specific Plan calls for up to 2,904 additional residential units in the Downtown area. Currently, there are roughly 2,300 residential units in Downtown, so this Plan would more than double the residential capacity of the area. The Specific Plan also allows for the development of an additional 530,000 to 1,380,000 square feet of retail and office space. Currently, there is just over 1 million square feet of retail and office space in the Downtown.

4.1.1 Land Use Designations and Intent

The Specific Plan establishes the following land use designations to implement the Land Use Plan. The land use designations shown in (**Map 4-1**) are intended to function as implementing zoning in accordance with **Appendix A: Development Code**. Appendix A includes a Land Use Matrix which lists uses permitted in each district as well as development standards (property line setbacks, building heights, etc.) and other objective design standards.



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Map 4-1. Land Use Plan

Core District

The intent of the Core district is to permit and encourage higher intensity commercial and mixed-use development. The goal is to create a mix of different land use types in a planned and integrated manner, including office, retail, and service commercial uses along with multifamily residential uses. The Core will become a vital economic center served by a variety of transportation modes, including facilities for people who walk, bike, and use public transit. This type of compact development around high-quality transit systems, also known as transit-oriented development, is envisioned around the Monterey Salinas Transit Center and will be a guiding concept of this district.

Mixed-use Node District

The Land Use Plan calls for the creation of a mixed-use node at the intersection of Reservation Road and California Avenue. This node, surrounded by the lower-intensity Transition district, would feature multistory mixed-use buildings with retail and commercial space on the ground floor and additional commercial space or residential uses on the floors above similar to the types of development expected in the Core district. The mixed-use node is strategically located at a gateway into the Downtown Core to help ensure a vibrant, urban atmosphere is associated with Downtown Marina.

Transition District

The intent of the Transition district is to permit and encourage commercial, multifamily residential, and mixed-use developments at a slightly reduced density compared to projects in the Core district. The Transition district serves as a connection between the Core and lower-density, single-use districts in other parts of the city, especially districts dominated by single-family homes. Because the Transition district encompasses two prominent gateways into the city (at east Reservation Road and the confluence of Highway 1 and Del Monte Boulevard), land uses should be inviting and visually interesting. Parking is screened and located behind or to the side of buildings, and building setbacks are landscaped with appropriate materials.

Multifamily Residential District

The intent of the Multifamily Residential district is to permit and encourage residential developments of up to three stories in height with up to 35 units per acre. Multifamily residential uses near the Core are critical for providing an affordable housing supply and population to support businesses in Downtown. An additional 154 residential units are proposed in the Multifamily Residential district.

4.1.2 Development Potential

The amount of development that can reasonably be expected under the Plan is referred to as "buildout." Buildout is expected to occur over the approximately 20-year planning horizon. **Table 4-1** details the potential residential units and commercial square footage that could result from buildout of the Specific Plan. This total represents the maximum development that could be expected in 2040 if the Specific Plan is implemented according to the land use designations described above.

Table 4-1. Anticipated new development by zone in the Downtown Specific Plan area

Land Use	Acres	Commercial Square Footage		Residential Units	
		Minimum	Maximum	Residential Density	Maximum Units
Core and Mixed-use Node District	56.4	317,766	901,470	70	1,372
Retail	-	208,427	675,390	-	-
Office	-	109,339	226,080	-	-
Transition District	104.0	214,322	483,727	50	1,378
Retail	-	70,352	199,279	-	-
Office	-	143,970	284,448	-	-
Multifamily Residential District	106.7	-	-	35	154
Total	**267.08**	**532,088**	**1,385,197**	**-**	**2,904**

4.1.3 Objective Design and Development Standards

Objective design and development standards are a key implementation strategy of the Specific Plan. Objective design standards are intended to make the requirements that apply to development projects more predictable and easier to interpret for all stakeholders, including decision makers, City staff, applicants, and members of the public. The purpose of objective design standards is to inform applicants beforehand what requirements apply to a proposed development and to enable the applicant to design a compliant project prior to submittal.

Government Code Sections 65913.4 and 66300(a)(7) defines Objective design standards as standards that:

> ***involve no personal or subjective judgment by a public official and are uniformly verifiable by reference to an external and uniform benchmark or criterion available and knowable by both the development applicant or proponent and the public official before submittal.***

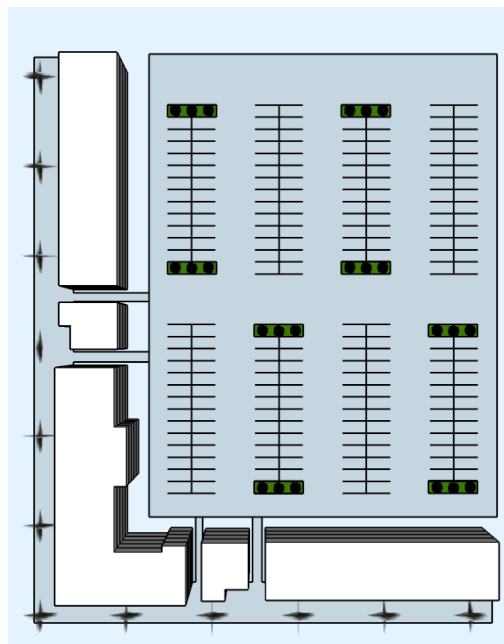


Figure 4-1. Traditional Downtown site layout with buildings brought to the edge of the sidewalk and parking in the rear.

In the case of Marina, the standards are intended to foster a more traditional downtown built environment as opposed to the suburban development pattern seen in Marina today (**Figure 4-1**). This will involve requiring that buildings in new developments are oriented toward the street and built closer to the sidewalk instead of behind large parking areas.

Objective design and development standards allow for streamlined approval of certain proposed projects while still requiring these projects to further the functional and aesthetic goals of the Specific Plan. The design and development standards detailed in **Appendix A: Development Code** address characteristics of architectural design and site planning including:

- Building Location and Orientation
- Building Articulation, Massing, and Scale
- Architectural Elements
- Materials and Color
- Utility and Service Areas
- Circulation and Access

4.2 Placemaking Framework

The following goals and policies outline the desired future conditions of the Specific Plan area and create a framework for the development of a vibrant Downtown Marina.

4.2.1 Vibrant, Mixed-Use Downtown

The primary goal of the Specific Plan is to promote land use that emphasizes community, creates a safe, walkable, and vibrant Downtown, attracts diverse business opportunities, encourages appropriate mixed uses, and integrates adjoining neighborhoods, parks, and trails. The Specific Plan looks to establish Downtown Marina as a vital destination center that accommodates a mix of commercial, retail, dining, entertainment, parks, and residential uses.

The Specific Plan envisions the Core District to include mixed-use buildings built to the property line (**Figure 4-4**) with doors and windows that face wide sidewalks with shade trees and pedestrian amenities. Development standards will require new development to provide features like lighting, public art, seating, and landscaping along building frontages to enhance the streetscape and create a pedestrian oriented, urban atmosphere. The Core will feature a mix of high density housing and neighborhood-oriented businesses in a walkable, pedestrian-scaled environment (**Figure 4-2** and **Figure 4-3**). Paseos can be situated to provide pedestrian connections to residences, offices, retail, and restaurants on deeper lots as well as increase connectivity between Marina's large, disconnected blocks. Parking facilities are to be located to the rear of buildings and accessed via side streets to minimize the number of driveways crossing the sidewalk and create an urban "street-wall." Parking is located behind buildings, and shared parking agreements (including providing parking in structures) are encouraged.

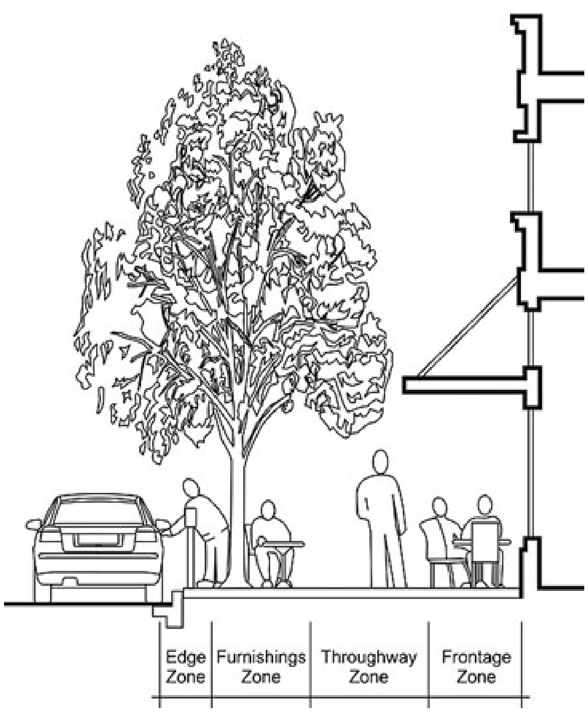


Figure 4-2. Pedestrian portion of the right-of-way.
Source: Urban Review St. Louis

Figure 4-3. Pedestrian right-of-way with outdoor dining next to building (top) or street (bottom).

The Transition and Multifamily Residential districts will be characterized by a "transitional" urban form (**Figure 4-5**) featuring buildings with doors and windows facing the street with larger setbacks than those found in the Core district. Parking will be located behind or to the side of buildings and accessed from the primary street frontage or side streets where possible. Setback areas will be well landscaped with native plants and trees creating a pleasant parkway environment for drivers, pedestrians, businesses, and residents. Commercial uses are encouraged on Reservation Road and Del Monte Boulevard to maximize visibility. Multifamily development is encouraged in the Transition District and may be designed in connection with a mixed-use project with commercial space on the street facing portion of the first floor or as an exclusively residential development. The Multifamily Residential district is reserved exclusively for residential development.

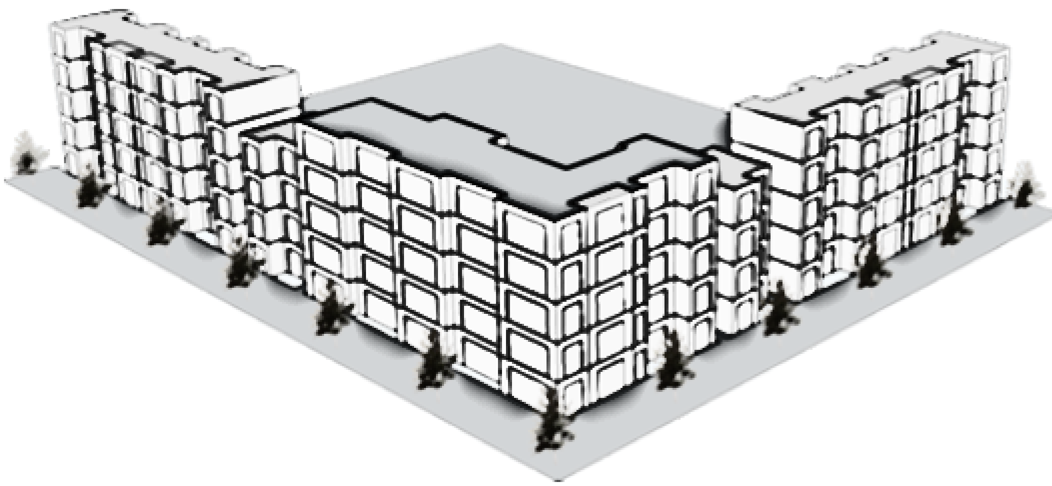


Figure 4-4. Urban block site layout.

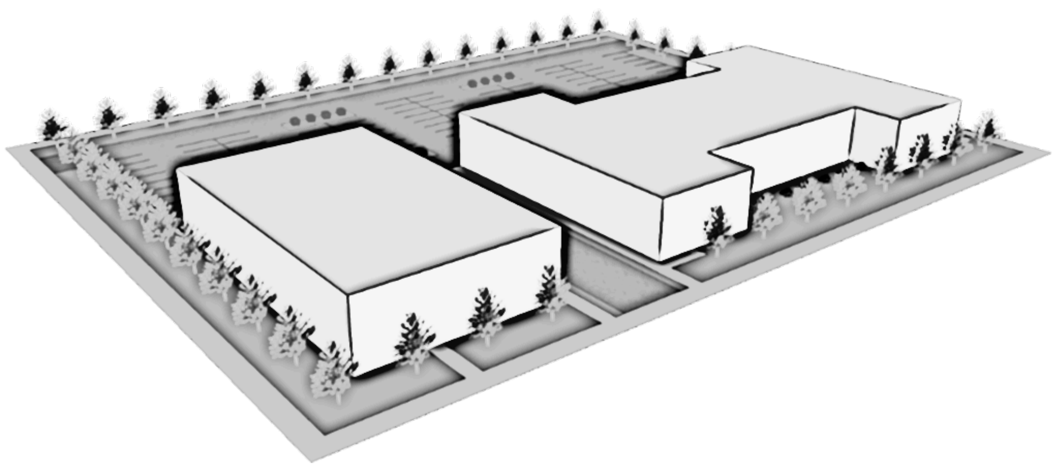


Figure 4-5. Transitional block site layout.

While there are several large parcels along Reservation Road which could be redeveloped, the typically small lot size under many different owners is a potential constraint to development in the Specific Plan area. Consolidation of contiguous lots under separate private ownership would allow more cohesive redevelopment envisioned for the Specific Plan area.

Marina is one of the most diverse small cities in the United States. Developers are encouraged to reflect the cultural and ethnic diversity of Marina in new architecture, which will help to create a unique identity that will distinguish Marina from neighboring communities. **Appendix B: Design Guidelines** provides guidance to property owners and developers for creating culturally inclusive spaces.

4.2.2 Transit-oriented Development

Transit-oriented development (TOD) is a planning approach that calls for high-density, mixed-use business and residential neighborhood centers to be clustered around transit stations and corridors (**Figure 4-6**). As the name implies, transit-oriented development is designed to be served by transit rather than or in addition to the automobile. Networks of streets and multi-use paths provide a walkable and bikeable environment that is conducive to living, working, and shopping in the same area. There are many benefits associated with TOD, including:

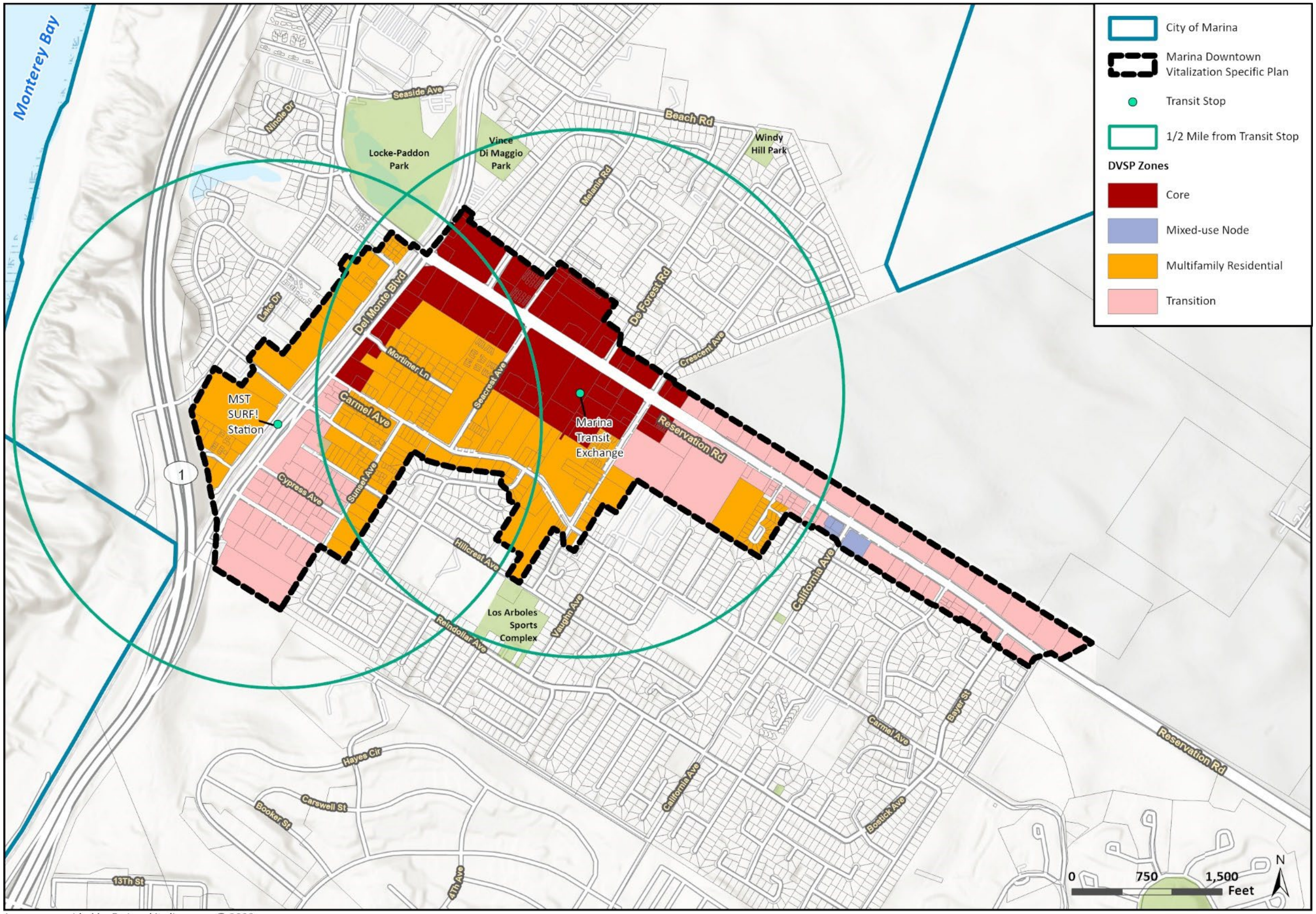
- Reducing vehicle miles traveled;
- Decreasing air pollution;
- Constraining sprawl and conserving open space;
- Lowering infrastructure costs;
- Promoting jobs-housing balance;
- Providing new housing;
- Creating vibrant new public spaces; and,
- Reducing the amount of land dedicated to parking.

Figure 4-6. Transit-oriented development in Minneapolis. Source: Metropolitan Council

TOD is appropriate within one-half mile of transit stops, with the highest intensity and mix of land uses concentrated within one-quarter mile or adjacent to a transit stop. Land use intensities and densities decrease away from the Core area to ensure compatibility with existing peripheral neighborhoods.

California Assembly Bill 2097 approved by the State Assembly and Governor in September of 2022 eliminates parking mandates for homes and commercial buildings near transit, or neighborhoods with low rates of car use. The bill prohibits a public agency from imposing any minimum automobile parking requirement on most residential, commercial, or other development projects that are located within half a mile of public transit.

As shown in **Map 4-2**, the majority properties within the Specific Plan area are located within a half mile of public transit from the proposed MST SURF! bus rapid transit project and/or the Marina Transit Exchange. The proposed SURF! project would provide high quality BRT stops at the intersection of Del Monte Boulevard and Palm Avenue and MST Transit Exchange along Reservation Road.



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Additional data provided by the City of Marina, 2023.

Map 4-2. Network of sidewalks, street crossings, and bike lanes in Downtown Marina.

4.2.3 Housing Affordability

The production of affordable housing is a primary goal of the Specific Plan. State legislation, namely Senate Bill (SB) 35 and SB 330, requires multifamily projects to be reviewed against objective standards. The standards provided in **Appendix A: Development Code** are structured to provide an objective framework for the design and development of multifamily projects which can be implemented without a discretionary process. In accordance with the laws, objective standards are the only basis a local agency may use to deny or reduce the density of certain eligible projects. Housing developers may take advantage of the legislation that streamlines approval if affordability requirements and specific criteria are met.

The Specific Plan looks to further the vision for Downtown by encouraging the development of multifamily housing which will both contribute to a lively neighborhood through residential and mixed-use development and fulfill the City's share of the Monterey Bay Area's regional housing need.

4.2.4 Economic Vitality

In order for Downtown to be successful and sustainable, the city must create an environment where desired uses are permitted. A diversified economic climate that attracts small– to mid-sized offices and a variety of retail shops, restaurants, entertainment, and mixed uses is the ultimate goal for Downtown Marina. The Specific Plan will establish a set of requirements and guidelines designed to guide the City toward its vision for a thriving economic future.

4.2.5 Sustainability

The California State General Plan Guidelines address sustainable development emphasizing the importance of addressing urban sprawl through compact, multiple use, transit-oriented infill development. On June 16, 2020, the City Council of the City of Marina adopted Resolution 2020-75, submitting to the voters at the November 3, 2020 General Municipal Election a Measure approving a General Plan Amendment extending the expiration date of the operative provisions of the 2000 Marina Urban Growth Boundary Initiative to December 31, 2040. The growth boundary is intended to discourage development in current open space areas north of the city limits and along its coast, and to encourage efficient development in Central Marina and within Marina's portion of former Fort Ord.

In combination with the urban growth boundary, General Plan policies emphasize the need to fully utilize the land within existing urbanized areas to accommodate Marina's fair share of the future population and employment growth. This Specific Plan seeks to establish and reinforce a compact development pattern with the intent of reducing the number of vehicle miles traveled by Marina's residents and enabling walking and biking for transportation.

In addition to establishing a sustainable development pattern, the city can further reduce the impacts of development on the environment through the implementation of a variety of green building practices, environmentally aware landscaping, and the availability of pedestrian amenities. Title 24 of the California Building Standards Code sets minimum requirements for energy and water efficiency for newly constructed buildings, additions to existing buildings, and alterations to existing buildings. The goals and policies described below are intended to guide new development in the Specific Plan area through the implementation of green building practices and smart growth policies.

4.2.6 Parks and the Urban Forest

Parks located within or near Downtown create opportunities for people to meet, recreate, and share ideas. Public open spaces like parks and plazas help make Downtown a destination by allowing visitors to linger and enjoy the neighborhood. While there is an abundance of existing and planned park and recreational space citywide, there remains a need to provide neighborhood-serving park and recreation facilities for under-served neighborhoods in the Specific Plan area. The General Plan has established a standard of 1.8 acres of playground and/or neighborhood park space per 1,000 residents within 1,200 – 1,500 feet of housing units served in addition to private common open space provided on the site of new residential development.

While there are no parks located within the Specific Plan area, Locke-Paddon Park (**Figure 4-7**), Vince DiMaggio Park, and the Los Arboles Sports Complex are located nearby. To increase the amount of recreational space available to current and future residents in the area, the Specific Plan looks to facilitate the improvement of stormwater retention areas for recreational use, encourage the acquisition of vacant land for the development of mini-parks, and incentivize the provision of publicly accessible private open space within Downtown.

Figure 4-7. Locke-Paddon Park.
Source: Pinterest

A healthy urban forest is associated with numerous benefits to a downtown environment. Among many other benefits, street trees help create safer streets by reducing speeds and providing a buffer between motorists and pedestrians, while reducing air pollution and road noise. Trees reduce urban heat islands for a more comfortable pedestrian experience and provide vital habitat for insects and birds including the City’s native raptor population.

In 1995, a Tree Committee was established to develop an ordinance to help preserve the City’s urban forest. The Tree Removal, Preservation and Protection ordinance governs actions relating to existing trees in public spaces and on private property, but it does not set forth standards or guidance on the expansion of the city’s urban forest.

The majority of trees in public spaces in the Specific Plan area are located in street medians along Reservation and Del Monte, with limited street tree plantings in the pedestrian portion of the right-of-way in the park strip. The trees in the medians are typically not indigenous to the area and are sporadically located. The few trees that are planted in the sidewalk area are often either poorly suited for Marina's climate, inappropriate for use along sidewalks because of root upheaval, or improperly pruned and therefore visually obtrusive. The Specific Plan looks to guide the selection of trees suitable for Marina's climate, require new developments to contribute to the urban forest, and properly maintain trees to preserve comfortable pedestrian mobility and visibility for drivers in passing cars. A list of trees ideally suited for Marina's climate is included in **Appendix B: Design Guidelines.**

Figure 4-8. Arbutus marina on California Avenue.

4.2.7 Gateways, Wayfinding, and Signage

A sense of arrival is an important part of identifying a district's borders or boundaries. Gateway or entryway enhancements can include a variety of elements such as signage, special landscape treatment, and information kiosks. The types of features included are largely determined by cost and land availability. Gateways create an important first impression for visitors and a sense of civic pride for residents of the community. It is important that these gateway enhancements be generally consistent as they serve the role of 'branding' the community.

In July 2007, the City Council adopted Citywide Public Sign and Identity Program Guidelines. This document presents a uniform design theme for gateway and wayfinding signs in Marina. The document states that gateway signs "promote a stronger sense of place,

Figure 4-9. Commercial blade signs.
Source: Under Consideration, Rite Lite Signs, Flicker

articulate visual identity, and assist in wayfinding." A concept for a gateway sign (**Figure 4-10**) is included alongside wayfinding signs in **Appendix B: Design Guidelines**.

Figure 4-10. Example of gateway sign that could be used at key locations in Marina.

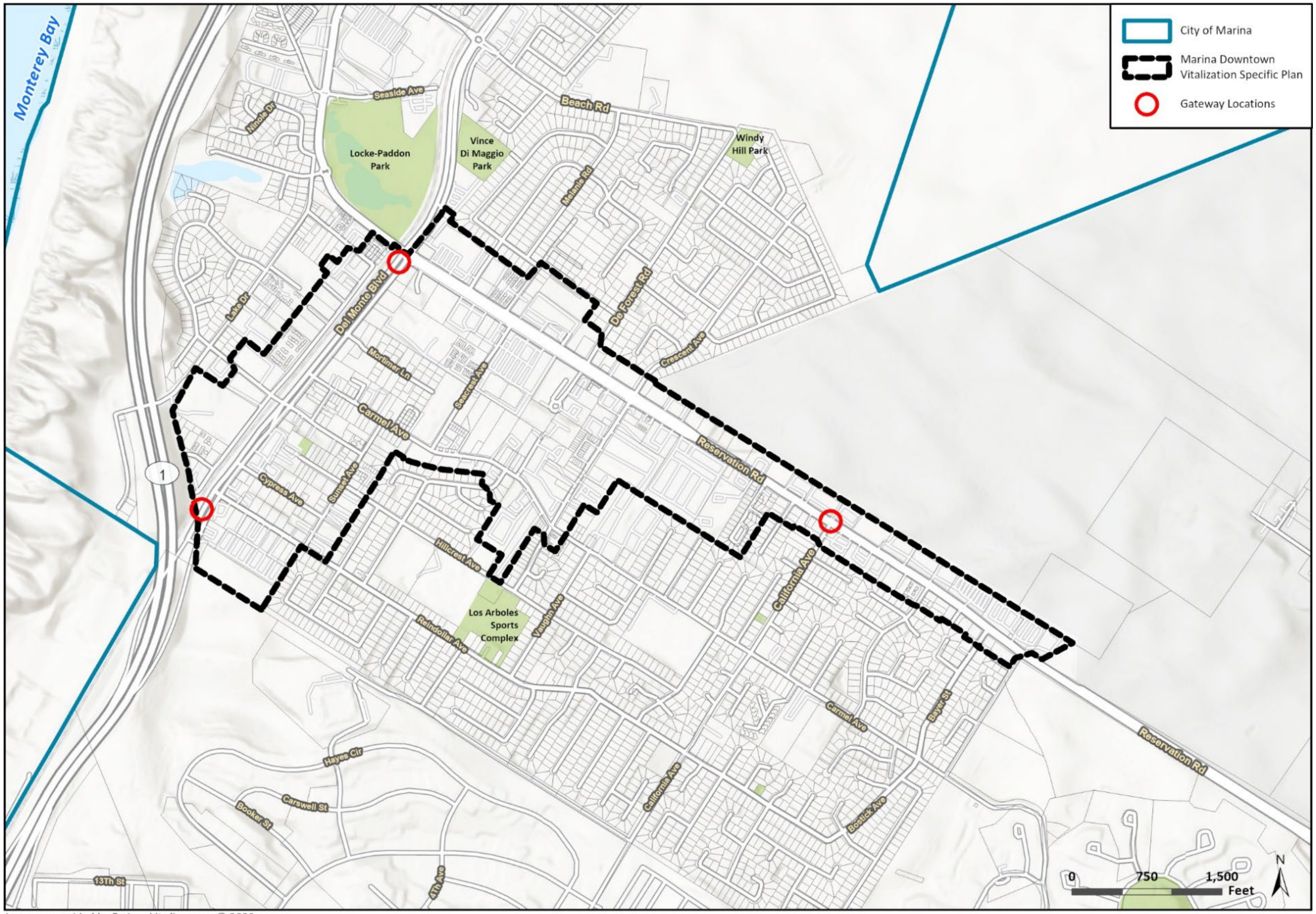
The Specific Plan calls for the installation of gateway signage at the three entries to Downtown Marina at the intersection of Reservation Road and Del Monte Blvd, the entry point from CA-1 heading northeast on Del Monte Blvd, and the point of entry heading northwest on Reservation Road (**Map 4-3**).

Civic signage plays a role in helping people understand the location of various uses and events occurring in the community (**Figure 4-11**), while private signage creates awareness of products and services available. It is essential that signage and lettering on the sign be of sufficient size to address the sign's intended audience. It is also important, if the sign is lighted, that the lighting be bright enough to be visible, but not so bright that it distracts and affects other properties.

Public entryway and directional signs are essential to allowing visitors and new members of the community to navigate their way to their desired destinations. Public information signage should be oriented to both vehicular and pedestrian traffic. Currently, public information signage in Downtown is provided by temporary signs attached to fences and located in the medians. Elected and appointed officials will need to determine the role of civic signage and if current methods are in the best interest of the community, and if so, what types of regulations need to apply.

Commercial signage in the Core district should be located on the building façade itself and designed to address both its pedestrian and vehicular audiences (**Figure 4-9**). Commercial signage in the Transition zones may include signage attached to buildings as well as freestanding signage where space for such signage is available. Freestanding signage should be located within the front setback of the building but, for safety, should not obscure drivers' view of pedestrians.

Figure 4-11. Wayfinding and directional signs.
Source: Rite Lite Signs



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Additional data provided by the City of Marina, 2022.

Map 4-3. Gateways to Downtown Marina.

4.2.8 Public Art

Figure 4-12. Existing public art in Marina includes this sculpture of a dolphin at Marina City Hall.

The inclusion of Public Art in Downtown is an important opportunity for placemaking, but public art projects in Marina are somewhat limited. The largest was conducted in 2001-02 by the Marina Arts Council, under the direction of Candy Myers-Owen. The “Dolphins on Parade” project was inspired by Chicago’s Cows on Parade, which occurred in 1999. The fiberglass dolphins were sculpted by local artist Charles Fischer and are currently on public display with two placed at the entrance to the Civic Center complex at 211 Hillcrest and one located at the front of the Marina Square Shopping Center on Reservation Road (**Figure 4-12**). The intent of the project was to include a symbol representative of Marina that would help brand the City.

As Downtown develops, public art should be a consideration for inclusion in public spaces both in the right-of-way and in plaza and park spaces. It will be important to include residents of Marina in the creation and placement of public art that adds value to the community. This Specific Plan seeks to reinforce the City’s General Plan and specifically Policy 3.34.7 to work with the local arts community to encourage the inclusion of public art within the City’s rights-of-way and other public spaces (**Figure 4-14** and **Figure 4-15**).

The City can encourage developers and landscapers to consider the multicultural nature of the community as they design projects in Downtown Marina (**Appendix B: Design Guidelines**). The following pages include examples of the types of public art installations encouraged in the Specific Plan area.

Figure 4-13. Bicycle rack including the City’s logo illustrates how street furniture can be developed to help identify the community.

Figure 4-14. These musical swings in Montreal create beautiful sound when in use (top).

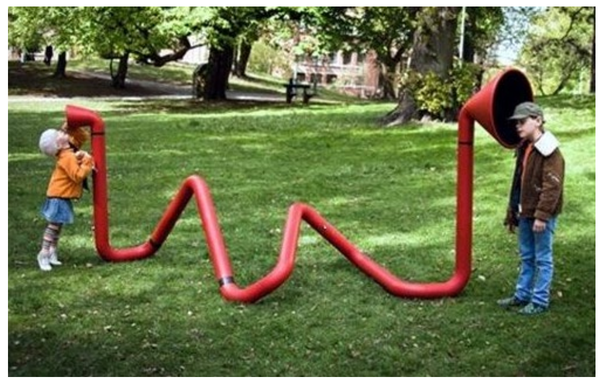
Figure 4-15. The Children's Environmental Wall in Dearborn, Michigan provided an opportunity for children to create paintings that were placed on tile and included in an art installation (right).

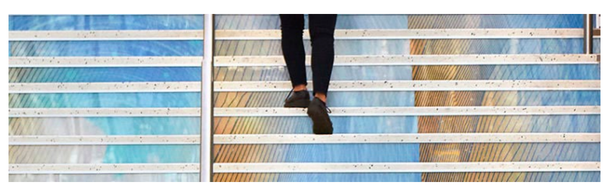
Examples of public art (clockwise, from top left): patterned manhole cover, in-pavement dance steps, contemporary sculpture, sculpture commemorating Vietnamese immigrants, interactive chalkboard, interactive sound sculpture, textured mural, painted staircase, reflective pillars, Workers United in Struggle mural, freeway underpass mural, coastal-themed sculpture, sculpture with vertical orientation, colorful crosswalk, sculpture celebrating educator Mary McLeod Bethune.


IN MEMORY
IN GRATITUDE


MARY McLEOD BETHUNE


Antes de morir quiero
Antes de morir quiero
Antes de morir quiero
Antes de morir quiero
Live, Laugh, LOVE





4.3 Land Use and Development Goals, Policies and Programs

Goal LU-1	**Land Use and Development**—A community with a safe, walkable, and vibrant Downtown, that attracts diverse business opportunities, encourages appropriate mixed uses, and integrates adjoining neighborhoods, parks and trails.
Goal LU-2	**Community Identity**—A Downtown that complements Marina's natural setting, provides opportunities for an attractive and functional built environment, accommodates and reflects the diversity of the community where people gather for social, cultural, educational, and recreational experiences.
Goal LU-3	**Cultural Diversity**—a downtown where people of all incomes, ages, abilities, races, and cultures feel like they belong.
Goal LU-4	**Housing Affordability**—A variety of affordable, high-quality housing options for people to live Downtown.
Goal LU-5	**Environment and Sustainability**—A Downtown that supports innovation in design and employs Green Building technology, employs Net Zero Building principles, and is designed to create more comfortable indoor and outdoor environments.
Goal LU-6:	**Economic Vitality**—An environment that attracts businesses and supports economic activity through innovation and business and social opportunities.
Policy LU-1.1	Make Downtown a destination by retaining and attracting a wide range of uses. Encourage the development of civic, entertainment, office, live-work units, and retail uses, as well as educational facilities, major employers, and medical centers. *See Program 1 below.*
Policy LU-1.2	As City administrative buildings are expanded, ensure civic facilities remain within or near Downtown.
Policy LU-1.3	Implement objective design and development standards that emphasize pedestrian orientation and scale, move parking areas to the rear of buildings, active streetscapes, and common open spaces to enhance the appearance of and contribute positively to the visual character of Downtown.
Policy LU-1.4	Ensure that new development is required to minimize the number of driveways that could interfere with the pedestrian right-of-way in the Core district.
Policy LU-1.5	Prohibit drive-thru facilities in the Core district.
Policy LU-1.6	Allow a wider variety of uses in the Transition District. Allow retail, service, and hospitality businesses that serve citywide or regional populations, in addition to 100 percent residential projects, or a mix thereof.
Policy LU-1.7	Encourage the consolidation of small contiguous lots to allow for more cohesive redevelopment of the Specific Plan area. *See Program 2 below.*
Policy LU-2.1	Encourage proposed developments to include design elements that reflect the cultural diversity of Marina.
Policy LU-2.2	Explore opportunities to create more neighborhood serving parks and public spaces Downtown. This can include the reuse and improvement of stormwater retention areas, the acquisition of vacant land for the development of mini-parks, improving access to existing parks, and incentivizing the provision of publicly accessible private open space in the Specific Plan area.

Policy LU-2.3	Require new development to contribute to the urban forest by planting and maintaining street trees from the City's approved list of species along the public right of way adjacent to the site to create a comfortable and verdant pedestrian environment.
Policy LU-2.4	Ensure proper pruning practices are maintained to open the canopy of the tree, show branch structure, and allow for building visibility.
Policy LU-2.5	Make Downtown readily identifiable to residents and visitors by establishing gateways at key locations. Include such features as landforms, landscaping, vegetation, signage, and public art to define entry points and introduce Downtown to citizens and visitors.
Policy LU-2.6	Ensure consistent branding and signage through use of city logos, slogans, and other materials to direct motorists to parking and destinations as well as create an identity and sense of place Downtown.
Policy LU-2.7	Use public art to create opportunities for people to connect with others and to express the City's history and cultural heritage. *See Program 10 below.*
Policy LU-3.1	Encourage investment in and development of businesses that represent the City's local identity, including minority owned businesses. *See Program 3 below.*
Policy LU-3.2	Establish a cultural district or districts within downtown with marketing, public spaces, and streetscape elements.
Policy LU-4.1	Promote housing development as a priority in all districts to address community housing need.
Policy LU-4.2	Utilize State law and City ordinances to ensure that housing is provided to a mix of income levels within Downtown.
Policy LU-5.1	Encourage compact, high-density urban form by allowing developments with a variety of uses at the ground floor as well as on upper stories of buildings in the Core, Mixed-use Node, and Transition districts that serve the local community and reduce car dependence for daily needs.
Policy LU-5.2	In addition to meeting the requirements set by title 24 of the California building code, consider additional measures such as energy efficient building design, passive heating/cooling strategies, wastewater technologies, water use reduction, water efficient fixtures, and green building materials. It is important for project applicants to go above and beyond the minimum requirements for energy efficiency set by Title 24 of the California Building Code, recognizing the benefits of green building features for future residents and the community as a whole.
Policy LU-5.3	Encourage the use of high-quality, durable materials appropriate for coastal Monterey County and compliment the natural setting of Marina. Consider fog, wind, drought, salt air, and sandy soils in all landscaping decisions. Consider the local environment in all decisions related to landscaping, building, and public spaces.
Policy LU-5.4	Ensure both public and private projects effectively manage stormwater runoff through the implementation of Low Impact Development (LID) principles and minimize impervious surfaces wherever possible
Policy LU-5.5	Encourage development to use locally available and recycled materials in construction wherever possible.
Policy LU-5.6	Encourage development to reduce its carbon footprint through meaningful energy conservation measures and the use renewable energy to opt-in to Monterey Bay Community Choice Power, Marina's local Community Choice Energy program.

Policy LU-6.1	Promote economic development through land use planning, targeted circulation and infrastructure improvements, and expanded resource availability.
Policy LU-6.2	Encourage new retail to locate along corridors with high pedestrian and vehicle traffic volumes and good visibility, where it has the best opportunity to thrive.
Program LU-1	The City should pursue funding through public sources such as the California Arts Council, or other private sources, and explore opportunities for entertainment and activities venues such as a new auditorium.
Program LU-2	Study the potential for a lot consolidation program to incentivize lot consolidation that encourages redevelopment. Incentives may include reduced development fees, administrative review, decreased parking ratios, etc.
Program LU-3	Develop a business investment program to support minority owned stores and businesses in Downtown.
Program LU-4	Create outreach material for the non-profit and for-profit development community to learn about the streamlining benefits of the Specific Plan.
Program LU-5	Dedicate a page on the City's website to show community members how their properties can be redeveloped to accommodate multifamily housing throughout Downtown. Provide example housing developments of duplexes, triplexes, and multiplexes that meet the design intent and standards outlined in the Specific Plan.
Program LU-6	Dedicate a webpage on the City's website to encourage transparency in the housing development process, including how the City is meeting its local housing obligations under state requirements.
Program LU-7	Develop and maintain a business retention and expansion program.
Program LU-8	Establish a list of "shovel-ready" sites in consultation with property owners and provide the list to interested developers and businesses seeking sites in the city.
Program LU-9	Make Downtown readily identifiable to residents and visitors by establishing gateways at key locations. Include such features as landscaping, vegetation, signage, and public art to define entry points and introduce Downtown to citizens and visitors.
Program LU-10	Develop a public art master plan to celebrate the culture and heritage of Marina.

5 Mobility

The Downtown Vitalization Specific Plan strives to create a pedestrian-friendly downtown core. This chapter addresses the role of mobility in supporting the vision and goals of the Specific Plan and includes policies related to vehicle, bicycle, and pedestrian circulation, pedestrian-oriented street design, and vehicle and bicycle parking. This chapter establishes a mobility plan for Downtown that promotes an active, engaged, human-oriented streetscape where the automobile is simply one of many modes of travel for people to move in and around Downtown to work, shop, and recreate.

The negative impacts of automobiles are well documented and include air pollution, noise, and traffic congestion. Wide roads can encourage speeding which makes walking and biking unpleasant and unsafe. Automobiles require large amounts of land dedicated to parking, which limits opportunities for development of parks, shops, and housing. Lastly, reliance on personal vehicles contributes tons of greenhouse gases to the atmosphere, accelerating the impacts of climate change.

Consistent with the City's Vision and Mission Statement and in an effort to curb the negative effects of regular automobile use, the Specific Plan calls for investment in traffic calming measures, active transportation facilities and amenities, a holistic approach to parking management, and improved public transit service in Downtown.

The requirements of this chapter are in addition to the requirements of the City of Marina's General Plan and Pedestrian and Bicycle Master Plan, providing greater detail on specific issues where necessary. Where direction or regulation is not provided, the provisions of these related documents shall take precedence. The requirements of this chapter supersede the City of Marina Municipal Code.

5.1 Technical Studies

In 2018, the City of Marina hired a consultant, Kimley-Horn, to conduct a traffic analysis of the existing transportation system Downtown and a proposed expansion of the system via the extension of Del Monte Boulevard south to 2nd Avenue. Kimley-Horn analyzed local and regional traffic volumes and considered the land use changes and right-of-way widths and design standards proposed by the Ad Hoc Committee as part of the Downtown Vitalization Specific Plan process.

The traffic analysis assumed that 2,904 residential units will be added to the Specific Plan area in addition to 530,000—1,385,000 square feet of retail and office space.

As part of the analysis, Kimley-Horn studied the feasibility of reducing the number of travel lanes on Reservation Road from four to two. While the analysis found intersections would operate at an acceptable level of service (LOS) on a two-lane facility, the road diet would result in significant queueing spilling back onto Del Monte Boulevard, Reservation Road, and other side streets. The consultant recommended maintaining four lanes of travel on Reservation Road.

The analysis also considered the implementation of single– and dual-lane roundabouts at several intersections in the Specific Plan area. The analysis concluded that mixing signals and roundabouts on a closely spaced grid system would result in traffic congestion, even with four lanes and a median. This is because arrival and departure patterns between roundabouts and signals are not conducive to traffic flow and operations. The analysis recommended instead to cluster traffic signals in the Core district and utilize roundabouts at major intersections in the Transition areas approaching the Core, as shown in **Map 5-1**. **Table 5-1** includes a list of intersections proposed to receive or maintain roundabouts or signalized intersection treatments.

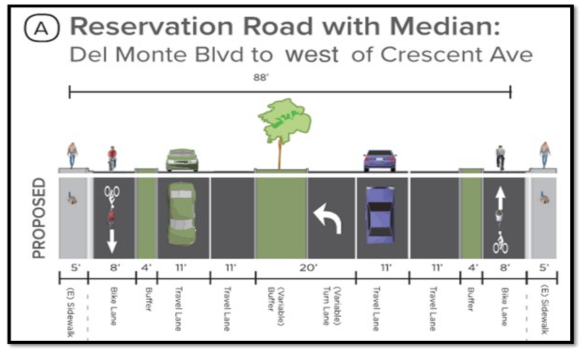


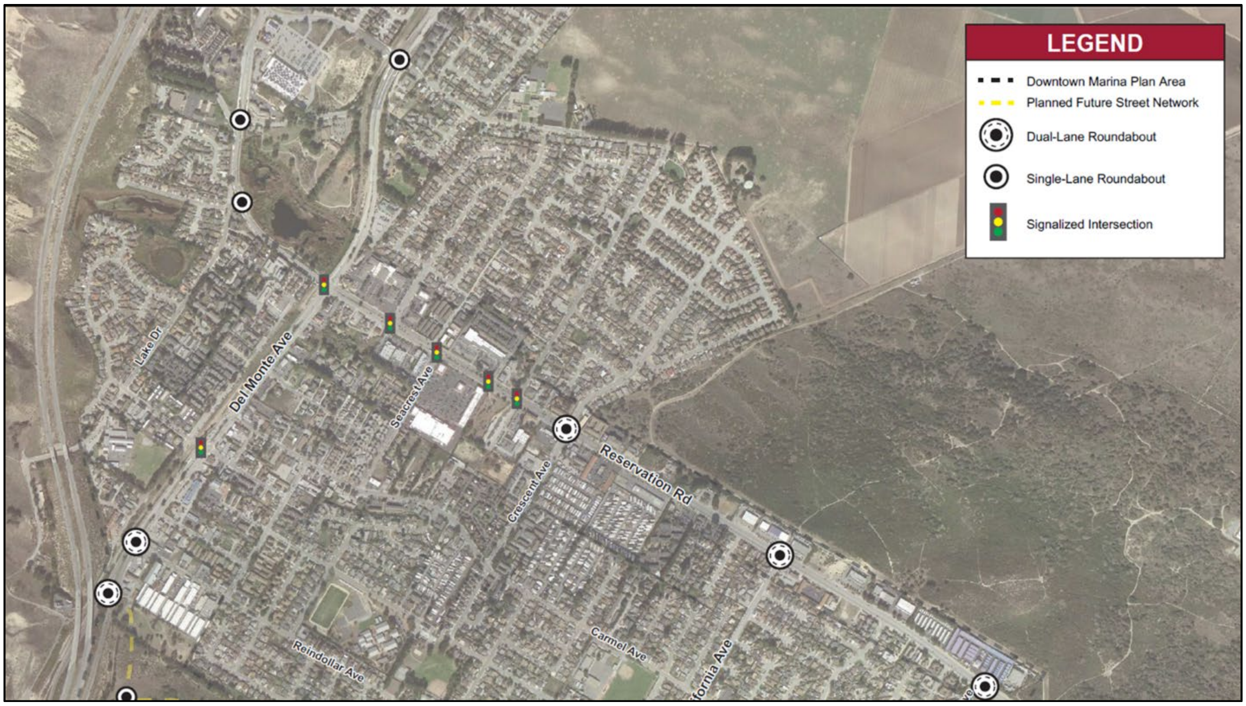
Figure 5-1. Concept cross section of Reservation Road.

The analysis resulted in several other recommendations, including:

- Implementation of protected bike lanes on Reservation Road from Del Monte Boulevard to Salinas Avenue, using funds from a Caltrans Active Transportation Program grant (**Figure 5-1**);
- Green-colored pavement at the beginning of bike facilities, transitional green striping at intersections, and right turn pockets to create safer conditions for cyclists;
- Filling in gaps in the sidewalks on Reservation Road and Del Monte Boulevard;
- Narrowing of travel lanes from 12’-14’ to 11’ to discourage speeding;
- Extension of Del Monte Boulevard south to 2nd Avenue, with the construction of a two-lane roundabout at the intersection with the Highway 1 northbound offramp;
- Extension of Patton Parkway to the new portion of Del Monte Boulevard, with the construction of a one-lane roundabout at the intersection of these two roads; and,
- Preserving an acceptable LOS while reducing speeds, particularly along Reservation Road and Del Monte Boulevard.

Table 5-1. Major intersections in the Specific Plan area

Intersection	Treatment
Del Monte Blvd / Patton Pkwy	Single-lane roundabout
Del Monte Blvd / Hwy 1	Dual-lane roundabout
Del Monte Blvd / Reindollar Ave	Dual-lane roundabout
Del Monte Blvd / Palm Ave	Signalized intersection
Del Monte Blvd / Reservation Rd	Signalized intersection
Reservation Rd / Vista del Camino	Signalized intersection
Reservation Rd / Seacrest Ave	Signalized intersection
Reservation Rd / Marina Square parking	Signalized intersection
Reservation Rd / De Forest Rd	Signalized intersection
Reservation Rd / Crescent Ave	Dual-lane roundabout
Reservation Rd / California Ave	Dual-lane roundabout
Reservation Rd / Salinas Ave	Dual-lane roundabout



Map 5-1. Location of roundabouts and signalized intersections in Downtown Marina.

These improvements are expected to affect mobility in a significant way. Protected bike lanes could make cycling a feasible option for people who do not currently feel safe riding a bike on Reservation Road. Combined with the land use changes and streetscape enhancements anticipated in the Specific Plan area, these bike lanes could help promote compact development Downtown.

The planned extension of Del Monte Boulevard south to 2nd Avenue (**Figure 5-2**) will help bridge a geographical gap between Downtown Marina and the Dunes project on the former site of Fort Ord. This vital connection will reduce the need to get on Highway 1 for trips within the city. It also presents an opportunity for further gateway enhancements, as discussed in **Chapter 4: Land Use and Development**.

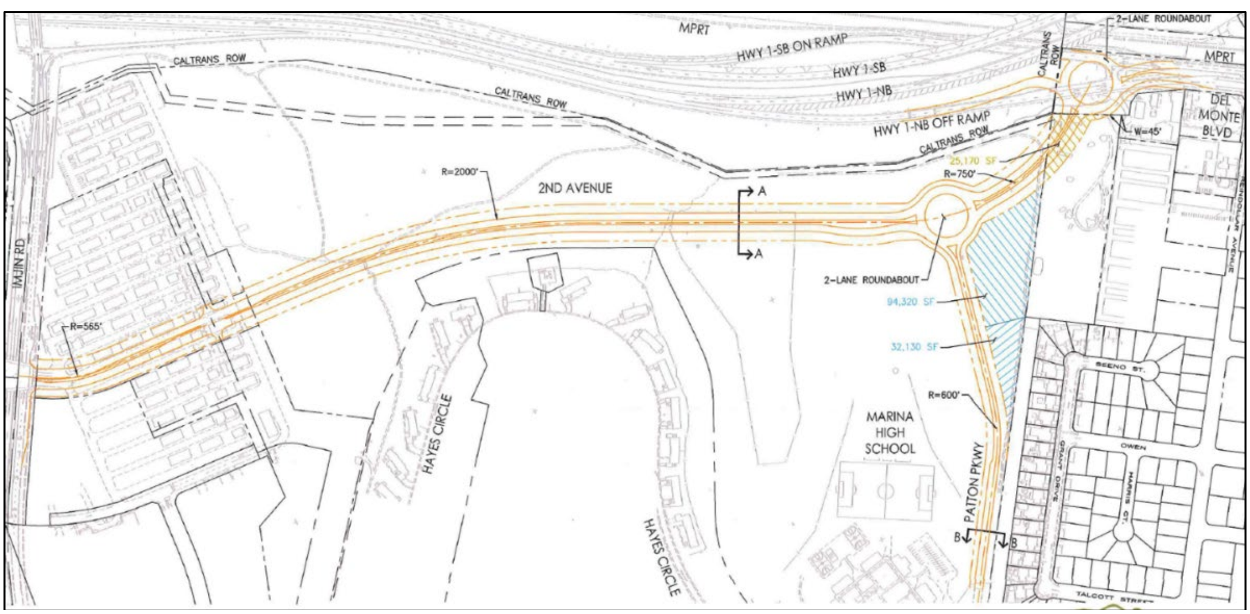


Figure 5-2. Illustrated concept of Del Monte Boulevard extension.

5.2 Traffic Calming and Complete Streets

To establish an environment that is safe and inviting to pedestrians and cyclists, it is important to integrate specific traffic calming measures aimed at reducing traffic speeds and increasing pedestrian connectivity. Traffic calming is a major part of what Smart Growth America refers to as Complete Streets. Complete Streets is an approach to planning, designing, and building streets that enables safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. (**Figure 5-3)**. **Table 5-2** includes a list of common traffic calming measures including bulbouts, landscaped medians, street trees, accent paving, and with building frontage create an urban street environment that encourages drivers to slow down.

Figure 5-3. Complete street concept.
Source: Crandall Arambula Urban Design

Table 5-2. Traffic Calming Measures

Traffic Calming Device	Description
Road Width Reduction /Road Diet	Reducing the number and width of traffic lanes
Raised Median Island or Refuge Island	Raised island in the road center (median) narrows lanes and provides pedestrian with a safe place to stop while crossing wide streets.
Curb Extensions/Neckdowns/ Bulbouts	Curb extensions at intersections that reduce the roadway width from curb to curb thereby reducing pedestrian crossing distance and slowing traffic.
Speed Tables/Raised Crosswalks	Ramped surface above roadway requiring drivers to slow while crossing pedestrian areas.
Reduced Corner Radii	The radius of street corners affects traffic turning speeds. A tighter radius forces drivers to reduce speed to safely make the turn.
Rumble Strips	Low bumps across road make noise when driven over
Roundabouts	Medium to large traffic circles requiring traffic to slow while navigating an intersection.
Pavement Treatments/Pavement Textures	Pavement treatments such as cobbles or bricks and markings to designate pedestrian oriented areas.

Traffic Calming Device	Description
Bike Lanes	Marking bike lanes narrows traffic lanes, causing vehicles to slow
Perceptual Design Features	Patterns painted into road surfaces and other perceptual design features that encourage drivers to reduce their speeds
Street Trees and Landscaping	Planting trees or landscaping along a street visually narrows the street, thereby reducing vehicle speed
Reduced Speed Limits	Reduction of posted speed limits and enforcement of posted speed limits.
On-Street Parking	On-street parking (diagonal or parallel) can serve as a highly effective way to slow traffic in main street and neighborhood environments
Elimination of Turn Lanes	Turn lanes facilitate vehicular movement across pedestrian rights-of-way during walk cycles. Eliminating dedicated turn lanes can improve pedestrian safety by encouraging drivers to stop completely before making a turn.

Narrower Travel Lanes

Narrower travel lanes encourage slower vehicle speeds and reduce pedestrian crossing distances. Drivers have been found to travel more slowly on streets with lane widths of 10 - 11 feet versus more typical 12-foot lane widths. Narrower travel lanes require more attention from drivers and are often used in downtown environments where there is a higher degree of potential conflicts with pedestrians and cyclists. Narrower lanes also have the benefit of reducing pedestrian crossing distances, thereby limiting the amount of time pedestrians share in a space with vehicles. Finally, narrowing vehicular lanes frees up space for other uses such as parking, bike lanes, medians, and widened sidewalks.

Bulbouts

Bulbouts are extensions of street curbs that narrow pedestrian crossing distances at crosswalks while also reducing the speeds at which drivers are able to comfortably make turns at intersections (**Figure 5-4**). Bulbouts should be incorporated at key intersections leading into and throughout Downtown. These curb extensions will be designed in conjunction with on-street parking as they create protected pockets along the road to allow for parallel parking. On-street parking consequently also narrows the perceived width of the road and serve as a traffic calming feature.

Figure 5-4. Bulbout.
Source: SF Streetsblog

Accent Paving

Accent paving—unit pavers or colored concrete—should be used to draw attention to pedestrian crossings (**Figure 5-5**). The change in texture makes motorists aware, through both visual and audible queues, that they are entering a pedestrian oriented space which in turn can slow the speed of traffic. Refer to **Appendix B: Design Guidelines** for more on accent paving and pedestrian crossings.

Figure 5-5. Accent paving at crosswalk.
Source: Main Street Beverly (blog)

Medians

Medians can help improve the overall appearance of streets and help slow traffic (**Figure 5-6**). Medians with refuge islands reduce conflicts between pedestrians and vehicles because they allow pedestrians to cross one direction of traffic at a time, giving them a safe harbor if needed. Medians along Reservation Road should be enhanced with improved landscaping to provide physical separation between through lanes and the pedestrians crossing the road.

Figure 5-6. Landscaped median.
Source: Downtown Brooklyn Partnership

Street Trees

Street trees offer an aesthetic alternative to the open speedway feeling of a treeless road (**Figure 5-7**). When planted in park strips, sidewalk tree-wells and medians, trees have a traffic calming effect as they create a visually enclosed street scene and separate pedestrians from vehicular traffic. Trees should be pruned regularly to ensure branches do not infringe on the pedestrian or bicycle right-of-way. **Appendix B: Design Guidelines**, includes a list of trees appropriate for Downtown.

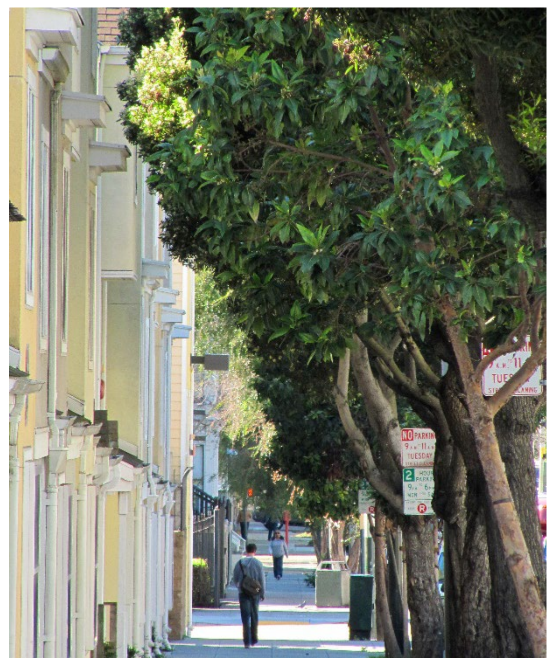


Figure 5-7. Street trees.
Source: Friends of the Urban Forest

5.3 Active Transportation

Although walking and biking are important ways for residents and visitors to get around Downtown, significant gaps exist in the City's sidewalk and bicycle network. To promote walking and biking in Downtown, the City should work toward a robust network of sidewalks and bikeways, facilitate walking and biking through the provision of streetscape amenities, and promote micro-mobility (bike and scooter sharing) services in the Specific Plan area and Central Marina more broadly.

Pedestrian and Bike Network

The Specific Plan looks to implement policies detailed in the City's 2010 Pedestrian and Bicycle Master Plan (PBMP). The PBMP identifies several goals and strategies relevant to the development of pedestrian and bicycle facilities Downtown including:

- Sidewalks should be installed on both sides of all streets;
- Sidewalks should provide direct connections between destinations, including homes, schools, shopping areas, public services, workplaces, parks, and transit facilities;
- Larger sidewalks should be used along arterial streets Downtown, in locations where large concentrations of pedestrians are expected and within one-half mile of a transit center;

- Intersections should be as compact as possible, and corner radii as small as possible, to facilitate safe crossings;
- Pedestrian refuge islands should be used on wider streets;
- Marked crosswalks should be provided across all street approaches to signalized intersections and at stop-controlled intersections where pedestrian traffic commonly occurs (such as near parks, schools, and transit stops) and should incorporate pedestrian activated signals.
- Bikeways should be implemented along key thoroughfares. The PBMP identifies several guidelines relating to bikeways, including:
- Multi-lane roadways with intersections should include on-street bike lanes or independent parallel trails. Existing roadways should receive bike lanes where feasible;
- Bikeways should be designed to maximize bicycle travel through effective connections.

Pedestrian and Bike Amenities

In addition to creating a safe and complete pedestrian and bicycle network, amenities aimed at pedestrians and cyclists can help people feel safer and more comfortable while walking or biking to various destinations. Where possible, amenities should be co-located to encourage easy access and potentially reduce costs.

Figure 5-8. Street furniture.
Source: Blueton Limited

Seating areas should be considered wherever extra sidewalk width allows them (**Figure 5-8**). Seating space can be included on walls, in alcoves, and along other edges. Similarly, planters add color and beauty to the streetscape. The use of local stone, masonry, and other building materials complementing area buildings and monuments should be considered.

Bike racks should be placed in secure locations outside the pedestrian right-of-way. The City should install attractive and functional bike racks in a U-rack, bollard, or decorative format. Wave, grid, and spiral racks should be avoided.

Figure 5-9. Bus shelter for Monterey-Salinas Transit in Monterey.
Source: Monterey Herald

In conjunction with Monterey-Salinas Transit, the City should work to install attractive bus stops that include shelters, benches, trash receptacles, and appropriate lighting (**Figure 5-9**). When possible, bus stops should be located near major intersections or mid-block crossings to facilitate the safe movement of people crossing the street.

Micro-mobility

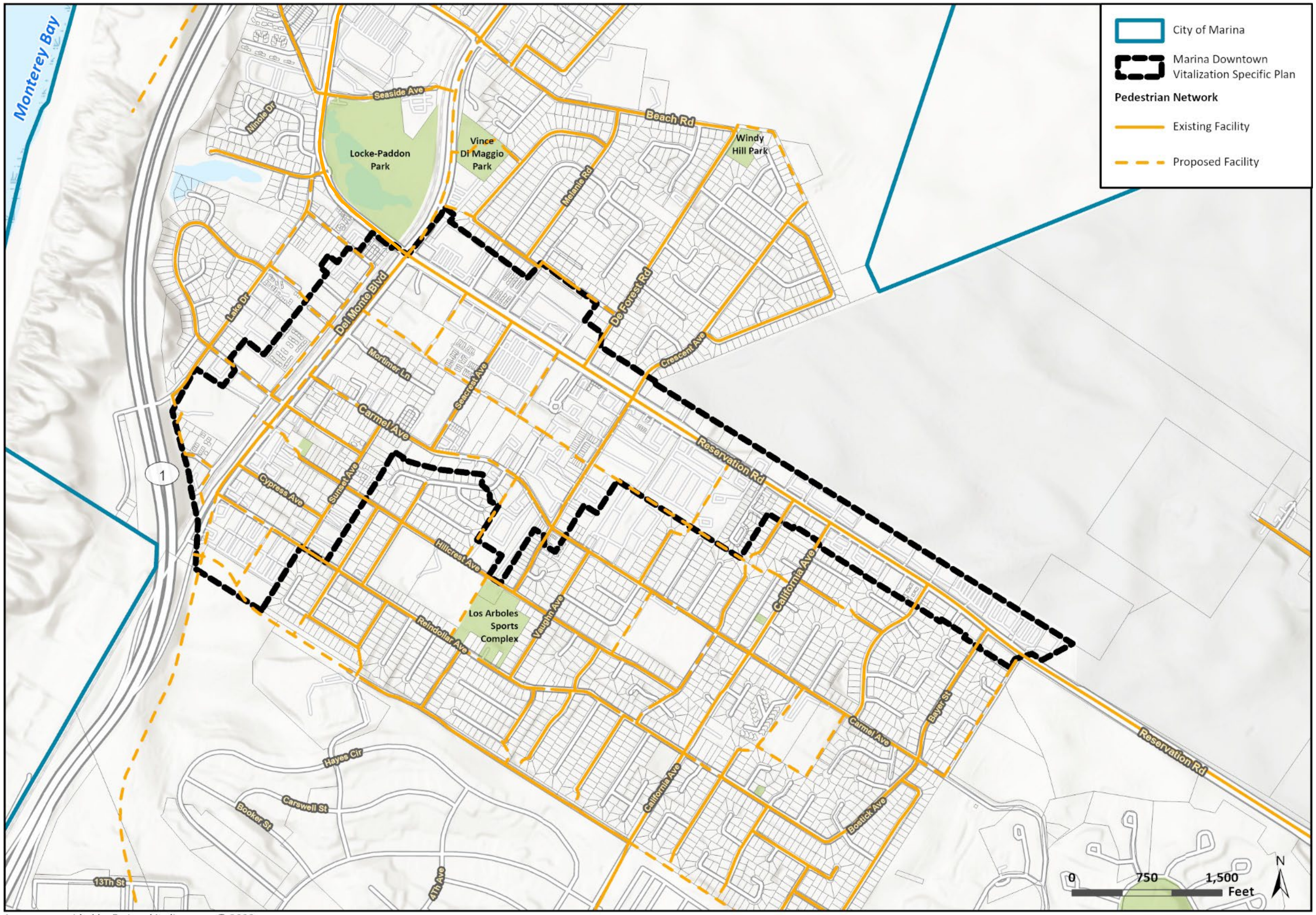

Figure 5-10. Bikeshare parking/charging station.
Source: Wired

In addition to personal bicycles, bike- and scooter-sharing programs can serve important roles in Downtown (**Figure 5-10**). They could provide people with easy connections to transit stops and facilities, help people accomplish short trips to various destinations without use of the automobile, and provide a low-cost alternative to ridesharing or carpooling within Downtown.

Dedicated facilities for bikes are present in many locations Downtown, but separate facilities for scooters have not been put in place. While recognizing the benefits of bike– and scooter-sharing, the City should support people to use bikes and scooters by providing appropriate facilities including dedicated and protected bike lanes and bike racks. The City should be sure to continue enforcing laws preventing the use of scooters and bikes on sidewalks.

5.4 Pedestrian, Bicycle, and Roadway Improvements

Consistent with the City's 2010 Pedestrian and Bicycle Master Plan, all streets in Downtown shall have continuous sidewalks on both sides of the street, and bikeways shall be implemented along key thoroughfares (**Map 5-2** and **Map 5-3**). Sidewalks and bikeways shall be designed and maintained as outlined in the Pedestrian and Bicycle Master Plan. Street design features will enhance the comfort and appeal of the pedestrian environment. Streetscapes should be active and interesting, provide separation between pedestrian rights-of-way and vehicular travel lanes, and feature landscaping and gathering nodes.



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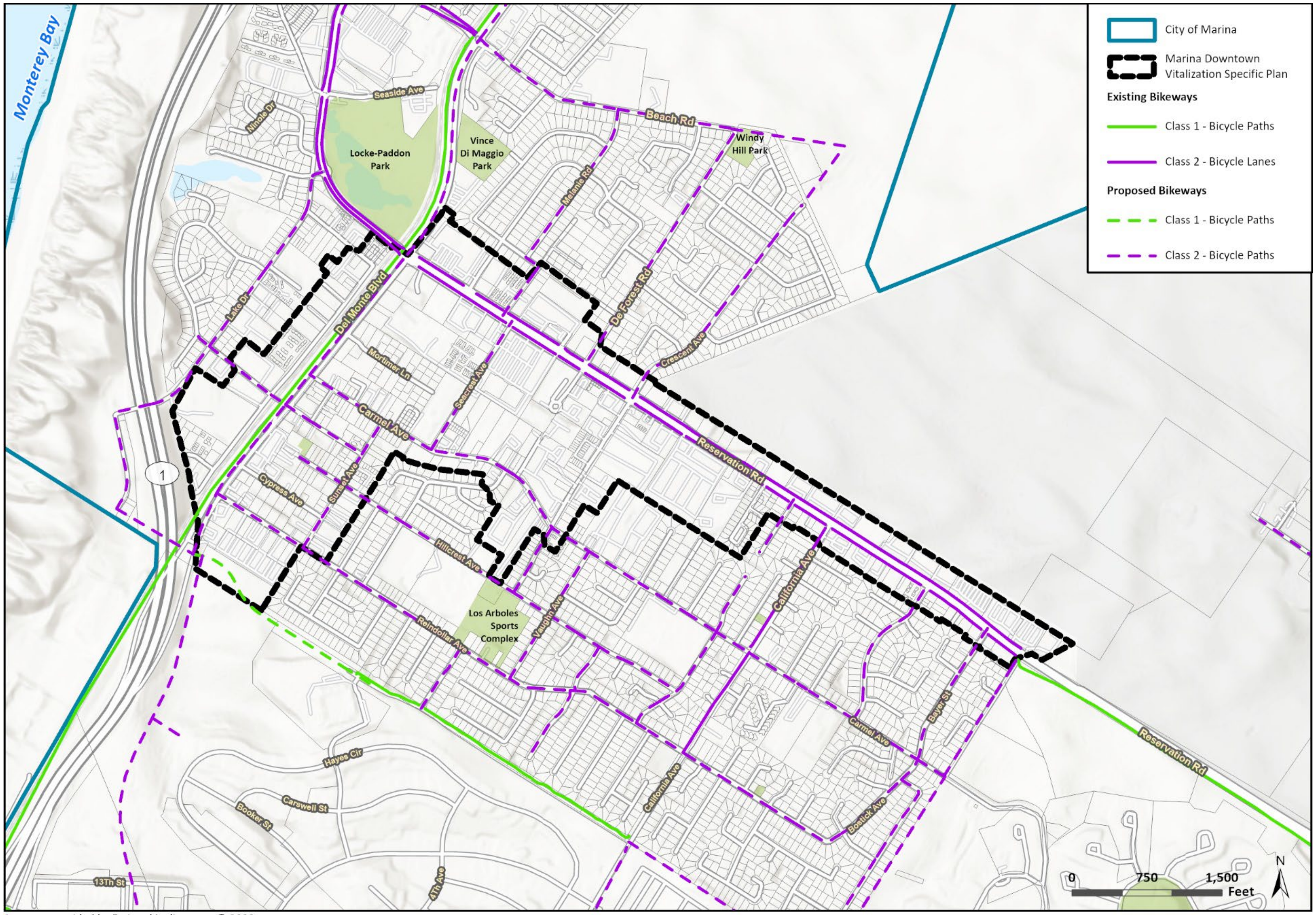
Additional data provided by the City of Marina, 2022.

Map 5-2. Existing and proposed pedestrian network.



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Additional data provided by the City of Marina, 2022.

Map 5-3. Existing and proposed bicycle network.

5.5 Parking

Surface parking lots abound in Downtown Marina, and they are primarily located along Reservation Road and Del Monte Boulevard. Existing commercial areas are oriented in a strip mall configuration with buildings positioned to the rear of sites leaving room for large parking lots in the front.

The Specific Plan allows significant intensification of development in the Specific Plan area which would create an increased demand for off-street parking. There is opportunity to create more on-street parking in some areas, but there will still be a need for additional parking as higher intensity development occurs. The Specific Plan assumes that structured parking with shared access will eventually replace surface lots as more intensive mixed-use development occurs. To create a pedestrian-friendly and aesthetically pleasing downtown core, on-site parking lots should be located behind buildings. **Appendix A: Development Code** provides clear standards for the provision of parking in the Specific Plan area. Specific elements of the proposed parking plan are outlined below.

On-street Parking

There are a number of benefits with on-street parking: Convenience, separation between the street and pedestrians, and traffic calming, (**Figure 5-11**). On-street parking will be provided in Downtown in strategic areas in accordance with the Specific Plan.

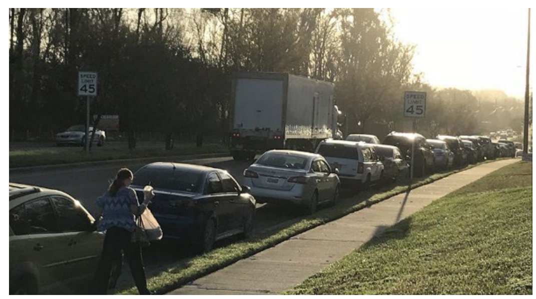


Figure 5-11. On-street parking.
Source: WUFT

Off-street Parking

Off-street parking lots are to be located at the rear of a property in the Core, Mixed-use Node, and Multifamily Residential District and at the rear or side of a property in the Transition District. This aids in maintaining a streetscape that emphasizes a direct connection between pedestrians, buildings, and the landscape. Parking lots should be landscaped (**Figure 5-12**).

Figure 5-12. Off-street parking.
Source: Pinterest

Parking Lot Consolidation

Parking lot consolidation is encouraged. When spaces are shared between uses, fewer parking lots are needed. Consolidation creates better organization and movement of service and delivery vehicles, opportunities for shared space, and an aesthetically improved streetscape that favors pedestrian movement.

Structured Parking

Several options are possible for a structured parking garage in Downtown Marina. Locations will be driven by intensity of development. Commercial retail or service uses should be included on the first floor facing the street. **Appendix A: Development Code** includes design standards for parking structures.

5.6 Transit

The use of public transit can reduce the number of single-occupant vehicles on the road and help Marina achieve community-wide goals for reducing traffic congestion, vehicle miles traveled, and greenhouse gas (GHG) emissions. The quality of transit service is determined by a range of factors, including frequency, reliability, and ease of access. As the Specific Plan is built out and new residents move into the area, there will be opportunities to expand transit service and frequency. The City and development community should work with Monterey-Salinas Transit to explore additional routes and more frequent service as the Specific Plan area develops. Streetscape improvements should anticipate bus stops and shelters as well as pedestrian connectivity to public transit stops.

5.7 Mobility Goals, Policies, and Programs

Goal M-1	**Mobility -** A Downtown with safe and efficient pedestrian and vehicular circulation that encourages people to gather, walk, bike, or use public transportation.
Policy M-1.1	Utilize traffic calming measures such as bulb outs, medians, and street trees to lower speeds throughout the Specific Plan area to creating a safer and more pleasant Downtown environment while balancing the demands of local and regional vehicular traffic.
Policy M-1.2	Mitigate traffic congestion through capacity management measures rather than further road widening.
Policy M-1.3	As development and redevelopment of large sites occurs in Downtown, encourage the development of blocks of approximately five acres in size to help provide access to landlocked and limited access parcels to encourage connectivity. For properties within a block under multiple ownership, provide for cross access through the block consistent with the Bicycle and Pedestrian Master Plan.
Policy M-1.4	Require the dedication of easements to create midblock pedestrian through-ways to develop an efficient, safe, and attractive pedestrian and bicycle path network throughout Downtown as well as providing access to businesses and residences in the interior of the site. These new pedestrian connections should include privately-owned and maintained amenities such as landscaping, outdoor seating, signage, and lighting.
Policy M-1.5	Develop a complete sidewalk system within Downtown, requiring right of way dedication as needed to close gaps the sidewalk network.
Policy M-1.6	Undertake streetscape and landscape improvements such as tree wells with benches, green sidewalks, street furniture, and public art along Reservation Road, Del Monte Boulevard, and side streets in the Core District to enhance the aesthetics and functionality of the pedestrian environment.
Policy M-1.7	Ensure streets accommodate people with special mobility needs by ensuring that right-of-way improvements, like, sidewalks, crosswalks, and driveways meet ADA standards.
Policy M-1.8	Install midblock crossings with enhanced striping, lighting, signage, and other safety features on major streets such that the distances between crossings are reduced to 600 feet or less.
Policy M-1.9	Require new commercial and mixed-use developments to provide appropriate bicycle parking for residents, workers, and patrons. Encourage developments to include end-of-trip support facilities such as lockers, changing rooms, and showers.

Policy M-1.10	Continue to evaluate the need for and financial feasibility of shared parking structures within the Core district if parking demand requires.
Policy M-1.11	Require that parking is located behind buildings or in underground structures in the Core, Mixed-use Node, and Multifamily Residential District out of direct view from the public right of way. Surface parking is allowed to the side of buildings in the Transition District.
Policy M-1.12	Require that above-ground parking structures, including podiums, be wrapped with other uses to create an attractive, pedestrian-friendly environment.
Policy M-1.13	Encourage alternative transportation, such as walking, biking, and transit, to reduce overall parking demand.
Policy M-1.14	Work with MST to improve pedestrian access to the Marina Transit Exchange and provide pedestrian amenities at all bus stops Downtown with adequate lighting, signage, and covered benches.
Policy M-1.15	Work with MST to expand bus routes within Marina and increase the frequency of bus service on both regional and citywide routes.
Policy M-1.16	Collaborate with the Monterey SURF! Program to facilitate the use of bus rapid transit system for resident commutes.
Policy M-1.17	Evaluate the feasibility of lane reductions on Reservation Road and Del Monte Boulevard to calm traffic and create a more inviting streetscape.
Policy M-1.18	Explore the implementation of micro-transit solutions including scooter and bike-share programs and shuttle service between Downtown and major destinations.
Program M-1	Develop a mobility plan for the Downtown to include complete streets design, pedestrian and bicycle paths, improvements to transit, parking, and transportation demand management measures. The plan should include a cost estimate and a financing and capital improvement program.
Program M-2	Community Development Department and Public Works Department should collaborate to implement low-cost improvements using existing resources to establish gateways to the Downtown along Reservation Road and Del Monte Boulevard, directional signage, and simple streetscape enhancements such as protected bike lanes, accent paving on crosswalks, reduced lane width, and curb bulbouts.

6 Public Facilities and Infrastructure

This chapter of the Specific Plan addresses the planned distribution, location, extent, and intensity of local services and public facilities, including potable water, wastewater, stormwater drainage, fire and police services, schools, libraries, and healthcare. Implementation of the Specific Plan will require the construction of infrastructure and provision of public services and utilities to serve the Specific Plan area in accordance with required standards. **Table 6-1** below lists various existing service providers for the Specific Plan area. Phasing and financing related to public services are discussed in **Chapter 7: Implementation**. This chapter also addresses the goals, policies and programs that are associated with the provision of adequate public services, public facilities, and utility services in the Specific Plan area.

Table 6-1. Service Providers in the City of Marina

Public Facility/Service	Provider
Potable Water	Marina Coast Water District
Wastewater	Marina Coast Water District, Monterey One Water
Stormwater	On-site and subdivision scale drainage and retention
Electrical Utilities	Monterey Bay Community Power, Pacific Gas and Electric
Natural Gas	Pacific Gas and Electric
Telecommunications	AT&T, Comcast
Fire Services	Marina Fire Department
Police Services	Marina Police Department
Schools	Monterey Peninsula Unified School District
Libraries	Monterey County Free Libraries

6.1 Potable Water

The public water supplier for Downtown Marina is the Marina Coast Water District (MCWD), a county water district formed and authorized by Division 12 of the California Water Code. MCWD was established in 1960 and provides potable water, wastewater collection, and reclaimed water services to customers within the City of Marina and portions of the City of Seaside to the south. MCWD owns and operates its own wells, pump stations and distribution infrastructure and relies completely on local groundwater pumped from the Salinas Valley Groundwater Basin to meet potable water demand.

In 2020, the MCWD prepared a water supply assessment (WSA) for the 20-year build out of the Specific Plan including up to 1,385,200 square-feet of commercial space and up to 2,900 new multifamily dwelling units. Under the provisions of SB 610, prior to the adoption of the Specific Plan, the City of Marina was required to request that the MCWD assess availability of potable water required to serve the additional development proposed by the Specific Plan. The WSA found that the high-density residential, office, and retail development proposed in the Specific Plan is projected to increase potable water demand by approximately 282-acre feet per year (AFT) by 2040 when compared to previous build out estimates of the Central Marina Service Area. The WSA also concluded that MCWD will be able to provide adequate supply for the projected development of the Specific Plan.

The MCWD 2020 Urban Water Management Plan (UWMP) compiled water demand projections from several recent WSAs (including the 2020 WSA for the Specific Plan) and development forecasts to assess water supply availability for the entire MCWD service area. The UWMP echoed the conclusions of the WSA forecasting that the water demand of Central Marina in 2040 including the buildout projections identified within Specific Plan will be 2,284 AFT. MCWD has already allocated 3,020 AFT of groundwater from the Salinas Valley Groundwater Basin to supply the Central Marina Service Area. The projected 20-year water demands in the UWMP across the entire MCWD are approximately 10,000 AFT, with an allocation amount of 11,040 AFT as shown in **Table 6-2**.

Table 6-2. Marina Coast Water District 2020 Urban Water Management Plan Projected Demand and Allocation by Service Area (AFT)

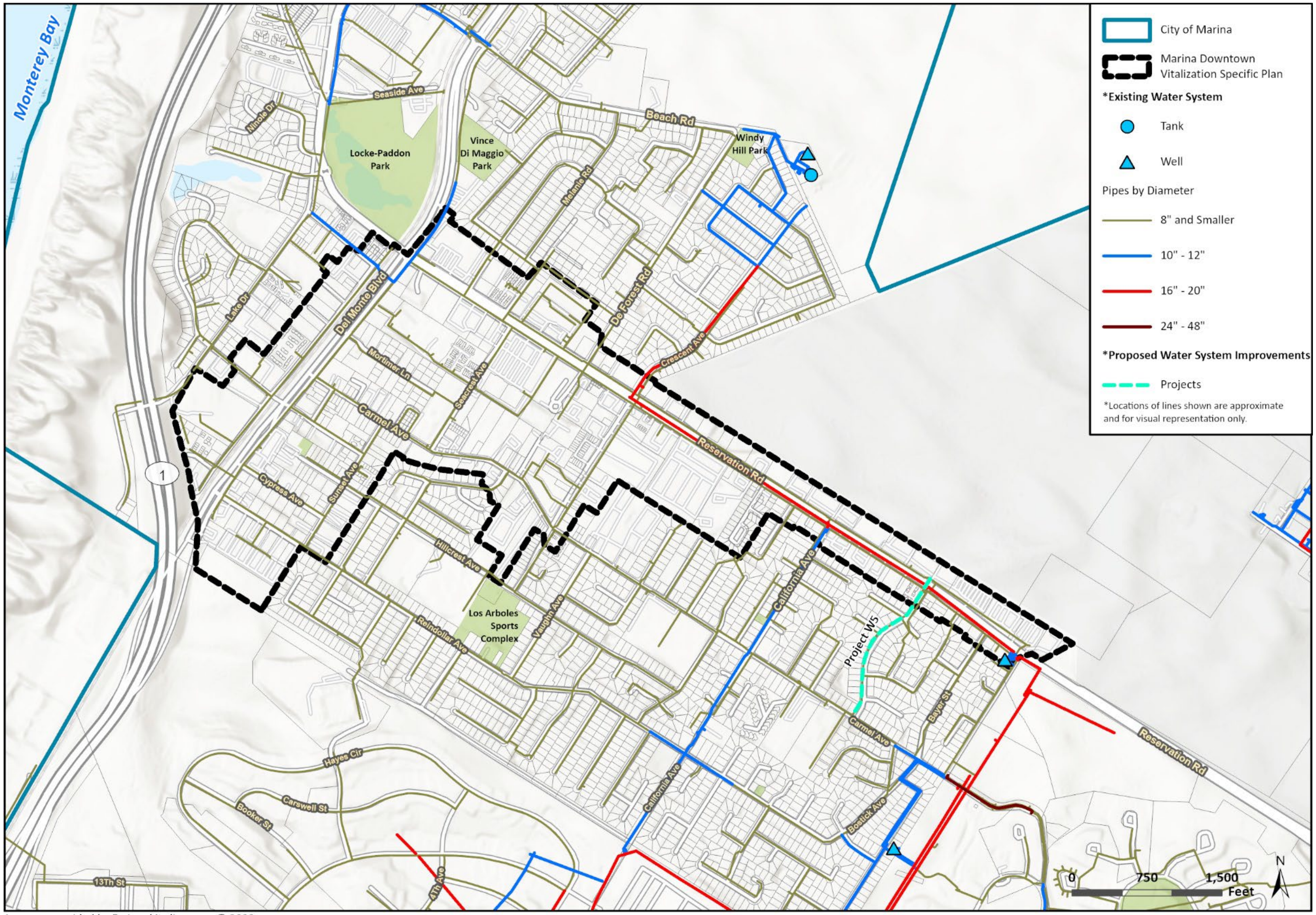
MCWD Service Area	2020	2040	Allocation
Ord Community	1,929	6,610	6,600
Marina	1,438	2,964	4,440
Central Marina (Including DVSP)	**1,438**	**2,284**	**3,020**
Total	3,367	9,574	11,040

As future water demands increase, the District plans to develop additional sources of water supply including the desalination of brackish groundwater and increased indirect potable reuse of purified recycled water from the Pure Water Monterey project. In addition, Monterey One Water (M1W) (formerly known as the Monterey Regional Water Pollution Control Agency) has agreed to deliver up to 1,427 AFY of recycled water from the Advanced Water Treatment Facility. Water from this facility will be used for groundwater replenishment and landscape irrigation within Central Marina thereby reducing additional demand for potable water. MCWD is currently constructing a recycled water distribution network and will begin delivering recycled water for urban landscape irrigation within the next few years.

6.1.1 Water Infrastructure Improvements

MCWD performed an analysis of existing water infrastructure based on projected demands within their 2020 Water Master Plan. MCWD identified one key potable water infrastructure improvement project necessary to accommodate projected future demand within the Specific Plan area. Project W5 of the 2020 MCWD Water Master Plan, the Lynscott Drive Pipeline Replacement shown in Figure 6.1, will replace an existing 8-inch pipeline with a new 12-inch pipeline to meet the increase of demand associated with the buildout of this Specific Plan. **Map 6-1** shows the existing water system and proposed improvements.

While buildout of the Specific Plan will increase water demand, there is sufficient capacity through MCWD to provide water for development of Downtown. Water infrastructure improvements, including pipe upsizing, shall be met with Program PF-1.



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Additional data provided by MCWD, 2019.

Map 6-1. Existing water system and proposed improvements

6.2 Wastewater

The provision of sanitary sewer or wastewater service in the Monterey Region is organized at two levels. Local cities and sanitation districts are responsible for maintenance and extension of sewer lines, while M1W, is responsible for development and operation of wastewater treatment facilities.

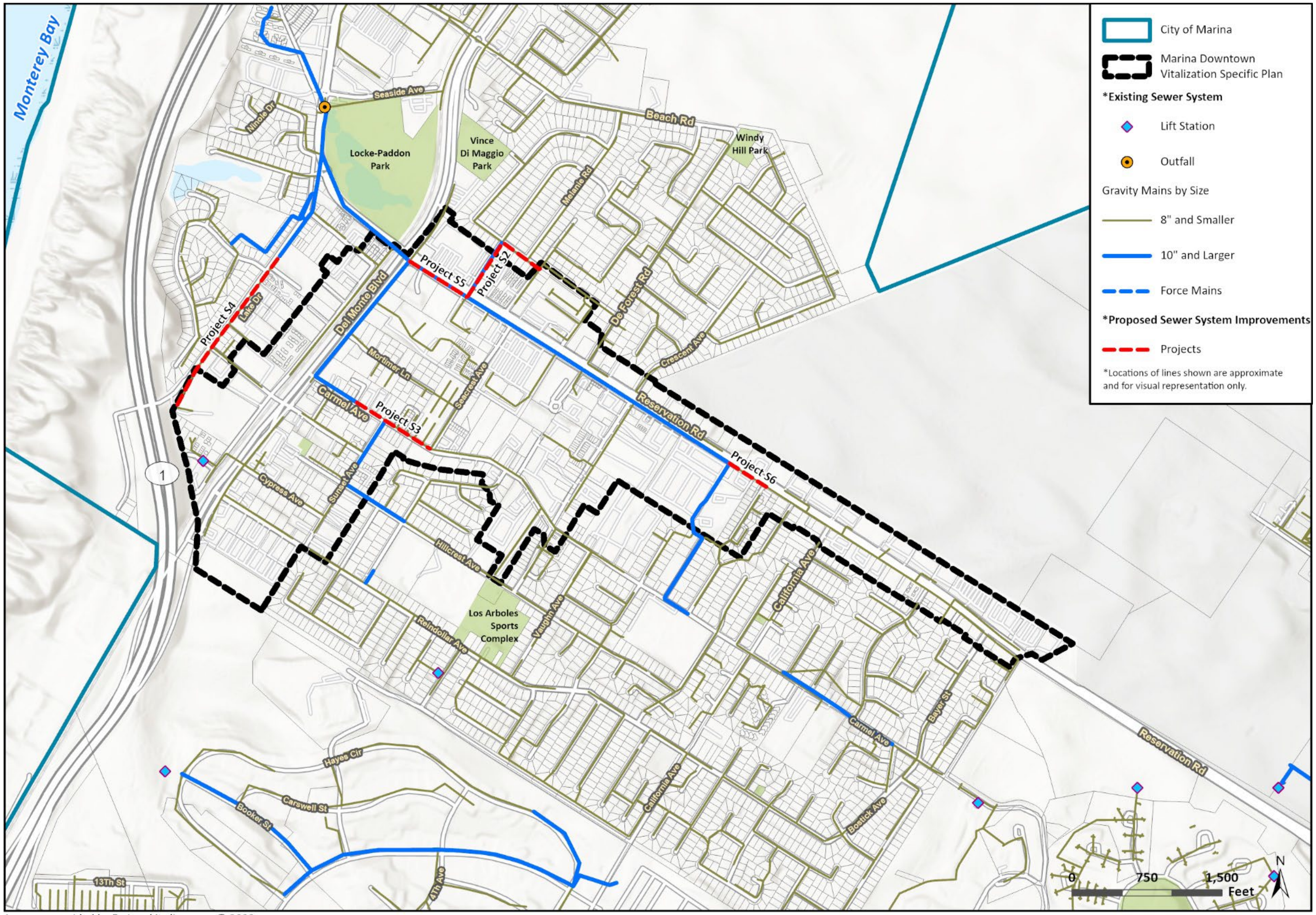
MCWD oversees the installation and maintenance of sewer lines in Marina. Wastewater is carried by the MCWD sanitary collection system to the M1W pump stations. From local pump stations, the wastewater is transported to the M1W treatment plant located two miles north of Marina. The regional treatment facility has a design and permitted capacity of 29.6 million gallons per day (mgd). 7,696 new residents in the Plan Area. Conservatively estimating water use of 100 gallons per day per person, and all water use being treated as wastewater, wastewater treatment demand for the project would be approximately 769,600 gallons per day. This represents approximately seven percent of available capacity at the RTP. Therefore, Specific Plan buildout would be served by a wastewater treatment provider with sufficient capacity.

6.2.1 Wastewater Infrastructure Improvements

The existing wastewater system is comprised of gravity sewer mains, pump stations, and force mains. Wastewater generated in the Specific Plan area is discharged to the M1W forebay pipe and lift station near the intersection of Reservation Road and Dunes Drive. The lift station pumps the sewage into the M1W interceptor pipeline that flows into the M1W wastewater treatment plant. The existing sewer system is generally adequate for existing flows but would need to be upgraded to accommodate the planned redevelopment. **Table 6-3** summarizes the sewer system upgrades required to accommodate the build out of the Specific Plan. These improvements are detailed in the 2020 MCWD Sewer Master Plan and shown below in **Map 6-2**. Buildout of the Specific Plan will increase the need for wastewater and sewer services and upgrades are required to meet demands from development of Downtown. Sewer infrastructure improvements, including pipe upsizing, shall be met with Program PF-2.

Table 6-3. MCWD 2020 Sewer Master Plan Planned Improvements in Central Marina

Project Description	Project Benefit	Project Trigger
Project S2 Peninsula Drive and Vista Del Camino Gravity Main: replacement of an existing 8-inch gravity main with a new 12-inch gravity main along Eucalyptus Street, Peninsula Drive and Vista del Camino from Viking Lane to Reservation Road.	Existing Customers: 85% New Development: 15%	Existing and Future Development
Project S3 Carmel Avenue Gravity Main: replacement of an existing 8-inch gravity main with new 10-inch and 12-inch gravity mains along Carmel Avenue between Seacrest Avenue and approximately 400 feet west of Sunset Avenue. This project is intended to mitigate an existing system deficiency.	Existing Customers: 100% New Development: 0%	Development of approximately 600 dwelling units.
Project S4 Lake Drive Pipeline Replacement: Replacement of the existing 6-inch and existing 8-inch gravity main with new 10-inch gravity mains along Lake Drive from the Highway 1 to Messinger Drive.	Existing Customers: 46% New Development: 54%	Development of approximately 600 dwelling units.
Project S5 Reservation Road Pipeline Replacement: Replacement of the existing 12-inch and 18-inch gravity mains with 21-inch gravity main along Reservation Road from Vista Del Camino to Del Monte Boulevard.	Existing Customers: 41% New Development: 59%	Development of approximately 2,950 dwelling units.
Project S6 Crestview Court Pipeline Replacement: Replacement of the existing 8-inch gravity main with new 10-inch gravity main along Reservation Road from 200 feet west of Crestview Court to 800 feet west of Crestview Court.	Existing Customers: 10% New Development: 90%	Development of approximately 200 dwelling units.



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Additional data provided by MCWD, 2019.

Map 6-2. Existing sewer system and proposed improvements.

6.3 Storm Drainage

Stormwater runoff generated from areas within the Specific Plan are collected in drain inlets, conveyed in underground pipes, and discharged into above ground percolation ponds. The majority of runoff from Reservation Road and nearby streets is carried downhill into a large percolation pond located in Locke-Paddon Park. Smaller percolation ponds are located throughout the city to provide detention for individual development areas. The City of Marina requires that the runoff from a ten-year, 24-hour storm event be retained onsite. Individual developments are required to propose a method of achieving this requirement that include the design of above ground percolation ponds or underground chambers to store excess runoff while it is dissipated into the ground via percolation.

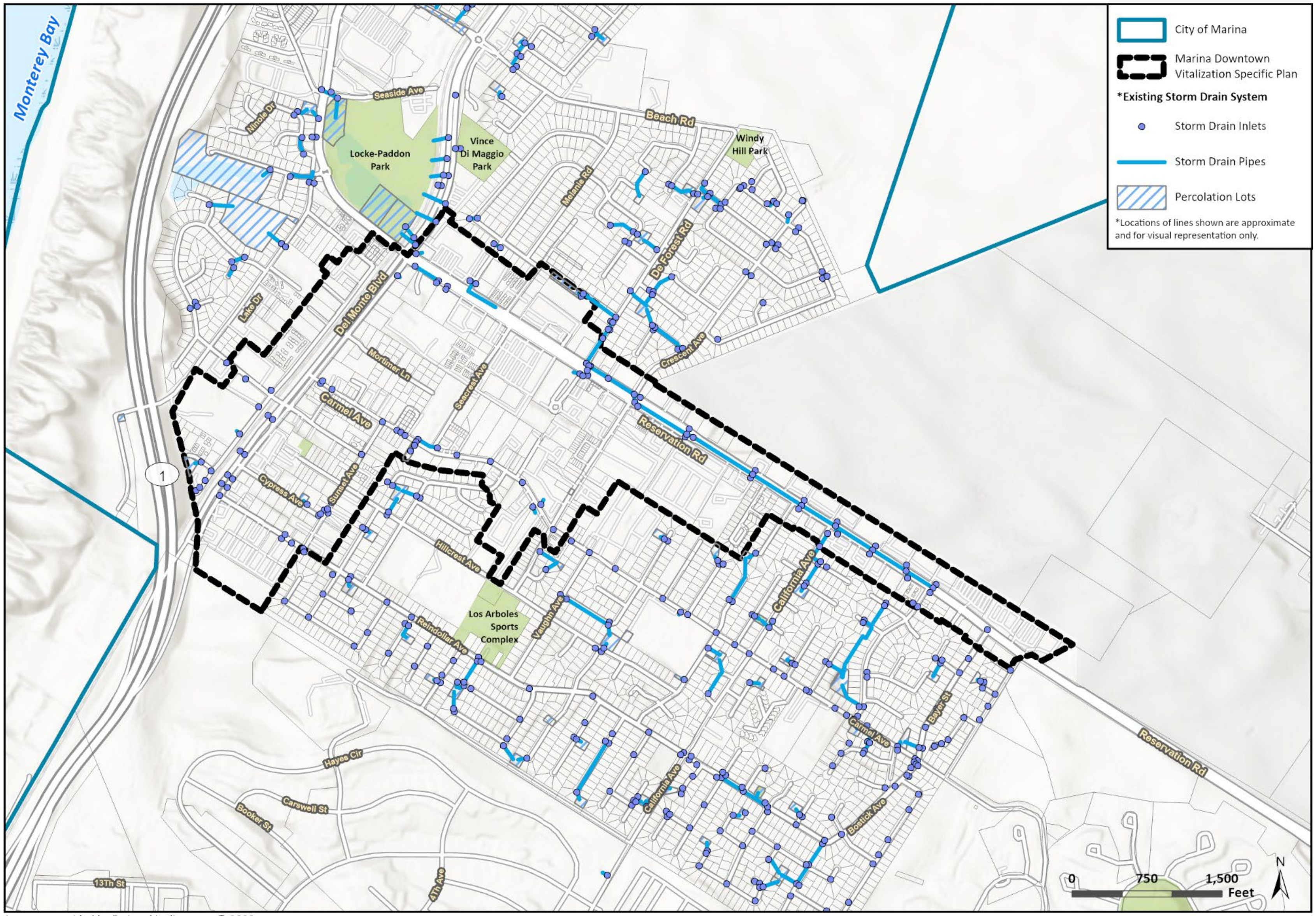
6.3.1 Storm Drainage Infrastructure Improvements

New development will be required to provide on-site retention in accordance with the City of Marina Standards and Specifications, but plan-wide drainage improvements are not required. Existing storm drainage infrastructure in the Specific Plan area is shown in **Map 6-3**. As development occurs, stormwater management measures are to be implemented in a manner that fulfills the requirements of Monterey County's National Pollutant Discharge Elimination System (NPDES) Phase II Permit, issued by the State Water Resources Control Board. This is intended to minimize the effects of urban stormwater runoff on the natural open space areas, including wetland areas and principal drainage corridors. Implementation includes two components: Stormwater management during construction and post-construction.

For active construction projects, a Storm Water Pollution Prevention Plan (SWPPP) is required to manage the release of onsite stormwater runoff. It addresses how stormwater from a construction site is managed and treated prior to being discharged from the site. The use of Best Management Practices (BMPs) during the construction process generally incorporates erosion and sediment controls. These BMPs typically include measures such as applying straw mulch to disturbed areas, the use of fiber rolls and silt fences, sedimentation basins, drain inlet protection, stabilized construction accesses, and material management. For construction activity in the Specific Plan area, the SWPPP is administered by Monterey County.

To manage stormwater quality and reduce post-development stormwater flows, development in the Specific Plan area is to utilize various Low Impact Development (LID) strategies. These strategies remove pollutants from runoff, attenuate peak flows, and reduce runoff volume. The Specific Plan LID measures include options for impervious area disconnection, tree planting, vegetated swales, and if needed, soil amendments. All LID measures are designed to the specifications outlined in the Design Guidelines for Low Impact Development: Site Planning, Source Control, Runoff Volume Reduction, and Treatment Control Practices document[1]. Although the Design Guidelines for Low Impact Development do not include BMPs that are implemented during active construction projects, it provides a comprehensive, long-term approach for managing stormwater generated by new development projects by identifying various planning tools and requirements that collectively reduce peak flows and pollution from urban runoff.

[1] Design Guidelines for Low Impact Development: Site Planning, Source Control, Runoff Volume Reduction, and Treatment Control Practices, 2011



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Additional data provided by the City of Marina, 2022; MCWD, 2008.

Map 6-3. Existing sewer system and proposed improvements.

6.4 Solid Waste

All solid waste collection in the City of Marina is serviced by Greenwaste Recovery. Landfill services in the city are provided by the Monterey Regional Waste Management District (MRWMD). Municipal solid waste is delivered to the Monterey Peninsula Landfill (MPL) located north of the Specific Plan area. According to CalRecycle, the landfill is permitted to handle a maximum throughput of 3,500 tons per day. The landfill has remaining capacity of 66 million cubic yards which is the equivalent of more than 100 years of use at current disposal rates. The MRWMD reports that the MPL landfills approximately 692,000 tons of municipal solid waste per year, or 2,241 tons each operating day. Therefore, remaining daily available capacity is approximately 1,259 tons per day.

Buildout of the Specific Plan would result in an estimated 7,957 new residents within the Specific Plan area. Based on 2019 CalRecycle estimates, Californians generate approximately 6.7 pounds of solid waste per day. Therefore, solid waste generation by new residents would total an estimated 53,312 pounds per day, or 26.7 tons per day. Additionally, Specific Plan buildout could result in an additional 1,386,000 square feet of commercial retail and office uses. Based on CalRecycle's generation rate estimates (0.046 lbs/per square foot/per day), it is estimated that there will be an additional 63,756 pounds per day of solid waste for these uses. In total, the Specific Plan would result in an estimated 121,068 pounds, or 60.5 tons, of solid waste per day delivered to the MPL representing 1.7 percent of available daily capacity. This estimate represents a full buildout scenario at the end of the Specific Plan's 20-year planning horizon. Based on this finding, the MRWMD has adequate capacity to accommodate the increase in municipal waste associated with the Specific Plan's buildout scenario.

6.5 Dry Utilities

There are two electricity provider options available to households and businesses in the Specific Plan area. Monterey Bay Community Power (MBCP) is the primary provider of electricity, offering an option to purchase carbon-free electricity from the utility. In addition, Pacific Gas and Electric (PG&E) also serves as the electricity provider to a minority of customers in the Specific Plan area that choose to opt out of MBCP carbon-free services. The Specific Plan area is currently developed and connected to all necessary internet and telecommunication utilities; therefore, expansion of dry utilities would be limited. Still, increased connection to utilities would result in increased demand on service providers.

Internet and telephone services in Marina are available through a variety of providers, including AT&T and Comcast. It is anticipated that these providers or any other future providers would provide cable, internet, and telephone services to the Specific Plan area.

6.6 Public Services and Community Facilities

6.6.1 Fire Services

Fire protection services for the City of Marina are provided by the Marina Fire Department (MFD). The MFD service area is limited to the Marina municipal boundary, with one fire station serving the entire city. The Marina Fire Station is located within Downtown at 211 Hillcrest Avenue and would offer fire protection to the Specific Plan area. In addition to fire services, the MFD provides medical emergency response, natural disaster preparedness, and hazardous materials mitigation services.

In 2016, the most recent year with reported data, MFD received 2,136 calls for service. Under 2016 existing conditions, MFD required three additional uniformed staff members and a fire marshal. In a 2020 interview, the Marina Fire Department indicated that existing fire facilities would not meet the needs of a full buildout of the Specific Plan. Future service expansion for the MFD would be necessary to maintain the safest environment possible within Downtown and the remainder of the city. The expansion of personnel and facilities may be necessary to accommodate buildout of the Specific Plan and would occur concurrently with new development.

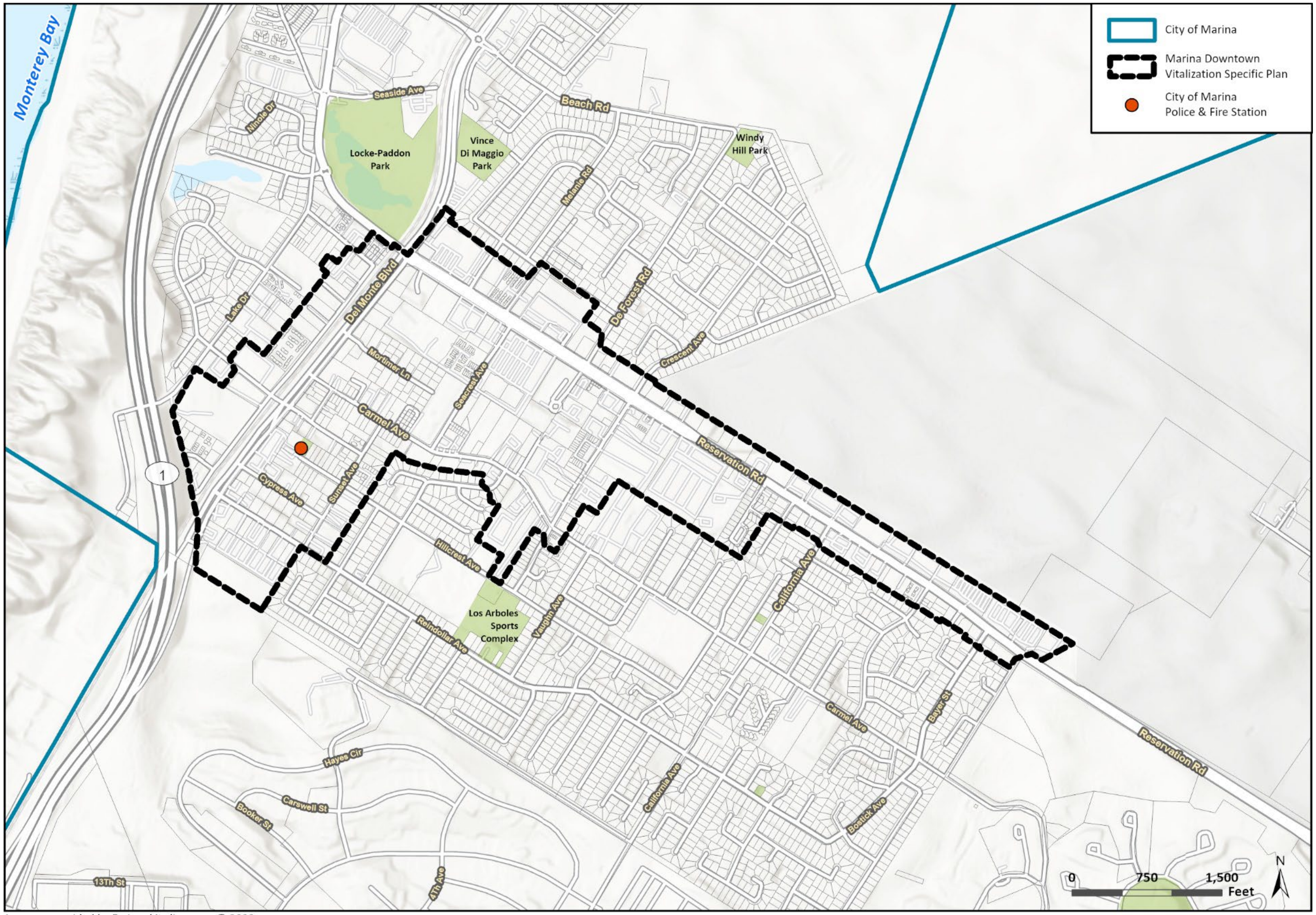
A 2021 study of standards of emergency services cover and deployment in Marina concluded that the fire department had exceeded the administrative and crew capability needs of the current fire station. On the recommendation of the study, City management proposed that a new fire station be built close to the corner of California Avenue and Imjin Parkway to improve response time and address critical deficiencies to emergency services and facilities.

To accommodate any service deficiencies present while new facilities are built, the city currently relies on a mutual aid agreement with all fire departments in Monterey County to enhance fire protection services and reduce response times. This mutual aid agreement can temporarily accommodate growth proposed for the Specific Plan area while emergency services capacity is expanded.

6.6.2 Police Services

The Marina Police Department (MPD) provides police services to the Specific Plan area. The MPD has one station located within the Specific Plan area at 211 Hillcrest Avenue. MPD provides preventative patrol, traffic control, crime prevention, investigations, drug enforcement, abuse prevention, and civil order services.

In 2020, the MPD had a staff of twenty-nine (29) sworn officers and eight (8) non-sworn personnel. Based on the 2020 Census, Marina’s population of 22,359 means the ratio of residents to police personnel is, approximately 604 to 1. With an estimated maximum of 7,957 new residents, the buildout of the Specific Plan would require the hiring of approximately 13 new police personnel to maintain the current ratio. Service levels at the MPD are regularly reassessed and adjusted as the population grows. The expansion of personnel and facilities necessary to accommodate buildout of the Specific Plan would occur concurrently with new development. The location of Marina’s shared police and fire station is shown in **Map 6-4**.



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Additional data provided by the City of Marina, 2022.

Map 6-4. Police and fire stations.

6.6.3 Schools

The Specific Plan area falls within the boundaries of the Monterey Peninsula Unified School District (MPUSD), which services the City of Marina as well as Seaside, Monterey, and Del Rey Oaks. Schools serving residents in the Specific Plan area are shown in **Map 6-5**. Schools serving the Specific Plan area include the following:

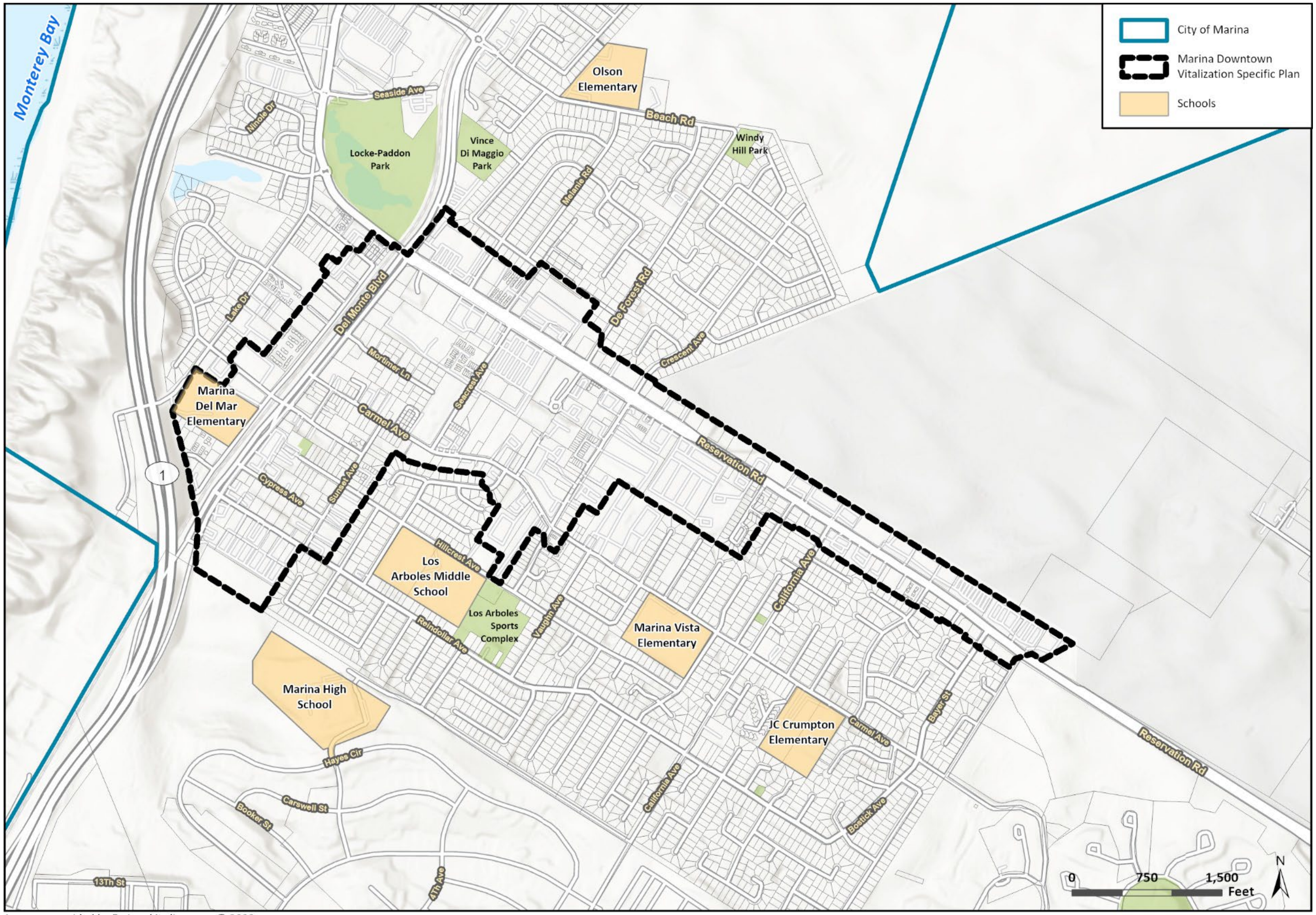
- **Marina High School** located at 298 Patton Parkway
- **Los Arboles Middle School** located at 294 Hillcrest Avenue
- **Crumpton Elementary School** located at 460 Carmel Avenue
- **Marina Vista Elementary School** located at 390 Carmel Avenue
- **Ione Olson Elementary School** located at 261 Beach Road

MPUSD has experienced declining enrollment in recent years. The District's School Reconfiguration and Consolidation Plan proposed to consolidate Foothill Elementary School and Highland Elementary School starting in the 2022-2023 school year. The plan recommended the creation of the Transitional Kindergarten through 8th grade schools at La Mesa and Monte Vista Elementary Schools, and the closure of Colton Middle School at the close of the 2022-2023 school year. While a reconfiguration plan has not yet been finalized, the district reorganization is focused on schools serving the Seaside and Monterey areas and is not expected to affect students in the Specific Plan area.

All new residential development in the Specific Plan area is anticipated to be multifamily housing (such as apartments, townhomes, and condominiums), which typically have a lower student generation rate than single-family homes. As part of the development review process, MPUSD determines student generation rates to assess capacity and set development impact fees.

The General Plan uses a student generation rate of one student for every five bedrooms, with 60 percent of the students projected to be enrolled in grades K-5, 20 percent in grades 6-8, and 20 percent in grades 9-12. Based on the maximum residential build out of the Specific Plan of 2,904 dwelling units, and an average of two-bedrooms per unit, total build out of the Specific Plan would contribute an estimated 1,161 students to local schools. This includes 697 K-5 students, 232 students in grades 6-8, and 232 students in grades 9-12. It should be noted that this estimate represents the number of students in the Specific Plan area at the end of the Specific Plan's 20-year horizon.

Based on capacity at existing schools and student generation rates, the Specific Plan does not anticipate the need for new schools in the Plan area. The capacity of existing schools serving the Specific Plan area will be sufficient to meet the need from residential development.



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Additional data provided by the City of Marina, 2022.

Map 6-5. Schools.

6.6.4 Libraries

The Marina branch of Monterey County Free Libraries was established on April 24, 1916. The Marina Library opened in its present location September 2007 with a new 11,000 square foot building including a wing to house the administrative headquarters for the Monterey County Free Libraries System. The Marina Branch offers access to books, periodicals, audio and video content in English, Spanish, Korean, and Vietnamese as well as computers, printing services, community rooms and a variety of programming for children and adults. The Friends of the Marina Library community group helps to provide advocacy, funding, and volunteer resources to support the branch.

According to the General Plan, this newest library branch along Seaside Circle and within Locke Paddon Park was a location identified to serve the entire community. As a result of this most recent development, library services are adequately provided to the Specific Plan area.

6.6.5 Civic Administrative Buildings

According to the General Plan, civic, commercial, cultural, and recreational uses are encouraged to create a center for the community in order to emphasize community life and identity as a focus for the city. Specifically, the Community Land Use Element identifies three potential locations for such a center. Figure 2.3 Public Facilities of the General Plan identifies three locations within or near the Specific Plan area for new civic administration buildings: Locke-Paddon Park adjacent to the Marina Public Library, the location of existing facilities along Hillcrest Avenue and Palm Avenue, and a vacant site along Salinas Avenue at Reservation Road.

The Locke Paddon Park site just outside of the Specific Plan Area was identified as the best location for construction of new City administrative facilities given its proximity to Downtown, and lack of major constraints present at alternative sites.

6.7 Public Facilities Goals, Policies, Programs

Goal PF-1	**Public Facilities -** Ensure that there are adequate public services and public utilities are provided for future development and enhance Downtown by planning for future public facilities.
Policy PF-1.1	Coordinate with public works and MCWD to prioritize and implement required water supply and distribution projects to ensure there is adequate capacity to serve new development in the Specific Plan Area.
Policy PF-1.2	Coordinate with public works and MCWD to prioritize and implement required wastewater projects to ensure there is adequate capacity to serve new development in the Specific Plan Area.
Policy PF-1.3	Ensure that stormwater and drainage facilities are adequate to accommodate development in Downtown.
Policy PF-1.4	Coordinate with Greenwaste Recovery and MRWMD to ensure waste collection and disposal services are available to serve new development in the Specific Plan area.
Policy PF-1.5	Meet regularly with Marina's Fire and Police Departments to coordinate the expansion of Fire and Police protection facilities and services in the Downtown.
Policy PF-1.6	Require that new development contribute to school impact fees.
Policy PF-1.7	Work with the school district to ensure that new development and changes in population are regularly assessed in order to adapt to the needs of local student populations and school district needs.
Policy PF-1.8	Continue to explore potential sites for a civic center, expansion of civic administrative buildings and a location that could accommodate commercial, cultural, and recreational uses.
Policy PF-1.9	Maintain a clean, attractive environment free from trash and debris through coordination with local waste management service providers, enforcement of existing policies on appropriate waste disposal, awareness campaigns, and the requirement of adequate on-site waste storage and collection facilities.
Program PF-1	Pipeline upsizing shall occur in accordance with Project W5 of the 2020 MCWD Water Master Plan to meet increased demand from buildout of the Specific Plan.
Program PF-2	The City shall monitor the rate of buildout in the Specific Plan area and throughout the City in accordance with the 2020 MCWD Sewer Master Plan and anticipate upgrades to the wastewater collection system.
Program PF-3	Identify the timing, location and funding source for a new fire station to adequately support the growth within the Specific Plan area.
Program PF-4	Regularly assess changes in the City of Marina's population, to adequately staff police services based on potential growth within the Specific Plan area.
Program PF-5	Establish a Downtown business improvement district or other funding mechanism to organize and finance the construction of downtown infrastructure improvements in more meaningful and intentional increments.

7 Implementation

7.1 Purpose and Intent

The preceding chapters of this Specific Plan identify the type of development desired in the Specific Plan area, including proposed improvements to vitalize the area. The desired development and vitalization improvements are outlined using goals, policies, and programs that make up a comprehensive community vision.

Successful implementation of the Specific Plan will require investments from the public and private sector. By utilizing the implementation measures outlined within this chapter, the City can create a downtown area that fosters and enables private investment. The implementation measures are intended to result in the systematic and orderly development of the Specific Plan area, consistent with the overarching vision of the project. All subsequent development projects and related activities are required to be consistent with the Downtown Vitalization Specific Plan (DVSP).

7.2 Regulatory Authority

City of Marina is authorized to adopt this Specific Plan pursuant to the provisions of California Planning and Land Use Law (Title 7, Chapter 3, Article 8 [Sections 65450-65457] (Planning and Zoning Law) of the California Government Code and Chapter 5, Subsection 5.11 (Specific Plans) of the City of Marina General Plan. The Government Code Section 65451 requires that a Specific Plan include a program of implementation measures necessary to carry out its proposed land uses, infrastructure, development standards, and other regulatory requirements.

Implementation of the Specific Plan is administered by the City of Marina. Specific Plans are designed to implement the goals and policies of the General Plan. State law requires that a Specific Plan can only be adopted or amended if it is consistent with a jurisdiction's adopted General Plan. As such, this Specific Plan is consistent with the policies of the City of Marina General Plan, and other applicable State and local regulations.

If any section, subsection, sentence, clause, phrase, or portion of this Specific Plan, or any future amendments or additions hereto, is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Specific Plan, or any future amendments or additions hereto. The City hereby declares that it would have adopted these requirements and each sentence, subsection, clause, phrase, or portion or any future amendments or additions thereto, irrespective of the fact that any one or more sections, subsections, clauses, phrases, portions or any future amendments or additions thereto may be declared invalid or unconstitutional.

7.3 Relationship to City Plans and Other Related Documents

7.3.1 Relationship to the General Plan

The Specific Plan is intended to implement the General Plan, which serves as the long-term policy guide for future development of the City of Marina. The City's values are the foundation of the General Plan and set direction for the Specific Plan's vision. The Specific Plan area implements that vision by establishing land use designations, design standards and guidelines, and refines that vision related to mobility, public facilities, and services to support new development. At the time of Specific Plan approval, the General Plan was amended to reflect Specific Plan land uses and is considered consistent with the General Plan as amended.

7.3.2 Relationship to the Zoning Code and Specific Plan Area Zoning

The City of Marina Zoning Code is a primary tool for implementing the General Plan. The Specific Plan is designed to supersede selected provisions of the Zoning Code. The zoning of the Specific Plan is SPL-DVSP. The SPL pre-fix is used to direct readers to the DVSP for all allowable land uses and guiding regulations for those uses. Where the Specific Plan establishes administrative practices, land use and/or development standards, the Specific Plan shall govern. Where the Specific Plan is silent on certain issues, such as definitions or procedures, the Zoning Code shall govern.

7.4 Conceptual Phasing

Redevelopment of the Specific Plan area will take place over time. As the majority of the parcels within the Plan Area are privately owned, redevelopment of these parcels will be initiated by the property owner according to the regulations of this Specific Plan.

The construction of public improvements is conditional on the following: (1) the timing of private redevelopment activities, and (2) the availability of funding. In the future, if there are improvements to roads to either reduce lanes or implement multi-modal measures, developers will be required to dedicate the necessary right-of-way as a condition of their projects, whenever they may be proposed. There is no intent to use eminent domain to acquire the right-of-way or to accelerate the public improvements, although the City retains this power.

While the DVSP emphasizes the importance of a downtown as a central business district and important economic driver, downtown residential development has been a critical component of the plan. The phasing plan that follows begins with a primary objective to drive development of multifamily residential within the Downtown consistent with the objectives of the General Plan housing element, which identifies the Downtown as key housing opportunity area for higher density housing, including housing that accommodates income levels of all types. Additional phases address enhancing retail and services, development surrounding the Marina Transit Exchange to emphasize the importance of transit for the future of Marina, as well as other mobility improvements that aim to create a walkable, bikeable downtown that accommodates all modes of transportation. The phasing below can be considered as a *strategy* for future development and is complimented by all the policies and programs outlined in previous sections.

Phasing Strategy 1: Multifamily Residential Development – Residential development is envisioned at the heart of the downtown and is a critical component to the mix of uses that are encouraged in the Specific Plan area. Residential uses are essential to the development of the Downtown and an important driver in achieving housing goals identified in the General Plan housing element. Through specific development standards and a development code that outlines objective design standards, multifamily residential development is expected to be a primary strategy for build out of the DVSP, including through streamlined review of multifamily housing development projects.

Phasing Strategy 2: Downtown Retail and Services – Economic development and enhancement of the city's identity are an important part of the DVSP. Support for existing local businesses, and the ability to foster an environment that encourages new businesses and attracts residents and visitors are a subsequent phasing strategy. In addition to the focus on driving residential development in the Downtown, ensuring retail and service uses are successful and thriving will create a desirable environment to live and visit.

Phasing Strategy 3: Marina Transit Exchange – Providing transit services for residents to commute and travel to other areas of the county and region are an important part of the success of the Downtown. The Marina Transit Exchange serves as a hub to support transit that is an essential service to residents who will live in the Downtown and require necessary services to encourage more active transportation and less dependence on single-occupancy vehicles. Development around this transit station, including enhanced services (e.g. shorter headways, express buses, and bus rapid transit), along with adequate sidewalk and bike infrastructure, mixed-use will encourage more use and activity around this station.

Phasing Strategy 4: Other Mobility Improvements – Mobility improvements that encourage traffic calming, complete streets, active transportation, and parking improvements are identified as a final phase for the Downtown to create an environment that matches land use needs with circulation and mobility needs. While these improvements are identified as only concepts in this plan, Program XX encourages the full development of these concepts to ensure land use and transportation work in concert.

7.5 Financing and Maintenance of Public Improvements

The availability of funding and financing are critical to the implementation of the Specific Plan. As new projects are developed in the Specific Plan area, public infrastructure will need to be upgraded to serve the growing population. The City is responsible for ensuring that the adequate infrastructure and public facilities and services are provided to meet the desired development potential outlined in this Specific Plan. The City will be required to pursue funding sources to meet these needs.

Several types of financing strategies and tools are available for financing district-wide improvements such as those found in the DVSP. It is anticipated that the Specific Plan area will be redeveloped over time using a combination of these strategies and tools which could include, but are not limited to, the strategies indicated in *Sections 7.5.1 through 7.5.2*.

7.5.1 Local Funding Sources

Development Impact Fees

California Government Code Section 66000 (“The Mitigation Fee Act”) allows for the creation and collection of development impact fees. The City of Marina and other local agencies currently impose development impact fees on new private developments citywide to mitigate the effects of increased demand on public facilities, transportation infrastructure, and parks. A development impact fee is a one-time fee imposed on new development devised to offset a “proportional share” of the cost of necessary public infrastructure and facilities.

Capital Improvement Program

The City’s existing Capital Improvement Program (CIP), Fund 462, can be utilized to leverage funding for strategic infrastructure projects within the Specific Plan area. Although the existing CIP does not currently account for improvements associated with Specific Plan build-out, an update to the CIP could enable allocation of funding toward infrastructure projects that will not only serve the Specific Plan area but will be beneficial to the greater community in Marina. Improvement projects that may service the broader community include roadway improvements, strategic economic improvements, and open space/parkland expansion.

Special Assessment/Special Tax District

Special Assessment Districts serve to increase tax amounts beyond existing property or sales tax for property owners and businesses within a specified district. The additional tax revenue gained from the Assessment District can then be used to fund district-specific improvements. Revenue from a Special Assessment District is limited by a requirement that mandates that taxation must be assigned to property owners in direct proportion to the benefits received from targeted improvements. In contrast, a Special Tax District utilizes property characteristics to assign tax amounts. Special Tax Districts allow for funds to be allocated to a broader scope of projects and activities in comparison to Special Assessment Districts. Both the Special Assessment District and the Special Tax District require approval by voters and/or affected property owners.

Enhanced Infrastructure Financing District

Enhanced Infrastructure Financing Districts (EIFDs) are a mechanism for local governments to finance development projects utilizing Tax Increment Financing (TIF). Generally, TIF tools serve to increase available funds by utilizing development bonds, which are then paid by capturing the future tax revenues that flow from the designated project area. An EIFD is a type of TIF that is formed by a city, district or county and may be utilized to help fund infrastructure development, including roadways and housing. Local agencies may establish an EIFD for a given project or geographic area to capture the projected incremental increases in property tax revenue that will occur as a result of development. To obtain the TIF bonds, the relevant authority is required to host three public hearings that overview the Infrastructure Financing Plan associated with the EIFD.

Although EIFDs can be an effective tool, there are multiple limitations to this type of financing. By dedicating future tax revenue to infrastructure projects, cities may limit funding for other necessary services. Because of this, the feasibility of EIFDs should be assessed in detail through a district-focused lens.

Property and Business Improvement District

In 1994, in an effort to create jobs, attract new businesses, and protect business districts in economically disadvantaged areas from blight and erosion, California legislation authorized property owners to form business improvement districts. Under state law, business districts can fund business related improvements, maintenance, and other related activities. A PBID may be formed for up to five years and may be renewed continually for additional terms of up to 10 years. Specific requirements for the formation of PBIDs can be found in Sections 36601-36615, 36621-36637, and 36650-36671 of the California State Code.

The principal activities funded by a PBID, which may also include residential properties and higher density districts and corridors, include the following:

- "Clean and safe" program (improving safety and aesthetics through various cleanup and beautification efforts);
- District marketing and targeted tenant and business capture outreach;
- Seasonal calendar of events and special attraction initiatives; and
- Maintenance of unique signs, banners, and landscape materials.

It is not common for PBIDs to enter into public infrastructure financing obligations, high cost street lighting or street furniture and replacements, or direct financial partnerships in property rehabilitation/façade improvements/public space or public parking partnerships development costs.

Art in Public Places (APP) Program

In many cities, APP programs are established to build public experiences of visual art by installing artworks in public spaces. Funding sources for these programs vary, and may include a specific percentage (e.g., 2-5%) of eligible capital improvement project budgets are set aside for the commission, purchase, and installation of artworks throughout the city. These funds may be administered by a special commission (and include dedication of staff resources) to develop a public art ordinance or master plan. *See Program LU-10 pertaining to the development of public art in the City of Marina.*

7.5.2 State and Federal Funding Sources

There are a variety of State and Federal grant and loan programs available to local and regional governments that can be used to fund local infrastructure projects. Grant opportunities are typically competitive and are allocated through a process of application and approval. The following list of grants may be applicable to the City of Marina for funding related to development in the Specific Plan area.

- **Infill Infrastructure Grant Program.** Administered by the California Department of Housing and Community Development (HCD), the Infill Infrastructure Grant Program aims to promote infill housing development by providing financial assistance to Capital Improvement Projects that are an integral part of, or necessary to facilitate the development of affordable and mixed income housing. Eligible costs include the construction, rehabilitation, demolition, relocation, preservation, acquisition, or other physical improvements of a capital asset that is an integral part of, or necessary to facilitate the development of housing.
- **Community Development Block Program (CDBG).** The CDBG Program is administered by the United States Department of Housing and Urban Development (HUD) and provides funding to jurisdictions to undertake community development and housing projects. Projects proposed by the jurisdictions must meet the objectives and eligibility criteria of CDBG legislation. The primary CDBG objective is the development of viable urban communities, including decent housing, a suitable living environment, and expanded economic opportunity, principally for persons of low-and moderate income.
- **California Infrastructure and Economic Development Bank (IBank).** IBank provides low-interest loans to public agencies for public infrastructure. The principal intent is to fund infrastructure which will generate permanent jobs. The IBANK also provides somewhat lower interest loans to firms seeking expansion that are committed to employment retention, growth, and opportunities in "under employment" areas.
- **Caltrans Sustainable Transportation Planning Grant Program.** This program provides planning funds for local and regional multimodal transportation and land use planning projects that further the region's RTP SCS, contribute to the State's GHG reduction targets, and assist in achieving the Caltrans Mission and Grant Program Objectives. For the DVSP, this may mean using funds to advance mobility goals that integrate land use and transportation, including development around the Marina Transit Exchange and other transportation demand management measures.

7.6 Specific Plan Administration

The Specific Plan outlines the general provisions, permitted land uses, design standards and guidelines, public facilities and services, as well as infrastructure improvements intended for the Specific Plan area. The City of Marina Community Development Department is broadly responsible for the administration, implementation, and enforcement of the Specific Plan. All development proposals within the Specific Plan area are subject to the procedures established herein.

7.6.1 Specific Plan Adoption and Administration

The City of Marina prepared the DVSP pursuant to the California Government Code, Chapter 4, Section 65451. This regulation defines the Specific Plan's role as a tool for implementing a City's General Plan. The Specific Plan will serve as a detailed extension to the General Plan, offering area-specific instruments to facilitate broad General Plan objectives.

Adoption

Adoption of this Specific Plan will occur by City Council resolution. Concurrent with the adoption of the DVSP, the City of Marina shall amend the City's General Plan and Zoning Map to ensure consistency with Specific Plan land uses. Upon ordinance adoption, the Specific Plan will serve as the land use and zoning map for the Specific Plan area. It is intended that all Specific Plan area projects, including design review plans, detailed site plans, building permits, or any other action requiring ministerial or discretionary approval, be consistent with this Specific Plan.

Minor Adjustments to the Specific Plan

Minor adjustments to the plans, guidelines, regulations, and standards contained in this Specific Plan may be approved at the discretion of the Community Development Director; provided, however, that such deviations are deemed to be in substantial conformance with this Specific Plan and are not detrimental to public health, safety, and welfare. Modifications to the adopted Specific Plan must be consistent with the purpose and intent of the originally approved Specific Plan. Any decisions made by the Community Development Director may be appealed to the Planning Commission. Decisions of the Planning Commission may be appealed to the City Council. Decisions by the City Council shall be deemed to be final. The following modifications constitute "minor adjustments" to the approved DVSP:

1. Minor changes to the design of the roadway cross-sections, provided that the streets have adequate capacity to handle the anticipated volumes of traffic and the design changes are deemed acceptable by the City's Traffic Engineer;
2. Minor modifications to the architectural or landscape design standards and guidelines;
3. Additions of new information or data to the Specific Plan maps, figures, and/or text which do not change the effect of any concepts or regulations.

Specific Plan Amendments

Those proposed changes to the Marina DVSP that are determined to be substantial in nature must be approved through a formal Specific Plan Amendment. Procedures for approval of a Specific Plan Amendment shall be consistent with the Zoning Amendment procedures outlined in Chapter 17.72 of the City of Marina Municipal Code. A Specific Plan Amendment is the appropriate procedure where changes to the Specific Plan meet one or more of the following criteria:

1. A new type of land use not identified in the Land Use Plan;
2. Increases in maximum allowance development analyzed per CEQA as shown in **Table 7-1**;
3. Significant changes to the Specific Plan area's circulation pattern that would result in an alteration of land uses;
4. Significant changes to the distribution of land uses would substantially alter the overall mix of land uses in the Land Use section of the Specific Plan.

An amendment to the DVSP shall be processed in the same manner as the original adoption of the DVSP. The document may be amended as many times as necessary. Specific Plan Amendments require approval from the City Council, with a prior recommendation forwarded by the Planning Commission. Approval shall require findings and conclusions such as the following:

1. The Specific Plan Amendment is consistent with the General Plan;
2. The Specific Plan Amendment does not have a significant effect on the environment and does not create new impacts that are not analyzed under the CEQA review process;
3. The amendment does not compromise the project's community benefits that would otherwise exist without the proposed amendments.

Table 7-1. Maximum Development Analyzed Per CEQA

Land Use	Maximum Allowable New Development
Multifamily Residential	2,904 units
Commercial Uses	874,669 square feet
Office Uses	510,528 square feet

7.6.2 Legal Nonconforming Uses and Structures

Upon adoption of the Specific Plan, any use that is inconsistent with the land use designations outlined in Table 2 of **Appendix A: Development Code** shall be considered a legal nonconforming use. A legal nonconforming use may be continued, changed, or replaced only as provided by this section.

1. Nonconforming uses of land. A legal nonconforming use of land may be continued, transferred, or sold, provided that no such use shall be enlarged or increased, nor extended to occupy a greater area than that which it lawfully occupied before becoming nonconforming. Additionally, legal nonconforming uses shall not be enlarged, extended, expanded, nor increased to occupy a larger area, nor a more intensive use than that which it was characterized by in the prior twelve months.
2. Nonconforming buildings. A legal nonconforming building may continue to be used as follows: If a structure in which a legal nonconforming use exists is modified or altered by 20 percent or more of the existing floor space or ground area, all structures must come into full compliance with the Specific Plan.
3. Nonconforming Residential Uses. A nonconforming residential use located in any district of the Specific Plan area may be expanded, enlarged, or remodeled without regard to 20 percent limitations.
4. If a nonconforming use is superseded by an allowed use, the new use shall conform to the regulations within the Specific Plan.
5. Ordinary maintenance and repairs may be made to any nonconforming building, provided no structural alterations are made and provided that such work does not exceed twenty-five percent of the assessed value in any one-year period.

6. Destroyed Structure. The reconstruction of a building damaged by fire or calamity which at the time was devoted to a nonconforming use may be authorized by the Planning Commission through use permit approval, provided that reconstruction shall occur within twenty-four months after the date of the damage and that the reconstructed building shall have no greater floor area than the one damaged.

Upon adoption of the Specific Plan, all structures that do not meet the standards identified in **Appendix A: Development Code** of the DVSP shall be considered legal nonconforming structures. A legal nonconforming structure may be altered subject to approval by the Community Development Director. The Community Development Director may approve alterations that are modified by less than 20 percent of the floor space or ground area existing at the time the structure became nonconforming. No alterations to nonconforming structures may be approved by the Director unless they are made more nearly conforming. Any structural alteration, modification, or expansion above 20 percent of the lawful floor space or ground area must come into full structural compliance with the design guidelines identified within the Specific Plan. If a nonconforming structure is destroyed by natural hazard or fire to an extent of more than 75 percent of its reasonable replacement value at the time of destruction, it must be reconstructed in conformity with the standards outlined within this Specific Plan.

7.7 Implementation Matrix

Each implementation program includes the party responsible for implementation, timeframe, and potential funding source. Assigning a responsible party helps to ensure continued commitment by City staff, elected officials, and other vital organizations to the goals of the Plan. In addition, to help establish priorities, programs include anticipated timeframes for implementation. Short-term programs are anticipated to be implemented within the first three years of Plan adoption, mid-term programs are to be implemented within four to 10 years, and long-term programs in 11 or more years.

	Program	Timeframe	Responsible Party
Program LU-1	The City should pursue funding through public sources such as the California Arts Council, or other private sources, and explore opportunities for entertainment and activities venues such as a new auditorium.	Mid-term	Planning Division
Program LU-2	Study the potential for a lot consolidation program to incentivize lot consolidation that encourages redevelopment. Incentives may include reduced development fees, administrative review, decreased parking ratios, etc.	Short-term	Planning Division
Program LU-3	Develop a business investment program to support minority owned stores and businesses in Downtown.	Short-term	City Manager's Office
Program LU-4	Create outreach material for the non-profit and for-profit development community to learn about the streamlining benefits of the Specific Plan.	Short-term	Planning Division

	Program	Timeframe	Responsible Party
Program LU-5	Dedicate a page on the City's website to show community members how their properties can be redeveloped to accommodate multifamily housing throughout Downtown. Provide example housing developments of duplexes, triplexes, and multiplexes that meet the design intent and standards outlined in the Specific Plan.	Short-term	Planning Division
Program LU-6	Dedicate a webpage on the City's website to encourage transparency in the housing development process, including how the City is meeting its local housing obligations under state requirements.	Short-Term	Planning Division
Program LU-7	Develop and maintain a business retention and expansion program.	Mid-term	Planning Division
Program LU-8	Establish a list of "shovel-ready" sites in consultation with property owners and provide the list to interested developers and businesses seeking sites in the city.	Short-term	Planning Division
Program LU-9	Make Downtown readily identifiable to residents and visitors by establishing gateways at key locations. Include such features as landscaping, vegetation, signage, and public art to define entry points and introduce Downtown to citizens and visitors.	Mid-term	Planning Division, Public Works
Program LU-10	Develop a public art master plan to celebrate the culture and heritage of Marina.	Mid-term	Planning Division
Program M-1	Develop a mobility plan for the Downtown to include complete streets design, pedestrian and bicycle paths, improvements to transit, parking, and transportation demand management measures.	Mid-term	Planning Division, Public Works
Program M-2	Community Development Department and Public Works Department should collaborate to implement low-cost improvements using existing resources to establish gateways to the Downtown along Reservation Road and Del Monte Boulevard, directional signage, and simple streetscape enhancements such as protected bike lanes, accent paving on crosswalks, reduced lane width, and curb bulbouts.	Short-term	Planning Division, Public Works
Program PF-1	Pipeline upsizing shall occur in accordance with Project W5 of the 2020 MCWD Water Master Plan to meet increased demand from buildout of the Specific Plan.	Mid-term	Public Works
Program PF-2	The City shall monitor the rate of buildout in the Specific Plan area and throughout the City in accordance with the 2020 MCWD Sewer Master Plan and anticipate upgrades to the wastewater collection system.	Ongoing	Public Works
Program PF-3	Identify the timing, location, and funding source for a new fire station to adequately support the growth within the Specific Plan area.	Short-Term	City Manager’s Office

	Program	Timeframe	Responsible Party
Program PF-4	Regularly assess changes in the City of Marina's population, to adequately staff police services based on potential growth within the Specific Plan area.	Ongoing	City Manager's Office
Program PF-5	Establish a Downtown business improvement district or other funding mechanism to organize and finance the construction of downtown infrastructure improvements in more meaningful and intentional increments.	Mid-Term	Planning Division

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Appendix A: Development Code

A.1 Overview

This section establishes procedures for the consistent promotion of high quality, well-designed development to be appropriately located throughout Downtown Marina. The Development Code includes Objective Development and Design Standards which are composed of written statements and graphic illustrations describing the design intent and regulations to achieve the desired community character for the Downtown. The overarching goal of this section is to prevent "rubber stamped" development prevalent in places like the Silicon Valley while fostering creative designs that preserve and enhance Marina's unique community character and natural environment. These standards also help to provide regulatory certainty and permit streamlining, particularly for affordable housing development.

All new construction and proposed structural and façade changes are required to be consistent with the Objective Development and Design Standards presented here. Design Standards are minimum requirements, and applicants may be required to provide additional amenities to meet the goals and policies of the Specific Plan consistent with the objective development and design standards contained herein. The Design Standards presented in this section are intended to create a framework for the design review process while preserving the flexibility needed for creative design. Additional objective standards from the City's Sign Ordinance and Zoning Ordinance may also be applicable. If there is a perceived conflict between Downtown Vitalization Specific Plan Design Standards and the design standards of other City plans and ordinances, the DVSP shall take precedence. If certain design issues are not specifically addressed in the Standards presented here, then the aforementioned documents, city staff, or relevant commissions and boards may provide further direction.

A.2 Administration

A.2.1 Review and Approval Process

The following administrative standards govern the implementation of future development applications within the Specific Plan area.

1. Administrative Plan Review is required for the following project types:
    a. Multifamily residential projects without a commercial component.
    b. Projects submitted and found eligible for SB 35 streamlining.
    c. Mixed-use projects in which at least two thirds of the occupiable floor space is designated for residential use.

2. Architectural Design Review is required for the following project types:
    a. Mixed-use projects in which less than two thirds of the occupiable floor space is designated for residential use.
    b. Non-residential projects.
    c. Any project which deviates from the objective design standards contained in this chapter.

3. Use Permits are required for projects which include conditionally permitted uses as shown in **Table 2** of this chapter and are not subject to the Architectural Design Review Process.

Table 1 depicts the process of entitlement through the City of Marina for various applications and action. **Table 1** applies only to future developments being implemented within the DVSP.

Table 1. Applications and Review Authority

Permit Type	Action Required By		
	Community Development Director	Planning Commission	City Council
Administrative Development Review	★		
Architectural Design Review, including deviation from objective design standards (Chapter 17.56 of the Marina Municipal Code)		★	
Use Permit (Chapter 17.58 of the Marina Municipal Code)		★	
Specific Plan Use Interpretations	★		

A.2.2 Administrative Development Review

No development shall occur or building permits issued within the adopted Specific Plan area until the proposed development is reviewed by the City's Planning Division and found to be consistent with the adopted Specific Plan. Criteria for review and approval of proposed development shall include, but not be limited to the following:

1. Conformance with the land use designation;
2. Conformance with the intended density/ intensity of the site; and
3. Conformance with the specific development and design standards, goals, and policies of the Specific Plan.

Evaluation of the proposed project by the planning department shall be granted as follows.

1. Form of Application. An application for a project approval under the Administrative Development Review process shall be completed on a form provided by the planning department.
2. Administrative-level Approval. Administrative-level approval is ministerial in nature and is conducted at the staff level under the general direction of the community development director without notice and hearing. A community meeting prior to filing an application is encouraged but not required. Approval shall be granted by the community development director only when the permit application contains sufficient information for the planning department to verify that the proposed use will be consistent with the standards outlined in this chapter, Appendix A: Development Code. Projects that comply with these requirements shall be permitted by right. Compliance with the requirements of this chapter shall not, however, waive any additional requirements for compliance such as an application for a lot line adjustment, merger of parcels, or subdivision in conjunction with approval of an application. A separate application for the lot line adjustment, merger of parcels, or appropriate subdivision map shall proceed in accordance with Title 16 of the Marina Municipal Code.
3. Notice of Decision. A notice of decision shall be either mailed first class and postage pre-paid to both the applicant and the applicant's representative (as shown on the application) or emailed and sent via either of those methods to any person who has made a written request for a copy of the decision. The decision of the community development director shall be final and conclusive.

4. Expiration of Administrative-level Review. Within two years of the date of approval by the community development director, commencement of construction shall have occurred or the approval shall become null and void. A one-year extension can be granted by the community development director if the project is complaint with the original approval.

A.2.3 Architectural Design Review

Chapter 17.56 of the Marina Municipal Code outlines the Site and Architectural Design Review process for the City, which applies to all new development within the Downtown as identified in Section A.2.1(2). In accordance with this chapter, the Planning Commission has the power to review all applications for developments in the City.

The Planning Commission considers "all necessary plans, drawings, and statements in an endeavor to encourage buildings, structures, or other improvements [are] designed and constructed, and so located, that they will not be unsightly, undesirable, or obnoxious in appearance to the extent that they will hinder the orderly and harmonious development of the city, impair the desirability of residence or investment or occupation in the city, limit the opportunity to obtain the optimum use and value of the land and improvements, impair the desirability of living conditions on or adjacent to the subject site, conform with the standards included in the local coastal land use plan, and/or otherwise adversely affect the general welfare of the community."

A.2.4 Use Permits

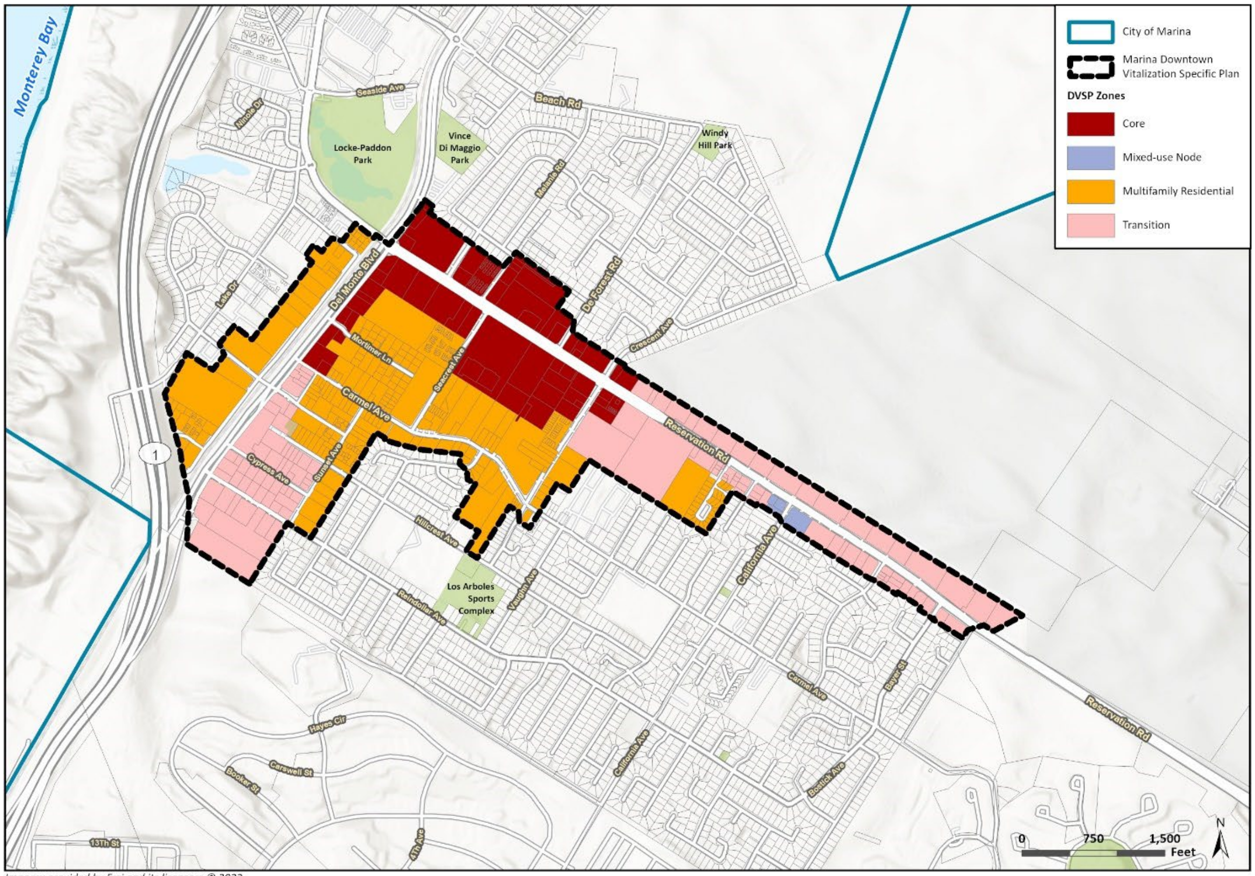
Projects which include conditionally permitted uses as shown in **Table 2** of this chapter shall follow the procedures outlined in Chapter 17.58 of the Marina Municipal Code.

A.2.5 Actions Not Regulated by the Specific Plan

Actions not otherwise regulated in this Specific Plan shall follow administrative procedures outlined in the City of Marina Zoning Code (Chapter 17 of the Marina Municipal Code).

A.3 Land Use Diagram

The Land Use Diagram (Figure 1) outlines the intended uses of land within the Plan Area. Each use designation, depicted by the colors on this diagram, is subject to the land use, development, and design standards presented in this section. The diagram illustrates the policies outlined in the Specific Plan Land Use chapter and serves as a visual aid for the interpretation and application of the land use policies.



Imagery provided by Esri and its licensors © 2023.
Additional data provided by the City of Marina, 2022.

Figure 1. Land Use Diagram

A.4 Land Use Designations

A.4.1 Core District

The Core district is established to encourage higher-rise mixed-use development with a combination of retail, office, commercial, entertainment, residential, and civic uses. This designation is intended to foster a compact, walkable urban form focused along the portions of Reservation Road and Del Monte Boulevard.

A.4.2 Mixed Use Node District

The Mixed-use Node district is intended to facilitate similar uses and development types as is intended in the Core district at a smaller scale in order to remain compatible with the surrounding neighborhood. The Mixed-use Node district allows for mid-rise mixed-use buildings with retail and commercial space on the ground floor and residential uses on the floors above. Mixed-use nodes help to ensure that visitors and residents associate Downtown Marina with a vibrant, urban atmosphere. Single-use residential buildings may be built on site so long as vertical mixed-use buildings are constructed at the street edge.

A.4.3 Transition District

The Transition District is intended for a combination of retail, service, and hospitality businesses that serve citywide or regional populations and multifamily residential development. Multifamily residential development is encouraged in the Transition District and may be designed in connection with a vertical mixed-use project with commercial space on the street-facing portion of the first floor or as an exclusively residential development.

A.4.4 Multifamily Residential District

The Multifamily Residential district permits and encourages mid-rise multifamily residential developments. Multifamily residential uses near the Core are critical for providing an affordable housing supply and population to support businesses Downtown.

A.5 Permitted Uses

A.5.1 Purpose

Table 2 provides the land uses allowed in each Specific Plan district.

A.5.2 Applicability

Land uses listed in the table are allowed in the district shown. Principally permitted uses are permitted by right. Conditionally permitted uses are those uses which are required to obtain a use permit in accordance with Chapter 17.58 of the Marina Municipal Code. Uses not included in the table are considered prohibited unless determined by the Community Development Director to be substantially similar to another permitted or conditionally permitted use.

Table 2. Downtown Vitalization Specific Plan Land Use Matrix

Land Use	Land Use Designation			
	Core	Mixed-use Node	Transition	Multifamily Residential
Primary Uses				
Amplified Music/Sound	C	C	C	C
Assembly, Major	C	C	C	NP
Assembly, Minor—First Floor facing Del Monte Blvd or Reservation Rd	NP	NP	P	NP
Assembly, Minor—Above First Floor, at first floor facing side streets or alleys, or behind first floor commercial	P	P	P	NP
Cannabis—Retail, Testing, Manufacturing and Delivery	C	C	C	NP
Card Room	NP	NP	NP	NP
Civic and Community Uses	C	C	C	C
Commercial Recreation Facility—Indoor	C	C	P	NP
Commercial Storage	NP	NP	NP	NP

Land Use	Land Use Designation			
	Core	Mixed-use Node	Transition	Multifamily Residential
Dwelling, attached—all floors	NP	NP	P	P
Dwelling, attached—above first floor or on first floor behind first floor commercial	P	P	-	-
Food and Beverage Sales, Major	C	C	C	NP
Food and Beverage Sales, Minor	P	P	P	NP
Hotel	C	C	C	NP
Parking Area, Accessory	P(1)	P(1)	P(2)	P(1)
Parking Area, Public	C	C	C	NP
Parking, Subgrade	P	P	P	P
Retail Sales, Major	NP	NP	C	NP
Retail Sales, Minor	P	P	P	NP
Restaurant, Major	C	C	C	NP
Restaurant, Minor	P	P	P	NP
Seating, Outside	P(3)	P(3)	P(3)	NP
Service, Major	NP	NP	C	NP
Service, Minor	P	P	P	NP
Animal Service	C	C	P	NP
Professional Office, First Floor facing Del Monte Blvd or Reservation Rd	NP	NP	P	NP
Professional Office- Above First Floor, at first floor facing side streets or alleys or behind first floor commercial	P	P	P	NP
Laundromat	P(4)	P(4)	P	C
Accessory Uses				
Outdoor display associated with a business	C	C	C	NP
Drive-thru or drive-in facilities associated with a business	NP	NP	C	NP
Exterior vending machines, accessory use to a business	NP	NP	-	NP
Temporary Uses				
Utility, Major	C	C	C	C
Utility, Minor	P	P	P	P

P = Principally Permitted Use by Right

C = Conditional Permitted Use; subject to the requirements of Chapter 17.58 of the Marina Municipal Code.

NP = Not Permitted

\- = Not Applicable

Notes

(1) On-site parking must be located behind the building.

(2) On-site parking must be located behind the building or on the side of the building.

(3) If seating area is within or partially within the public right-of-way, an encroachment permit or license agreement is required.

(4) Must not face Del Monte Blvd or Reservation Rd.

A.5.3 Use Definitions

The following section defines land uses outlined in **Table 2**.

Amplified Music/Sound: The use of any indoor or outdoor amplified, sound or entertainment that is audible from the exterior of a building, from a separate tenant space, or an adjacent property, including but not limited to the use of speakers, microphones, amplifiers, acoustic instruments or the human voice.

Assembly, Major: Includes the following-

Small Group Assembly: An establishment offering entertainment, social exchange, religious services, educational training, or other instructional services to groups of twenty to forty-nine persons in a single room. Examples include performance venues, movie theaters, religious institutions, community centers, college or university extension programs, group addiction services, social clubs, community centers, or similar uses.

Large Group Assembly: An establishment offering entertainment, social exchange, religious services, educational training, or other instructional services to groups of fifty or more persons in a single room. Examples include performance venues, movie theaters, religious institutions, community centers, college or university extension programs, group addiction services, social clubs, community centers, or similar uses.

Assembly, Minor: Includes the following-

Small Instructional Service: An establishment offering classes or educational training to groups of five or fewer students in a single classroom or studio environment. Examples include musical instruction, academic tutoring, and similar uses.

Large Instructional Service: An establishment offering classes, educational training, or other instructional services to groups of six to nineteen students in a single classroom or studio environment. Examples include group exercise training, driving instruction schools, and similar uses.

Cannabis — Retail, Testing, Manufacturing and Delivery: See Chapter 17.47 of the Marina Municipal Code for conditions related to this use.

Card Room: Any room, space or enclosure furnished or equipped with a table used or intended to be used for the playing of cards or similar games, and the use of which is available to the public, or any portion of the public; provided, however, that this chapter shall not apply to any bona fide nonprofit society, club, fraternal, labor or other organization as defined in Section 5.32.110 of the Marina Municipal Code.

Civic and Community Uses: Establishments that provide services or facilities for the general public and include uses such as government offices, civic centers, libraries, and museums.

Clinic: An establishment that provides medical, dental, chiropractic, optical and similar services.

Commercial Recreation Facility — indoor: Establishments providing indoor amusement and entertainment services for a fee or admission charge, including bowling alleys, amusement and electronic game arcades, ice skating and roller-skating rinks, pool and billiard rooms as a primary use.

Commercial Storage: A facility exclusively used for the storage of motor vehicles or personal goods, with or without a fee. Includes self-storage and similar facilities.

Dwelling, Attached: A residential dwelling unit that shares a common wall with another unit.

Food and Beverage Sales, Major: Includes the following-

Convenience Store with Beer and Wine Sales: An establishment that contains 5,000 square feet or less of gross floor area and sells food and beverages primarily for consumption off premises, including beer and wine.

Convenience Store with Beer, Wine, and Distilled Spirit Sales: An establishment that contains 5,000 square feet or less of gross floor area and sells food and beverages primarily for consumption off premises, including beer, wine, and distilled spirits. Includes Liquor Stores.

Grocery Store: An establishment that contains more than 5,000 square feet of gross floor area and sells food and non-alcoholic beverages primarily for consumption off of the premises, other retail items, and small recycling facilities within convenience drop off zones, as defined by the California Beverage Container Recycling and litter reduction.

Grocery Store with Beer and Wine Sales: An establishment that contains more than 5,000 square feet of gross floor area, sells food and beverages primarily for consumption off of the premises, including beer and wine.

Grocery Store with Beer, Wine, and Distilled Spirit Sales: An establishment that contains more than 5,000 square feet of gross floor area and sells food and beverage primarily for consumption off of the premises, including beer, wine and distilled spirits.

Wine Tasting Shop: An establishment primarily engaged in the retail sale of wine for off-site consumption and as an ancillary use includes the service of wine for on-site consumption.

Food and Beverage Sales, Minor: An establishment that contains 5,000 square feet or less of gross floor area and sells food and non-alcoholic beverages primarily for consumption off premises.

Hotel: An establishment offering lodging to transient patrons. These establishments may provide additional services, such as conference and meeting rooms, restaurants, bars, or recreation facilities available to guests or to the general public. This classification includes, auto courts motor lodges, motels, hostels, extended-stay hotels, and tourist courts, but does not include rooming hotels, boarding houses, or residential hotels designed or intended to be used for sleeping for a period of thirty consecutive days or longer. This classification also excludes bed and breakfast facilities and similar accommodations that an occupant of single-family housing provides on the same premises incidental to the primary residential use of the property.

Park and Recreation Facilities: Parks, plazas and recreation facilities and support uses (parking, snack bars, etc.).

Parking Area, Accessory: An area used for the parking of motor vehicles by persons in residence or employed upon the premises or for clients and customers.

Parking Area, Public: An area or structure, other than a street or other public way, used for the parking of automobiles and available to the public for a fee or free of charge.

Parking Subgrade: Parking under a structure that is below the finished grade of the site.

Retail Sales, Minor: An establishment that primarily offers new or used goods for purchase by the consumer of such goods, excluding other such establishments more specifically described herein. This use category includes vehicle sales if such a use is conducted completely within an enclosed building and does not include outdoor display of vehicles.

Retail Sales, Major: Includes the following-

Adult Businesses: As defined and regulated in the Municipal Code section 17.52.

Animal Sales and Adoption Services: Retail sales and adoption of small animals typically considered pets. Excludes sale of live fish for personal aquariums.

Outdoor Sales: The retail sales or rental of any merchandise where the gross floor area of the outdoor storage area exceeds 10% of the gross floor area of the enclosed building.

Fuel Sales: An establishment offering the sale of motor fuel for any motor vehicle. Includes gas stations.

Restaurant, Major: Includes the following-

Restaurant with Bar, Major: An establishment that sells food, beer, wine, and distilled spirits for consumption on the premises and contains a bar area that occupies more than 25% of the restaurant area and more than twenty seats.

Bar: An establishment that sells beer, wine or distilled spirits for consumption on the premises and without obligatory food service.

Night Club: An establishment that sells beer, wine or distilled spirits for consumption on the premises without obligatory food service and offers live entertainment.

Social Club with Bar: An establishment occupied by a fraternal, veterans, or similar membership-based organization that sells beer, wine and/or distilled spirits to members and guests only for consumption on the premises.

Restaurant, Minor: Includes the following-

Restaurant: An establishment that sells food and non-alcoholic beverages for consumption on the premises.

Convenience Restaurant: A restaurant or similar establishment offering food and/or beverages for sale for consumption on or off the premises in disposable containers and from a counter.

Restaurant with Beer and Wine Sales: An establishment that sells food, beer and wine for consumption on the premises and does not contain a bar area.

Restaurant with Bar, Minor: An establishment that sells food, beer and wine for consumption on the premises and contains a bar area that occupies 25% or less of the restaurant area with no more than twenty seats.

Seating, Outside: Seating area on the exterior of a business.

Seating, Outside, Major: Seating area over and above 150 square feet in size.

Services, Major: Includes the following-

Animal Boarding: Provision of shelter for small animals on a commercial basis. This classification includes ancillary activities such as feeding, exercising, grooming, and incidental medical care.

Outdoor Service: The provision of any service where the gross floor area of the outdoor service area exceeds 10% of the gross floor area of the enclosed building.

Child Care Center: Any childcare facility other than a family childcare home, includes infant centers, preschools, and extended childcare facilities.

Motor Vehicle Rental: An establishment that offers the rental of new or used automobiles, trucks, recreational vehicles, trailers, boats, or other vehicles licensed by the Department of Motor Vehicles.

Motor Vehicle Service: An establishment offering the provision of repair, maintenance, washing, or similar services for motor vehicles.

Massage Establishments: As defined in the Municipal Code section 17.52.

Service, Minor: Includes the following-

Animal Service: An establishment offering the provision of boarding associated with veterinary services, grooming, or veterinary services for small common household animals.

Bank, Retail: Financial institutions that provide retail banking services to individuals and businesses. This classification includes only those institutions engaged in the on-site circulation of cash money and includes on or off-site automatic teller machines. Freestanding automatic teller machines (ATMs) kiosks are not permitted.

General Service: An establishment offering the direct provision to the customer of personal services including barber and beauty shops, seamstresses, tailors, shoe repair shops, dry cleaning (excluding processing plants), photocopying, mail and packing service centers, self-service laundries, and appliance repair.

Fitness and Health Establishment: Commercial or nonprofit facilities, such as fitness centers and health and athletic clubs, oriented toward promoting physical health. Such facilities can include any of the following: gymnasium, swimming pool, exercise equipment, indoor sauna, spa or hot tub facilities; indoor tennis, handball, racquetball, and other indoor sports activities.

Professional Office, Off-site: An establishment offering indirect provision of services on behalf of customers that do not visit the site to receive the service including remote medical or dental laboratories, testing facilities, telephone call centers, catering services apart from restaurants, and similar uses that do not provide in-person service or interaction with the ultimate recipient of the service.

Professional Offices: An establishment consisting of offices providing professional services directly to a customer. This includes architectural or engineering firms, computer software consulting, data management, financial services, interior design, graphic design, real estate, insurance, legal offices, medical/dental offices, clinics, on-site medical or dental testing, travel services, and title offices.

Temporary Use: The use of a property for the sale of merchandise and temporary events for a period of 60 contiguous days or less and no more than 75 days in a calendar year. Includes pumpkin sales, Christmas tree sales, swap meets, farmers markets, and similar uses.

Utility, Major: Includes a public or privately-owned or operated generating plant, electrical substation, above-ground electrical transmission line, switching building, refuse collection, PWS facility, processing, recycling or disposal facility, water reservoir or similar water storage facility, flood control or drainage facility, water or wastewater treatment plant, transportation or rail facility, and similar facilities and the following—

Personal Wireless Service (PWS) Facility: A facility for the provision of PWS, as defined in 47 U.S.C. Section 332 (c)(7)(C)(ii). (Ord. 3443 § 4, 2010; Ord. 3278 §1, 5/00)

Utility, Minor: Utility facilities that are necessary to support legally established uses and involve only minor structures such as

A.6 Core District

A.6.1 Intent

This section includes development standards, including density, height, setbacks, parking, and other site development standards. Applicants are encouraged to design projects that are culturally inclusive spaces respectful of Marina's diverse history.

A.6.2 Applicability

This section provides standards applicable to the Core District.

A.6.3 Development Standards

Core District Development Standards			
Maximum Residential Density	70 dwelling units per acre		
Minimum Residential Density	20 dwelling units per acre		
Maximum Lot Coverage	70%; Parking facilities are not counted towards lot coverage percentage.		
Minimum Setbacks	Front: 0 feet	Side: 0 feet	Rear: 10 feet
Percent of frontage built to within 5 feet of minimum front setback	Reservation Road: 75%	Del Monte Boulevard: 75%	Other Streets: 50%
Maximum Building Height	Properties fronting Reservation Road or Del Monte Boulevard: lesser of 60 feet or five stories	Properties fronting other streets: lesser of 48 feet or four stories	
Ground floor commercial	All mixed-use developments shall include commercial uses on the ground floor. Residential on the ground floor facing Reservation Road or Del Monte Boulevard is not permitted.		
Minimum Commercial Ground Floor Height	12 feet		
Minimum Fenestration (percentage of façade)	Ground floor frontage: 60%	Upper floors frontage: 20%	Residential - all floors: 20%
Minimum Parking Provided	Commercial Retail: 1 stall per 600 GSF of commercial space	Residential Studio: 1 stall per unit One bedroom or larger: 1.5 stalls per unit	
Minimum Open Space Provided	While no overall landscaped percentage is required, appropriately placed paseos, plazas, courtyards, and alcoves are encouraged. Properties in the Core must adhere to standards in the City landscape and parking ordinances.		

A.7 Mixed-use Node District

A.7.1 Intent

This section includes development standards, including density, height, setbacks, parking, and other site development standards. Applicants are encouraged to design projects that are culturally inclusive spaces respectful of Marina's diverse history.

A.7.2 Applicability

This section provides standards applicable to the Mixed-use Node District.

A.7.3 Development Standards

Mixed-use Node District Development Standards			
Maximum Residential Density	70 dwelling units per acre		
Minimum Residential Density	20 dwelling units per acre		
Maximum Lot Coverage	70%; Parking facilities are not counted towards lot coverage percentage.		
Minimum Setbacks	Front: 0 feet	Side: 0 feet	Rear: 10 feet
Percent of frontage built to within 5 feet of minimum front setback	Reservation Road: 75%	Del Monte Boulevard: 75%	Other Streets: 50%
Maximum Building Height	Lesser of 48 feet or four stories.		
Ground Floor Commercial Requirement	All street-facing buildings shall include commercial uses on the ground floor. Residential uses on the ground floor are permitted for buildings not facing Reservation Road or Del Monte Boulevard.		
Minimum Commercial Ground Floor Height	12 feet		
Minimum Fenestration (percentage of façade)	Ground floor frontage: 60%	Upper floors frontage: 20%	Residential - all floors: 20%
Minimum Parking Provided	Commercial Retail: 1 stall per 600 GSF of commercial space	Residential Studio: 1 stall per unit One bedroom or larger: 1.5 stalls per unit	
Minimum Open Space Provided	While no overall landscaped percentage is required, appropriately placed paseos, plazas, courtyards, and alcoves are encouraged. Properties in the Mixed-Use Node District must adhere to standards in the City landscape and parking ordinances.		

A.8 Transition District

A.8.1 Intent

This section includes development standards, including density, height, setbacks, parking, and other site development standards. Applicants are encouraged to design projects that are culturally inclusive spaces respectful of Marina's diverse history.

A.8.2 Applicability

This section provides standards applicable to the Transition District.

A.8.3 Development Standards

Transition District Development Standards		
Maximum Residential Density	50 dwelling units per acre	
Minimum Residential Density	20 dwelling units per acre	
Maximum Lot Coverage	50%; Parking facilities are not counted towards lot coverage percentage.	
Minimum Lot Width	100 feet	
Setbacks (min – max)	Front: 10 - 25 feet	Side (min): 10 feet Rear (min): 10 feet
Maximum Building Height	Lesser of 48 feet or four stories.	
Ground floor commercial	Ground floor commercial is permitted but not required.	
Minimum Commercial Ground Floor Height	12 feet	
Minimum Parking Provided	Commercial Uses along Reservation Road: 1 stall per 600 GSF of commercial space Commercial Uses along Del Monte Boulevard: 1 stall per 350 GSF of commercial space	Residential Studio: 1 stall per unit One bedroom or larger: 1.5 stalls per unit
Minimum Open Space (as defined per Municipal Code Chapter 17.04.515-516)	Studio/One-bedroom unit: 300 square feet per unit For each additional bedroom in excess of one: 50 square feet Open space may be provided as private or common open space or combination thereof.	

A.9 Multifamily Residential District

A.9.1 Intent

This section includes development standards, including density, height, setbacks, parking, and other site development standards. Applicants are encouraged to design projects that are culturally inclusive spaces respectful of Marina's diverse history.

A.9.2 Applicability

This section provides standards applicable to the Multifamily Residential District.

A.9.3 Development Standards

Multifamily Residential District Development Standards			
Maximum Residential Density	35 dwelling units per acre		
Minimum Residential Density	20 dwelling units per acre		
Setbacks	Front (min – max): 10 - 25 feet	Side (min; interior lot): 5 feet Side (min; corner lot): 10 feet	Rear (min): 15 feet
Maximum Building Height	Lesser of 42 feet or three stories		
Minimum Parking Provided	Studio: 1 stall per unit One bedroom or larger: 1.5 stalls per unit		
Minimum Open Space (as defined per Municipal Code Chapter 17.04.515-516)	Studio/One-bedroom unit: 300 square feet Each additional bedroom: 50 square feet Open space may be provided as private or common open space or combination thereof.		

A.10 Standards Applicable to All Districts

A.10.1 Applicability

This section provides standards applicable to all districts of the Specific Plan.

A.10.2 Development Standards

Development Standards	
Maximum Projection into Setbacks	Front porch: 6 feet Side yard porch/patio: 3 feet Rear yard porch/patio: 6 feet Cornices/eaves/canopies: 2.5 feet Bay window/chimney: 2 feet
Upper Story Stepbacks	Where adjacent to an R-1 or R-2 zoned property, an additional 5-foot stepback from the shared property line is required for each floor above the second story.
Parking Requirements under density bonus application	If an applicant submits a project which meets the requirements of California Density Bonus law, the applicant is entitled to reductions in parking requirements in accordance with Government Code Sections 65915 – 65918.

A.11 Design Standards

The design standards in this section describe the desired character of multiple use, commercial (office and retail), and residential development within the Downtown. Standards establish specific criteria that applicants are required for meeting Objectives and are readily identified by "shall" or "must" statements. Compliance with these standards is mandatory.

Building Location and Orientation

Purpose

Foster a unique character that feels safe, welcoming, and engaging to pedestrians throughout the Specific Plan area.

Design Standards

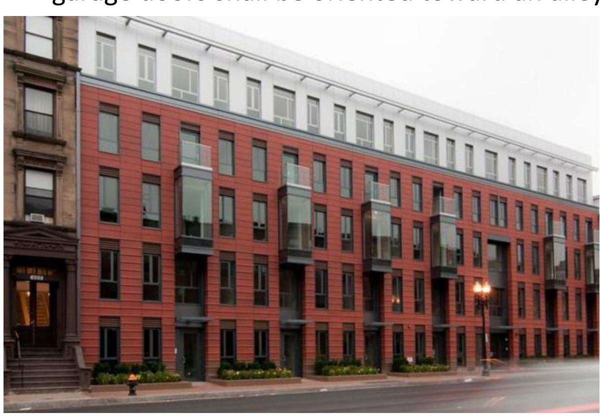
1. **Building Entry.** Primary building entries shall be located along public rights-of-way, landscaped open space areas, paseos, or fronts of other buildings.
2. **Corner Building Orientation.** Buildings on corner lots shall orient the primary pedestrian entrance towards the larger of the fronting streets or incorporate a chamfered entrance.
3. **Residential Open Spaces.** Multifamily residential development with multiple buildings shall arrange buildings to create outdoor spaces such as courtyards, pathways, paseos, and recreational areas, with windows facing the outdoor spaces.

Specific to the Core District

4. **Core District Street Wall.** Where site conditions permit, buildings in the Core District with frontage on Del Monte or Reservation Road shall be built to side property lines unless the design includes a pedestrian paseo, or publicly accessible plaza.
5. **Angled Buildings.** Primary building façades in the Core District shall be parallel to the front lot line and shall not be at an angle.

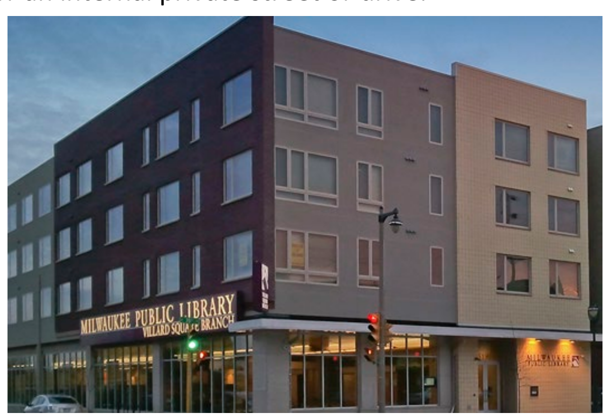
Specific to the Multifamily Residential District

6. **Garage Doors.** For developments in the Multifamily Residential District containing 5 or more units, garage doors shall be oriented toward an alley or an internal private street or drive.



Building fronts face public rights-of-way or fronts of other buildings.

Source: Boston Globe



Building oriented toward the street, meeting the edge of the sidewalk.

Source: Milwaukee Public Library

Building Articulation, Massing, and Scale

Purpose

Create an attractive and pedestrian-friendly Downtown environment by encouraging varied building massing and facades that create variety and minimize the appearance of large box-like buildings.

Design Standards

1. **Building Articulation.** The wall plane on all façades visible from a public street or other publicly accessible spaces shall include at least two of the following massing changes or architectural elements to break up monolithic building façades:
    a. Architectural projections such as balconies covered porches, dormers, or bay windows.
    b. Varying setbacks to different parts of the building.
    c. A combination of volumes between one and five stories as allowed by applicable development standards.
    d. Upper story windows recessed at least two inches with header and sill, awnings, or trellises.
    e. Wall plane offsets or at least 18 inches.
    f. Accent materials and colors.
    g. Other features that serve the purpose of façade articulation at the discretion of the community development director.

    Surface detailing, such as score lines, shall not serve as a substitute for the elements listed above.
2. **Pedestrian Scale Features.** Architectural details and materials shall be incorporated on the lower part of façades to relate to human scale and create visual interest. At least two of the following elements shall be provided:
    a. Awnings
    b. Trellises
    c. Transom windows
    d. Accent materials, textures, and colors
3. **Roofline Articulation.** Buildings shall incorporate one of the following to articulate rooflines.
    a. A change in the height of a parapet or roof
    b. A change in roof pitch or direction
    c. Gables, parapets, or cornices of varying heights
4. **Blank Walls.** Blank walls over 20 feet in height and 20 feet in length on elevations visible to the public are prohibited.
5. **External Stairways.** Exterior stairways, where provided, shall be designed to be complimentary to the overall architecture of the building and consistent with its architectural style.
6. **Internal Walls.** Walls that face internal walkways shall be articulated to a similar extent as the primary façade to enhance the pedestrian experience.

Varied massing and pedestrian scale features.
Source: Commercial Architects

Commercial building with varied roofline.
Source: Buildings on Fire

Architectual Elements

Purpose

Define and enhance the pedestrian realm and create a cohesive and attractive streetscape with visual interest.

Design Standards

1. **Entries**.
   a. All building entries shall be clearly defined with recesses, overhangs, accent materials, and detailing consistent with the following provisions. Entry design shall be defined with two or more of the following features: porch, decorative detailing or placement of art, a projecting element above the entrance, changes in the roofline, a tower, a recess, or a change in the wall plane.
   b. Primary pedestrian entries shall be accessible directly from a public street or sidewalk.
2. **Commercial Storefronts.** First floor façades of mixed-use developments shall include elements of traditional storefronts, which can be achieved with a traditional (Figure 2) or more contemporary design. On the first floor, at least 60% of the building facade shall be a transparent, and at least 20% of the façade of any floor above the first shall be transparent.
3. **Windows.**
   a. Window and door type, material, shape, and proportion shall complement the architectural style of the building.
   b. Storefront and office windows shall use visually permeable glass. Mirrored or reflective glass is prohibited.
   c. Windows shall be either recessed two inches or include surrounding enhancements such as headers and sills, shutters, or trellises in order to provide architectural relief on the façade surface.

4. Roofs.

a. Roofing materials shall not be reflective. Roofs with solar panels shall include design features that block glare into surrounding buildings, such as a parapet or screen.

b. Roof elements shall continue all the way around the building, not just in the most visible locations.

c. For all non-parapet roofs in the Transition and Multifamily Residential Districts, an overhang or eve of at least 16 inches in depth is required.

5. Awnings.

a. Awnings in the Core and Transition District shall fit within individual bays or structural divisions of the building façade rather than extending beyond a single bay.

b. Awnings and canopies shall be constructed of canvas, glass, or metal. Vinyl and plastic awnings and canopies are not permitted.

c. Internal lighting of awnings is prohibited.

d. For each building, a consistent awning style and color shall be used across the entire building.

6. Ancillary Structures.

a. Ancillary structures shall incorporate similar or complementary roof pitch, materials, and architectural style as the primary buildings within the development.

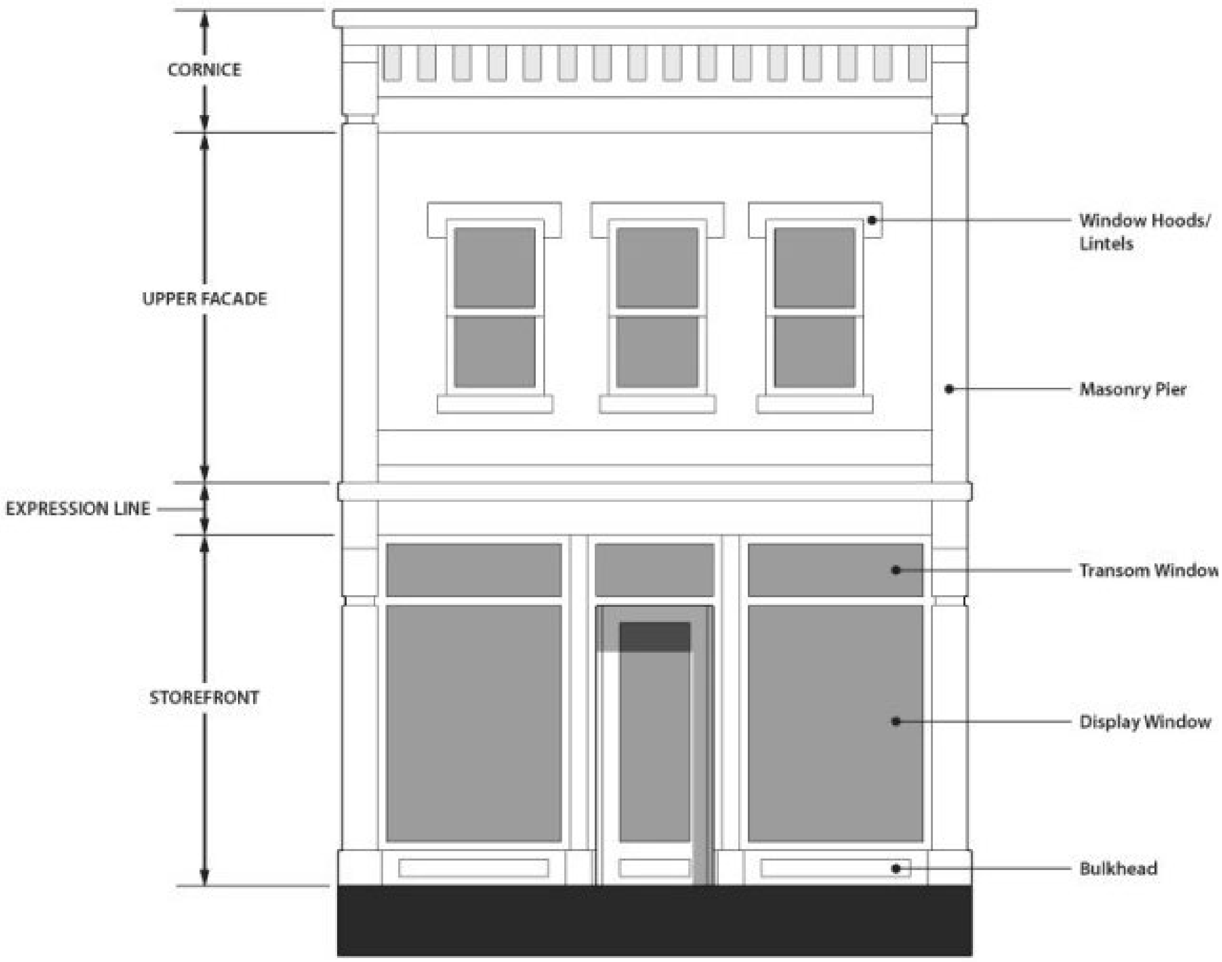
b. Common mailbox enclosures shall be designed similar or complementary in form, material, and color to the primary building.

Recessed building entryway.
Source: Sky Windows & Aluminum Products

Chamfered corner entrance on corner building.
Source: Denver Infill

Single-bay awnings.
Source: Awning Ideas

Permeable glass storefront.
Source: Area-Info



Source: Sterling Codifiers

Figure 2. Traditional Urban Storefront

Modern interpretation of traditional urban storefront.

Materials and Color

Purpose

Maintain and enhance the overall character and quality of development through the use of durable materials that contribute texture and richness to the Downtown environment and celebrate, through architecture, the diversity of the City of Marina.

Design Standards

1. Materials.

a. Buildings shall incorporate at least two but no more than three different types of materials on exterior walls.

b. Building materials designed to withstand the coastal climate shall be used for exterior surfaces.

c. At the pedestrian street level in the Core District, materials shall be selected that are durable and highly resistant to pedestrian traffic, such as precast concrete, stone masonry, brick, commercial grade ceramic tile, weatherized wood siding, and stucco.

d. The following façade materials are prohibited: mirrored and heavily tinted glass, windows with "tape on" divisions/mullions, Vinyl and aluminum siding, plywood siding, corrugated fiberglass.

e. The following roof materials are prohibited: highly reflective material (i.e. high gloss tile), Simulated clay tile roofs in metal, corrugated metal roof panels.

f. Color and material changes shall occur at the inside corner of intersecting wall planes or where architectural elements intersect such as a chimney, pilaster, projection, or fence line.

2. Colors.

a. Building exterior colors may be earth tones, whites, greys, or muted blue, green, and dark red colors that are complementary to the building's architectural style. Bright or dark colors may be used on trims or accents only. Pastel, neon, or day-glow colors, as well as primary colors used as field colors, are prohibited.

Material changes at intersecting wall planes.

Durable materials at the pedestrian street level.

Source: Jameson Architects

Utility and Service Areas

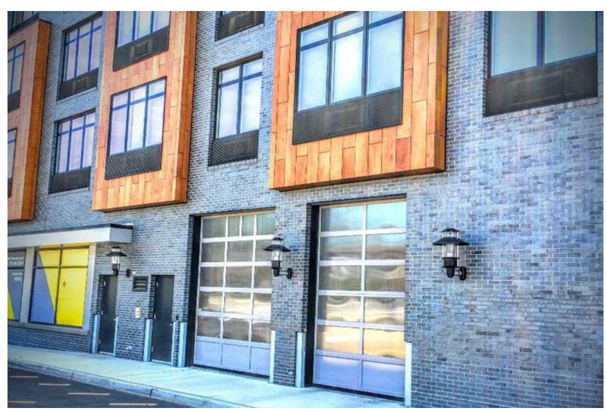
Purpose

Buffer service and utility areas from the pedestrian environment to maintain a high-quality pedestrian environment and promote public health, safety, and welfare.

Design Standards

1. **Service and Loading Areas.**
   a. Service areas, including loading docks and storage areas, shall be screened from adjoining walkways with vines, evergreen shrubs, evergreen trees, decorative walls, or decorative fences.
   b. Loading areas shall be located and designed to minimize visibility from public areas and adjacent properties.
   c. Where possible, loading areas shall be accessible from side streets or alleys, rather than from the front of buildings.
   d. Loading areas shall be functionally separated from parking and pedestrian walkways for safety, and to provide convenient access for delivery trucks.
2. **Waste and Recyclable Material Storage.**
   a. Outdoor areas designated for storage of trash shall be completely enclosed in a walled and gated structure of sufficient size to accommodate storage of both trash and recyclable materials.
   b. Enclosures shall be finished with materials and colors complimentary to the primary buildings on the site.
   c. Enclosures shall include a roof structure to obscure views into the enclosure from above, where adjacent to multi-story buildings.
3. **Mechanical Equipment.** Mechanical and utility equipment (e.g., heating, cooling, antennas, satellite dishes, air conditioners, transformers, electric and gas meters, junction boxes, or similar equipment excluding photovoltaic panels) shall be screened with landscaping, walls, or fencing or if roof mounted, with roof wells or parapets.

Loading area at the rear or side of building.
Source: Wikimedia Commons



Screened loading dock.
Source: Pinterest

Circulation and Access

Purpose

Provide safe and efficient access to pedestrians and vehicles while minimizing the visual impact of parking areas and garages on the public streetscape.

Design Standards

1. **Pedestrian Access and Circulation.**
    a. Pedestrian pathways shall be provided and designed in compliance with the Americans with Disabilities Act (if required) and Title 24 of the California Code of Regulations, and adopted City Design Guidelines and Standards.
2. **Parking and Circulation Areas.**
    a. Off-street parking and circulation areas shall be designed and screened in accordance with objective standards contained within adopted City Design Guidelines and Standards.
    b. Surface parking areas shall be located to the rear of buildings in the Core, Mixed-use Node, Multifamily Residential District, and to the rear and/or side of buildings in the Transition District.
3. **Vehicular Access.** Vehicular access to off-street parking and loading areas shall be provided from alleys or secondary streets and not the primary frontage wherever possible.

Parking Structures

Purpose

Provide adequate parking Downtown while minimizing the negative visual impacts on the public realm from parking structures.

Design Standards

1. **Structure Articulation.**
    a. Horizontal openings shall be broken up with vertical columns to create a rhythm of openings.
    b. Parapet additions shall be added to key areas on the building to change the roof line and reduce its horizontal appearance.
    c. At least 60 percent of the wall face on parking structures shall be articulated with one or more of the following design elements: architectural treatments, artwork, durable lattices, and other design features.
2. **Ingress and Egress.**
    a. Vehicular entrance and exit points for parking structures shall be accessible and easy to find, and separate pedestrian routes shall be provided to the outside.
    b. Vehicular entries and exits to parking structures shall be located in areas that will minimize impacts to pedestrians and neighboring land uses.
    c. Vehicular entries and exits to parking garages shall be recessed to help mitigate their impact.
    d. Elevators and stairways shall be located to increase visibility and improve safety.
3. **Lighting.** Parking structures shall use full spectrum lighting to increase safety and comfort. Fixtures shall shine down, not out to the street, to minimize light pollution.

Pedestrian entrance to parking structure.
Source: ParkWhiz

Articulation of parking structure façade. Façade may be articulated with landscaping elements.
Source: DeepStream Designs

Articulation of parking structure façade. Façade may be articulated with interesting design elements and artwork.
Source: Moore Ruble Yudell

Appendix B: Design Guidelines

The following design guidelines provide additional direction for achieving the intended result of the policies presented in the Specific Plan and the Design Standards presented in Appendix A: Development Code. Design guidelines use “should”, “consider”, or other similar statements. Compliance is encouraged, not mandatory.

Building Articulation, Massing, and Scale

Purpose

Create an attractive and pedestrian-friendly Downtown environment by encouraging varied building massing and facades that create variety and minimize the appearance of large box-like buildings.

Design Guidelines

1. **Upper Story Stepbacks.** The upper stories of a building in the Transition and Multifamily Residential Districts may be stepped back to reduce the scale of façades facing narrower streets. Façades should provide a clear visual distinction between each floor through the use of articulation and attractive ornamentation.
2. **Climatic Consideration.** Climatic factors—including prevailing winds, shade trees, window and door orientation, and the positioning of buildings on the site—should be considered as part of the design review process with the intent of maximizing energy conservation and providing comfort.

Varied massing and pedestrian scale features.
Source: Commercial Architects

Commercial building with varied roofline.
Source: Buildings on Fire

Architectural Elements

Purpose

Define and enhance the pedestrian realm and create a cohesive and attractive streetscape with visual interest..

Design Guidelines

1. **Cultural Design Elements.** Strongly consider inclusion of subtle architectural elements reflective of, or modern architectural interpretations of, the various cultural groups of Marina. Refer to Section B.2 of this appendix for examples of traditional architectural elements associated with the Asian community and other cultures in Marina.
2. **Corner Buildings**. Buildings on corner lots may have chamfered corner entrances. Elements, such as a corner tower or variation in roof form at the corner can also be used to highlight a corner entrance.
3. **Awnings.**
    a. Awnings and canopies over storefronts and entries provide colorful accents and create the appearance of an interesting and active streetscape. Use canopies, arcades, awnings, and overhangs throughout the Downtown on the ground floor of commercial uses.
    b. A variety of solid and striped colored awnings may be considered. Painted or baked enamel metal awnings may be considered when an integral design element to the building.
4. **Windows.**
    a. Windows should be articulated with accent trim, sills, kickers, shutters, window flower boxes, balconies, awnings, or trellises authentic to the architectural style of the building.
    b. Windows and skylights should be located to maximize day lighting and reduce the need for indoor lighting.
5. **Roofs**.
    a. Light-colored (not highly reflective) roofing materials are encouraged to reduce urban heat island effect.
6. **Parapet Finishes**. If the interior side of a parapet is visible from pedestrian view, it should be finished with the same materials and a similar level of detail as the front façade.

Cornice and parapet detailing.
Source: Houzz

Bulkhead detailing on an urban storefront.
Source: Pier, Fine Associates

Building entry with transom window.
Source: General Millwork Supply

A variety of awning styles.
Sources: Pinterest, Best Awnings Long Island, CRL Arch

Materials and Color

Purpose

Maintain and enhance the overall character and quality of development through the use of durable materials that contribute texture and richness to the Downtown environment and celebrate, through architecture, the diversity of the City of Marina.

Design Guidelines

1. **Materials.**
   a. Materials should come from renewable resources whenever possible.
   b. Materials and textures may vary between the base and body of a building to break up large wall planes and add visual interest to the building.
2. **Colors.**
   a. Contrasting accent colors are encouraged for architectural details, awnings, and at entrances.
   b. Colors may be used to enhance different parts of a building's façade.
   c. Where rain gutters, downspouts, and wall venting are not integrated into the exterior walls, their color should blend with adjacent surfaces. Copper downspouts and gutters may be used.

No more than three different materials on exterior walls.
Source: Commercial Architects

Color used to enhance façade.
Source: ArchiExpo

Parking Structures

Purpose

Provide adequate parking Downtown while minimizing the negative visual impacts on the public realm from parking structures.

Design Guidelines

1. Street facing portions of parking structures should include commercial retail uses.
2. Parking structures should make provisions for car sharing priority spaces and electrical charging stations.
3. Interior walls and ceilings should be painted a light color to improve illumination.
4. All mechanical equipment and piping should be painted to match the interior of the structure.
5. Paved surfaces within parking structures should be designed to reduce tire squeal.
6. Where possible, parking structures should not be located on corner lots.

Retail, offices, and housing screening parking garage from pedestrian streetscape.
Source: Build a Better Burb

B.1 Design Guidelines for Right of Way and Civic Space

The following design guidelines for civic space, including the public right-of-way, were developed to enhance the overall aesthetic of the Downtown and encourage a walkable street environment. Streetscapes in the Downtown should be visually interesting, comfortable, and accommodating to people who walk, bike, and use transit.

The design guidelines describe the desired character of streetscapes within the Downtown. Some guidelines apply only to certain portions of the pedestrian zones identified in Figure 1 below. When this is the case, standards and guidelines will be clearly identified with one or more of these four zones (Edge, Furnishings, Throughway, and Frontage).

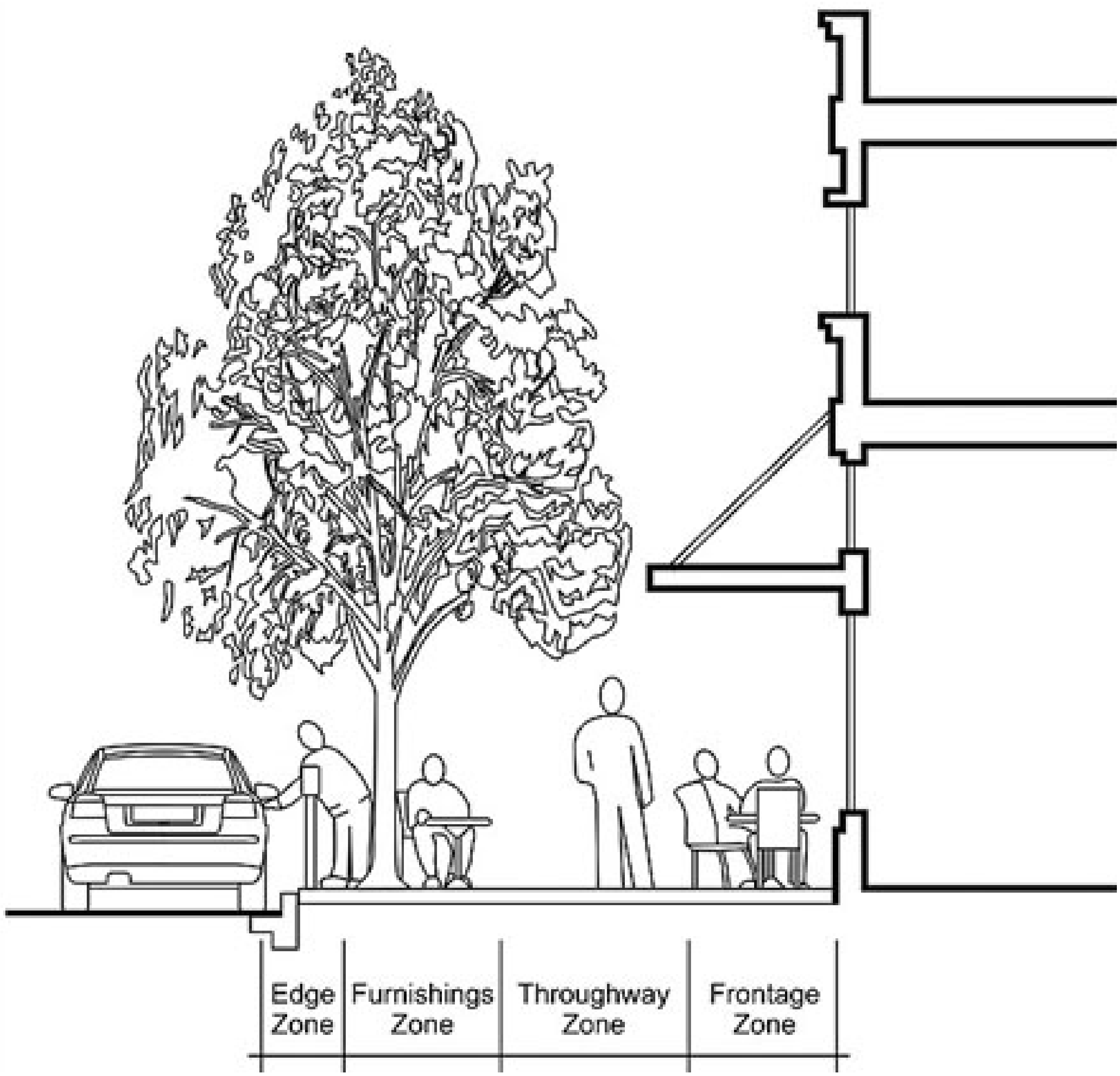


Figure 1 Pedestrian Zones

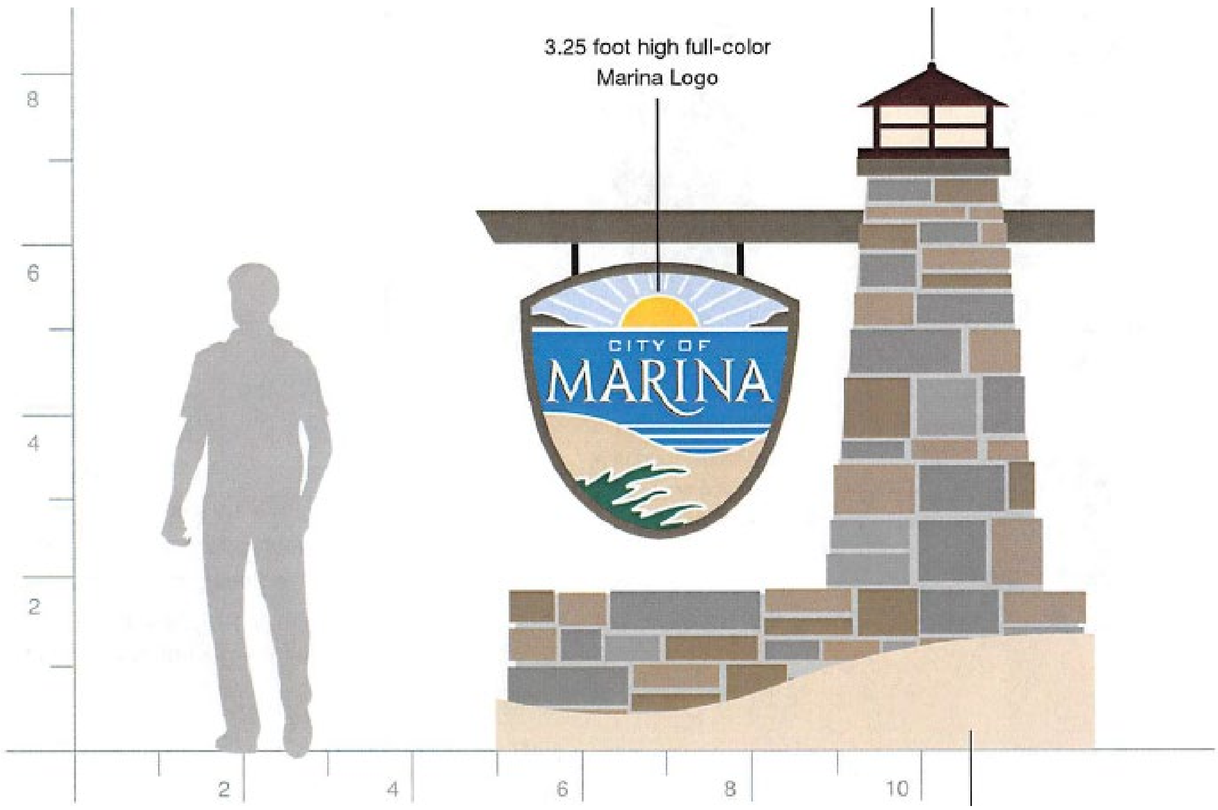
Gateways

Purpose

Design attractive gateways that welcome residents and visitors to Downtown.

Design Guidelines

1. Gateways shall be designed to complement the overall architectural character of the Downtown.
2. Gateways shall include a combination of features including public art, landscaping, signs, enhanced paving, and outdoor seating, along with defining architectural features on buildings such as tower elements.
3. Over-street banners announcing community events may be placed on posts at gateways in accordance with regulations governing signs.
4. Colored, textured, and permeable paving should be installed at significant intersection and entry drives.



Example of a gateway sign that could be used at key locations in Marina. This concept was developed in 2007 as part of the *Citywide Public Sign and Identity Program Guidelines*.

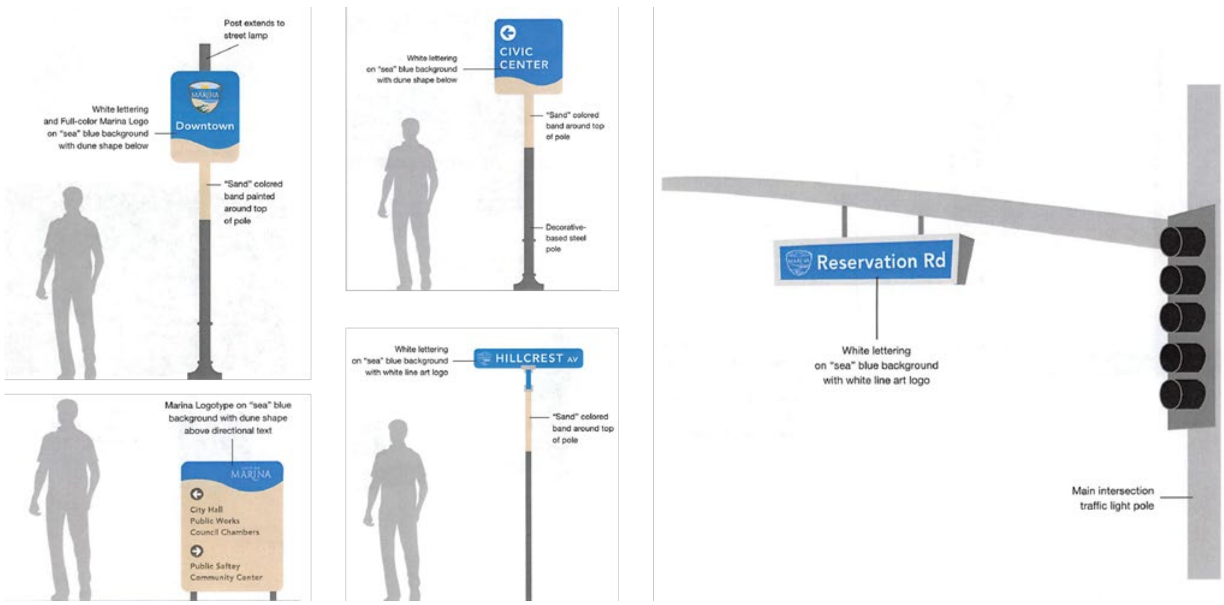
Wayfinding

Purpose

Strategically locate informative wayfinding signs throughout the Downtown.

Design Guidelines

1. Wayfinding signs shall have a consistent shape, font, and pattern.
2. Wayfinding signs shall incorporate a consistent level of contrast (e.g. white lettering with blue background) to increase sign visibility.
3. Sign lettering shall be of sufficient size to be legible to motorists given existing speed limits.
4. Wayfinding signs shall use universal symbols, pictures, or colors to communicate a destination.



Wayfinding signs that utilize a consistent shape, font, and pattern. These concepts were developed in 2007 as part of the Citywide Public Sign and Identity Program Guidelines.

Street Furnishings

Purpose

Use street furnishings to create visual interest and opportunities for gathering and relaxing.

Design Guidelines

1. A consistent design theme for benches, light posts, trash receptacles, and other furnishings shall be used throughout the Downtown.
2. Benches shall be constructed of coastal-appropriate materials such as stone or masonry and shall include arms or features designed to help people sit and stand.
3. Amenities in the Furnishings Zone or Frontage Zone shall not interfere with pedestrian traffic in the Throughway Zone (see Figure 1).
4. Newspaper racks may be located in the Furnishings Zone but shall not negatively impact accessibility to crosswalks, transit and bike facilities, and pedestrian traffic in the Throughway Zone. Vending machines are not permitted.
5. Benches and trash receptacles shall be placed approximately every 100 feet on major corridors and at other key locations.
6. Combination recycle and trash receptacles should be used throughout the Downtown.
7. Public art should be incorporated into the streetscape and in medians. Bike racks should include an artistic design element.
8. Planter pots should be consistent in finish and style in key locations throughout the Downtown Core.
9. Expandable grates should be used to accommodate tree growth. Install gravel mulch to prevent accumulation of litter.

Install benches constructed of stone, masonry, or other coastal-appropriate materials.

Source: IndiaMart

Use combination recycle and trash receptacles.

Source: DeepStream Designs

Use a consistent design theme for benches, light posts, and other furnishings.
Source: Rivard Report

Bike racks may include an artistic design element.

Source: Source: Streetscapes

Source: dero.com

Expandable tree grates.

Source: Sweets Construction

Sidewalks and Plazas

Purpose

Integrate sidewalks, plazas, paseos, and walkways throughout the Downtown.

Accent treatments should be applied in the sidewalk at street edge.

Source: USC News

Design Guidelines

1. Sidewalks and street crossings shall be designed to allow people to easily find a direct route to destinations.
2. Sidewalks shall be located on both sides of the street, and gaps in sidewalks shall be filled to improve connectivity.
3. Sidewalk surfaces shall be stable, firm, smooth, and slip-resistant.
4. Sidewalks shall be designed, built, and maintained to appropriate specifications to accommodate all users, including mobility impaired persons.
5. Street trees and planted park strips shall be used to separate pedestrians from vehicular traffic and to enhance safety and sense of place.

Use in-pavement flashers at high-risk crossings.

Source: Honolulu Advertiser

6. Crosswalks shall be clearly visible to motorists and made of durable materials.
7. Sidewalks shall be appropriately designed, constructed, and maintained.
8. Permeable materials such as interlocking pavers or porous surface paving should be used.
9. “Structural soil” should be used as a base material below sidewalks to encourage sidewalk tree growth without damage to concrete.
10. Accent treatments should be applied in the sidewalk at street edge in key locations, around tree grates, around planters, at corners, and at the entry of paseos.
11. In-pavement flashers should be used at high-risk crossings with higher traffic and pedestrian volumes.
12. Safe mid-block crossings should be implemented at appropriate locations to enhance accessibility and increase pedestrian safety for blocks of 600 feet or greater.

Fill gaps in sidewalks to improve connectivity.

Permeable materials such as these interlocking pavers may be used to minimize runoff.

Medians and Roundabouts

Purpose

Landscape medians and roundabouts to provide visual interest.

Design Guidelines

1. Drought-tolerant plant materials native or adaptable to the area shall be used in medians and roundabouts.
2. Drip or low-water irrigation systems shall be used in medians and roundabouts.
3. Colorful shrub masses or contrast in texture and hue of shrubs should be used to complement median trees.
4. Medians narrower than four feet in width should be paved with pervious concrete.
5. Planted medians should include a one-foot-wide maintenance band along the back of the curb.
6. Landscaping of roundabouts should make the central island more conspicuous and complement surrounding streetscapes.

Landscaped roundabouts.

Plant drought-tolerant shrubs.
Source: Pinterest

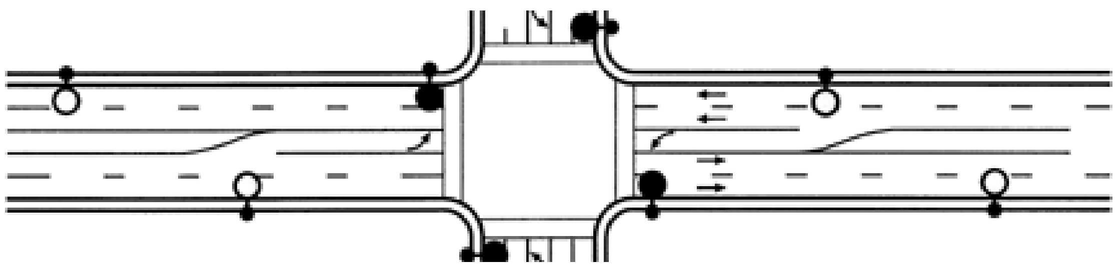
Lighting

Purpose

Install lighting that provides safety, protects the dark night sky, and reduces energy usage.

Design Guidelines

1. Lamps shall be directed downward (except those highlighting architectural features) and shall not be visible from the side or from behind the fixture.
2. Lamps shall be shielded to provide sufficient light for safety while not generating excessive glare.
3. Street light poles shall be no taller than 15 feet on local streets and 25 feet on arterial roads.
4. Energy-efficient bulbs of a consistent color range below 3000K shall be used in all street lamps.
5. Exterior lighting in public spaces shall be compatible with the character of the neighborhood.
6. Pedestrian-scale lighting shall be used in the Downtown.
7. Street light fixtures shall accommodate banner attachment arms in Core and Transition zones.
8. Light poles should be positioned at intersecting property lines and at least five feet from driveways.
9. Streetlamps should be constructed of galvanized steel or other materials suitable to Marina's Climate.



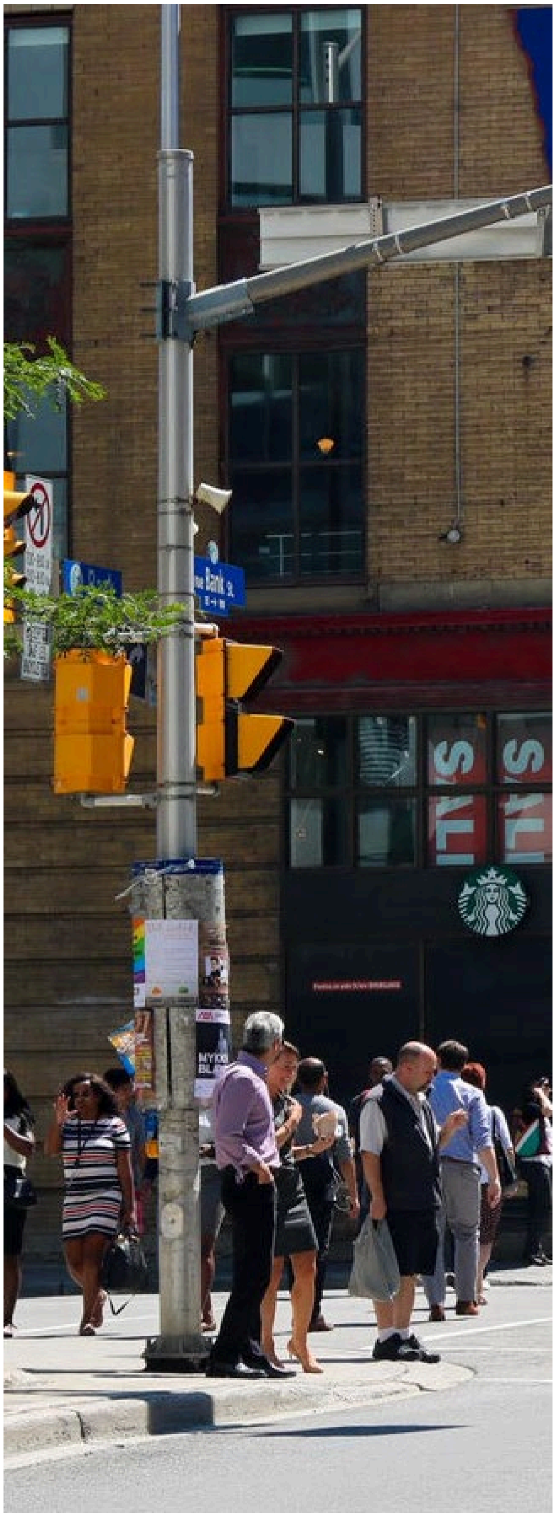
Ensure there is sufficient spacing between poles to minimize glare and conserve energy.
Source: Gvsigmini

B.2 Cultural Design and Landscaping Elements

The architecture in the commercial area of Downtown Marina primarily reflects the mid- to late-20th Century period during which it was built. The architecture and site planning of the area is very suburban in nature and does not contain a planned baseline that would provide architectural clues to guide the design of a more urban Downtown.

In urban downtowns, buildings are located immediately adjacent to the right-of-way, with most architectural features facing the public street or streets, in the case of corner lots. The intent of the design standards and guidelines for the Downtown is to ensure certain features in the façade contribute to the visual interest of the building and help create a more transparent street wall, providing the ability to see into and out of the street-level floor of the building. Beyond these basic features, there are a variety of architectural elements that can be used to help provide identity to the building and contribute to the overall interest of the Downtown.

History is often an important source in providing visual clues for development of the downtown areas of cities. Many cities have ethnic pockets, reflecting the origins of residents of the City. Most people have visited a Chinatown, Little Italy, Koreatown, Greektown, Hmongtown, or Little Ethiopia located in larger cities in their travels. In smaller towns such as Marina, these



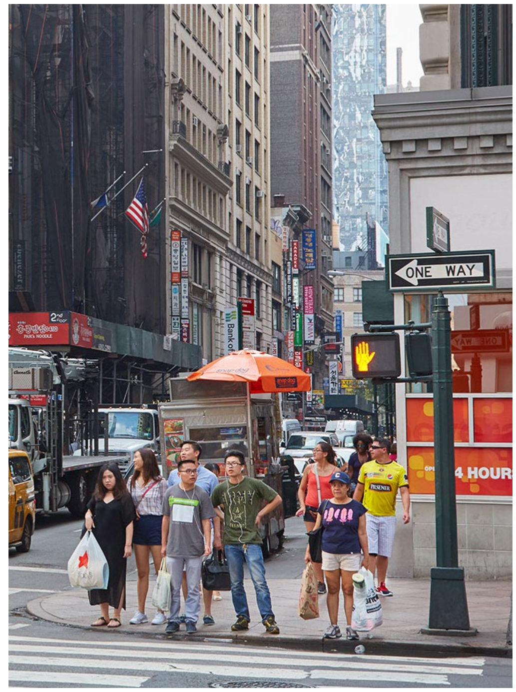
Bank Street in Ottawa
Source: Downtown Bank

Greektown in Detroit
Source: Daily Detroit

pockets rarely develop, and yet the cultural makeup of the community is an important part of the City's identity.

The various cultures within Marina can be an important resource for architectural elements and design of buildings in the Downtown. During the development of the Downtown Vitalization Specific Plan, several interested citizens prepared a collection of examples of Asian architectural elements for inclusion in the appendix of the Specific Plan. The City would welcome and encourage other interested ethnic groups to develop similar design element examples for inclusion in the document. The intent of this section is to be inclusive of the variety of cultures who have come together to make up the City of Marina. As this portion of the appendix is intended to be informational, proposed additions to this would be reviewed by Staff and approved for inclusion by the Planning Commission.

Marina is one of the most diverse small cities in the United States. Applicants are encouraged to consider the multicultural nature of Marina in the development of building and site design, form, and architectural details and features. According to the 2021 American Community Survey 5-Year Estimates, 28% of Marina's population identify as Hispanic or Latino. Approximately 16% of the population self-identifies as Asian, 7% as Black or African American, 2% as Native Hawaiian or Pacific Islander, and less than 1% as Native American. Another 12% self-identify as some other race, and more than 13% self-identify as being multiracial (two or more races). Developers are encouraged to reflect the cultural and ethnic diversity of Marina in new architecture, which will help to create a unique identity that will distinguish Marina from neighboring communities.



Koreatown in New York City.
Source: Marriott Traveler

Little Ethiopia in Los Angeles.
Source: Amoeba Music

B.2.1 Asian Design/Landscape Element

An example of architecture that celebrates Marina's Asian community is the Junsay Oaks Apartments, which utilized an Asian-hybrid style. The City intends to encourage the character of buildings, styles, and landscaping that enhance the community's multicultural identity. This is evident in a General Plan goal that calls for "A City physically and visually distinguishable from the other communities of the Monterey Bay region, with a sense of place and identity in which residents can take pride" (Plan, 10).

The intent of these design elements is to have buildings incorporating subtle elements or modern interpretations of various Asian styles. Table 1 includes common architectural elements and forms that may be integrated into building architecture and common open space.

These goals are compatible with a citizen-led effort to encourage Asian-hybrid styles that recognize the diversity of Marina. A petition signed by more than 350 residents and business owners called for "Asian design elements for buildings and landscaping...[that will] give visibility to the important cultural make-up of the City of Marina."

Included in this Appendix are images and text that illustrate the roofs and building forms, doors and windows, colors and materials, and elements of ornamentation and landscaping that illustrate the suggested design guidelines for developers to apply in residential, commercial, and mixed-use projects.

Junsay Oaks Apartments.

Source: Community Housing Improvement Systems and Planning Association

Top, middle: Landscaping with traditional Asian themes.

Bottom: Building incorporating subtle Asian elements of architecture: Multi-level roofs, horizontal lines, extended roof eaves, simple lines, red door, large windows.

Table 1. Common Architectural Elements and Forms in Asian-themed Architecture

Roof/Building Forms/Exterior Walls	Doors and Windows	Colors and Materials	Ornamentation/Landscaping
Tiled roof	Prominent horizontal paned windows	Subdued color pallet	Rock gardens
Multiple roof planes including asymmetrical positioning	Paned windows in shoji style	Natural wood	Stone lanterns
Multiple roof pitches	Simple 90-degree geometric door ornamentation	Natural stone	Light fixtures favoring horizontal/vertical lines
Extended roof eaves	Red colored doors	Bamboo	Wooden Asian style trellis/arbors
Exposed rafter beams with angled ends	Circular forms	Natural materials and colors	Stone bridges, benches, stepping-stones for accents
Black/brown horizontal/vertical wood trim over white wall face	Expansive windows for sense of connectedness to nature	Synthetic materials that simulate natural materials	Modern/simple designed pagoda style gate
Emphasizing horizontal plane			
Emphasizing simple, clean lines			

ROOFS | BUILDING FORMS | EXTERIOR WALLS

Clockwise, from top left: black/brown horizontal/vertical wood trim over white wall fence; emphasis on horizontal plane; multiple roof planes including asymmetrical positioning; extended roof eaves; exposed rafter beams with angled ends; tiled roof; emphasis on simple, clean lines; multiple roof pitches.

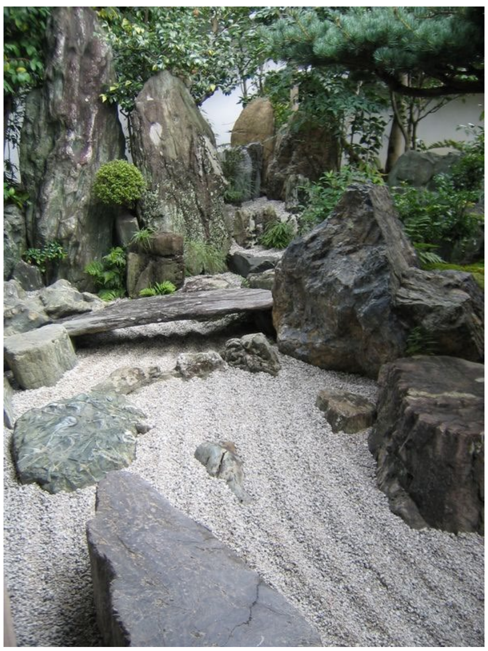
DOORS | WINDOWS

Clockwise, from top left: Paned windows in shoji style; prominent horizontal paned windows; circular forms; simple 90-degree geometric door ornamentation; red colored doors; expansive windows for sense of connectedness to nature.

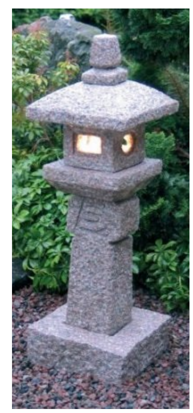
COLORS | MATERIALS

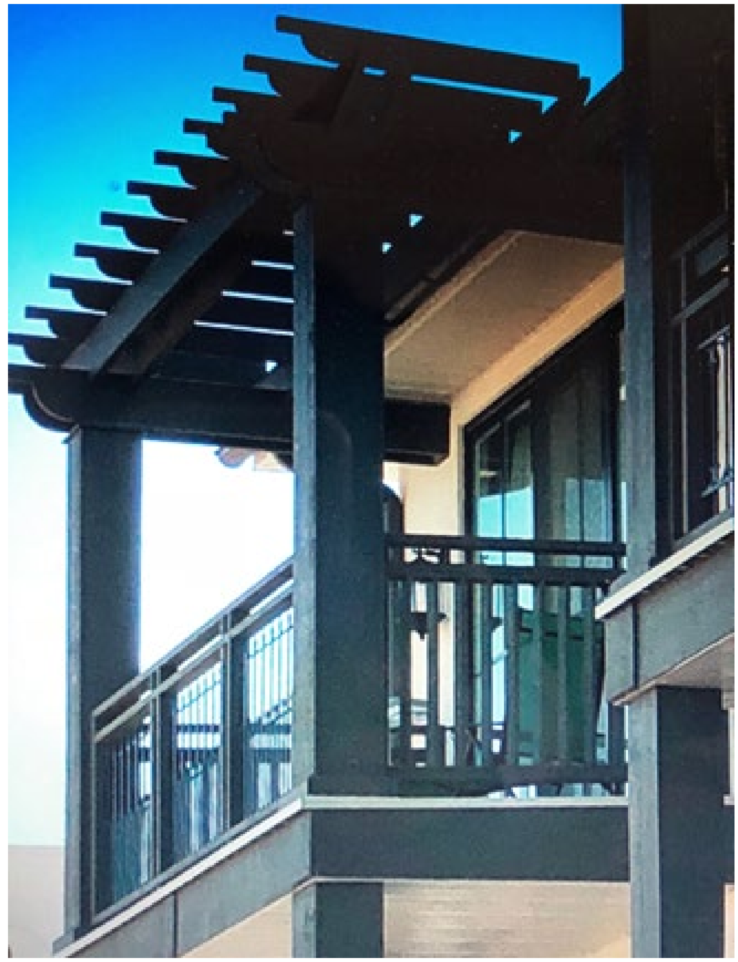
Clockwise, from top left: Natural materials and colors; natural wood; natural stone; synthetic materials that simulate natural materials; subdued color pallet.

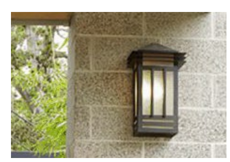
ORNAMENTATION | LANDSCAPING



Clockwise, from top left: Stone bench; trellis; pagoda-style gate; trellis; lanterns; fence; rock garden; simple landscaping; stepping stones; stone lanterns; rock garden.







B.3 Suggested Trees for Marina

Trees are an important part of a healthy coastal community. A well-maintained urban forest improves street safety, adds character to neighborhoods and districts, provides habitat for birds and insects, improves drainage, reduces air pollution, and creates an inviting street environment. It is important to select ideal trees for Marina's climate, place trees at appropriate intervals along the street right-of-way, and prune trees to preserve comfortable pedestrian mobility and visibility for drivers in passing cars.

Top: Red flower gum (*eucalyptus ficifolia*). Bottom: Brisbane box (*lophostemon confertus*).

This appendix includes two lists of recommended street trees in Marina. The first list, "Recommended List of Preferred Trees", was compiled by City Planning Staff and includes the botanical and common names of trees, the mature height and spread of trees, the tolerance of trees to coastal winds and drought, and the suitability of trees for planting in park strips and near overhead utilities.

The second list, "Marina Tree List", was compiled by the Marina Tree & Garden Club, a group comprised of local volunteers. The Marina Tree & Garden Club has assisted with several significant public and private landscaping projects in Marina, including at the Marina Public Library. This tree list includes the botanical and common names of recommended trees. Online, links for each tree provide additional information, including the maximum height and spread of the tree, the lifespan of the tree, and a narrative description of the characteristics of the tree. A matrix rates the cost of installing and maintaining the tree; the resistance of each tree to drought, wind, frost, and disease; and the propensity of the tree's roots to upheave sidewalks and interfere with power lines. Finally, the list includes several images of each recommended tree, including local examples of trees with captions explaining their locations.

For more information about trees suited for Marina's climate, visit the following websites:

Marina Tree & Garden Club
(http://www.marinatreeandgarden.org/treelist.html)

Urban Forest Ecosystems Institute
(https://selectree.calpoly.edu/)

Friends of the Urban Forest
(https://www.fuf.net/)

B.3.1 Recommended List of Preferred Trees

Tree Species: ***Botanical name*** **Common name**	Mature Size (feet):		Tolerances: (5=Best)		Site Suitability: (5=Best)	
	Height	Spread	Coastal Winds	Drought	Street Tree	Overhead Utilities
Arbutus unedo (2) strawberry tree	20-35	20-35	4	3	5	4
Arbutus 'Marina' strawberry tree	20-35	20-35	2	4	3	3
Brachychiton poulneus bottle tree	30-50	25-30	2	4	3	2
Callistemon citrinus Lemon bottlebrush	20-25	15-20	1	1	2	5
Casuarina cunninghamiana river she-oak	40-70	30-50	4	4	3	1
Casuarina strict coast beefwood	20-35	20-30	5	5	5	3
Cinnamomum camphora camphor tree	30-50	40-50	3	4	4	2
Corynocarpus laevigata New Zealand laurel air	20-40	15-30	2	2	2	3
Cupressus Macrocarpa (2) Monterey cypress	50-80	40-70	5	5	5	1
Erobotrya japonica Loquat	15-30	20-30	3	3	3	4
Eucalyptus ficifolia red flower gum	30-40	20-30	5	4	5	3
Eucalyptus nicholii Willow-leaf pepermint	30-40	20-30	5	4	5	3
Eucalyptus polyanthemos Silver dollar gum	20-60	20-30	4	5	4	1
Eucalyptus viminalis Manna gum	100-150	30-40	4	5	3	1
Geijera Parvifiora Australian willow	25-30	15-20	1	2	4	4
Ginko biloba maidenhair autumn gold	35-50	25-40	1	2	2	1
Lauris nobilis Grecian laurel	12-40	15-30	3	3	4	3
Leptospermum laevigatum Australian tea tree	15-30	15-25	5	5	4	4
Liquidambar styracifiua American sweet gum	30-60	25-40	4	4	4	1
Lophostemon Conifertus Brisbane box	35-60	25	5	5	5	1
Lyonothamnue floribuncus Catalina ironwood	30-60	15-20	5	5	5	1

Tree Species: ***Botanical name*** **Common name**	**Mature Size (feet):**		**Tolerances: (5=Best)**		**Site Suitability: (5=Best)**	
	Height	**Spread**	**Coastal Winds**	**Drought**	**Street Tree**	**Overhead Utilities**
Malus Floribunda Japan flower crabapple	20-30	15-20	1	2	4	4
Maytenus Boaria green showers	30-50	15-20	1	1	1	2
Melaleuca quinquenervia cajeput tree	20-40	20-35	2	4	4	3
Melaleuca styphelioides rigid leaf paperbark	20-40	20-35	1	2	2	3
Metrosderos excelsus New Zealand Xmas	20-30	20-30	2	2	3	4
Olea europaea Olive	25-30	25-30	4	5	5	4
Pinus canariensis Canary Island pine	60-80	20-40	1	2	1	1
Pinus halepensis Allepo pine	30-60	20-35	2	4	3	1
Pinus pinea Italian stone pine	30-60	30-50	2	3	2	1
Pinus radiate (2) Monterey pine	60-90	20-40	4	3	3	1
Pinus sabiniana (3) foothill pine	40-50	20-40	1	2	2	2
Pinus Torreyana (3) torrey pine	40-60	30-50	2	2	2	1
Pittosporum crassifolium none	15-25	15-25	5	4	4	5
Pittosporum undulatum Victorian box	30-40	20-40	1	1	2	3
Platanus Acerifolia Sycamore – London Plane	40-80	25-40	1	2	2	1
Podocarpus gracilior African fern pine	30-50	20-35	1	2	1	2
Prunus cerasifolia flowering plum	20-30	15-20	1	3	4	4
Prunus caroliniana Carolina laurel cherry	20-40	20-30	1	1	1	3
Prunus ilicifolia (3) holly leaf cherry	20-30	20-30	1	1	2	4
Pyrus calleryana ornamental flower pear	25-50	25-40	1	1	1	2
Quercus agrifolia (1) California coast live oak	30-40	30-40	2	5	5	3
Quercus Ilex holly oak	30-50	40-50	2	4	3	2

Tree Species: ***Botanical name*** **Common name**	Mature Size (feet):		Tolerances: (5=Best)		Site Suitability: (5=Best)	
	Height	**Spread**	**Coastal Winds**	**Drought**	**Street Tree**	**Overhead Utilities**
Quercus suber cork oak	30-50	40-50	1	2	1	2
Rhus lancea African zumac	15-25	15-25	3	3	4	5
Robinia ambiqua locust	40-50	15-20	3	2	2	2
Tristania laurina elegant Brisbane box	30-60	20-40	5	5	5	2
Schinus Terebinthifolius Brazilian pepper tree	20-30	20-30	3	3	4	4

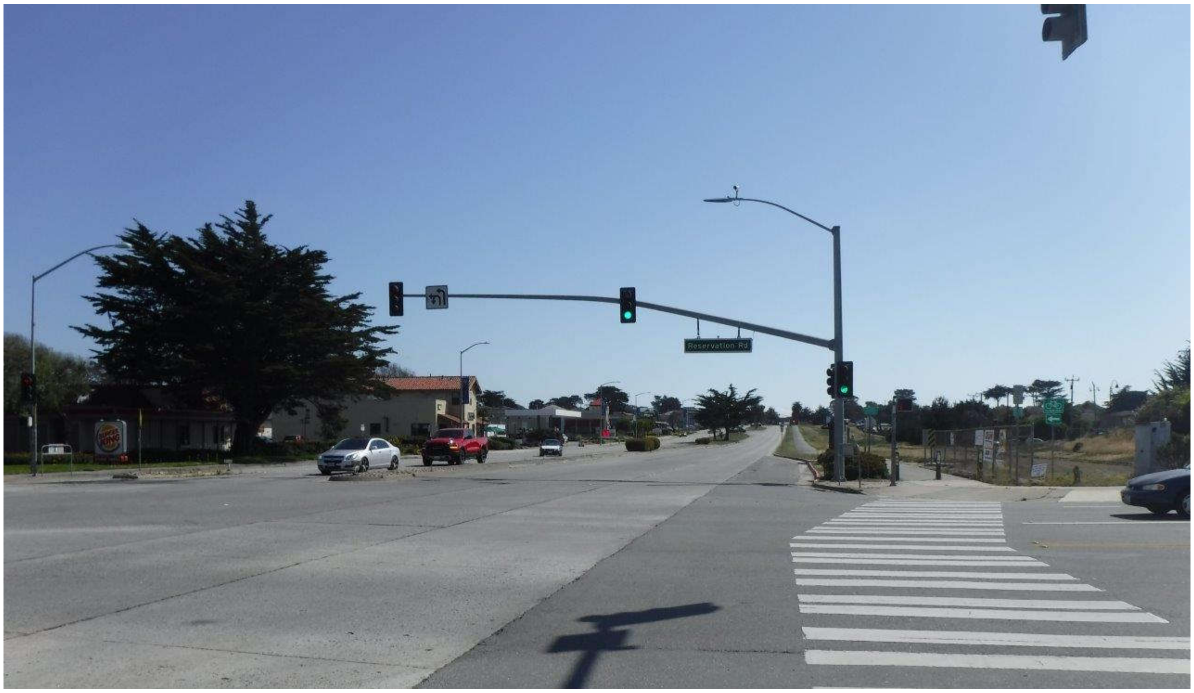
Footnotes:
1) Native to Marina
2) Native to Monterey Peninsula
3) Native to California
4) Tree list is not all inclusive
5) More detailed tree information is available at the Planning Division

B.3.2 Marina Tree & Garden Club Tree List

Common Name	Botanical Name	Common Name	Botanical Name
Small Trees and Shrubs: Less than 20’ tall at maturity. Suitable for sidewalk strips and 36” openings in concrete. Will not lift sidewalks.			
California wild lilac	*Ceanothus 'Ray Hartman'*	Saratoga bay laurel	*Laurus 'Saratoga'*
Toyon	*Heteromeles arbutifolia*	Little Gem Magnolia	*Magnolia grandiflora*
Italian buckthorn	*Rhamnus alaternus*		
Medium Trees: 20’-35’ tall at maturity. Suitable for street strips, wide medians, yards and areas away from power lines. This list reflects trees that have generally well-behaved roots.			
Mountain She-Oak, Coast Beefwood	*Allocasuarina verticillate*	Strawberry tree	*Arbutus “Marina”*
Lemon Bottlebrush	*Callistemon citrinus*	New Zealand Laure*l*	*Corynocarpus laevigatus*
Loquat	*Eriobotrya japonica*	English Holly	*Ilex aquifolium*
Heath Melaleuca, Swamp paperbark	*Melaleuca ericifolia*	Flaxleaf Paperbark	*Melaleuca linariifolia*
Cajeput Tree	*Melaleuca quinquenervia*	Black Tea Tree, Prickly Leaf Paperbark	*Melaleuca styphelioides*
Karo Tree	*Pittosporum crassifolium*	Fern Pine	*Podocarpus gracilior*
Catalina Cherry	*Prunus ilicifolia ssp lyonii*	Small-Leaf Tristania, Water gum	*Tristaniopsis laurina*
African Sumac	*Searsia lancea*		
Large Trees: More than 35’ tall at maturity. Not suitable under or near power lines or, small street/sidewalk openings. Larger trees will have more issues with roots lifting sidewalks and causing damage.			
Monterey Cypress	*Cupressus macrocarpa*	Camphor Tree	*Cinnamomum camphora*
Australian Willow	*Geijera parvifiora*	Red flowering gum	*Corymbia ficifolia*
Willow-leaf peppermint	*Eucalyptus nicholii*	Silver Dollar gum	*Eucalyptus polyanthemos*
Brisbane Box	*Lophostemon confertus*	Catalina Ironwood	*Lyonothamnus floribundus asplenifolius*
Canary Island Pine	*Pinus canariensus*	Allepo Pine	*Pinus halepensis*
Stone Pine	*Pinus pinea*	Monterey Pine	*Pinus radiate*
Torrey Pine	*Pinus Torreyana*	Island Oak	*Quercus tomentella*
Coast Live Oak	*Quercus agrifolia*		
Palm Trees: Palms are long lived at 50-100+ years and some get very large. Not suitable under power lines or small street/sidewalk openings because of mature size.			
Mediterranean Fan Palm	*Chamaerops humilis*	Dracaena Palm	*Cordyline australis*
Canary Island Date Palm	*Phoenix canariensis*	Date Palm	*Phoenix dactylifera*
California Fan Palm	*Washingtonia filifera*	Mexican Fan Palm	*Washingtonia robusta*

Appendix B

Biological Resources Assessment



Downtown Vitalization Specific Plan

Revised Biological Resources Assessment

prepared by

City of Marina
211 Hillcrest Avenue
Marina, California 93933
Contact: Guido Persicone, Community Development Director

prepared with the assistance of

Rincon Consultants, Inc.
2511 Garden Road, Suite C-250
Monterey, California 93940

May 2023

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
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Downtown Vitalization Specific Plan

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Executive Summary

This Biological Resources Assessment was prepared to support environmental review of the City of Marina's Downtown Vitalization Specific Plan (Specific Plan). The Specific Plan was developed to provide guidance for future development within the City's downtown area. The intent of the Specific Plan is to provide opportunities for vitalization and enhancement within downtown Marina.

Six vegetation communities and/or land cover types were identified within the Specific Plan: developed, Ice plant mat, ruderal, sand mat manzanita (*Arctostaphylos pumila*), annual grassland, and willow riparian.

Suitable habitat is present for 14 special status plant species. Of the 14 species, five federal or state listed plant species have the potential to occur within the project area: Monterey spineflower (*Chorizanthe pungens* var. *pungens*), and Monterey gilia (*Gilia tenuiflora* ssp. *arenaria*), robust spineflower (*Chorizanthe robusta* var. *robusta*), seaside bird's-beak (*Cordylanthus rigidus* ssp. *littoralis*), and Yadon's rein orchid (*Piperia yadonii*). Of the remaining 9 non-listed species, three were observed in the Specific Plan: sandmat manzanita (*Arctostaphylos pumila*), Monterey cypress (*Hesperocyparis macrocarpa*), and Monterey Pine (*Pinus radiata*). Monterey cypress and Monterey pine are not naturally occurring however, and are largely contained with landscaped areas The remaining six non-listed species include Fort Ord spineflower (*Chorizanthe minutiflora*), Eastwood's goldenbush (*Ericameria fasciculata*), sand-loving wallflower (*Erysimum ammophilum*), Kellogg's horkelia (*Horkelia cuneata* var. *sericea*), Point Reyes horkelia (*Horkelia marinensis*), and northern curly-leaved monardella (*Monardella sinuata* ssp. *Nigrescens*).

Seven special status wildlife species have the potential to occur within the Specific Plan area: Smith's blue butterfly (*Euphilotes enoptes smithi*), tricolored blackbird (*Agelaius tricolor*), northern California legless lizard (*Anniella pulchra*), coast horned lizard (*Phrynosoma blainvillii*), burrowing owl (*Athene cunicularia*), white-tailed kite (*Elanus leucurus*) and Monterey shrew (*Sorex ornatus salarius*).

Potentially jurisdictional waters in the Specific Plan area include two detention basins, riparian habitat at Locke-Paddon Park, and a pond on private property. These features are potentially under the jurisdiction of the USACE, RWQCB, and or CDFW.

Eight mitigation measures have been proposed to reduce impacts to biological resources to less than significant under the California Environmental Quality Act (CEQA).

1 Introduction

Rincon Consultants, Inc. (Rincon) has prepared this Biological Resources Assessment (BRA) to document existing conditions, summarize previous biological resource reports and studies, and provide a basis for evaluation of potential impacts to special status and sensitive biological resources from the implementation of the Specific Plan located in the City of Marina, California (City). This BRA has been prepared to support CEQA environmental review of the Specific Plan. The Specific Plan Environmental Impact Report will be a programmatic environmental review, and this BRA provides programmatic-level analysis, with mitigation measures designed to be implemented at the project-level, when individual projects are proposed for development.

1.1 Project Location

The City of Marina is located in Monterey County, adjacent to Monterey Bay along State Route 1 (SR1) between the cities of Monterey and Santa Cruz (Figure 1). The Specific Plan area encompasses approximately 322 acres near the center of the City of Marina. The Specific Plan is depicted within the Marina, California United States Geological Survey (USGS) 7.5-minute topographic quadrangle, and is generally bounded by development to the north and south, SR1 to the west, and open space to the east (Figure 2). In the greater vicinity, to the west is the Pacific Ocean, to the north are agricultural lands, to the east is the Marina Airport, and to the south is the former Fort Ord.

1.2 Project Description

The Specific Plan implements the goals and policies of the City of Marina General Plan and provides specific direction to reflect conditions unique to the Downtown area. The Specific Plan includes land use designations, access requirements and standards, infrastructure location and sizing, financing, and development standards. The maximum buildout would increase residential, retail, and office space in the downtown area, and would focus on mixed-use and retail along Reservation Road, with multi-family residential uses in the surrounding area. The Specific Plan also provides road and access improvements for pedestrians, cyclists, and motorists.

Figure 1 Regional Location Map

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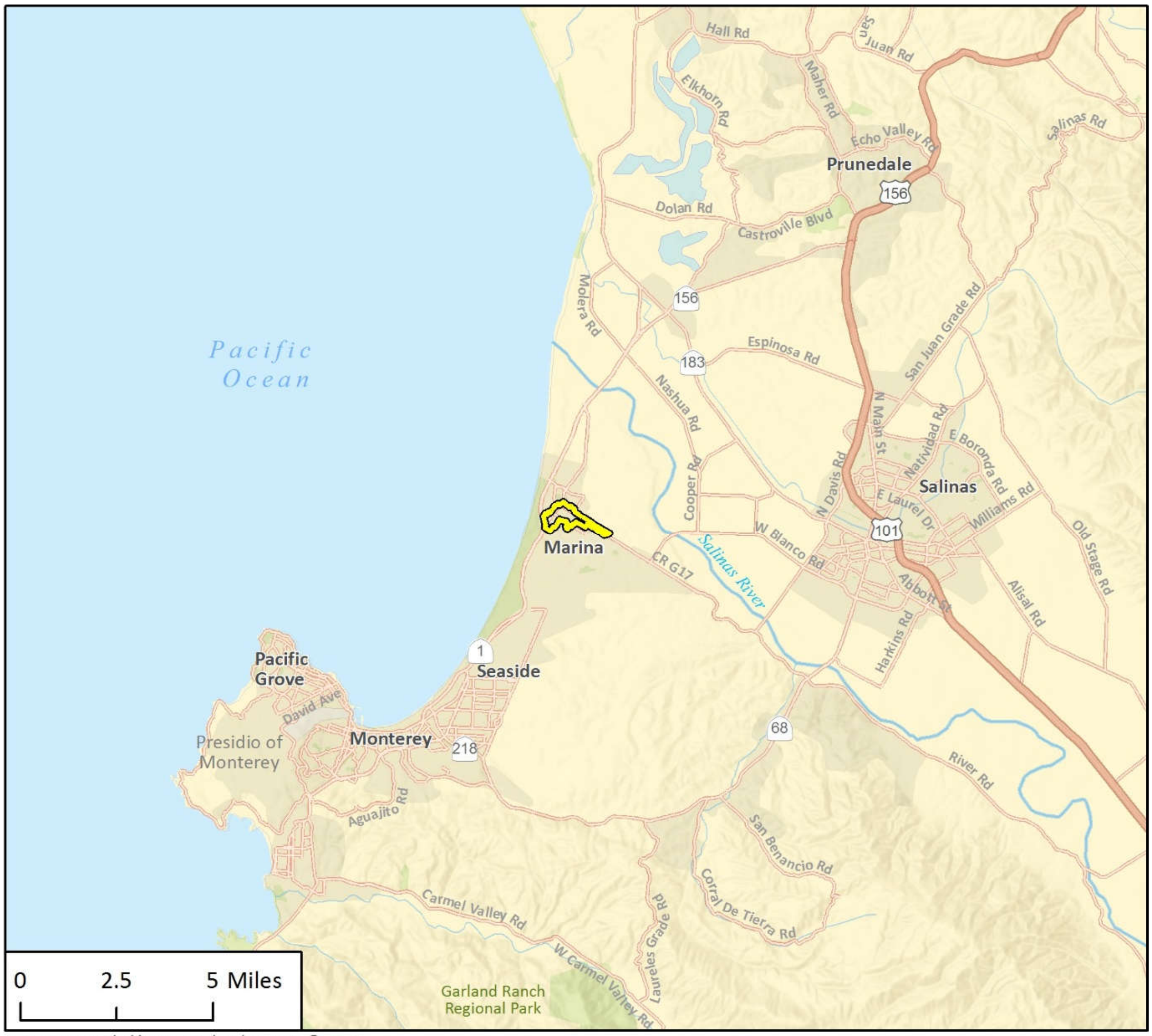
Additional data provided by County of Monterey, 2020.



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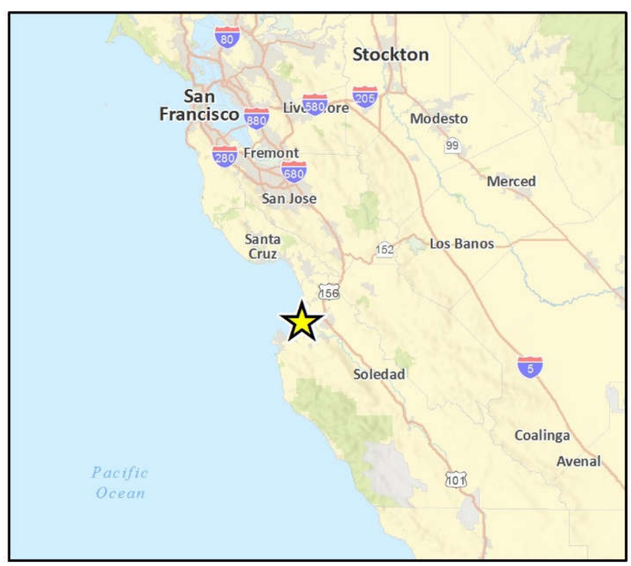
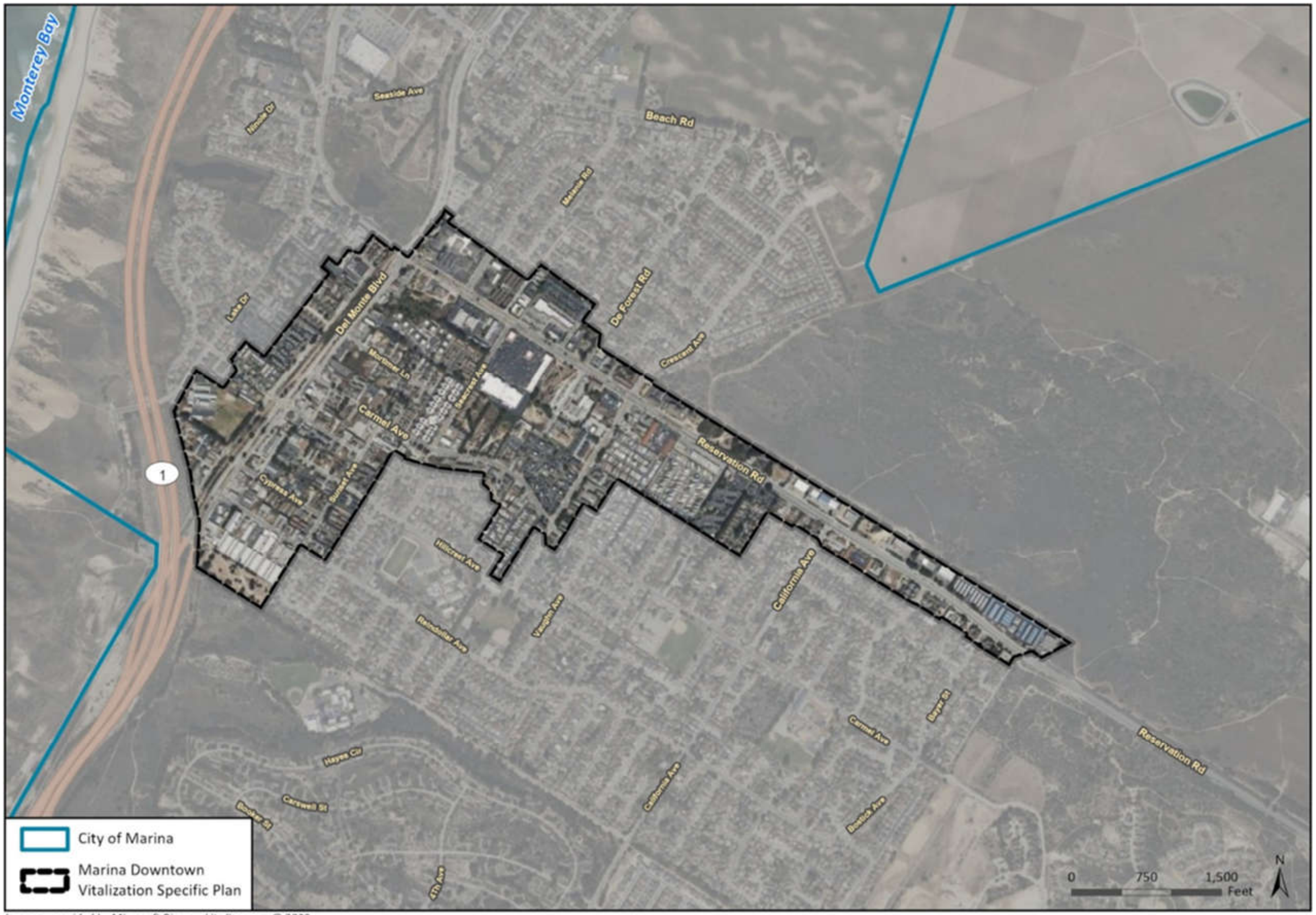


Fig 1 Regional Location

Figure 2 Project Area Map



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2 Methodology

2.1 Regulatory Overview

Regulated or sensitive resources studied and analyzed herein include special status plant and animal species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement, and locally protected resources, such as protected trees. Regulatory authority over biological resources is shared by Federal, State, and local authorities. Primary authority for regulation of general biological resources lies within the land use control and planning authority of local jurisdictions (in this instance, the City of Marina).

2.1.1 Definition of Special Status Species

For the purposes of this report, special status species include:

- Species listed as threatened or endangered under the Federal Endangered Species Act (FESA); species that are under review may be included if there is a reasonable expectation of listing within the life of the project
- Species listed as candidate, threatened, or endangered under the California Endangered Species Act (CESA)
- Species designated as Fully Protected, Species of Special Concern, or Watch List by the California Department of Fish and Wildlife (CDFW)
- Species designated as sensitive by the U.S. Forest Service or Bureau of Land Management, if the project would affect lands administered by these agencies
- Species designated as locally important by the Local Agency and/or otherwise protected through ordinance or local policy

2.1.2 Environmental Statutes

For the purpose of this report, potential impacts to biological resources were analyzed based on the following statutes (Appendix A):

- California Environmental Quality Act (CEQA)
- Federal Endangered Species Act (ESA)
- California Endangered Species Act (CESA)
- Federal Clean Water Act (CWA)
- California Fish and Game Code (CFGC)
- Migratory Bird Treaty Act (MBTA)
- The Bald and Golden Eagle Protection Act
- Porter-Cologne Water Quality Control Act
- City of Marina Municipal Code

The Specific Plan area is located outside of the coastal zone, and is therefore not subject to the regulations contained in the Marina Local Coastal Land Use Plan (LCLUP).

2.1.3 Guidelines for Determining CEQA Significance

The following threshold criteria, as defined by the CEQA Guidelines Appendix G Initial Study Checklist, were used to evaluate potential environmental effects. Based on these criteria, the proposed project would have a significant effect on biological resources if it would:

a) *Have substantial adverse effects, 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.*

b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.*

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.*

2.2 Literature Review

Rincon reviewed literature for baseline information on biological resources potentially occurring In the Specific Plan and vicinity. The purpose of this review was to identify biological resources that could be affected by development under the Specific Plan goals and policies. The literature review included information available in peer reviewed journals, standard reference materials, and online databases (e.g., Holland, 1986; Baldwin et al., 2012, Sawyer et al., 2009; Stebbins, 2003; Sibley, 2016; Sullivan et al., 2009).

Rincon also conducted a review of relevant databases of sensitive resource occurrences from the California Department of Fish and Wildlife (CDFW) California Natural Diversity Data Base (CNDDB) (CDFW, 2019a) and Biogeographic Information and Observation System (CDFW, 2019b); the U.S. Fish and Wildlife Service (USFWS) Critical Habitat Portal (USFWS, 2019a), National Wetlands Inventory Wetlands Mapper (USFWS, 2019b), and Information for Planning and Consultation (IPaC) System (USFWS, 2019c); the United States Department of Agriculture, Natural Resources Conservation Service (USDA, NRCS) Web Soil Survey (USDA, NRCS, 2019); and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS, 2019). Other sources of information about the site included aerial photographs, topographic maps, geologic maps, climatic data, and project plans.

Queries of the CDFW CNDDB and the CNPS Inventory of Rare and Endangered Plants of California included the *Marina*, California USGS 7.5-minute topographic quadrangles, and surrounding six quadrangles; *Spreckels, Prunedale, Salinas, Monterey, Seaside,* and *Moss Landing*. A list of federal species known to occur in Monterey County was acquired from the USFWS IPaC System. The results of these scientific database queries were compiled into a table that is presented as Appendix A. Updated queries of the CNDDB (CDFW 2023a), Special Animals List (CDFW 2023b), CNPS Inventory of Rare and Endangered Plants of California (CNPS 2023), and Information, Planning and Conservation System (USFWS 2023) were conducted in March 2023.

2.3 Field Reconnaissance Survey

A biological resource reconnaissance survey was conducted to assess the habitat suitability for potential special status species, map the existing vegetation, map any evident sensitive biological resources currently onsite, note the presence of potential jurisdictional waters or wetlands, document any wildlife connectivity/movement features, and record all observations of plant and wildlife species within the Specific Plan area. The focus of this survey was to asses undeveloped areas identified through a review of areal imagery as possibly contain sensitive biological resources, natural habitat, or habitat that is potentially suitable for special status species. Most of the survey area could be assessed from the public right of way. Meandering transects were walked throughout vacant lots that were accessible from the public right of way. A wind shield survey was conducted throughout the rest of the developed area to confirm the desk top evaluation of aerial imagery. Rincon Biologist Samantha Kehr conducted the site visit on June 17, 2019, between the hours of 2:00pm and 4:00pm. Conditions onsite were 65°F and clear with a slight breeze. Site photos from the survey are included as Appendix B.

3 Existing Conditions

3.1 Physical Characteristics

The Specific Plan areas is located at the southern end of Monterey Bay, within the Central California Coast Ecoregion. It is bordered to the west by the Pacific Ocean and to the east by Fort Ord National Monument. The climate in this region is generally mild with an annual minimum temperature of 39.9°F, a maximum average temperature of 67.9°F, and an annual precipitation of 14.89 inches (WRCC 2019). Elevation within the City ranges from approximately 19 feet mean sea level (msl) near Locke-Paddon Park, to 64 feet above msl along the Specific Plan area's eastern border along Reservation Road.

The Specific Plan area covers 336 acres comprised primarily of existing residential development and commercial and industrial development. A small component of the Specific Plan area is comprised of vacant lots and small patches of open space, primarily within existing development. As such the Specific Plan area is largely developed, with very little natural habitat, and the majority of potential impacts from project-level development would result only in those areas comprised of lots, open space and natural areas. What natural or semi-natural habitat is present is limited to the eastern edge of the Specific Plan area along reservation Road, the eastern edge of Locke-Paddon Park, and south of development at Reindollar Avenue between SR1 and George Patton Senior Elementary School.

3.1.1 Watershed and Drainages

The Specific Plan is located in the Monterey Bay Subwatershed (HUC12 180600150305), south of the Salinas River watershed. According to the National Wetland Inventory (NWI) (USFWS, 2019b), known jurisdictional wetlands and waters within the Specific Plan area are limited to the freshwater wetlands at Locke-Paddon Park in the north west corner. No other wetlands or waters are mapped in the Specific Plan area.

3.1.2 Soils

Based on the most recent Natural Resources Conservation Service (NRCS) soil survey for Monterey County (USDA 2019), the Specific Plan contains one soil map unit:

Baywood Sand, 2 to 15 Percent Slopes

Baywood sand is somewhat excessively drained soils derived from stabilized sandy eolian sands with 2 to 15 percent slopes. This soil map unit has 8 centimeters (cm) of available water storage. This soil map unit typically lacks hydric soils.

3.2 Vegetation and Other Land Cover

Vegetation community mapping for the Specific Plan is based on aerial imagery and reconnaissance surveys conducted on June 17, 2019. Vegetation classification was based on *A Manual of California Vegetation, Second Edition* (Sawyer et al., 2009), *Preliminary Descriptions of the Terrestrial*

Communities of California (Holland, 1986), and *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer, 1988); however, classifications have been modified as needed to accurately describe the existing habitats observed on-site.

Vegetation composition and structure within the Specific Plan is generally limited to landscape and ruderal vegetation types, with developed being the dominate land cover type in the Specific Plan (Figure 3).

Developed

This land cover type is not described by Holland (1986), Sawyer et al. (2009), or Mayer and Laudenslayer (1988). It includes all areas that have been developed, including paved roads, sidewalks, parking lots, buildings, and basketball courts. Vegetation in this land cover type consists of primarily non-native ornamental plantings in lawns, park strips, parking lots, commercial parks, baseball fields, etc. Tree species found in this community are highly variable and typically non-native or not occurring as part of a natural woodland. Species observed within this land cover type in the Specific Plan are primarily Monterey cypress (*Hesperocyparis macrocarpa*) and eucalyptus (*Eucalyptus* sp.), with some Monterey pine (*Pinus radiata*). Bushes and shrubs in this community are variable by occurrence and may include coyote brush (*Baccharis pilularis*), California poppy (*Eschscholzia californica*), sweet alyssum (*Lobularia maritima*), and juniper (*Juniperus* spp.). A drought tolerant demonstration garden was also observed within the developed area of the Specific Plan, planted at the Marina Coast water Districts Well site 11, on Reservation Road west of Salinas Avenue. Native and drought tolerant species were planted at the site in 2002 by the Marina Tree and Garden Club, including Pajaro manzanita (*Arctostaphylos pajaroensis*), Hooker's manzanita (*Arctostaphylos hookerI*), matilija poppy (*Romneya coulterI*), Red Monkeyflower (*Diplacus parvifolius*), Coast Buckwheat (*Eriogonum fasciculatum*), and statice (*Limonium sinuatum*).

Ice Plant Mat

Ice plant species (*Carpobrotus edulis*, *C. chilensis*) are non-native invasive species, originally planted in the 1940s and 1950s for landscaping and dune stabilization (USACE 1992). These perennial ground-hugging succulents form large monospecific mats (Sawyer et al., 2009). *Carpobrotus edulis* is an invasive species with a Cal ICP rating of "High" for its invasive tendencies. This hardy species spreads readily from landscaped areas into dune and scrub habitats, out competing native species for space, nutrients, and moisture.

Ruderal

Ruderal vegetation communities are also not described by Holland (1986), Sawyer et al. (2009), or Mayer and Laudenslayer (1988). This vegetation community is highly variable and contains a large component of bare soil or sand. Species found in this community are typical of disturbed areas between development, and are largely non-native, invasive, or ornamental, including wild oats (*Avena* ssp.), ripgut brome (*Bromus diandrus*), sweet alyssum, statice, and ice plant.

Sandmat Manzanita

A small patch of sandmat manzanita (*Arctostaphylos pumila*) was observed on an open parcel adjacent to the ranch to the north of Reservation Road. Other species observed in this area include black sage (*Salvia mellifera*), manzanita (*Arctostaphylos* sp.), and coast live oak (*Quercus agrifolia*).

Figure 3 Vegetation Communities and Land Cover Types

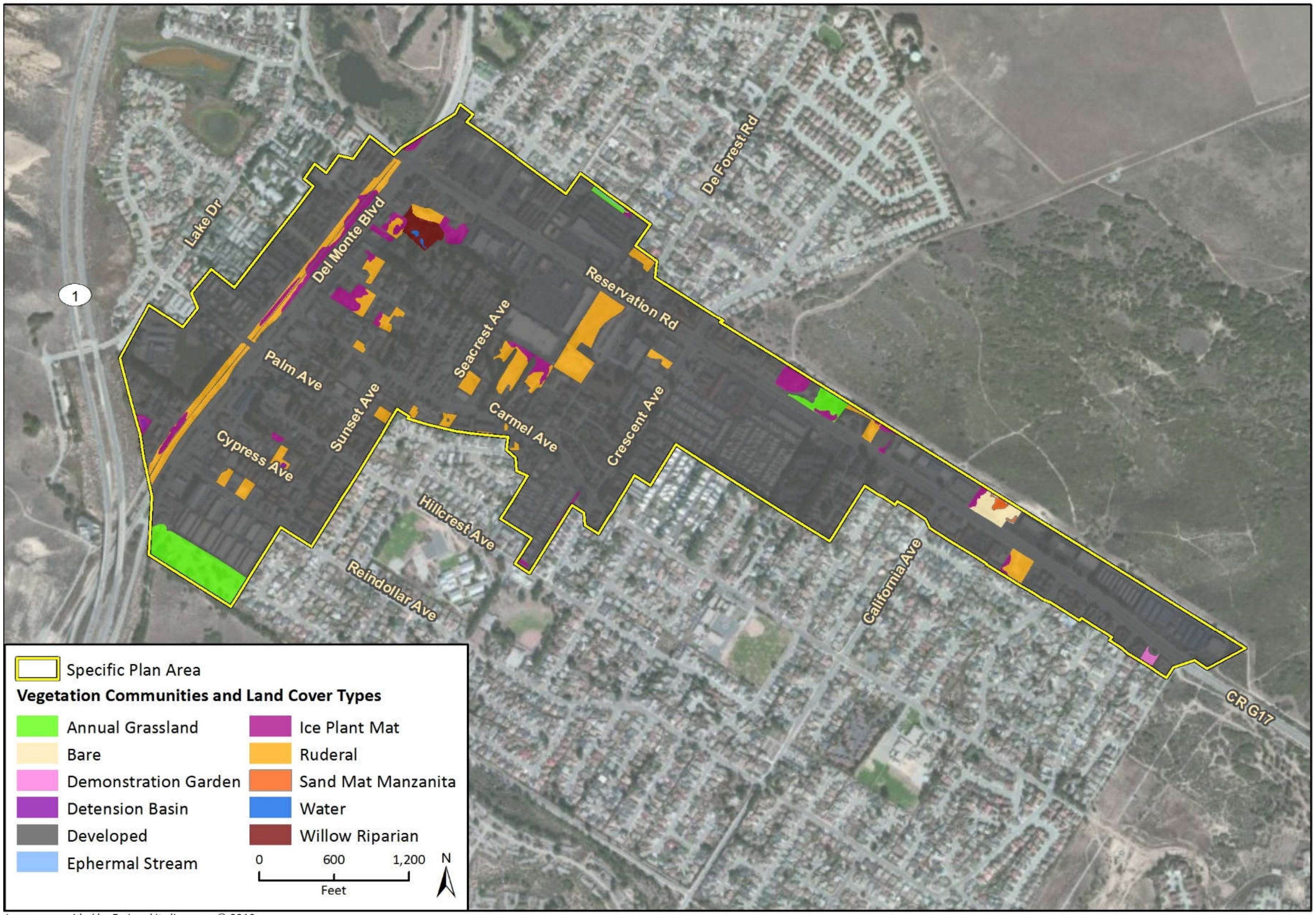

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Fig X Biological Resources

Annual Grassland

This community is typically comprised of grasses and forbs introduced during and since the Spanish colonial period. While some invasive plants may have been first introduced during the 16th century as Spanish explorers came to California's coast, it is likely that the majority of invasive plants were introduced after people of Old World descent began to settle in California. Non-native species are dominant, including annual grasses such as wild oats, ripgut brome, rattail fescue (*Festuca myuros*), Italian rye (*Festuca perennis*), and foxtail barley (*Hordeum murinum* var. *leporinum*).

Willow Riparian

This community occurs along the margins of Locke-Paddon Park and around a perennial pond on private property south of Styles Court and is dominated by arroyo willow (*Salix lasiolepis*) in tree form. Other trees in this community include Monterey cypress and occasional coast live oak trees. In the understory at Locke-Paddon Park California blackberry and coyote brush are present.

3.3 General Wildlife

Wildlife observed in the Specific Plan is consistent with urban disturbance tolerant species, including American crow (*Corvus brachyrhynchos*), anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), red-shouldered hawk (*Buteo lineatus*), and red-tailed hawk (*Buteo jamaicensis*). Parks and landscaped trees also provide habitat for migratory birds such as California towhee (*Melozone crissalis*), bushtit (*Psaltriparus minimus*), western scrub jay (*Aphelocoma californica*), and chestnut-backed chickadee (*Poecile rufescens*).

4 Sensitive Biological Resources

Local, state, and federal agencies regulate special status species and other sensitive biological resources and require an assessment of their presence or potential presence to be conducted on-site prior to the approval of proposed development on a property. This section discusses sensitive biological resources observed on the project site, and evaluates the potential for the project site to support additional sensitive biological resources. Assessments for the potential occurrence of special status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB, species occurrence records from other sites in the vicinity of the survey area, previous reports for the project site, and the results of surveys of the project site. The potential for each special status species to occur in the study area was evaluated according to the following criteria:

- **Not Expected.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime), and species would have been identifiable on-site if present (e.g., oak trees). Protocol surveys (if conducted) did not detect species.
- **Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site. Protocol surveys (if conducted) did not detect species.
- **Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded (e.g., CNDDB, other reports) on the site recently (within the last 5 years).

4.1 Special Status Species

4.1.1 Special Status Plant Species

Based on the database and literature review, 53 special status plants species were documented within the *Marina*, California USGS 7.5-minute topographic quadrangle (within which the Specific Plan area is located) and the six surrounding quadrangles. Thirty-nine (39) of these could be eliminated based on the absence of suitable habitat, lack of suitable soils, and existing development in the Specific Plan (see Appendix D for a species by species evaluation). Of the remaining 14 species, three (3) Federal and/or State listed plant species and three (3) non-listed species with a rare plant rank of 1B to 2B have a low potential to occur in the Specific Plan area. Eight (8) special status plant species are known to occur or have at least a moderate potential to occur within the vicinity of the Specific Plan area. With the exception of nesting birds, special status species would not be expected to occur in any portions of the Specific Plan area mapped as “developed.”

Federal and/or State Listed Species

- Monterey spineflower (*Chorizanthe pungens* var. *pungens*)
- Monterey gilia (*Gilia tenuiflora* ssp. *arenaria*)
- Robust spineflower (*Chorizanthe robusta* var. *robusta*)
- Seaside bird's-beak (*Cordylanthus rigidus* ssp. *littoralis*)
- Yadon's rein orchid (*Piperia yadonii*)

One special status plant species with a CRPR rank of 1B.2, sandmat manzanita (*Arctostaphylos pumila*), was observed in the Specific Plan and is considered present.

Two rare plants were observed in landscaping, Monterey cypress (*Hesperocyparis macrocarpa*) 1B.2, and Monterey Pine (*Pinus radiata*) 1B.1; however, these individuals occur as isolated remnants or occur as landscaping. Both species have special status only when they occur as part of a natural stand or woodland. They are protected by the City of Marina's municipal code however, which requires a permit for the removal of any tree with a diameter at breast height (DBH) of ten inches or more. No Federal or State listed plants were observed within the Specific Plan area.

The remaining six non-listed species include:

- Fort Ord spineflower (*Chorizanthe minutiflora*)
- Eastwood's goldenbush (Ericameria fasciculata)
- Sand-loving wallflower (*Erysimum ammophilum*)
- Kellogg's horkelia (*Horkelia cuneata* var. *sericea*)
- Point Reyes horkelia (*Horkelia marinensis*)
- Northern curly-leaved monardella (*Monardella sinuata* ssp. *Nigrescens*)

The limited portions of the Specific Plan area where natural vegetation communities occur generally provide marginal habitat due to development, landscaping, and the presence of non-native invasive species. Bare patches in ice plant mats and lawns provide sandy open habitat for dune species such as seaside bird's-beak, Monterey spineflower, and Monterey gilia. Remnant patches of chaparral species north of Reservation Road may also contain robust spineflower, and Yadon's rein-orchid.

4.1.2 Special Status Animal Species

Based on the database and literature review, 33 special status wildlife species were documented within the *Marina*, California USGS 7.5-minute topographic quadrangle (within which the Specific Plan area is located) and the six surrounding quadrangles. Twenty-six (26) of these could be eliminated based on the absence of suitable habitat (e.g., aquatic habitat, specific vegetation communities) and existing development in the Specific Plan area (see Appendix D). One (1) non-listed special status species was determined to have a low potential to occur in the Specific Plan area. The remaining six (6) species have low to high potential to occur based on the potential presence of suitable habitat and known occurrences

Species with potential to occur within the Specific Plan area include:

- Smith's blue butterfly (*Euphilotes enoptes smithi*) – Federally Endangered
- Tricolored blackbird (*Agelaius tricolor*) –State Threatened
- Northern California legless lizard (*Anniella pulchra*) – SSC

- Coast horned lizard (*Phrynosoma blainvillii*) – SSC
- Burrowing owl (*Athene cunicularia*) - SSC
- White-tailed kite (*Elanus leucurus*) - FP
- Monterey shrew (*Sorex ornatus salarius*) – SSC

Because these species have very specific habitat requirements, their potential to occur within the Specific Plan is restricted to undeveloped habitats and ruderal or landscaped areas adjacent to undeveloped habitat, particularly for small terrestrial species with limited mobility and small home ranges such as coast horned lizard, northern California legless lizard, and Monterey shrew. Smith's blue butterfly is dependent on its host plant coast buckheat (*Eriogonum latifolium*) and sea cliff buckwheat (*Eriogonum parvifolium*), which may occur in sandmat manzanita communities or on undeveloped areas north of Reservation Road. Suitable habitat for tricolored blackbird within the Specific Plan is restricted to willow riparian habitat at Locke-Paddon Park and the pond on private property. Burrowing owl is a highly mobile species which nests and roosts in California ground squirrel burrows. This species may utilize ruderal and grassland habitats on vacant lots within the Specific Plan, however this species also requires a sufficient prey base of insects, therefore smaller vacant lots and ruderal areas are likely unsuitable for burrowing owl.

4.1.3 Other Protected Species

Migratory birds protected by California Fish and Game Code were also observed in the Specific Plan. Trees, shrubs, buildings and other structures in the Specific Plan provide suitable nesting habitat for many migratory birds commonly found in developed areas.

4.2 Sensitive Plant Communities and Critical Habitats

Sensitive natural communities are vegetation types, associations, or sub-associations that support concentrations of special status plant and/or wildlife species, are of relatively limited distribution, and/or are of particular value to wildlife. According to the CDFW Vegetation Program, Alliances with State ranks of S1-S3 are considered to be imperiled, and thus, potentially of special concern. Natural communities with these ranks are generally addressed during CEQA environmental review with compensatory mitigation prescribed for impacts as applicable.

Sensitive natural communities documented within five miles of the Specific Plan area include:

- Central dune scrub
- Central maritime chaparral
- Valley needlegrass grassland

Sandmat manzanita (G1 S1) is considered a sensitive natural community by CDFW, however the sandmat manzanita observed in the Specific Plan is largely isolated from adjacent higher quality habitats and is highly disturbed.

4.3 Jurisdictional Waters and Wetlands

The Specific Plan area is located within the Salinas River watershed, which covers approximately 4,600 square miles from San Luis Obispo to Monterey County. No CDFW or USACE jurisdictional wetlands or waters are present in the Specific Plan area. Two small isolated stormwater retention basins were observed north of Cypress Avenue and southwest of San Pablo Court, which appear to be properly maintained (Figure 3). These stormwater features drain water from the street and surrounding development, no “bed,” “Bank,” “channel,” or riparian vegetation was observed at either basin. They are therefore not likely to be USACE or CDFW jurisdictional, but would potentially be considered a RWQCB jurisdictional stormwater feature under the Porter-Cologne Water Quality Control Act, which regulates discharge to waters of the State, including discharge of stormwater.

The edge of riparian vegetation at Locke-Paddon Park also falls within the Specific Plan and is likely to be jurisdictional under CDFW. A “pond” observed on aerial imagery on private property may also be USACE, RWQCB, or CDFW jurisdictional. Historical topographic maps of the area depict a wetland in this area prior to the surrounding development (USGS 2019). Additionally, a stormwater drainage runs above ground for approximately 325 feet south of Viking Lane.

4.4 Wildlife Movement

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations or those populations that are at risk of becoming isolated. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

The habitats within the link do not necessarily need to be the same as the habitats that are being linked. Rather, the link merely needs to contain sufficient cover and forage to allow temporary inhabitation by ground-dwelling species. Habitat linkages are contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending upon the species using a corridor, specific physical resources (such as rock outcroppings, vernal pools, or oak trees) may need to be located within the habitat link at certain intervals to allow slower-moving species to traverse the link. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a short period of time. Wildlife movement corridors can be both large and small scale.

The California Essential Habitat Connectivity Project commissioned by the California Department of Transportation (Caltrans) and CDFW; identifies “natural landscape blocks” which support native biodiversity and the “essential connectivity areas” which link them (Spencer et al., 2010). No essential connectivity areas or landscape blocks are mapped within the Specific Plan. There is some open space to the north of Reservation Road and former Fort Ord lands to the south and west, however, the extent of existing development has isolated the Specific Plan, and it is not likely to function as an essential connectivity area or an important regional wildlife movement corridor.

4.5 Resources Protected By Local Policies and Ordinances

Protected Trees

The City of Marina Municipal Code Chapter 17.51 (Tree Removal, Preservation and Protection) requires a tree removal permit for the removal of any tree within the city with a single stem six inches or more in diameter at breast height (DBH), or a multistemmed plant having an aggregate diameter of ten inches or more DBH, and any living woody plant which was planted as part of an approved compensation plan or landscaping plan. The City also designates landmark trees for protection, and the City Tree Committee maintains a list of designated landmark trees. No landmark trees occur within the Specific Plan.

4.6 Habitat Conservation Plans

The Specific Plan is not within any Habitat Conservation Plan (HCP) or other conservation plan areas.

5 Impact Analysis and Mitigation Measures

5.1 Special Status Species

The proposed project would have a significant effect on biological resources if it would:

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

State and/or federally listed animal species with the potential to occur in areas of species-specific, suitable natural habitat within the Specific Plan area include tricolored blackbird and Smith's blue butterfly. State and/or federally listed plant species with the potential to occur in areas of species-specific, suitable natural habitat within the Specific Plan area include seaside bird's-beak, Monterey gilia, robust spineflower, Yadon's rein orchid, and Monterey spineflower. Additionally, non-listed special status species, rare plants, and birds protected by California Fish and Game code have the potential to occur in areas of natural habitat and ruderal areas of the Specific Plan area. Special status species are most likely to occur in undeveloped or ruderal areas, however Monterey spineflower and Monterey gillia may occur in sandy openings within landscaped areas.

Construction activity associated with individual projects developed under the Specific Plan could include demolition, grading, vegetation removal, equipment and vehicle staging, parking, construction noise and construction staging. At the individual project level these activities have the potential to directly impact special status plant and wildlife species. Wildlife species may be injured or killed by construction activity if present during construction. Wildlife present in the Specific Plan or in adjacent areas could be impacted by construction noise and activity if that activity causes individuals to abandon breeding activity and increases competition with other individuals of the same species. Special status plant species would be directly impacted through clearing, grading and vegetation removal in vegetated portions of the Specific Plan area if those species are present.

Impacts may also occur if the quality of habitat were degraded by development in adjacent areas through the introduction of invasive weeds, human disturbance, and altered hydrology. Impacts to CRPR 1B and 2B plants are generally considered significant under CEQA if the loss of individuals represented a population-level impact that resulted in a loss of, or risk to an entire local or regional population. The impacts to the sensitive biological resources listed above and resulting from projects developed under the Specific Plan would potentially be significant under CEQA without mitigation. Implementation of measures BIO-1(a) through BIO-1(f) would reduce impacts to less than significant.

Mitigation Measures

BIO-1(a) Biological Resources Screening and Assessment

For projects proposed for development within the Specific Plan the City should engage a qualified biologist to perform a preliminary biological resource screening to determine whether the project has any potential to impact special status biological resources, inclusive of special status plants and animals, sensitive vegetation communities, jurisdictional waters (including creeks, drainages, streams, ponds, vernal pools, riparian areas and other wetlands), or biological resources protected under local or regional ordinances. If it is determined that the project has no potential to impact biological resources, no further action is required. If the project would have the potential to impact biological resources, prior to construction, a qualified biologist shall conduct a project-specific biological analysis to document the existing biological resources within a project footprint plus a minimum buffer of 100 feet around the project footprint, as is feasible, and to determine the potential impacts to those resources. If the project would have the potential to impact biological resources, the following mitigation measures [BIO-1(b) through BIO-1(f)] should be incorporated, as applicable, to reduce impacts to a less than significant. Pending the results of the project-specific biological analysis, design alterations, further technical studies (e.g., protocol surveys) and consultations with the USFWS, NMFS, CDFW, and/or other local, state, and federal agencies may be required. Note that specific surveys described in the mitigation measures below may be completed as part of the project-specific biological analysis where suitable habitat is present.

BIO-1(b) Special Status Plant Pre-Construction Survey

Surveys for special status plants should be completed by the project proponent prior to any vegetation removal, grubbing, or other construction activity (including staging and mobilization). The surveys should be floristic in nature, that is, every plant observed should be identified to species subspecies, or variety, sufficient to identify listed plants. The surveys should be seasonally timed to coincide with the target Federal and State listed species and rare plants identified above. All plant surveys should be conducted by a City-approved biologist during the appropriate blooming period during the year prior to initial ground disturbance. All special status plant species identified on-site should be mapped onto a site-specific aerial photograph or topographic map with the use of Global Positioning System (GPS) unit. Surveys should be conducted in accordance with the most current protocols established by the CDFW, USFWS, and the local jurisdictions if said protocols exist. A report of the survey results should be submitted to the implementing agency. If impacts to federal or state-listed species are identified for an individual project, consultation with CDFW and/or USFWS, as appropriate, may be required.

BIO-1(c) Special Status Plant Species Avoidance, Minimization, and Mitigation

If Federal and/or State listed species are found during special status plant pre-construction surveys [required under Mitigation Measure BIO-1(b)], avoidance of, or mitigation for impacts to, occupied habitat should be required. If populations of CRPR List 1B or 2 species are found during special status plant pre-construction surveys, the City-approved biologist should evaluate whether the loss of occupied areas would result in a local or regional population-level impact (i.e., jeopardize the continued existence of a local or regional population). Mitigation for regional population level impacts to rare plants should be required by the City. If feasible, the Proposed Project should be re-designed to avoid development in locations of Federal and/or State listed or CRPR List 1B or 2 species. Federal and/or State listed or CRPR List 1B or 2 species occurrences that are not within the immediate disturbance footprint and would be avoided, but which are located within 50 feet of disturbance limits, should have bright orange protective fencing installed at an appropriate distance (as determined by a qualified biologist) to ensure they are protected during construction activities.

If development cannot avoid Federally or State listed plants species, then USFWS and CDFW, as appropriate, should be consulted regarding the potential for salvage of individual plants or seek compensation (minimum compensation ratio of 1:1 for the impact area, with the conservation area of a similar density of individuals) for the loss of these individuals or their habitat either in an on-site or off-site preserve, through payments to an appropriate mitigation bank, or as otherwise determined in coordination with USFWS and CDFW. Project applicants should consult with USFWS and CDFW for the potential to salvage or "take" listed species and to determine if take authorization would be required by one or both agencies. Impacts to Federal and/or State listed or CRPR List 1B or 2 species would require adherence to Mitigation Measure BIO-1(c).

BIO-1(d) Restoration and Monitoring

If development cannot avoid Federal or State listed plant species, all impacts should be mitigated by the project applicant at a minimum ratio of 1:1 for areas occupied by the species. Ratios may be higher pending consultation with CDFW and/or USFWS for listed species. Restoration areas should be of a similar density of individuals as areas impacted Project activities. A restoration plan should be prepared by the project applicant and submitted to the City for review and approval. Documentation demonstrating consultation with CDFW and USFWS regarding impacts to federal or state listed species should be submitted to the City. Population level impacts to CRPR List 1B or 2 species should also be mitigated at a 1:1 ratio for occupied areas, and should also require a restoration plan in coordination with the City. The restoration plan(s) should include, at a minimum, the following components:

- Description of the project/affected species location(s) (i.e., location, responsible parties, areas to be impacted by habitat type)
- Compensatory mitigation [type(s) and area(s) species to be established, restored, enhanced, and/or preserved; specific functions and values of species type(s) to be established, restored, enhanced, and/or preserved]
- Description of the proposed compensatory mitigation site (location and size, ownership status, existing functions and values)
- Implementation plan for the compensatory mitigation site (rationale for expecting implementation success, responsible parties, schedule, site preparation, planting plan)
- Maintenance activities during the monitoring period, including weed removal as appropriate (activities, responsible parties, schedule)
- Monitoring plan for the compensatory mitigation site, including no less than quarterly monitoring for the first year (performance standards, target functions and values, target acreages to be established, restored, enhanced, and/or preserved, annual monitoring reports)
- Success criteria based on the goals and measurable objectives; said criteria to be, at a minimum, at least 80 percent survival of container plants and 30 percent relative cover by vegetation type
- An adaptive management program and remedial measures to address any shortcomings in meeting success criteria
- Notification of completion of compensatory mitigation and agency confirmation
- Contingency measures (initiating procedures, alternative locations for contingency compensatory mitigation, funding mechanism)

BIO-1(e) Special Status Wildlife Pre-Construction Surveys

GENERAL WILDLIFE SURVEYS

Pre-construction clearance surveys for northern California legless lizard and coast horned lizard should be conducted within 14 days prior to the start of construction (including staging and mobilization) in areas of suitable habitat. The surveys should cover the entire disturbance footprint plus a minimum 200-foot buffer within suitable habitat, where permissible, and should identify all special status animal species that may occur on-site. California legless lizard and coast horned lizard should be relocated from the site to a safe location within suitable habitat as near to the project area as possible by a qualified biologist.

BURROWING OWL SURVEYS

A qualified biologist should conduct pre-construction clearance surveys prior to ground disturbance activities within suitable natural habitats and ruderal areas to confirm the presence/absence of burrowing owls. The surveys should be consistent with the recommended survey methodology provided by CDFW (2012). Clearance surveys should be conducted within 14 days prior to construction and ground disturbance activities. If no burrowing owls are observed, no further actions are required. If burrowing owls are detected during the pre-construction clearance surveys, the following measures should apply:

- Avoidance buffers during the breeding and non-breeding season should be implemented in accordance with the CDFW (2012) and Burrowing Owl Consortium (1993) minimization mitigation measures.
- If avoidance of burrowing owls is not feasible, then additional measures such as passive relocation during the nonbreeding season and construction buffers of 200 feet during the breeding season should be implemented, in consultation with CDFW. In addition, a Burrowing Owl Exclusion Plan and Mitigation and Monitoring Plan will be developed by a qualified biologist in accordance with the CDFW (2012) and Burrowing Owl Consortium (1993).

SMITH'S BLUE BUTTERFLY HOST PLANT SURVEYS

Prior to grading and construction in undeveloped areas, an approved biologist should conduct surveys for seacliff buckwheat (*Eriogonum parvifolium*) and seaside buckwheat (*Eriogonum latifolium*), host plants of Smith's blue butterfly in areas of suitable habitat.

If Smith's blue butterfly host plants are not located, no further action is required. If host plants are located within proposed disturbance areas, they should be avoided if feasible. If avoidance is not feasible, focused surveys should be conducted to determine presence or absence of the butterfly species. This may include surveys during the adult flight period (mid-June through early September), and/or inspection of host plants for all life forms (egg, larva, pupa, and adult). If individuals of any life stage that may be impacted by the Proposed Project are detected during focused surveys, a permit for relocation should be obtained from USFWS, and they should be relocated by a USFWS permitted biologist.

REPORTING

A report of all pre-construction and pre-demolition survey results should be submitted to the City for its review prior to the start of demolition. The report should include a description of the survey methodology for each species, the environmental conditions at the time of the survey(s), the results of the survey, any requirements for addressing special status species identified during surveys, and the biological qualifications of the surveyors. The report should be accompanied by maps and figures showing the location of any special status species occurrences and associated avoidance buffers.

BIO-1(f) Biological Resources Avoidance and Minimization

The following measures should be applied to avoid impacts to sensitive species and biological resources. The project applicant should be responsible for implementing selected measures.

- Ground disturbance should be limited to the minimum necessary to complete the project. The limits of disturbance for each construction phase should be flagged. Areas of special biological concern within or adjacent to the limits of disturbance should have highly visible orange construction fencing installed between said area and the limits of disturbance.
- All construction occurring within or adjacent to natural habitats that may support Federally and/or State listed endangered/threatened species, State fully protected species, and/or special status species should have a qualified biological monitor present during all initial ground disturbing/vegetation clearing activities.
- No endangered/threatened species should be captured and relocated without express permission from the CDFW and/or USFWS.
- If at any time during construction an endangered, threatened, or fully protected species enters the construction site or otherwise may be impacted, all construction activities should cease. A CDFW/USFWS-approved biologist should document the occurrence and consult with the CDFW and USFWS, as appropriate, to determine whether it was safe for project activities to resume.
- At the end of each workday, excavations should be secured with cover or a ramp provided to prevent wildlife entrapment.
- All trenches, pipes, culverts or similar structures should be inspected for animals prior to burying, capping, moving, or filling.
- If night work is required, all construction lighting should be pointed down and directed only on the work area.
- The City should approve one or more qualified biologists to oversee and monitor biological compliance for the project. At least one qualified biologist should be present during all initial ground disturbing activities, including vegetation removal to recover special status animal species unearthed by construction activities.

5.2 Sensitive Plant Communities

The proposed project would have a significant effect on biological resources if it would:

b) *Have a substantial adverse impact 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 US Fish and Wildlife Service.*

The small patch of sandmat manzanita in the Specific Plan is isolated and highly degraded by the surrounding development and incursion of ice plant. This vegetation community has a limited distribution, largely restricted to coastal areas of Monterey County. It is locally common in the vicinity of the Specific Plan; however, given the higher quality chaparral habitat to the north of Reservation Road and within the Fort Ord National Monument, removal of a small patch of sandmat manzanita would not represent a significant impact to this vegetation community.

Mitigation Measures

No mitigation is required.

5.3 Jurisdictional Waters and Wetlands

The proposed project would have a significant effect on biological resources if it would:

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.*

Alteration of the two stormwater basins and the drainage would require authorization from the City of Marina and evaluation under the City's NPDES permit. The Specific Plan will include storm drainage improvements, which will likely be implemented under the City's NPDES permit. No project elements are planned that would alter or impact riparian vegetation at Locke-Paddon Park. Impacts to these features that resulted from development under the Specific Plan would therefore be less than significant. If alteration of the pond located on private property is proposed, a jurisdictional delineation and potential permitting would be required. Impacts to this feature may be significant but mitigable to less than significant.

BIO-2 Jurisdictional Delineation

If a proposed project under the Specific Plan would impact a potentially jurisdictional feature as determined at the biological scoping phase (Measure BIO-1[a]), a qualified biologist should complete a jurisdictional delineation. The jurisdictional delineation will determine the extent of the jurisdiction for CDFW, USACE, and/or RWQCB, and should be conducted in accordance with the requirement set forth by each agency. The result will be a preliminary jurisdictional delineation report that should be submitted to the implementing agency, USACE, RWQCB, and CDFW, as appropriate, for review and approval. Jurisdictional areas should be avoided to the maximum extent possible. If jurisdictional areas are expected to be impacted, then the RWQCB would require a Waste Discharge Requirements (WDRs) permit and/or Section 401 Water Quality Certification (depending upon whether or not the feature falls under federal jurisdiction). If CDFW asserts its jurisdictional authority, then a Streambed Alteration Agreement pursuant to Section 1600 et seq. of the CFGC would also be required prior to construction within the areas of CDFW jurisdiction. If the USACE asserts its authority, then a permit pursuant to Section 404 of the CWA would likely be required. Furthermore, a compensatory mitigation program should be implemented, and the measures set forth by the regulatory agencies during the permitting process. Compensatory mitigations for all permanent impacts to waters of the U.S. and waters of the state shall be completed at a ratio as required in applicable permits, but should not be less than a minimum ratio of 1:1. All temporary impacts to waters of the U.S. and waters of the state should be fully restored to natural condition.

5.4 Wildlife Movement

The proposed project would have a significant effect on biological resources if it would:

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

No significant corridors for wildlife movement occur within the Specific Plan and there are no policies related to wildlife movement in the Specific Plan. Therefore, there are no impacts to movement from development under the Specific Plan.

Mitigation Measures

No mitigation is required.

5.5 Local Policies and Ordinances

The proposed project would have a significant effect on biological resources if it would:

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

The Specific Plan includes an objective about urban forestry, which outlines the need for preservation of the City's trees while improving accessibility and aesthetics due to root upheaval and improper planting/pruning. The Specific Plan also includes a discussion of the City's tree committee and links to the City's recommended street tree species list. The strategies outlined for this objective include developing a street tree plan to ensure suitable species are incorporated into right of way improvements and properly maintained. This strategy also includes encouraging developers to preserve trees onsite. Tree removal as a result of proposed projects under the Specific Plan will be required to get approval from the City of Marina, and therefore would not conflict with the local tree policy and impacts would be less than significant.

Mitigation Measures

No mitigation is required.

5.6 Adopted or Approved Plans

The proposed project would have a significant effect on biological resources if it would:

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

There are no habitat conservation plans or natural community conservation plans that have been adopted in the Specific Plan area. Therefore, development facilitated by the Specific Plan would not conflict with any such plans and no impact would occur.

Mitigation Measures

No mitigation is required.

6 Limitations, Assumptions, and Use Reliance

This Biological Resources Assessment has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigation is limited by the scope of work performed. Reconnaissance biological surveys for certain taxa may have been conducted as part of this assessment but were not performed during a particular blooming period, nesting period, or particular portion of the season when positive identification would be expected if present, and therefore, cannot be considered definitive. The biological surveys are limited also by the environmental conditions present at the time of the surveys. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. In particular, mobile wildlife species could occupy the site on a transient basis, or re-establish populations in the future. Our field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from site reconnaissance, jurisdictional areas, review of CNDDB RareFind5, and specified historical and literature sources. Standard data sources relied upon during the completion of this report, such as the CNDDB, may vary with regard to accuracy and completeness. In particular, the CNDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

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Appendix A

Regulatory Setting

Regulatory Setting

Special status habitats are vegetation types, associations, or sub-associations that support concentrations of special status plant or animal species, are of relatively limited distribution, or are of particular value to wildlife.

Listed species are those taxa that are formally listed as endangered or threatened by the federal government (e.g. U.S. Fish and Wildlife Service [USFWS]), pursuant to the Federal Endangered Species Act (FESA) or as endangered, threatened, or rare (for plants only) by the State of California (i.e. California Fish and Game Commission), pursuant to the California Endangered Species Act or the California Native Plant Protection Act. Some species are considered rare (but not formally listed) by resource agencies, organizations with biological interests/expertise (e.g. Audubon Society, CNPS, The Wildlife Society), and the scientific community.

The following is a brief summary of the regulatory context under which biological resources are managed at the federal, state, and local levels. A number of federal and state statutes provide a regulatory structure that guides the protection of biological resources. Agencies with the responsibility for protection of biological resources within the project site include:

- U.S. Army Corps of Engineers (wetlands and other waters of the United States);
- Central Coast Regional Water Quality Control Board (waters of the State);
- U.S. Fish and Wildlife Service (federally listed species and migratory birds);
- California Department Fish and Wildlife (riparian areas, streambeds, and lakes; state-listed species; Species of Special Concern; nesting birds);
- City of Marina Municipal Code

U.S. Army Corps of Engineers

Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) has authority to regulate activities that could discharge fill of material into wetlands or other “waters of the United States.” Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters (typically a navigable water). The USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetland value or acres. In achieving the goals of the Clean Water Act, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any fill of wetlands that are hydrologically connected to jurisdictional waters would require a permit from the USACE prior to the start of work. Typically, when a project involves impacts to waters of the United States, the goal of no net loss of wetland acres or values is met through avoidance and minimization to the extent practicable, followed by compensatory mitigation involving creation or enhancement of similar habitats.

Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and the local Regional Water Quality Control Board (RWQCB) have jurisdiction over “waters of the State,” pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to "isolated" waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The RWQCB administers actions under this general order for isolated waters not subject to federal jurisdiction, and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the Clean Water Act for waters subject to federal jurisdiction.

United States Fish and Wildlife Service

The USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the Federal Endangered Species Act (FESA) (16 USC § 153 et seq.). Generally, the USFWS implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadramous species. Projects that would result in "take" of any federally threatened or endangered species are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of the FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. "Take" under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of the FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) derives its authority from the Fish and Game Code of California. The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 et. seq.) prohibits take of state listed threatened or endangered. Take under CESA is restricted to direct mortality of a listed species and the law does not prohibit indirect harm by way of habitat modification. Where incidental take would occur during construction or other lawful activities, CESA allows the CDFW to issue an Incidental Take Permit upon finding, among other requirements, that impacts to the species have been minimized and fully mitigated.

The CDFW also enforces Sections 3511, 4700, 5050, and 5515 of the Fish and Game Code, which prohibits take of species designated as Fully Protected. The CDFW is not allowed to issue an Incidental Take Permit for Fully Protected species; therefore, impacts to these species must be avoided.

California Fish and Game Code sections 3503, 3503.5, and 3513 describe unlawful take, possession, or destruction of native birds, nests, and eggs. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs. Section 3513 makes it a state-level office to take any bird in violation of the federal Migratory Bird Treaty Act. CDFW administers these requirements.

Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The SSC category is intended by the

CDFW for use as a management tool to include these species in special consideration when decisions are made concerning the development of natural lands. The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Effective in 2015, CDFW promulgated regulations (14 CCR 786.9) under the authority of the NPPA, establishing that the CESA's permitting procedures would be applied to plants listed under the NPPA as "Rare." With this change, there is little practical difference for the regulated public between plants listed under CESA and those listed under the NPPA.

Perennial, intermittent, and ephemeral streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 *et seq*. of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over activities that divert, obstruct, or alter the channel, bed, or bank of any river, stream or lake.

Fort Ord Habitat Management Plan

The Fort Ord Habitat Management Plan (HMP) was published by the USACE in 1997 in compliance with the USFWS final Biological Opinion for disposal and reuse of former Fort Ord lands. The HMP establishes guidelines for the conservation and management of plant and wildlife species and their habitat that occur on former Fort Ord lands. The HMP promotes preservation, enhancement, and restoration of habitat and populations of HMP covered species while allowing development on selected properties that promotes economic recovery after closure of the fort.

Local Jurisdiction

City of Marina Municipal Code

The City of Marina Municipal Code Chapter 17.51 (Tree Removal, Preservation and Protection) requires a tree removal permit for the removal of any tree within the city with a single stem six inches or more in diameter at breast height (DBH), or a multistemmed plant having an aggregate diameter of ten inches or more DBH, and any living woody plant which was planted as part of an approved compensation plan or landscaping plan. Conditions imposed on the removal may include, but would not be limited to, one or more of the following:

1) Preparation of a tree removal and protection plan, including tree protection guidelines.
2) A compensation plan requiring the replacement or placement of additional trees on the property and/or the payment to the city to fund the purchase, planting, and maintenance of off-site replacement trees.
3) Preparation of a site restoration plan requiring restoration of ground surface area in the vicinity of tree removals.

Additionally, section 17.51.070 provides for the protection of Landmark trees and landmark tree stands. Landmark trees and landmark tree stands are defined by the City as;

1) Prominently visible from public streets, public parking areas, parks or open space, from a minimum distance of one hundred feet; and
2) Indicate at least a seventy percent chance of surviving more than ten years, and be able to be maintained without excessive threat to the public health, safety and welfare.

Landmark trees and landmark tree stands must also meet one of the following criteria:

1) Possesses special beauty, or horticultural or historic interest;
2) Is of such substantial size or prominence that it has significant visibility from city streets, parks or open space;
3) Is of such substantial size that it makes a significant contribution to the forested skyline of the city;
4) Is a rare or unusual species for this area; and
5) Is a particularly outstanding representative of the species.

Applications for the removal of landmark trees and landmark tree stands must be reviewed and approved by the City Planning Commission and tree committee.

City of Marina General Plan

The City of Marina General Plan (GP) includes policies to provide "Habitat Reserves and Other Open Space for the protection of important habitat areas, scenic areas, and other areas of natural open space." Under the GP areas designated as "Habitat Reserve and Other Open Space" will be permanently maintained to "protect significant plants and wildlife inhabiting these areas." These areas include;

1. Riparian habitats and vegetation along the Salinas River;
2. Coastal Strand and Dunes;
3. 1,160 acres of maritime chaparral, coastal scrub, and coast live oak woodland designated for protection within the University of California Natural Reserve System, a 124 acre reserve site and adjacent land on Armstrong Ranch, 160 acres within the East Garrison Reserve, a 227 acre reserve south of Imjin Road, and a 50 acre reserve located along the east side of Highway 1 near the planned extension of Del Monte Boulevard; and
4. Wetlands, including habitat at the Armstrong Ranch to preserve vernal pools. The GP also requires a biological field survey to determine if additional vernal ponds exist prior to development on the Armstrong Ranch. If vernal pools are present, development must preserve vernal pools or provide either for the replacement of habitat. Several ponds in the developed areas of the City are also protected as open space.

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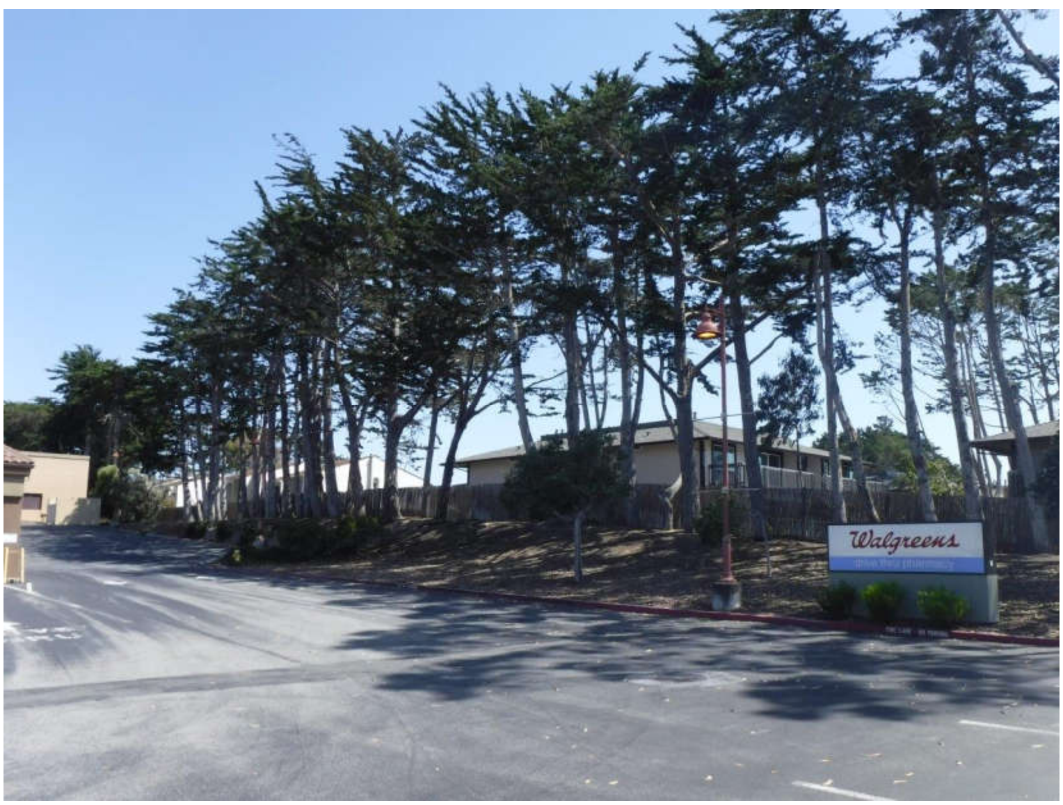
Appendix B

Site Photographs

Photograph 1. A detention basin on Cypress Avenue, facing east

Photograph 2. Annual grassland south of Reindollar Avenue, facing east

Photograph 3. A vacant lot with ruderal vegetation, facing south



Photograph 4. Landscaped Monterey cypress between commercial and residential development, facing south

Photograph 5. The pond and willow riparian vegetation on private property, facing west

Photograph 6. Reservation Road near the east end of the Specific Plan, facing west

Photograph 7. A parcel containing sandmat manzanita, bare ground, and ice plant mat, facing west

Photograph 8. The drainage south of Viking Avenue, facing east

Appendix C

Special Status Species Evaluation Tables

Special Status Plant and Lichen Species in the Regional Vicinity of the Project Site

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Agrostis lacuna-vernalis vernal pool bent grass	None/None G1/S1 1B.1	Vernal pools. In mima mound areas or on the margins of vernal pools. 125-150 m. annual herb. Blooms Apr-May	Not Expected	Vernal Pools are not present.
Allium hickmanii Hickman's onion	None/None G2/S2 1B.2	Closed-cone coniferous forest, chaparral, coastal scrub, coastal prairie, cismontane woodland. Sandy loam, damp ground and vernal swales; mostly in grassland though can be associated with chaparral or woodland. 5-200 m. perennial bulbiferous herb. Blooms Mar-May	Not Expected	Suitable habitats are not present.
Arctostaphylos hookeri ssp. *hookeri* Hooker's manzanita	None/None G3T2/S2 1B.2	Chaparral, coastal scrub, closed-cone coniferous forest, cismontane woodland. Sandy soils, sandy shales, sandstone outcrops. 30-550 m. perennial evergreen shrub. Blooms Jan-Jun	Not Expected	Suitable habitats are not present.
Arctostaphylos montereyensis Toro manzanita	None/None G2?/S2? 1B.2	Chaparral, cismontane woodland, coastal scrub. Sandy soil, usually with chaparral associates. 45-765 m. perennial evergreen shrub. Blooms Feb-Mar	Not Expected	Suitable habitats are not present.
Arctostaphylos pajaroensis Pajaro manzanita	None/None G1/S1 1B.1	Chaparral. Sandy soils. 30-155 m. perennial evergreen shrub. Blooms Dec-Mar	Not Expected	Suitable habitats are not present.
Arctostaphylos pumila sandmat manzanita	None/None G1/S1 1B.2	Closed-cone coniferous forest, chaparral, cismontane woodland, coastal dunes, coastal scrub. On sandy soil with other chaparral associates. 3-210 m. perennial evergreen shrub. Blooms Feb-May	Present	A small patch of Sandmat manzanita was observed in the Specific Plan north of Reservation Road.
Astragalus tener var. *tener* alkali milk-vetch	None/None G2T1/S1 1B.2	Alkali playa, valley and foothill grassland, vernal pools. Low ground, alkali flats, and flooded lands; in annual grassland or in playas or vernal pools. 0-168 m. annual herb. Blooms Mar-Jun	Not Expected	Vernal Pools and alkali soils are not present, and there are no known occurrences within 5 miles.
Astragalus tener var. *titi* coastal dunes milk-vetch	Endangered/ Endangered G2T1/S1 1B.1	Coastal bluff scrub, coastal dunes, coastal prairie. Moist, sandy depressions of bluffs or dunes along and near the Pacific Ocean; one site on a clay terrace. 1-45 m. annual herb. Blooms Mar-May	Not Expected	Natural dune habitats and moist soils are not present, and there are no known occurrences within 5 miles.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Bryoria spiralifera twisted horsehair lichen	None/None G3/S1S2 1B.1	North coast coniferous forest. Usually on conifers. 0-30 m. fruticose lichen (epiphytic).	Not Expected	Coniferous forests are not present, and there are no known occurrences within 5 miles.
Castilleja ambigua var. *insalutata* pink Johnny-nip	None/None G4T2/S2 1B.1	Coastal bluff scrub, coastal prairie. 0-100 m. annual herb (hemiparasitic). Blooms May-Aug	Not Expected	Natural dune habitats are not present.
Centromadia parryi ssp. *congdonii* Congdon's tarplant	None/None G3T2/S2 1B.1	Valley and foothill grassland. Alkaline soils, sometimes described as heavy white clay. 0-230 m. annual herb. Blooms May-Oct(Nov)	Not Expected	Suitable habitats and alkaline soils are not present, and there are no known occurrences within 5 miles.
Chorizanthe minutiflora Fort Ord spineflower	None/None G1/S1 1B.2	Coastal scrub, chaparral (maritime). Sandy, openings. 60-145 m. annual herb. Blooms Apr-Jul	Low Potential	Sandy soils are present and there are 4 known occurrences within 5 miles.
Chorizanthe pungens var. *pungens* Monterey spineflower	Threatened/ None G2T2/S2 1B.2	Coastal dunes, chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Sandy soils in coastal dunes or more inland within chaparral or other habitats. 0-170 m. annual herb. Blooms Apr-Jun(Jul-Aug)	High Potential	Sandy soils are present and there are 12 known occurrences within 5 miles, including areas directly adjacent to the Specific Plan.
Chorizanthe robusta var. *robusta* robust spineflower	Endangered/ None G2T1/S1 1B.1	Cismontane woodland, coastal dunes, coastal scrub, chaparral. Sandy terraces and bluffs or in loose sand. 9-245 m. annual herb. Blooms Apr-Sep	Low Potential	Sandy soils are present, however there are no known occurrences within 5 miles.
Clarkia jolonensis Jolon clarkia	None/None G2/S2 1B.2	Cismontane woodland, chaparral, coastal scrub, riparian woodland. 10-1280 m. annual herb. Blooms Apr-Jun	Not Expected	Suitable habitats are not present.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Collinsia multicolor San Francisco collinsia	None/None G2/S2 1B.2	Closed-cone coniferous forest, coastal scrub. On decomposed shale (mudstone) mixed with humus; sometimes on serpentine. 30-275 m. annual herb. Blooms (Feb)Mar-May	Not Expected	Suitable habitats on shale soils are not present, and there are no known occurrences within 5 miles.
Cordylanthus rigidus ssp. *littoralis* seaside bird's-beak	None/ Endangered G5T2/S2 1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub, coastal dunes. Sandy, often disturbed sites, usually within chaparral or coastal scrub. 30-520 m. annual herb (hemiparasitic). Blooms Apr-Oct	Low Potential	Sandy soils and disturbed sites are present, and there are 9 known occurrences within 5 miles.
Delphinium californicum ssp. *interius* Hospital Canyon larkspur	None/None G3T3/S3 1B.2	Cismontane woodland, chaparral, coastal scrub. In wet, boggy meadows, openings in chaparral and in canyons. 195-1095 m. perennial herb. Blooms Apr-Jun	Not Expected	Suitable habitats in wet areas are not present, and there are no known occurrences within 5 miles.
Delphinium hutchinsoniae Hutchinson's larkspur	None/None G2/S2 1B.2	Broadleafed upland forest, chaparral, coastal prairie, coastal scrub. On semi-shaded, slightly moist slopes, usually west-facing. 15-535 m. perennial herb. Blooms Mar-Jun	Not Expected	Suitable habitats in wet areas are not present, and there are no known occurrences within 5 miles.
Delphinium umbraculorum umbrella larkspur	None/None G3/S3 1B.3	Cismontane woodland, chaparral. Mesic sites. 215-2075 m. perennial herb. Blooms Apr-Jun	Not Expected	Suitable habitats in wet areas are not present, and there are no known occurrences within 5 miles.
Ericameria fasciculata Eastwood's goldenbush	None/None G2/S2 1B.1	Closed-cone coniferous forest, chaparral (maritime), coastal scrub, coastal dunes. In sandy openings. 30-215 m. perennial evergreen shrub. Blooms Jul-Oct	High Potential	Sandy soils are present and there are 9 known occurrences within 5 miles, one of which includes the eastern end of the Specific Plan area, at the corner of Salinas Ave and Reservation Rd.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Eriogonum nortonii Pinnacles buckwheat	None/None G2/S2 1B.3	Chaparral, valley and foothill grassland. Sandy soils; often on recent burns; western Santa Lucias. 90-975 m. annual herb. Blooms (Apr)May-Aug(Sep)	Not Expected	Suitable habitats are not present, and there are no known occurrences within 5 miles.
Erysimum ammophilum sand-loving wallflower	None/None G2/S2 1B.2	Chaparral (maritime), coastal dunes, coastal scrub. Sandy openings. 5-130 m. perennial herb. Blooms Feb-Jun	High Potential	Sandy soils are present and there are 15 known occurrences within 5 miles, one of which includes the undeveloped area south of Reindollar Ave.
Erysimum menziesii Menzies' wallflower	Endangered/ Endangered G1/S1 1B.1	Coastal dunes. Localized on dunes and coastal strand. 1-25 m. perennial herb. Blooms Mar-Sep	Not Expected	Natural dune habitats are not present.
Fritillaria liliacea fragrant fritillary	None/None G2/S2 1B.2	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland. Often on serpentine; various soils reported though usually on clay, in grassland. 3-400 m. perennial bulbiferous herb. Blooms Feb-Apr	Not Expected	Suitable habitats on serpentine soils are not present, and there are no known occurrences within 5 miles.
Gilia tenuiflora ssp. *arenaria* Monterey gilia	Endangered/ Threatened G3G4T2/S2 1B.2	Coastal dunes, coastal scrub, chaparral (maritime), cismontane woodland. Sandy openings in bare, wind-sheltered areas. Often near dune summit or in the hind dunes; two records from Pleistocene inland dunes. 5-245 m. annual herb. Blooms Apr-Jun	High Potential	Sandy soils are present and there are 15 known occurrences within 5 miles, one of which includes the eastern end of the Specific Plan area, at the corner of Salinas Ave and Reservation Rd. A second occurrence also crosses the Specific Plan area south of Reindollar Ave.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Hesperocyparis goveniana Gowen cypress	Threatened/ None G1/S1 1B.2	Closed-cone coniferous forest, chaparral. Coastal terraces; usually in sandy soils; sometimes with Monterey pine, bishop pine. 100-125 m. perennial evergreen tree.	Not Expected	Natural coniferous forest and chaparral habitats are not present, and there are no known occurrences within 5 miles.
Hesperocyparis macrocarpa Monterey cypress	None/None G1/S1 1B.2	Closed-cone coniferous forest. Granitic soils. 10-20 m. perennial evergreen tree.	Present (landscaped)	This species is present in the Specific Plan area as a commonly cultivated species.
Holocarpha macradenia Santa Cruz tarplant	Threatened/ Endangered G1/S1 1B.1	Coastal prairie, coastal scrub, valley and foothill grassland. Light, sandy soil or sandy clay; often with nonnatives. 10-220 m. annual herb. Blooms Jun-Oct	Not Expected	Suitable habitats are not present, and there are no known occurrences within 5 miles.
Horkelia cuneata var. *sericea* Kellogg's horkelia	None/None G4T1?/S1? 1B.1	Closed-cone coniferous forest, coastal scrub, coastal dunes, chaparral. Old dunes, coastal sandhills; openings. Sandy or gravelly soils. 5-430 m. perennial herb. Blooms Apr-Sep	High Potential	Sandy soils are present and there are 12 known occurrences within 5 miles, one of which occurs approximately 0.2 miles south of the Specific Plan area along Hwy 1.
Horkelia marinensis Point Reyes horkelia	None/None G2/S2 1B.2	Coastal dunes, coastal prairie, coastal scrub. Sandy flats and dunes near coast; in grassland or scrub plant communities. 2-775 m. perennial herb. Blooms May-Sep	Low Potential	Sandy soils are present and there is 1 known occurrence just west of the Specific Plan area at the
Lasthenia conjugens Contra Costa goldfields	Endangered/ None G1/S1 1B.1	Valley and foothill grassland, vernal pools, alkaline playas, cismontane woodland. Vernal pools, swales, low depressions, in open grassy areas. 1-450 m. annual herb. Blooms Mar-Jun	Not Expected	Vernal Pools are not present.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Layia carnosa beach layia	Endangered/ Endangered G2/S2 1B.1	Coastal dunes, coastal scrub. On sparsely vegetated, semi-stabilized dunes, usually behind foredunes. 0-30 m. annual herb. Blooms Mar-Jul	Not Expected	Native dune communities are not present and the are no known occurrences of this species within 5 miles.
Legenere limosa legenere	None/None G2/S2 1B.1	Vernal pools. In beds of vernal pools. 1-1005 m. annual herb. Blooms Apr-Jun	Not Expected	Vernal Pools are not present.
Lupinus tidestromii Tidestrom's lupine	Endangered/ Endangered G1/S1 1B.1	Coastal dunes. Partially stabilized dunes, immediately near the ocean. 4-25 m. perennial rhizomatous herb. Blooms Apr-Jun	Not Expected	Native dune communities are not present and the are no known occurrences of this species within 5 miles.
Malacothamnus palmeri var. *involucratus* Carmel Valley bush-mallow	None/None G3T2Q/S2 1B.2	Cismontane woodland, chaparral, coastal scrub. Talus hilltops and slopes, sometimes on serpentine. Fire dependent. 5-520 m. perennial deciduous shrub. Blooms Apr-Oct	Not Expected	Suitable habitats and soils are not present and the are no known occurrences of this species within 5 miles.
Malacothamnus palmeri var. *palmeri* Santa Lucia bush-mallow	None/None G3T2Q/S2 1B.2	Chaparral. Dry rocky slopes, mostly near summits, but occasionally extending down canyons to the sea. 3-670 m. perennial deciduous shrub. Blooms May-Jul	Not Expected	Suitable habitats and soils are not present and the are no known occurrences of this species within 5 miles.
Malacothrix saxatilis var. *arachnoidea* Carmel Valley malacothrix	None/None G5T2/S2 1B.2	Chaparral, coastal scrub. Rock outcrops or steep rocky roadcuts. 30-1040 m. perennial rhizomatous herb. Blooms (Mar)Jun-Dec	Not Expected	Suitable habitats and soils are not present and the are no known occurrences of this species within 5 miles.
Meconella oregana Oregon meconella	None/None G2G3/S2 1B.1	Coastal prairie, coastal scrub. Open, moist places. 60-640 m. annual herb. Blooms Mar-Apr	Not Expected	Suitable habitats and moist soils are not present.
Microseris paludosa marsh microseris	None/None G2/S2 1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 3-610 m. perennial herb. Blooms Apr-Jun(Jul)	Not Expected	Suitable habitats are not present.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Monardella sinuata ssp. *nigrescens* northern curly-leaved monardella	None/None G3T2/S2 1B.2	Coastal dunes, coastal scrub, chaparral, lower montane coniferous forest. Sandy soils. 10-245 m. annual herb. Blooms (Apr)May-Jul(Aug-Sep)	Low potential	Sandy soils are present and there are 4 known occurrences within 5 mile, however the habitats within the Specific Plan area are heavily disturbed.
Monolopia gracilens woodland woollythreads	None/None G3/S3 1B.2	Chaparral, valley and foothill grassland, cismontane woodland, broadleafed upland forest, North Coast coniferous forest. Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns, but may have only weak affinity to serpentine. 120-975 m. annual herb. Blooms (Feb)Mar-Jul	Not Expected	Suitable habitats and soils are not present and the are no known occurrences of this species within 5 miles.
Pinus radiata Monterey pine	None/None G1/S1 1B.1	Closed-cone coniferous forest, cismontane woodland. Three primary stands are native to California. Dry bluffs and slopes. 60-125 m. perennial evergreen tree.	Present (landscaped)	This species is present in the Specific Plan area as a commonly cultivated species.
Piperia yadonii Yadon's rein orchid	Endangered/ None G1/S1 1B.1	Closed-cone coniferous forest, chaparral, coastal bluff scrub. On sandstone and sandy soil, but poorly drained and often dry. 10-505 m. perennial herb. Blooms (Feb)May-Aug	Low Potential	Sandy soils are present and there is a known occurrence approximately 250 feet south of the Specific Plan area, however the habitats within the Specific Plan area are heavily disturbed.
Plagiobothrys chorisianus var. *chorisianus* Choris' popcornflower	None/None G3T1Q/S1 1B.2	Chaparral, coastal scrub, coastal prairie. Mesic sites. 2-705 m. annual herb. Blooms Mar-Jun	Not Expected	Suitable habitats and moist soils are not present.
Potentilla hickmanii Hickman's cinquefoil	Endangered/ Endangered G1/S1 1B.1	Coastal bluff scrub, closed-cone coniferous forest, meadows and seeps, marshes and swamps. Freshwater marshes, seeps, and small streams in open or forested areas along the coast. 5-125 m. perennial herb. Blooms Apr-Aug	Not Expected	Suitable habitats and mesic sites are not present and the are no known occurrences of this species within 5 miles.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Ramalina thrausta angel's hair lichen	None/None G5?/S2S3 2B.1	North coast coniferous forest. On dead twigs and other lichens. 75-430 m. fruticose lichen (epiphytic).	Not Expected	Suitable habitats not present and the are no known occurrences of this species within 5 miles.
Rosa pinetorum pine rose	None/None G2/S2 1B.2	Closed-cone coniferous forest, cismontane woodland. 5-1090 m. perennial shrub. Blooms May-Jul	Not Expected	Suitable habitats are not present and the are no known occurrences of this species within 5 miles.
Stebbinsoseris decipiens Santa Cruz microseris	None/None G2/S2 1B.2	Broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland. Open areas in loose or disturbed soil, usually derived from sandstone, shale or serpentine, on seaward slopes. 90-750 m. annual herb. Blooms Apr-May	Not Expected	Suitable habitats are not present and the are no known occurrences of this species within 5 miles.
Trifolium buckwestiorum Santa Cruz clover	None/None G2/S2 1B.1	Coastal prairie, broadleafed upland forest, cismontane woodland. Moist grassland. Gravelly margins. 30-550 m. annual herb. Blooms Apr-Oct	Not Expected	Suitable habitats are not present.
Trifolium hydrophilum saline clover	None/None G2/S2 1B.2	Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. 1-335 m. annual herb. Blooms Apr-Jun	Not Expected	Suitable habitats and mesic sites are not present and the are no known occurrences of this species within 5 miles.
Trifolium polyodon Pacific Grove clover	None/Rare G1/S1 1B.1	Closed-cone coniferous forest, meadows and seeps, coastal prairie, valley and foothill grassland. Along small springs and seeps in grassy openings. 5-260 m. annual herb. Blooms Apr-Jun(Jul)	Not Expected	Suitable habitats are not present and the are no known occurrences of this species within 5 miles.
Trifolium trichocalyx Monterey clover	Endangered/ Endangered G1/S1 1B.1	Closed-cone coniferous forest. Openings, burned areas, and roadsides. Sandy soils. 60-210 m. annual herb. Blooms Apr-Jun	Not Expected	Suitable habitats are not present and the are no known occurrences of this species within 5 miles.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale

Regional Vicinity refers to within a 7-quad search radius of site.

FE = Federally Endangered FT = Federally Threatened FC = Federal Candidate Species

SE = State Endangered ST = State Threatened SC = State Candidate SR = State Rare

CRPR (CNPS California Rare Plant Rank)

1A=Presumed Extinct in California

1B=Rare, Threatened, or Endangered in California and elsewhere

2A=Plants presumed extirpated in California, but more common elsewhere

2B=Plants Rare, Threatened, or Endangered in California, but more common elsewhere

CRPR Threat Code Extension

.1=Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)

.2=Fairly endangered in California (20-80% occurrences threatened)

.3=Not very endangered in California (<20% of occurrences threatened)

Special Status Animal Species in the Regional Vicinity of the Project Site

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Invertebrates				
Bombus crotchii Crotch bumble bee	None/State Candidate Endangered G2/S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia*, and *Eriogonum*.	Not Expected	There are no known occurrences of this species within 5 miles.
Bombus occidentalis western bumble bee	None/SCE G3/S1	Once common and widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.	Not Expected	There is one known occurrence of this species within 5 miles, however suitable natural habitats are not present, and the Specific Plan area is largely developed.
Danaus plexippus pop. 1 monarch - California overwintering population	None/None G4T2T3/S2S3	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	Not Expected	There are no known occurrences of wintering monarchs this species within 5 miles.
Euphilotes enoptes smithi Smith's blue butterfly	Endangered/None G5T1T2/S1S2	Most commonly associated with coastal dunes & coastal sage scrub plant communities in Monterey & Santa Cruz counties. Hostplant: *Eriogonum latifolium* and *Eriogonum parvifolium* are utilized as both larval and adult food plants.	High Potential in undeveloped areas	There are 5 known occurrences within 5 mile one of which is approximately 773 feet west of the Specific Plan area. One occurrence of host plant *Eriogonum latifolium*, was also reported from just north of the Specific Plan area adjacent to the small patch of sandmat manzanita.
Fish				
Eucyclogobius newberryi tidewater goby	Endangered/None G3/S3 SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	Not Expected	Suitable Aquatic habitats are not present.
Lavinia exilicauda harengus Monterey hitch	None/None G4T3/S3 SSC	Aquatic, Klamath/North coast flowing waters, Klamath/North coast standing waters, Riparian forest.	Not Expected	Suitable Aquatic habitats are not present.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Oncorhynchus mykiss irideus pop. 9 steelhead - south-central California coast DPS	Threatened/None G5T2Q/S2	Federal listing refers to runs in coastal basins from the Pajaro River south to, but not including, the Santa Maria River.	Not Expected	Suitable Aquatic habitats are not present and the are no known occurrences of this species within 5 miles.
Spirinchus thaleichthys longfin smelt	Candidate Threatened G5/S1 SSC	Euryhaline, nektonic & anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.	Not Expected	Suitable Aquatic habitats are not present and the are no known occurrences of this species within 5 miles.
Reptiles				
Anniella pulchra northern California legless lizard	None/None G3/S3 SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	High Potential in undeveloped areas	Suitable sandy soils are present and there are 27 known occurrences within 5 miles, including one within the Specific Plan area.
Emys marmorata western pond turtle	None/None G3G4/S3 SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Not Expected	The Specific Plan area does not contain suitable ponds or connectivity to suitable ponds.
Phrynosoma blainvillii coast horned lizard	None/None G3G4/S3S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	High Potential in undeveloped areas	Suitable sandy soils are present and there are 5 known occurrences within 5 miles.
Thamnophis hammondii two-striped gartersnake	None/None G4/S3S4 SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	Not Expected	Suitable Aquatic habitats are not present and the are no known occurrences of this species within 5 miles.
Amphibians				
Ambystoma californiense California tiger salamander	Threatened/ Threatened G2G3/S2S3 WL	Central Valley DPS federally listed as threatened. Santa Barbara and Sonoma counties DPS federally listed as endangered. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	Not Expected	Suitable breeding habitats are not present and there is no connectivity to populations on the former Fort Ord.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Ambystoma macrodactylum croceum Santa Cruz long-toed salamander	Endangered/ Endangered G5T1T2/S1S2 FP	Wet meadows near sea level in a few restricted locales in Santa Cruz and Monterey counties. Aquatic larvae prefer shallow (<12 inches) water, using clumps of vegetation or debris for cover. Adults use mammal burrows.	Not Expected	Suitable Aquatic habitats are not present and the are no known occurrences of this species within 5 miles.
Rana boylii foothill yellow-legged frog	None/Candidate Threatened G3/S3 SSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Not Expected	Suitable Aquatic habitats are not present and the are no known occurrences of this species within 5 miles.
Rana draytonii California red-legged frog	Threatened/None G2G3/S2S3 SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Not Expected	There is one occurrence within 5 miles, from the Salinas River approximately 2.6 miles north of the Specific Plan area, however suitable Aquatic habitats are not present and agricultural and airport development are likely to block movement from the river.
Spea hammondii western spadefoot	None/None G3/S3 SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Not Expected	Suitable habitats are not present and the are no known occurrences of this species within 5 miles.
Taricha torosa Coast Range newt	None/None G4/S4 SSC	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats & will migrate over 1 km to breed in ponds, reservoirs & slow moving streams.	Not Expected	Suitable habitats are not present and the are no known occurrences of this species within 5 miles.
Birds				
Agelaius tricolor tricolored blackbird	None/Threatened G2G3/S1S2 SSC	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	Moderate Potential at Locke-Paddon Park only	There is one known occurrence that overlaps the Specific Plan area at Locke-Paddon Park, however it only overlaps a small area.
Asio flammeus short-eared owl	None/None G5/S3 SSC	Found in swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields. Tule patches/tall grass needed for nesting/daytime seclusion. Nests on dry ground in depression concealed in vegetation.	Not Expected	Suitable habitats are not present and the are no known occurrences of this species within 5 miles.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Athene cunicularia burrowing owl	None/None G4/S3 SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Moderate Potential in undeveloped areas	There is a known occurrence within the Specific Plan area, however the Specific Plan is mostly developed, with small isolated patches of suitable habitat.
Buteo regalis ferruginous hawk	None/None G4/S3S4 WL	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	Not Expected	Suitable foraging habitat occurs in the open grasslands and agricultural lands to the north of the Specific Plan and this species is known to winter there, however vacant lots and open spaces within the Specific Plan are too small to be considered foraging habitat for large raptors.
Charadrius alexandrinus nivosus western snowy plover	Threatened/None G3T3/S2S3 SSC	Sandy beaches, salt pond levees & shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	Not Expected	Suitable nesting habitat is not present.
Coturnicops noveboracensis yellow rail	None/None G4/S1S2 SSC	Summer resident in eastern Sierra Nevada in Mono County. Freshwater marshlands.	Not Expected	Suitable marsh habitat is not present.
Cypseloides niger black swift	None/None G4/S2 SSC	Coastal belt of Santa Cruz and Monterey counties; central & southern Sierra Nevada; San Bernardino & San Jacinto mountains. Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf; forages widely.	Not Expected	Suitable nesting habitat is not present.
Elanus leucurus white-tailed kite	None/None G5/S3S4 FP	Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Low potential for nesting in stands of trees	Large trees in the Specific Plan may provide nesting habitat, and there are multiple occurrences in the vicinity of the Specific Plan (ebird 2019).
Eremophila alpestris actia California horned lark	None/None G5T4Q/S4 WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, “bald” hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Not Expected	Suitable grassland habitats are not present.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Falco mexicanus prairie falcon	None/None G5/S4 WL	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	Not Expected	Suitable open habitats are not present.
Falco peregrinus anatum American peregrine falcon	Delisted/Delisted G4T4/S3S4 FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	Not Expected	Buildings tall enough to provide
Laterallus jamaicensis coturniculus California black rail	None/Threatened G3G4T1/S1 FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Not Expected	Suitable marsh habitat is not present.
Pelecanus occidentalis californicus California brown pelican	Delisted/Delisted G4T3T4/S3 FP	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.	Not Expected	Suitable nesting habitat and nest colonies are not present.
Rallus obsoletus obsoletus California Ridgway's rail	Endangered/ Endangered G5T1/S1 FP	Salt water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	Not Expected	Suitable marsh habitat is not present.
Riparia riparia bank swallow	None/Threatened G5/S2	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Not Expected	Suitable nesting habitat is not present.
Mammals				
Corynorhinus townsendii Townsend's big-eared bat	None/None G3G4/S2 SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Not Expected	Suitable roosting habitat is not present.
Neotoma macrotis luciana Monterey dusky-footed woodrat	None/None G5T3/S3 SSC	Forest habitats of moderate canopy and moderate to dense understory. Also in chaparral habitats. Nests constructed of grass, leaves, sticks, feathers, etc. Population may be limited by availability of nest materials.	Not Expected	Suitable habitat is not present.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Sorex ornatus salarius Monterey shrew	None/None G5T1T2/S1S2 SSC	Riparian, wetland & upland areas in the vicinity of the Salinas River delta. Prefers moist microhabitats. feeds on insects & other invertebrates found under logs, rocks & litter.	Low Potential in suitable habitat adjacent to wetlands only	Marginal habitat occurs in the Specific Plan, and there are no known occurrences within 5 miles.
Taxidea taxus American badger	None/None G5/S3 SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Not Expected	Suitable open habitat is not present.

Regional Vicinity refers to within a 7-quad search radius of site.
FE = Federally Endangered FT = Federally Threatened FC = Federal Candidate Species FS=Federally Sensitive
SE = State Endangered ST = State Threatened SC = State Candidate SS=State Sensitive
SSC = CDFW Species of Special Concern SFP = State Fully Protected

Appendix C

Noise Analysis Data

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Ambient Noise Survey Data Sheet

Instructions: Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

DVSP Downtown Vitalization Specific Plan

Project Name: ~~American Cannery~~ **Job Number:** 19-07378

Date: 6/18/19 **Operator Name:** Christy ~~B~~ Sabdo & Karli Grigsby

Measurement #1

Location: Lake Drive and Hwy. 1 **Begin time:** 10:30 AM **Finish time:** 10:45 AM

Measurement No.: ST2 (#1) **Wind (mph):** 3 gusts up to 10 **Direction:** ~~southeast~~ WNW

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: 94 End: 94

Primary Noise Sources: wind, highway traffic **Distance:** 50 ft. from roadway centerline

Secondary Noise Sources: birds, kids outside school, wind chimes, dog barking

Notes:

Traffic Count: Passenger Cars: 11 (2)

Medium to Heavy Duty Trucks (3 axles): Heavy Duty Trucks (4+ axles):

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: 59.5 **SEL:** 89.0 **Lmax:** 69.0 **Lmin:** 45.7 **PK:** PH: 112.5

L(05): 63.3 **L(10):** 62.3 **L(50):** 58.5 **L(90):** 54.2 **L(95):** 53.0

Response: Slow Fast Peak Impulse

Measurement #2

Location: **Begin time:** **Finish time:**

Measurement No.: **Wind (mph):** **Direction:**

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: End:

Primary Noise Sources: **Distance:**

Secondary Noise Sources:

Notes:

Traffic Count: Passenger Cars:

Medium to Heavy Duty Trucks (3 axles): Heavy Duty Trucks (4+ axles):

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: **SEL:** **Lmax:** **Lmin:** **PK:**

L(05): **L(10):** **L(50):** **L(90):** **L(95):**

Response: Slow Fast Peak Impulse

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Ambient Noise Survey Data Sheet

Instructions: Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

DVSP Downtown Vitalization Specific plan

Project Name: ~~American Tin Cannery~~ **Job Number:** 19-07378
Date: 6/18/19 **Operator Name:** Christy Sabdo + Karli Grigsby

Measurement #1

Location: Delmonte blvd. + Palm Ave. **Begin time:** 10:56 AM **Finish time:** 11:11 AM
Measurement No.: ST3 (#2) **Wind (mph):** 3mph **Direction:** WNW
Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)
Calibration (dB): Start: 94 End: 94
Primary Noise Sources: roadway traffic **Distance:** 50 feet
Secondary Noise Sources: people talking at 7-11 gas station + bus stop, wind, birds, fire station - fire truck backing up
Notes:

Traffic Count: Passenger Cars: 𝍸𝍸𝍸𝍸𝍸𝍸𝍸 + approx. 300 = 335
Medium to Heavy Duty Trucks (3 axles): II Heavy Duty Trucks (4+ axles): 𝍸𝍸I
Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq:	70.0	**SEL:**	99.5	**Lmax:**	83.6	**Lmin:**	50.8	**PK:**	111.1 (PH)
L(05):	74.1	**L(10):**	72.8	**L(50):**	63.4	**L(90):**	55.2	**L(95):**	53.5

Response: Slow Fast Peak Impulse

Measurement #2

Location: **Begin time:** **Finish time:**
Measurement No.: **Wind (mph):** **Direction:**
Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)
Calibration (dB): Start: End:
Primary Noise Sources: **Distance:**
Secondary Noise Sources:
Notes:

Traffic Count: Passenger Cars:
Medium to Heavy Duty Trucks (3 axles): Heavy Duty Trucks (4+ axles):
Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq:		**SEL:**		**Lmax:**		**Lmin:**		**PK:**	
L(05):		**L(10):**		**L(50):**		**L(90):**		**L(95):**	

Response: Slow Fast Peak Impulse

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Ambient Noise Survey Data Sheet

Instructions: Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

DVSP Downtown Vitalization Specific Plan

Project Name: ~~American Tin Cannery~~ **Job Number:** 19-07378
Date: 6/18/19 **Operator Name:** Christy Sabdo + Karli Grigsby

Measurement #1

Location: Reservation Rd. + Mortimer Lane **Begin time:** 11:20 AM **Finish time:** 11:35 AM
Measurement No.: ST4 (#3) **Wind (mph):** 3 **Direction:** WNW
Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)
Calibration (dB): Start: 94 End: 94
Primary Noise Sources: roadway traffic. **Distance:** 50 ft from centerline of Reservation Road
Secondary Noise Sources: birds, people talking, wind, Marina Drive, Doctors on Duty + KFC parking lot
Notes:

Traffic Count: Passenger Cars: 268
Medium to Heavy Duty Trucks (3 axles): ~~||||~~ ||| Heavy Duty Trucks (4+ axles): ~~||||~~ ||
Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):
Leq: 70.0 **SEL:** 99.5 **Lmax:** 79.5 **Lmin:** 47.6 **PK:** 111.7 (PH)
L(05): 74.3 **L(10):** 72.9 **L(50):** 64.3 **L(90):** 51.1 **L(95):** 49.2
Response: Slow Fast Peak Impulse

Measurement #2

Location: **Begin time:** **Finish time:**
Measurement No.: **Wind (mph):** **Direction:**
Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)
Calibration (dB): Start: End:
Primary Noise Sources: **Distance:**
Secondary Noise Sources:
Notes:

Traffic Count: Passenger Cars:
Medium to Heavy Duty Trucks (3 axles): Heavy Duty Trucks (4+ axles):
Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):
Leq: **SEL:** **Lmax:** **Lmin:** **PK:**
L(05): **L(10):** **L(50):** **L(90):** **L(95):**
Response: Slow Fast Peak Impulse

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Ambient Noise Survey Data Sheet

DJSP

Instructions: Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

Project Name: American Tin Cannery **Job Number:** 19-07378

Date: 8/18/19 **Operator Name:** Christy Sabdo + Karli Grigsby

Measurement #1

Location: Reservation Rd. & De Forest Rd. **Begin time:** 11:54 AM **Finish time:** 12:14 PM

Measurement No.: ST5 (#4) **Wind (mph):** 3 **Direction:** WNW

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: 94 End: 94.3

Primary Noise Sources: roadway traffic, wind **Distance:** 30 & 150 ft. from centerline

Secondary Noise Sources: bus transit exchange station, people biking + skateboarding

Notes:

Traffic Count: Passenger Cars: 287

Medium to Heavy Duty Trucks (3 axles): II Heavy Duty Trucks (4+ axles): ~~IIII~~ ~~IIII~~ III

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: 59.9 **SEL:** 89.4 **Lmax:** 74.8 **Lmin:** 49.7 **PK:** 110.5 (PH)

L(05): 63.8 **L(10):** 62.5 **L(50):** 57.6 **L(90):** 53.0 **L(95):** 51.7

Response: Slow Fast Peak Impulse

Measurement #2

Location: **Begin time:** **Finish time:**

Measurement No.: **Wind (mph):** **Direction:**

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: End:

Primary Noise Sources: **Distance:**

Secondary Noise Sources:

Notes:

Traffic Count: Passenger Cars:

Medium to Heavy Duty Trucks (3 axles): Heavy Duty Trucks (4+ axles):

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: **SEL:** **Lmax:** **Lmin:** **PK:**

L(05): **L(10):** **L(50):** **L(90):** **L(95):**

Response: Slow Fast Peak Impulse

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Ambient Noise Survey Data Sheet

Instructions: Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

DVSP **Project Name:** ~~American Can Cannery~~ **Job Number:** 19-07378

Date: 6/18/19 **Operator Name:** Christy Sabdo & Karli Grigsby

Measurement #1

Location: Reservation Rd. + ~~[illegible]~~ Bayer St. **Begin time:** 12:30 PM **Finish time:** 12:45 PM

Measurement No.: ST6 (#5) **Wind (mph):** 9 **Direction:** WNW

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: 94 End: 94.2

Primary Noise Sources: roadway traffic, wind, **Distance:** 100 ft. from centerline

Secondary Noise Sources: flag + flagpole, children in apts. nearby

Notes:

Traffic Count: Passenger Cars: 239

Medium to Heavy Duty Trucks (3 axles): ||||| ||| Heavy Duty Trucks (4+ axles): ||||| ||

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: 70.0 **SEL:** 99.5 **Lmax:** 82.4 **Lmin:** 48.1 **PK:** 111.7 (PH)

L(05): 77.0 **L(10):** 75.6 **L(50):** 69.2 **L(90):** 55.9 **L(95):** 52.5

Response: Slow Fast Peak Impulse

Measurement #2

Location: **Begin time:** **Finish time:**

Measurement No.: **Wind (mph):** **Direction:**

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: End:

Primary Noise Sources: **Distance:**

Secondary Noise Sources:

Notes:

Traffic Count: Passenger Cars:

Medium to Heavy Duty Trucks (3 axles): Heavy Duty Trucks (4+ axles):

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: **SEL:** **Lmax:** **Lmin:** **PK:**

L(05): **L(10):** **L(50):** **L(90):** **L(95):**

Response: Slow Fast Peak Impulse

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Ambient Noise Survey Data Sheet

Instructions: Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

BVSP **Project Name:** American Tin Cannery **Job Number:** 19-07378
Date: 6-18-2019 **Operator Name:** Christy Sabdo & Karli Grigsby

Measurement #1

Location: Seacrest Ave. **Begin time:** 1:04 PM **Finish time:** 1:19 PM
Measurement No.: ST8 (#6) **Wind (mph):** 9 **Direction:** WNW
Cloud Cover Class: ~~Overcast (>80%)~~ Light (20-80%) Sunny (<20%)
Calibration (dB): Start: ~~92.9~~ 94 End: ~~94~~ 93.8
Primary Noise Sources: roadway traffic **Distance:** 50 ft. from centerline
Secondary Noise Sources: car stereo, leaf blower, pedestrian walking, child on bike
Notes:

Traffic Count: Passenger Cars: 95
Medium to Heavy Duty Trucks (3 axles): 1 Heavy Duty Trucks (4+ axles):
Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: 61.5 **SEL:** 91.0 **Lmax:** 75.9 **Lmin:** 49.0 **PK:** 109.7 (PH)
L(05): 66.2 **L(10):** 65.3 **L(50):** 58.4 **L(90):** 51.5 **L(95):** 50.2
Response: Slow Fast Peak Impulse

Measurement #2

Location: **Begin time:** **Finish time:**
Measurement No.: **Wind (mph):** **Direction:**
Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)
Calibration (dB): Start: End:
Primary Noise Sources: **Distance:**
Secondary Noise Sources:
Notes:

Traffic Count: Passenger Cars:
Medium to Heavy Duty Trucks (3 axles): Heavy Duty Trucks (4+ axles):
Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: **SEL:** **Lmax:** **Lmin:** **PK:**
L(05): **L(10):** **L(50):** **L(90):** **L(95):**
Response: Slow Fast Peak Impulse

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Ambient Noise Survey Data Sheet

Instructions: Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

DVSP **Project Name:** American Tin Cannery **Job Number:** 19-07378
Date: 6/18/19 **Operator Name:** Christy Sabdo + Karli Grigsby

Measurement #1

Location: Carmel Avenue **Begin time:** 1:32 PM **Finish time:** 1:47 PM
Measurement No.: ST8 7 (#7) **Wind (mph):** 9 **Direction:** WNW
Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)
Calibration (dB): Start: 94 End: 94.2
Primary Noise Sources: roadway traffic, birds **Distance:** 50 ft. from centerline
Secondary Noise Sources: truck backing up
Notes:

Traffic Count: Passenger Cars: 66
Medium to Heavy Duty Trucks (3 axles): 1 Heavy Duty Trucks (4+ axles): 1
Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):
Leq: 60.8 **SEL:** 90.3 **Lmax:** 74.8 **Lmin:** 47.3 **PK:** 113.9 (PH)
L(05): 65.9 **L(10):** 64.8 **L(50):** 57.0 **L(90):** 50.3 **L(95):** 49.0
Response: Slow Fast Peak Impulse

Measurement #2

Location: **Begin time:** **Finish time:**
Measurement No.: **Wind (mph):** **Direction:**
Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)
Calibration (dB): Start: End:
Primary Noise Sources: **Distance:**
Secondary Noise Sources:
Notes:

Traffic Count: Passenger Cars:
Medium to Heavy Duty Trucks (3 axles): Heavy Duty Trucks (4+ axles):
Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):
Leq: **SEL:** **Lmax:** **Lmin:** **PK:**
L(05): **L(10):** **L(50):** **L(90):** **L(95):**
Response: Slow Fast Peak Impulse

LT San Pablo Ct. Msmt.
~12:52 PM
6-20-2019 Karli Grigsby

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Ambient Noise Survey Data Sheet

Instructions: Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

DVSP **Project Name:** ~~American Can~~ Cannery **Job Number:** 19-07378
Date: ~~6/18/19~~ 6-20-2019 **Operator Name:** Karli Grigsby

Measurement #1

Location: San Pablo Ct. **Begin time:** 12:58 PM **Finish time:** 1:13 PM
Measurement No.: ST1 (#1) **Wind (mph):** 11 **Direction:** W
Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)
Calibration (dB): Start: 94 End: 94
Primary Noise Sources: roadway traffic, birds **Distance:** 200 ft. from Hwy. 1
Secondary Noise Sources: dog barking
Notes:

Traffic Count: Passenger Cars: |||| (4)
Medium to Heavy Duty Trucks (3 axles): ______ Heavy Duty Trucks (4+ axles): ______
Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):
Leq: 58.0 **SEL:** 87.5 **Lmax:** 62.9 **Lmin:** 53.4 **PK:** —
L(05): — **L(10):** — **L(50):** — **L(90):** — **L(95):** —
Response: Slow Fast Peak Impulse

Measurement #2

Location: ______ **Begin time:** ______ **Finish time:** ______
Measurement No.: ______ **Wind (mph):** ______ **Direction:** ______
Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)
Calibration (dB): Start: ______ End: ______
Primary Noise Sources: ______ **Distance:** ______
Secondary Noise Sources: ______
Notes:

Traffic Count: Passenger Cars: ______
Medium to Heavy Duty Trucks (3 axles): ______ Heavy Duty Trucks (4+ axles): ______
Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):
Leq: ______ **SEL:** ______ **Lmax:** ______ **Lmin:** ______ **PK:** ______
L(05): ______ **L(10):** ______ **L(50):** ______ **L(90):** ______ **L(95):** ______
Response: Slow Fast Peak Impulse

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Notes: DVSP Karli Grigsby
6-20-2019

	Start	End
Lake Ct.	1:22 PM	1:37 PM
ST2 (#2)	wind 11 mph	W

Calibration : start 94 end

overcast > 80%

Distance: 50 ft. from Lake Ct. centerline

primary noise: roadway traffic

secondary: Children outside at school

Leq: 61.9 SEL: 91.4 Lmax: 67.5 Lmin: 55.9

response: Slow

passenger cars: ~~||||~~

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/19/2019
Case Description: Marina DVSP

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential	Residential	60	60	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	50	0
Dump Truck	No	40		76.5	50	0
Front End Loader	No	40		79.1	50	0

Results

Equipment		Calculated (dBA) *Lmax	Leq
Excavator		80.7	76.7
Dump Truck		76.5	72.5
Front End Loader		79.1	75.1
	Total	80.7	79.9

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/19/2019
Case Description: Marina DVSP

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	60	60	60

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Excavator	No	40		80.7	500	0
Dump Truck	No	40		76.5	500	0
Front End Loader	No	40		79.1	500	0

Results

		Calculated (dBA)	
Equipment		*Lmax	Leq
Excavator		60.7	56.7
Dump Truck		56.5	52.5
Front End Loader		59.1	55.1
	Total	60.7	59.9

*Calculated Lmax is the Loudest value.

OPERATION AIR QUANTITY LIMITS

48PG03-14 Vertical and Horizontal Units

UNIT 48PG	COOLING (cfm)		HEATING (cfm)*	
	Min	Max	Min	Max
03	600	1000	600	1680
04 (Low Heat)	900	1500	600	1680
04 (Med Heat)	900	1500	940	2810
04 (High Heat)	900	1500	1130	2820
05 (Low Heat)	1200	2000	600	1680
05 (Med Heat)	1200	2000	940	2810
05 (High Heat)	1200	2000	1130	2820
06 (Low Heat)	1500	2500	940	2810
06 (Med Heat)	1500	2500	1130	2820
06 (High Heat)	1500	2500	1510	2520
07 (Low Heat)	1800	3000	940	2810
07 (Med Heat)	1800	3000	1130	2820
07 (High Heat)	1800	3000	1510	2520
08 (Low Heat)	2250	3750	2060	5160
08 (Med Heat)	2250	3750	2110	6870
08 (High Heat)	2250	3750	2450	4900
09 (Low Heat)	2550	4250	2060	5160
09 (Med Heat)	2550	4250	2110	6870
09 (High Heat)	2550	4250	2450	4900
12 (Low Heat)	3000	5000	2110	6870
12 (Med Heat)	3000	5000	2450	4900
12 (High Heat)	3000	5000	3150	6300
14 (Low Heat)	3750	6250	2110	6870
14 (Med Heat)	3750	6250	2450	4900
14 (High Heat)	3750	6250	3150	6300

*Consult tables on pages 8 and 9 if using a stainless steel heat exchanger.

Outdoor Sound Power (Total Unit)

UNIT 48PG	A–WEIGHTED* (dB)	OCTAVE BAND LEVELS dB							
		63	125	250	500	1000	2000	4000	8000
03	75.0	82.6	79.9	75.7	73.3	70.0	64.3	58.4	50.5
04	73.2	79.8	77.2	74.1	70.1	68.0	63.6	58.4	51.9
05	71.9	79.7	79.6	72.6	69.6	66.0	61.4	56.4	48.5
06	78.5	82.2	82.6	79.5	75.7	73.9	68.6	64.0	56.3
07	78.5	87.5	83.0	78.5	76.3	73.8	68.4	63.8	56.5
08	80.0	91.7	83.6	81.0	77.9	75.0	69.9	66.0	59.3
09	79.9	89.1	82.7	80.0	77.7	75.0	70.2	66.3	57.8
12	80.0	90.4	83.1	80.9	77.8	75.2	70.0	66.1	57.6
14	83.3	86.4	85.9	85.3	81.8	78.2	72.2	67.9	59.9

LEGEND
dB – Decibel
* Sound Rating AHRI or tone Adjusted, A–Weighted Sound Power Level in dB. For sizes 03–12, the sound rating is in accordance with AHRI Standard 270–1995. For sizes 14, the sound rating is in accordance with AHRI 370–2010.

FHWA RD-77-108

Traffic Noise Prediction Model

Data Input Sheet

Project Name : Marina DVSP
Project Number : 19-07378
Modeled Condition : Existing

Surface Refelction: Ldn
Assessment Metric: Soft
Peak ratio to ADT: 10.00
Traffic Desc. (Peak or ADT) : Peak

Segment	Roadway	Segment From	To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	K-Factor
1	Del Monte Blvd	HW1 to Reindollar Ave		2,135	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
2		Reindollar Ave to Palm Ave		1,663	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
3		Palm Ave to Reservation Rd		1,510	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
4	Reservation Rd	Del Monte Blvd to Vista Del Camino (		1,763	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
5		Vista Del Camino Cir to Seacrest Ave		1,759	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
6		Seacrest Ave to De Forest Rd		1,696	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
7		De Forest Rd to Crescent Ave		1,720	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
8		Crescent Ave to California Ave		1,669	40	50	96.00	2.00	2.00	84.00	0.00	16.00	
9		California Ave to Salinas Ave		1,515	40	50	96.00	2.00	2.00	84.00	0.00	16.00	
10		Salinas Ave to out of DVSP		1,518	40	50	96.00	2.00	2.00	84.00	0.00	16.00	
11	Reindollar Ave	Del Monte Blvd to east		678	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
12	Cypress Ave	Del Monte Blvd to east		177	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
13	Palm Ave	Del Monte Blvd to east		177	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
14	Carmel Ave	Del Monte Blvd to east		678	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
15	Mortimer Ln	Del Monte Blvd to east		177	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
16	Vista Del Camino Cir	Reservation Road to north		584	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
17	Seacrest Ave	Reservation Road to south		550	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
18	De Forest Rd	Reservation Road to north		225	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
19	Crescent	Reservation Road to north		203	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
20		Reservation Road to south		422	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
21	California Ave	Reservation Road to south		378	35	50	98.50	1.00	0.50	84.00	0.00	16.00	
22	Lynscott Dr	Reservation Road to south		378	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
23	Bayer St	Reservation Road to south		378	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
24	Salinas Ave	Reservation Road to south		34	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
25	Sunset Avenue	Reindollar Ave to Carmel Ave		177	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
26	Hillcrest Ave	End of street towards Zanetta Drive		177	25	50	98.50	1.00	0.50	84.00	0.00	16.00	

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Traffic Noise Prediction Model

Predicted Noise Levels

Project Name : Marina DVSP
Project Number : 19-07378
Modeled Condition : Existing
Assessment Metric: Soft

		Segment		Noise Levels, dBA Soft					Distance to Traffic Noise Level Contours, Feet				
Segment	Roadway	From	To	Auto	MT	HT	Total	75 dB	70 dB	65 dB	60 dB	55 dB	50 dB
1	Del Monte Blvd	HW1 to Reindollar Ave		67.5	60.4	65.6	70	24	51	109	236	508	1,094
2		Reindollar Ave to Palm Ave		66.4	59.3	64.5	69	20	43	92	199	429	924
3		Palm Ave to Reservation Rd		66.0	58.9	64.0	69	19	40	87	187	403	869
4	Reservation Rd	Del Monte Blvd to Vista Del Camino (		66.6	59.5	64.7	69	21	45	97	208	449	967
5		Vista Del Camino Cir to Seacrest Ave		66.6	59.5	64.7	69	21	45	97	208	449	967
6		Seacrest Ave to De Forest Rd		66.5	59.4	64.6	69	20	44	94	202	435	938
7		De Forest Rd to Crescent Ave		66.5	59.4	64.6	69	21	44	95	205	442	953
8		Crescent Ave to California Ave		68.1	60.2	65.0	70	24	52	113	243	524	1,128
9		California Ave to Salinas Ave		67.7	59.8	64.6	70	23	49	106	229	492	1,061
10		Salinas Ave to out of DVSP		67.7	59.8	64.6	70	23	49	106	229	492	1,061
11	Reindollar Ave	Del Monte Blvd to east		58.4	50.1	54.7	60	5	11	25	53	115	247
12	Cypress Ave	Del Monte Blvd to east		52.6	44.3	48.9	55	2	5	10	21	46	100
13	Palm Ave	Del Monte Blvd to east		52.6	44.3	48.9	55	2	5	10	21	46	100
14	Carmel Ave	Del Monte Blvd to east		58.4	50.1	54.7	60	5	11	25	53	115	247
15	Mortimer Ln	Del Monte Blvd to east		52.6	44.3	48.9	55	2	5	10	21	46	100
16	Vista Del Camino Cir	Reservation Road to north		57.8	49.4	54.1	60	5	10	22	48	103	222
17	Seacrest Ave	Reservation Road to south		57.5	49.2	53.8	60	5	10	21	46	100	215
18	De Forest Rd	Reservation Road to north		53.6	45.3	49.9	56	3	5	12	25	55	118
19	Crescent	Reservation Road to north		53.2	44.8	49.5	55	2	5	11	24	51	109
20		Reservation Road to south		56.3	48.0	52.6	58	4	8	18	39	83	179
21	California Ave	Reservation Road to south		60.1	49.8	52.0	61	6	13	27	58	126	271
22	Lynscott Dr	Reservation Road to south		55.9	47.5	52.2	58	4	8	17	36	77	166
23	Bayer St	Reservation Road to south		55.9	47.5	52.2	58	4	8	17	36	77	166
24	Salinas Ave	Reservation Road to south		45.4	37.1	41.7	47	1	2	3	7	16	34
25	Sunset Avenue	Reindollar Ave to Carmel Ave		52.6	44.3	48.9	55	2	5	10	21	46	100
26	Hillcrest Ave	End of street towards Zanetta Drive		52.6	44.3	48.9	55	2	5	10	21	46	100

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Traffic Noise Prediction Model

Data Input Sheet

Project Name : Marina DVSP
Project Number : 19-07378
Modeled Condition : Future

Surface Refelction: Ldn
Assessment Metric: Soft
Peak ratio to ADT: 10.00
Traffic Desc. (Peak or ADT) : Peak

Segment	Roadway	Segment From To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	K-Factor
1	Del Monte Blvd	HW1 to Reindollar Ave	2,493	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
2		Reindollar Ave to Palm Ave	1,959	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
3		Palm Ave to Reservation Rd	1,714	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
4	Reservation Rd	Del Monte Blvd to Vista Del Camino (	2,139	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
5		Vista Del Camino Cir to Seacrest Ave	2,018	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
6		Seacrest Ave to De Forest Rd	1,995	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
7		De Forest Rd to Crescent Ave	1,993	35	50	96.00	2.00	2.00	84.00	0.00	16.00	
8		Crescent Ave to California Ave	1,917	40	50	96.00	2.00	2.00	84.00	0.00	16.00	
9		California Ave to Salinas Ave	1,840	40	50	96.00	2.00	2.00	84.00	0.00	16.00	
10		Salinas Ave to out of DVSP	1,880	40	50	96.00	2.00	2.00	84.00	0.00	16.00	
11	Reindollar Ave	Del Monte Blvd to east	945	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
12	Cypress Ave	Del Monte Blvd to east	248	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
13	Palm Ave	Del Monte Blvd to east	248	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
14	Carmel Ave	Del Monte Blvd to east	945	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
15	Mortimer Ln	Del Monte Blvd to east	248	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
16	Vista Del Camino Cir	Reservation Road to north	757	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
17	Seacrest Ave	Reservation Road to south	774	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
18	De Forest Rd	Reservation Road to north	322	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
19	Crescent	Reservation Road to north	246	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
20		Reservation Road to south	584	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
21	California Ave	Reservation Road to south	547	35	50	98.50	1.00	0.50	84.00	0.00	16.00	
22	Lynscott Dr	Reservation Road to south	547	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
23	Bayer St	Reservation Road to south	547	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
24	Salinas Ave	Reservation Road to south	136	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
25	Sunset Avenue	Reindollar Ave to Carmel Ave	248	25	50	98.50	1.00	0.50	84.00	0.00	16.00	
26	Hillcrest Ave	End of street towards Zanetta Drive	248	25	50	98.50	1.00	0.50	84.00	0.00	16.00	

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Traffic Noise Prediction Model

Predicted Noise Levels

Project Name : Marina DVSP
Project Number : 19-07378
Modeled Condition : Future
Assessment Metric: Soft

		Segment		Noise Levels, dBA Soft				Distance to Traffic Noise Level Contours, Feet					
Segment	Roadway	From	To	Auto	MT	HT	Total	75 dB	70 dB	65 dB	60 dB	55 dB	50 dB
1	Del Monte Blvd	HW1 to Reindollar Ave		68.2	61.0	66.2	71	26	57	122	262	565	1,218
2		Reindollar Ave to Palm Ave		67.1	60.0	65.2	70	22	48	103	222	477	1,029
3		Palm Ave to Reservation Rd		66.5	59.4	64.6	69	21	44	95	205	442	953
4	Reservation Rd	Del Monte Blvd to Vista Del Camino (		67.5	60.4	65.6	70	24	51	109	236	508	1,094
5		Vista Del Camino Cir to Seacrest Ave		67.2	60.1	65.3	70	23	49	106	229	492	1,061
6		Seacrest Ave to De Forest Rd		67.2	60.1	65.3	70	23	48	104	225	485	1,045
7		De Forest Rd to Crescent Ave		67.2	60.1	65.3	70	23	48	104	225	485	1,045
8		Crescent Ave to California Ave		68.7	60.8	65.6	71	27	57	124	266	574	1,237
9		California Ave to Salinas Ave		68.5	60.6	65.4	71	26	56	120	258	557	1,199
10		Salinas Ave to out of DVSP		68.6	60.7	65.5	71	26	57	122	262	565	1,218
11	Reindollar Ave	Del Monte Blvd to east		59.8	51.5	56.1	62	7	14	31	66	142	306
12	Cypress Ave	Del Monte Blvd to east		54.0	45.7	50.3	56	3	6	13	27	58	126
13	Palm Ave	Del Monte Blvd to east		54.0	45.7	50.3	56	3	6	13	27	58	126
14	Carmel Ave	Del Monte Blvd to east		59.8	51.5	56.1	62	7	14	31	66	142	306
15	Mortimer Ln	Del Monte Blvd to east		54.0	45.7	50.3	56	3	6	13	27	58	126
16	Vista Del Camino Cir	Reservation Road to north		58.9	50.6	55.2	61	6	12	27	57	124	266
17	Seacrest Ave	Reservation Road to south		59.0	50.7	55.3	61	6	12	27	57	124	266
18	De Forest Rd	Reservation Road to north		55.2	46.9	51.5	57	3	7	15	32	69	149
19	Crescent	Reservation Road to north		54.0	45.7	50.3	56	3	6	13	27	58	126
20		Reservation Road to south		57.8	49.4	54.1	60	5	10	22	48	103	222
21	California Ave	Reservation Road to south		61.7	51.4	53.6	63	7	16	35	75	161	346
22	Lynscott Dr	Reservation Road to south		57.5	49.2	53.8	59	5	10	21	46	98	212
23	Bayer St	Reservation Road to south		57.5	49.2	53.8	59	5	10	21	46	98	212
24	Salinas Ave	Reservation Road to south		51.4	43.1	47.7	53	2	4	8	18	39	84
25	Sunset Avenue	Reindollar Ave to Carmel Ave		54.0	45.7	50.3	56	3	6	13	27	58	126
26	Hillcrest Ave	End of street towards Zanetta Drive		54.0	45.7	50.3	56	3	6	13	27	58	126

Appendix D

CalEEMod Modeling Outputs

Marina Downtown Vitalization Specific Plan - Proposed Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Marina Downtown Vitalization Specific Plan - Proposed
Construction Start Date	1/1/2024
Operational Year	2040
Lead Agency	City of Marina
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	10.8
Location	36.6835098553933, -121.79814886466889
County	Monterey
City	Marina
Air District	Monterey Bay ARD
Air Basin	North Central Coast
TAZ	3264
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.9

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

General Office Building	510	1000sqft	11.7	510,528	0.00	0.00	—	—
Apartments Low Rise	2,904	Dwelling Unit	182	3,078,240	0.00	—	7,272	—
Regional Shopping Center	875	1000sqft	20.1	875,000	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Water	W-7	Adopt a Water Conservation Strategy

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.	29.5	172	140	244	0.25	5.14	22,382	22,385	4.74	2,243	2,246	—	49,523	49,523	2.39	2.61	121	50,464
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	32.2	177	147	262	0.25	5.18	22,516	22,521	4.77	2,264	2,269	—	52,080	52,080	2.90	2.73	3.34	52,970
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.8	122	80.8	145	0.14	2.91	15,965	15,967	2.68	1,600	1,602	—	32,432	32,432	1.74	1.86	37.2	33,066
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	3.25	22.3	14.8	26.4	0.03	0.53	2,914	2,914	0.49	292	292	—	5,369	5,369	0.29	0.31	6.17	5,474

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	29.5	25.4	140	244	0.25	5.14	19,222	19,227	4.74	1,935	1,939	—	49,523	49,523	2.39	2.58	112	50,464
2025	25.8	172	96.8	220	0.21	3.11	22,382	22,385	2.87	2,243	2,246	—	47,332	47,332	2.32	2.61	121	48,288
2026	17.4	15.5	53.5	147	0.13	1.37	18,852	18,853	1.27	1,887	1,888	—	34,618	34,618	1.77	2.38	96.2	35,468
2027	16.7	14.2	51.0	139	0.13	1.28	18,852	18,853	1.19	1,887	1,888	—	34,051	34,051	1.63	2.25	87.7	34,850
2028	15.7	13.9	49.0	132	0.13	1.23	18,852	18,853	1.14	1,887	1,888	—	33,468	33,468	1.63	2.24	80.0	34,255
2029	15.1	13.3	46.4	125	0.13	1.16	18,852	18,853	1.08	1,887	1,888	—	32,870	32,870	1.08	2.16	72.5	33,615
2030	14.4	12.7	44.6	120	0.13	1.13	18,852	18,853	1.05	1,887	1,888	—	32,273	32,273	0.95	2.16	65.4	33,007
2031	13.4	12.2	42.6	114	0.13	1.09	18,852	18,853	0.94	1,887	1,888	—	31,690	31,690	0.95	2.09	58.7	32,395
2032	12.7	11.1	40.6	107	0.13	0.92	18,852	18,853	0.85	1,887	1,888	—	31,136	31,136	0.88	2.09	52.4	31,833
2033	12.2	10.7	38.7	102	0.13	0.85	18,852	18,853	0.79	1,887	1,887	—	30,611	30,611	0.88	2.02	46.4	31,280
2034	11.8	10.3	37.7	96.5	0.13	0.81	18,852	18,853	0.75	1,887	1,887	—	30,111	30,111	0.81	1.48	40.9	30,614
2035	11.4	10.0	35.7	91.9	0.13	0.74	18,852	18,853	0.69	1,887	1,887	—	29,645	29,645	0.74	1.41	35.9	30,119
2036	10.6	9.71	34.3	86.8	0.13	0.69	18,852	18,853	0.64	1,887	1,887	—	29,214	29,214	0.74	1.41	31.3	29,684
2037	10.2	9.36	33.5	83.9	0.13	0.68	18,852	18,853	0.63	1,887	1,887	—	28,830	28,830	0.74	1.34	26.9	29,274
2038	9.69	8.94	32.0	80.0	0.13	0.63	18,852	18,853	0.59	1,887	1,887	—	28,485	28,485	0.68	1.34	23.2	28,923
2039	9.28	8.55	31.3	77.4	0.13	0.61	18,852	18,853	0.56	1,887	1,887	—	28,173	28,173	0.60	1.34	19.8	28,606
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	32.2	177	147	262	0.25	5.18	22,516	22,521	4.77	2,264	2,269	—	52,080	52,080	2.90	2.73	3.34	52,970
2025	25.6	172	101	213	0.21	3.11	22,382	22,385	2.87	2,243	2,246	—	46,056	46,056	2.60	2.61	3.13	46,902

2026	19.8	167	59.2	163	0.13	1.39	22,146	22,147	1.29	2,216	2,218	—	37,114	37,114	2.17	2.53	2.86	37,925
2027	16.0	14.0	53.9	134	0.13	1.28	18,852	18,853	1.19	1,887	1,888	—	33,045	33,045	1.80	2.31	2.28	33,780
2028	15.5	13.6	51.8	128	0.13	1.23	18,852	18,853	1.14	1,887	1,888	—	32,483	32,483	1.26	2.30	2.07	33,203
2029	14.9	13.0	49.1	121	0.13	1.16	18,852	18,853	1.08	1,887	1,888	—	31,905	31,905	1.19	2.23	1.88	32,602
2030	13.8	12.7	47.3	116	0.13	1.13	18,852	18,853	1.05	1,887	1,888	—	31,327	31,327	1.12	2.22	1.70	32,018
2031	13.3	12.0	45.3	110	0.13	1.09	18,852	18,853	0.94	1,887	1,888	—	30,761	30,761	1.06	2.15	1.52	31,428
2032	12.5	10.9	42.7	104	0.13	0.92	18,852	18,853	0.85	1,887	1,888	—	30,222	30,222	0.99	2.15	1.36	30,888
2033	12.1	10.6	40.7	98.5	0.13	0.85	18,852	18,853	0.79	1,887	1,887	—	29,711	29,711	0.99	2.02	1.20	30,338
2034	11.7	10.2	39.3	93.3	0.13	0.81	18,852	18,853	0.75	1,887	1,887	—	29,224	29,224	0.86	2.02	1.06	29,848
2035	10.8	9.89	37.7	88.7	0.13	0.74	18,852	18,853	0.69	1,887	1,887	—	28,771	28,771	0.85	1.94	0.93	29,372
2036	10.6	9.69	35.8	84.3	0.13	0.69	18,852	18,853	0.64	1,887	1,887	—	28,351	28,351	0.85	1.94	0.81	28,952
2037	10.1	9.27	35.4	81.0	0.13	0.68	18,852	18,853	0.63	1,887	1,887	—	27,978	27,978	0.79	1.34	0.70	28,397
2038	9.70	8.91	33.4	77.1	0.13	0.63	18,852	18,853	0.59	1,887	1,887	—	27,641	27,641	0.78	1.34	0.60	28,060
2039	9.31	8.58	32.8	74.8	0.13	0.61	18,852	18,853	0.56	1,887	1,887	—	27,339	27,339	0.71	1.34	0.51	27,755
2040	8.89	8.17	31.9	72.3	0.13	0.60	18,852	18,853	0.55	1,887	1,887	—	27,065	27,065	0.65	1.27	0.44	27,459
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	16.6	41.1	80.8	131	0.14	2.91	10,951	10,954	2.68	1,102	1,104	—	27,316	27,316	1.42	1.43	27.4	27,804
2025	17.8	122	68.3	145	0.14	2.11	15,965	15,967	1.95	1,600	1,602	—	32,432	32,432	1.74	1.86	37.2	33,066
2026	12.2	12.2	39.6	98.0	0.09	0.98	13,498	13,499	0.91	1,351	1,352	—	24,081	24,081	1.35	1.70	29.7	24,652
2027	11.3	9.95	37.8	92.5	0.09	0.92	13,466	13,467	0.85	1,348	1,348	—	23,655	23,655	1.24	1.65	27.1	24,205
2028	10.9	9.65	36.4	88.3	0.09	0.88	13,503	13,504	0.82	1,351	1,352	—	23,316	23,316	0.82	1.65	24.7	23,854
2029	10.6	9.28	34.4	83.9	0.09	0.83	13,466	13,467	0.77	1,348	1,348	—	22,839	22,839	0.81	1.59	22.4	23,354
2030	10.1	8.95	33.1	80.1	0.09	0.81	13,466	13,467	0.75	1,348	1,348	—	22,425	22,425	0.72	1.54	20.2	22,923
2031	9.38	8.52	31.7	76.2	0.09	0.78	13,466	13,467	0.67	1,348	1,348	—	22,020	22,020	0.72	1.49	18.1	22,500
2032	8.94	7.77	29.9	71.9	0.09	0.66	13,503	13,503	0.61	1,351	1,352	—	21,694	21,694	0.67	1.50	16.2	22,173
2033	8.64	7.54	28.4	68.1	0.09	0.61	13,466	13,466	0.56	1,348	1,348	—	21,269	21,269	0.67	1.44	14.3	21,729
2034	8.31	7.22	27.3	64.6	0.09	0.58	13,466	13,466	0.54	1,348	1,348	—	20,921	20,921	0.62	1.44	12.7	21,378

2035	7.69	7.03	26.3	61.6	0.09	0.53	13,466	13,466	0.49	1,348	1,348	—	20,596	20,596	0.57	1.39	11.1	21,035
2036	7.43	6.83	25.0	58.6	0.09	0.49	13,503	13,503	0.46	1,351	1,352	—	20,351	20,351	0.57	1.01	9.68	20,676
2037	7.15	6.55	24.6	56.3	0.09	0.49	13,466	13,466	0.45	1,348	1,348	—	20,028	20,028	0.57	0.96	8.34	20,335
2038	6.82	6.29	23.6	53.6	0.09	0.45	13,466	13,466	0.42	1,348	1,348	—	19,788	19,788	0.52	0.95	7.14	20,092
2039	6.62	6.06	22.8	51.7	0.09	0.43	13,466	13,466	0.40	1,348	1,348	—	19,571	19,571	0.47	0.95	6.11	19,873
2040	0.02	0.02	0.06	0.14	< 0.005	< 0.005	36.9	36.9	< 0.005	3.69	3.69	—	53.1	53.1	< 0.005	< 0.005	0.01	53.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.03	7.50	14.8	23.9	0.03	0.53	1,999	1,999	0.49	201	202	—	4,522	4,522	0.24	0.24	4.54	4,603
2025	3.25	22.3	12.5	26.4	0.03	0.39	2,914	2,914	0.36	292	292	—	5,369	5,369	0.29	0.31	6.17	5,474
2026	2.23	2.23	7.22	17.9	0.02	0.18	2,463	2,464	0.17	247	247	—	3,987	3,987	0.22	0.28	4.92	4,081
2027	2.07	1.82	6.89	16.9	0.02	0.17	2,458	2,458	0.16	246	246	—	3,916	3,916	0.21	0.27	4.48	4,007
2028	2.00	1.76	6.64	16.1	0.02	0.16	2,464	2,464	0.15	247	247	—	3,860	3,860	0.14	0.27	4.10	3,949
2029	1.93	1.69	6.27	15.3	0.02	0.15	2,458	2,458	0.14	246	246	—	3,781	3,781	0.13	0.26	3.71	3,867
2030	1.85	1.63	6.04	14.6	0.02	0.15	2,458	2,458	0.14	246	246	—	3,713	3,713	0.12	0.26	3.34	3,795
2031	1.71	1.55	5.78	13.9	0.02	0.14	2,458	2,458	0.12	246	246	—	3,646	3,646	0.12	0.25	3.00	3,725
2032	1.63	1.42	5.46	13.1	0.02	0.12	2,464	2,464	0.11	247	247	—	3,592	3,592	0.11	0.25	2.68	3,671
2033	1.58	1.38	5.19	12.4	0.02	0.11	2,458	2,458	0.10	246	246	—	3,521	3,521	0.11	0.24	2.37	3,597
2034	1.52	1.32	4.98	11.8	0.02	0.11	2,458	2,458	0.10	246	246	—	3,464	3,464	0.10	0.24	2.10	3,539
2035	1.40	1.28	4.79	11.2	0.02	0.10	2,458	2,458	0.09	246	246	—	3,410	3,410	0.09	0.23	1.84	3,483
2036	1.36	1.25	4.55	10.7	0.02	0.09	2,464	2,464	0.08	247	247	—	3,369	3,369	0.09	0.17	1.60	3,423
2037	1.30	1.20	4.49	10.3	0.02	0.09	2,458	2,458	0.08	246	246	—	3,316	3,316	0.09	0.16	1.38	3,367
2038	1.24	1.15	4.31	9.78	0.02	0.08	2,458	2,458	0.08	246	246	—	3,276	3,276	0.09	0.16	1.18	3,326
2039	1.21	1.11	4.15	9.44	0.02	0.08	2,458	2,458	0.07	246	246	—	3,240	3,240	0.08	0.16	1.01	3,290
2040	< 0.005	< 0.005	0.01	0.03	< 0.005	< 0.005	6.73	6.73	< 0.005	0.67	0.67	—	8.79	8.79	< 0.005	< 0.005	< 0.005	8.92

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	29.5	25.4	140	244	0.25	5.14	19,222	19,227	4.74	1,935	1,939	—	49,523	49,523	2.39	2.58	112	50,464
2025	25.8	172	96.8	220	0.21	3.11	22,382	22,385	2.87	2,243	2,246	—	47,332	47,332	2.32	2.61	121	48,288
2026	17.4	15.5	53.5	147	0.13	1.37	18,852	18,853	1.27	1,887	1,888	—	34,618	34,618	1.77	2.38	96.2	35,468
2027	16.7	14.2	51.0	139	0.13	1.28	18,852	18,853	1.19	1,887	1,888	—	34,051	34,051	1.63	2.25	87.7	34,850
2028	15.7	13.9	49.0	132	0.13	1.23	18,852	18,853	1.14	1,887	1,888	—	33,468	33,468	1.63	2.24	80.0	34,255
2029	15.1	13.3	46.4	125	0.13	1.16	18,852	18,853	1.08	1,887	1,888	—	32,870	32,870	1.08	2.16	72.5	33,615
2030	14.4	12.7	44.6	120	0.13	1.13	18,852	18,853	1.05	1,887	1,888	—	32,273	32,273	0.95	2.16	65.4	33,007
2031	13.4	12.2	42.6	114	0.13	1.09	18,852	18,853	0.94	1,887	1,888	—	31,690	31,690	0.95	2.09	58.7	32,395
2032	12.7	11.1	40.6	107	0.13	0.92	18,852	18,853	0.85	1,887	1,888	—	31,136	31,136	0.88	2.09	52.4	31,833
2033	12.2	10.7	38.7	102	0.13	0.85	18,852	18,853	0.79	1,887	1,887	—	30,611	30,611	0.88	2.02	46.4	31,280
2034	11.8	10.3	37.7	96.5	0.13	0.81	18,852	18,853	0.75	1,887	1,887	—	30,111	30,111	0.81	1.48	40.9	30,614
2035	11.4	10.0	35.7	91.9	0.13	0.74	18,852	18,853	0.69	1,887	1,887	—	29,645	29,645	0.74	1.41	35.9	30,119
2036	10.6	9.71	34.3	86.8	0.13	0.69	18,852	18,853	0.64	1,887	1,887	—	29,214	29,214	0.74	1.41	31.3	29,684
2037	10.2	9.36	33.5	83.9	0.13	0.68	18,852	18,853	0.63	1,887	1,887	—	28,830	28,830	0.74	1.34	26.9	29,274
2038	9.69	8.94	32.0	80.0	0.13	0.63	18,852	18,853	0.59	1,887	1,887	—	28,485	28,485	0.68	1.34	23.2	28,923
2039	9.28	8.55	31.3	77.4	0.13	0.61	18,852	18,853	0.56	1,887	1,887	—	28,173	28,173	0.60	1.34	19.8	28,606
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	32.2	177	147	262	0.25	5.18	22,516	22,521	4.77	2,264	2,269	—	52,080	52,080	2.90	2.73	3.34	52,970
2025	25.6	172	101	213	0.21	3.11	22,382	22,385	2.87	2,243	2,246	—	46,056	46,056	2.60	2.61	3.13	46,902
2026	19.8	167	59.2	163	0.13	1.39	22,146	22,147	1.29	2,216	2,218	—	37,114	37,114	2.17	2.53	2.86	37,925
2027	16.0	14.0	53.9	134	0.13	1.28	18,852	18,853	1.19	1,887	1,888	—	33,045	33,045	1.80	2.31	2.28	33,780
2028	15.5	13.6	51.8	128	0.13	1.23	18,852	18,853	1.14	1,887	1,888	—	32,483	32,483	1.26	2.30	2.07	33,203
2029	14.9	13.0	49.1	121	0.13	1.16	18,852	18,853	1.08	1,887	1,888	—	31,905	31,905	1.19	2.23	1.88	32,602

2030	13.8	12.7	47.3	116	0.13	1.13	18,852	18,853	1.05	1,887	1,888	—	31,327	31,327	1.12	2.22	1.70	32,018
2031	13.3	12.0	45.3	110	0.13	1.09	18,852	18,853	0.94	1,887	1,888	—	30,761	30,761	1.06	2.15	1.52	31,428
2032	12.5	10.9	42.7	104	0.13	0.92	18,852	18,853	0.85	1,887	1,888	—	30,222	30,222	0.99	2.15	1.36	30,888
2033	12.1	10.6	40.7	98.5	0.13	0.85	18,852	18,853	0.79	1,887	1,887	—	29,711	29,711	0.99	2.02	1.20	30,338
2034	11.7	10.2	39.3	93.3	0.13	0.81	18,852	18,853	0.75	1,887	1,887	—	29,224	29,224	0.86	2.02	1.06	29,848
2035	10.8	9.89	37.7	88.7	0.13	0.74	18,852	18,853	0.69	1,887	1,887	—	28,771	28,771	0.85	1.94	0.93	29,372
2036	10.6	9.69	35.8	84.3	0.13	0.69	18,852	18,853	0.64	1,887	1,887	—	28,351	28,351	0.85	1.94	0.81	28,952
2037	10.1	9.27	35.4	81.0	0.13	0.68	18,852	18,853	0.63	1,887	1,887	—	27,978	27,978	0.79	1.34	0.70	28,397
2038	9.70	8.91	33.4	77.1	0.13	0.63	18,852	18,853	0.59	1,887	1,887	—	27,641	27,641	0.78	1.34	0.60	28,060
2039	9.31	8.58	32.8	74.8	0.13	0.61	18,852	18,853	0.56	1,887	1,887	—	27,339	27,339	0.71	1.34	0.51	27,755
2040	8.89	8.17	31.9	72.3	0.13	0.60	18,852	18,853	0.55	1,887	1,887	—	27,065	27,065	0.65	1.27	0.44	27,459
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	16.6	41.1	80.8	131	0.14	2.91	10,951	10,954	2.68	1,102	1,104	—	27,316	27,316	1.42	1.43	27.4	27,804
2025	17.8	122	68.3	145	0.14	2.11	15,965	15,967	1.95	1,600	1,602	—	32,432	32,432	1.74	1.86	37.2	33,066
2026	12.2	12.2	39.6	98.0	0.09	0.98	13,498	13,499	0.91	1,351	1,352	—	24,081	24,081	1.35	1.70	29.7	24,652
2027	11.3	9.95	37.8	92.5	0.09	0.92	13,466	13,467	0.85	1,348	1,348	—	23,655	23,655	1.24	1.65	27.1	24,205
2028	10.9	9.65	36.4	88.3	0.09	0.88	13,503	13,504	0.82	1,351	1,352	—	23,316	23,316	0.82	1.65	24.7	23,854
2029	10.6	9.28	34.4	83.9	0.09	0.83	13,466	13,467	0.77	1,348	1,348	—	22,839	22,839	0.81	1.59	22.4	23,354
2030	10.1	8.95	33.1	80.1	0.09	0.81	13,466	13,467	0.75	1,348	1,348	—	22,425	22,425	0.72	1.54	20.2	22,923
2031	9.38	8.52	31.7	76.2	0.09	0.78	13,466	13,467	0.67	1,348	1,348	—	22,020	22,020	0.72	1.49	18.1	22,500
2032	8.94	7.77	29.9	71.9	0.09	0.66	13,503	13,503	0.61	1,351	1,352	—	21,694	21,694	0.67	1.50	16.2	22,173
2033	8.64	7.54	28.4	68.1	0.09	0.61	13,466	13,466	0.56	1,348	1,348	—	21,269	21,269	0.67	1.44	14.3	21,729
2034	8.31	7.22	27.3	64.6	0.09	0.58	13,466	13,466	0.54	1,348	1,348	—	20,921	20,921	0.62	1.44	12.7	21,378
2035	7.69	7.03	26.3	61.6	0.09	0.53	13,466	13,466	0.49	1,348	1,348	—	20,596	20,596	0.57	1.39	11.1	21,035
2036	7.43	6.83	25.0	58.6	0.09	0.49	13,503	13,503	0.46	1,351	1,352	—	20,351	20,351	0.57	1.01	9.68	20,676
2037	7.15	6.55	24.6	56.3	0.09	0.49	13,466	13,466	0.45	1,348	1,348	—	20,028	20,028	0.57	0.96	8.34	20,335
2038	6.82	6.29	23.6	53.6	0.09	0.45	13,466	13,466	0.42	1,348	1,348	—	19,788	19,788	0.52	0.95	7.14	20,092

2039	6.62	6.06	22.8	51.7	0.09	0.43	13,466	13,466	0.40	1,348	1,348	—	19,571	19,571	0.47	0.95	6.11	19,873
2040	0.02	0.02	0.06	0.14	< 0.005	< 0.005	36.9	36.9	< 0.005	3.69	3.69	—	53.1	53.1	< 0.005	< 0.005	0.01	53.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.03	7.50	14.8	23.9	0.03	0.53	1,999	1,999	0.49	201	202	—	4,522	4,522	0.24	0.24	4.54	4,603
2025	3.25	22.3	12.5	26.4	0.03	0.39	2,914	2,914	0.36	292	292	—	5,369	5,369	0.29	0.31	6.17	5,474
2026	2.23	2.23	7.22	17.9	0.02	0.18	2,463	2,464	0.17	247	247	—	3,987	3,987	0.22	0.28	4.92	4,081
2027	2.07	1.82	6.89	16.9	0.02	0.17	2,458	2,458	0.16	246	246	—	3,916	3,916	0.21	0.27	4.48	4,007
2028	2.00	1.76	6.64	16.1	0.02	0.16	2,464	2,464	0.15	247	247	—	3,860	3,860	0.14	0.27	4.10	3,949
2029	1.93	1.69	6.27	15.3	0.02	0.15	2,458	2,458	0.14	246	246	—	3,781	3,781	0.13	0.26	3.71	3,867
2030	1.85	1.63	6.04	14.6	0.02	0.15	2,458	2,458	0.14	246	246	—	3,713	3,713	0.12	0.26	3.34	3,795
2031	1.71	1.55	5.78	13.9	0.02	0.14	2,458	2,458	0.12	246	246	—	3,646	3,646	0.12	0.25	3.00	3,725
2032	1.63	1.42	5.46	13.1	0.02	0.12	2,464	2,464	0.11	247	247	—	3,592	3,592	0.11	0.25	2.68	3,671
2033	1.58	1.38	5.19	12.4	0.02	0.11	2,458	2,458	0.10	246	246	—	3,521	3,521	0.11	0.24	2.37	3,597
2034	1.52	1.32	4.98	11.8	0.02	0.11	2,458	2,458	0.10	246	246	—	3,464	3,464	0.10	0.24	2.10	3,539
2035	1.40	1.28	4.79	11.2	0.02	0.10	2,458	2,458	0.09	246	246	—	3,410	3,410	0.09	0.23	1.84	3,483
2036	1.36	1.25	4.55	10.7	0.02	0.09	2,464	2,464	0.08	247	247	—	3,369	3,369	0.09	0.17	1.60	3,423
2037	1.30	1.20	4.49	10.3	0.02	0.09	2,458	2,458	0.08	246	246	—	3,316	3,316	0.09	0.16	1.38	3,367
2038	1.24	1.15	4.31	9.78	0.02	0.08	2,458	2,458	0.08	246	246	—	3,276	3,276	0.09	0.16	1.18	3,326
2039	1.21	1.11	4.15	9.44	0.02	0.08	2,458	2,458	0.07	246	246	—	3,240	3,240	0.08	0.16	1.01	3,290
2040	< 0.005	< 0.005	0.01	0.03	< 0.005	< 0.005	6.73	6.73	< 0.005	0.67	0.67	—	8.79	8.79	< 0.005	< 0.005	< 0.005	8.92

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.	176	278	79.8	716	1.05	2.55	34.4	36.9	2.56	6.01	8.57	2,154	137,565	139,719	229	7.83	91.6	147,867

Mit.	176	278	79.8	716	1.05	2.55	34.4	36.9	2.56	6.01	8.57	2,048	137,398	139,446	218	7.57	91.6	147,243
% Reduced	—	—	—	—	—	—	—	—	—	—	—	5%	< 0.5%	< 0.5%	5%	3%	—	< 0.5%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	151	253	87.4	581	1.01	2.41	34.4	36.8	2.38	6.01	8.39	2,154	133,277	135,431	231	8.58	29.2	143,783
Mit.	151	253	87.4	581	1.01	2.41	34.4	36.8	2.38	6.01	8.39	2,048	133,110	135,158	220	8.32	29.2	143,159
% Reduced	—	—	—	—	—	—	—	—	—	—	—	5%	< 0.5%	< 0.5%	5%	3%	—	< 0.5%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	141	243	74.9	597	0.90	2.43	29.6	32.1	2.43	5.18	7.62	2,154	121,574	123,729	229	7.19	51.4	131,638
Mit.	141	243	74.9	597	0.90	2.43	29.6	32.1	2.43	5.18	7.62	2,048	121,407	123,455	218	6.93	51.4	131,013
% Reduced	—	—	—	—	—	—	—	—	—	—	—	5%	< 0.5%	< 0.5%	5%	4%	—	< 0.5%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	25.7	44.4	13.7	109	0.16	0.44	5.41	5.85	0.44	0.95	1.39	357	20,128	20,485	37.8	1.19	8.50	21,794
Mit.	25.7	44.4	13.7	109	0.16	0.44	5.41	5.85	0.44	0.95	1.39	339	20,100	20,439	36.0	1.15	8.50	21,691
% Reduced	—	—	—	—	—	—	—	—	—	—	—	5%	< 0.5%	< 0.5%	5%	4%	—	< 0.5%

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	148	143	53.6	478	0.89	0.48	34.4	34.8	0.45	6.01	6.46	—	90,611	90,611	6.97	6.16	64.1	92,684

Area	25.8	133	2.03	226	0.01	0.14	—	0.14	0.18	—	0.18	0.00	688	688	0.03	0.01	—	691
Energy	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	45,429	45,429	5.13	0.35	—	45,663
Water	—	—	—	—	—	—	—	—	—	—	—	531	837	1,368	54.5	1.31	—	3,121
Waste	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Total	176	278	79.8	716	1.05	2.55	34.4	36.9	2.56	6.01	8.57	2,154	137,565	139,719	229	7.83	91.6	147,867
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	148	143	63.3	569	0.86	0.48	34.4	34.8	0.45	6.01	6.46	—	87,011	87,011	8.71	6.92	1.66	89,291
Area	0.00	109	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	45,429	45,429	5.13	0.35	—	45,663
Water	—	—	—	—	—	—	—	—	—	—	—	531	837	1,368	54.5	1.31	—	3,121
Waste	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Total	151	253	87.4	581	1.01	2.41	34.4	36.8	2.38	6.01	8.39	2,154	133,277	135,431	231	8.58	29.2	143,783
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	120	116	49.4	431	0.74	0.41	29.6	30.0	0.38	5.18	5.56	—	74,837	74,837	6.58	5.53	23.9	76,672
Area	17.7	126	1.39	155	0.01	0.09	—	0.09	0.12	—	0.12	0.00	471	471	0.02	< 0.005	—	473
Energy	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	45,429	45,429	5.13	0.35	—	45,663
Water	—	—	—	—	—	—	—	—	—	—	—	531	837	1,368	54.5	1.31	—	3,121
Waste	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Total	141	243	74.9	597	0.90	2.43	29.6	32.1	2.43	5.18	7.62	2,154	121,574	123,729	229	7.19	51.4	131,638
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	22.0	21.2	9.01	78.6	0.13	0.07	5.41	5.48	0.07	0.95	1.02	—	12,390	12,390	1.09	0.92	3.95	12,694
Area	3.23	22.9	0.25	28.2	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	78.1	78.1	< 0.005	< 0.005	—	78.3
Energy	0.51	0.25	4.41	2.22	0.03	0.35	—	0.35	0.35	—	0.35	—	7,521	7,521	0.85	0.06	—	7,560

Water	—	—	—	—	—	—	—	—	—	—	—	87.8	139	226	9.03	0.22	—	517
Waste	—	—	—	—	—	—	—	—	—	—	—	269	0.00	269	26.9	0.00	—	941
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.55	4.55
Total	25.7	44.4	13.7	109	0.16	0.44	5.41	5.85	0.44	0.95	1.39	357	20,128	20,485	37.8	1.19	8.50	21,794

2.6. Operations Emissions by Sector, Mitigated

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	148	143	53.6	478	0.89	0.48	34.4	34.8	0.45	6.01	6.46	—	90,611	90,611	6.97	6.16	64.1	92,684
Area	25.8	133	2.03	226	0.01	0.14	—	0.14	0.18	—	0.18	0.00	688	688	0.03	0.01	—	691
Energy	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	45,429	45,429	5.13	0.35	—	45,663
Water	—	—	—	—	—	—	—	—	—	—	—	424	670	1,094	43.6	1.05	—	2,497
Waste	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Total	176	278	79.8	716	1.05	2.55	34.4	36.9	2.56	6.01	8.57	2,048	137,398	139,446	218	7.57	91.6	147,243
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	148	143	63.3	569	0.86	0.48	34.4	34.8	0.45	6.01	6.46	—	87,011	87,011	8.71	6.92	1.66	89,291
Area	0.00	109	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	45,429	45,429	5.13	0.35	—	45,663
Water	—	—	—	—	—	—	—	—	—	—	—	424	670	1,094	43.6	1.05	—	2,497
Waste	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Total	151	253	87.4	581	1.01	2.41	34.4	36.8	2.38	6.01	8.39	2,048	133,110	135,158	220	8.32	29.2	143,159

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	120	116	49.4	431	0.74	0.41	29.6	30.0	0.38	5.18	5.56	—	74,837	74,837	6.58	5.53	23.9	76,672
Area	17.7	126	1.39	155	0.01	0.09	—	0.09	0.12	—	0.12	0.00	471	471	0.02	< 0.005	—	473
Energy	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	45,429	45,429	5.13	0.35	—	45,663
Water	—	—	—	—	—	—	—	—	—	—	—	424	670	1,094	43.6	1.05	—	2,497
Waste	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Total	141	243	74.9	597	0.90	2.43	29.6	32.1	2.43	5.18	7.62	2,048	121,407	123,455	218	6.93	51.4	131,013
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	22.0	21.2	9.01	78.6	0.13	0.07	5.41	5.48	0.07	0.95	1.02	—	12,390	12,390	1.09	0.92	3.95	12,694
Area	3.23	22.9	0.25	28.2	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	78.1	78.1	< 0.005	< 0.005	—	78.3
Energy	0.51	0.25	4.41	2.22	0.03	0.35	—	0.35	0.35	—	0.35	—	7,521	7,521	0.85	0.06	—	7,560
Water	—	—	—	—	—	—	—	—	—	—	—	70.3	111	181	7.22	0.17	—	413
Waste	—	—	—	—	—	—	—	—	—	—	—	269	0.00	269	26.9	0.00	—	941
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.55	4.55
Total	25.7	44.4	13.7	109	0.16	0.44	5.41	5.85	0.44	0.95	1.39	339	20,100	20,439	36.0	1.15	8.50	21,691

3. Construction Emissions Details

3.1. Demolition (2024) - 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	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437

Demolitio	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.23	1.87	17.8	15.6	0.02	0.76	—	0.76	0.70	—	0.70	—	2,453	2,453	0.10	0.02	—	2,462
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.34	3.25	2.84	< 0.005	0.14	—	0.14	0.13	—	0.13	—	406	406	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.08	0.07	0.05	0.73	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	111	111	0.01	< 0.005	0.48	113
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	0.43	0.16	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	332	332	0.02	0.05	0.68	349
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.69	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	104	104	0.01	< 0.005	0.01	106
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	0.46	0.16	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	332	332	0.02	0.05	0.02	349
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.47	0.00	0.00	69.8	69.8	0.00	6.99	6.99	—	75.0	75.0	0.01	< 0.005	0.15	76.2
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	0.02	0.01	0.32	0.11	< 0.005	< 0.005	44.8	44.8	< 0.005	4.49	4.49	—	238	238	0.01	0.04	0.21	250
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	12.4	12.4	< 0.005	< 0.005	0.02	12.6
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	0.06	0.02	< 0.005	< 0.005	8.17	8.18	< 0.005	0.82	0.82	—	39.4	39.4	< 0.005	0.01	0.03	41.4

3.2. Demolition (2024) - 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	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.23	1.87	17.8	15.6	0.02	0.76	—	0.76	0.70	—	0.70	—	2,453	2,453	0.10	0.02	—	2,462
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.34	3.25	2.84	< 0.005	0.14	—	0.14	0.13	—	0.13	—	406	406	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.08	0.07	0.05	0.73	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	111	111	0.01	< 0.005	0.48	113
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	0.43	0.16	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	332	332	0.02	0.05	0.68	349

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.69	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	104	104	0.01	< 0.005	0.01	106
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	0.46	0.16	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	332	332	0.02	0.05	0.02	349
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.47	0.00	0.00	69.8	69.8	0.00	6.99	6.99	—	75.0	75.0	0.01	< 0.005	0.15	76.2
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	0.02	0.01	0.32	0.11	< 0.005	< 0.005	44.8	44.8	< 0.005	4.49	4.49	—	238	238	0.01	0.04	0.21	250
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	12.4	12.4	< 0.005	< 0.005	0.02	12.6
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	0.06	0.02	< 0.005	< 0.005	8.17	8.18	< 0.005	0.82	0.82	—	39.4	39.4	< 0.005	0.01	0.03	41.4

3.3. Demolition (2025) - 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	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.04	1.71	15.9	14.2	0.02	0.66	—	0.66	0.60	—	0.60	—	2,446	2,446	0.10	0.02	—	2,455
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	2.89	2.60	< 0.005	0.12	—	0.12	0.11	—	0.11	—	405	405	0.02	< 0.005	—	406
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.08	0.07	0.05	0.68	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	108	108	0.01	< 0.005	0.45	110
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	0.41	0.16	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	326	326	0.02	0.05	0.67	342

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.65	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	102	102	0.01	< 0.005	0.01	104
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	0.44	0.16	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	326	326	0.02	0.05	0.02	342
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.44	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	73.3	73.3	< 0.005	< 0.005	0.14	74.6
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	0.02	0.01	0.31	0.11	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	233	233	0.01	0.04	0.21	244
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	12.1	12.1	< 0.005	< 0.005	0.02	12.3
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	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	38.5	38.5	< 0.005	0.01	0.03	40.4

3.4. Demolition (2025) - 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	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.04	1.71	15.9	14.2	0.02	0.66	—	0.66	0.60	—	0.60	—	2,446	2,446	0.10	0.02	—	2,455
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	2.89	2.60	< 0.005	0.12	—	0.12	0.11	—	0.11	—	405	405	0.02	< 0.005	—	406
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.08	0.07	0.05	0.68	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	108	108	0.01	< 0.005	0.45	110
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	0.41	0.16	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	326	326	0.02	0.05	0.67	342

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.65	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	102	102	0.01	< 0.005	0.01	104
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	0.44	0.16	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	326	326	0.02	0.05	0.02	342
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.44	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	73.3	73.3	< 0.005	< 0.005	0.14	74.6
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	0.02	0.01	0.31	0.11	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	233	233	0.01	0.04	0.21	244
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	12.1	12.1	< 0.005	< 0.005	0.02	12.3
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	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	38.5	38.5	< 0.005	0.01	0.03	40.4

3.5. Demolition (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	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.95	1.63	14.8	13.6	0.02	0.60	—	0.60	0.55	—	0.55	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.30	2.69	2.48	< 0.005	0.11	—	0.11	0.10	—	0.10	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.07	0.07	0.05	0.63	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	106	106	0.01	< 0.005	0.42	108
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	0.40	0.15	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	319	319	0.02	0.05	0.63	336

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.06	0.60	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	100	100	0.01	< 0.005	0.01	102
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	0.42	0.15	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	319	319	0.02	0.05	0.02	335
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.41	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	72.0	72.0	< 0.005	< 0.005	0.13	73.2
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	0.02	0.01	0.30	0.11	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	228	228	0.01	0.04	0.19	240
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.9	11.9	< 0.005	< 0.005	0.02	12.1
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	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	37.8	37.8	< 0.005	0.01	0.03	39.7

3.6. Demolition (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	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.95	1.63	14.8	13.6	0.02	0.60	—	0.60	0.55	—	0.55	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.30	2.69	2.48	< 0.005	0.11	—	0.11	0.10	—	0.10	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.07	0.07	0.05	0.63	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	106	106	0.01	< 0.005	0.42	108
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	0.40	0.15	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	319	319	0.02	0.05	0.63	336

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.06	0.60	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	100	100	0.01	< 0.005	0.01	102
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	0.42	0.15	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	319	319	0.02	0.05	0.02	335
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.41	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	72.0	72.0	< 0.005	< 0.005	0.13	73.2
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	0.02	0.01	0.30	0.11	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	228	228	0.01	0.04	0.19	240
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.9	11.9	< 0.005	< 0.005	0.02	12.1
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	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	37.8	37.8	< 0.005	0.01	0.03	39.7

3.7. Demolition (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	2.64	2.21	19.9	18.6	0.03	0.80	—	0.80	0.73	—	0.73	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.64	2.21	19.9	18.6	0.03	0.80	—	0.80	0.73	—	0.73	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.89	1.58	14.2	13.3	0.02	0.57	—	0.57	0.52	—	0.52	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.59	2.43	< 0.005	0.10	—	0.10	0.10	—	0.10	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.07	0.06	0.04	0.59	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	104	104	0.01	< 0.005	0.38	106
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	0.39	0.15	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	312	312	0.02	0.05	0.58	328

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.56	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	98.4	98.4	0.01	< 0.005	0.01	99.9
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	0.02	0.01	0.41	0.15	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	312	312	0.02	0.05	0.01	327
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.38	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	70.6	70.6	< 0.005	< 0.005	0.12	71.8
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	0.02	0.01	0.29	0.10	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	223	223	0.01	0.04	0.18	234
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.7	11.7	< 0.005	< 0.005	0.02	11.9
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	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	36.9	36.9	< 0.005	0.01	0.03	38.7

3.8. Demolition (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	2.64	2.21	19.9	18.6	0.03	0.80	—	0.80	0.73	—	0.73	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.64	2.21	19.9	18.6	0.03	0.80	—	0.80	0.73	—	0.73	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.89	1.58	14.2	13.3	0.02	0.57	—	0.57	0.52	—	0.52	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.59	2.43	< 0.005	0.10	—	0.10	0.10	—	0.10	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.07	0.06	0.04	0.59	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	104	104	0.01	< 0.005	0.38	106
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	0.39	0.15	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	312	312	0.02	0.05	0.58	328

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.56	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	98.4	98.4	0.01	< 0.005	0.01	99.9
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	0.02	0.01	0.41	0.15	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	312	312	0.02	0.05	0.01	327
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.38	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	70.6	70.6	< 0.005	< 0.005	0.12	71.8
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	0.02	0.01	0.29	0.10	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	223	223	0.01	0.04	0.18	234
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.7	11.7	< 0.005	< 0.005	0.02	11.9
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	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	36.9	36.9	< 0.005	0.01	0.03	38.7

3.9. Demolition (2028) - 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	2.61	2.19	19.6	18.7	0.03	0.78	—	0.78	0.71	—	0.71	—	3,429	3,429	0.14	0.03	—	3,440
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.61	2.19	19.6	18.7	0.03	0.78	—	0.78	0.71	—	0.71	—	3,429	3,429	0.14	0.03	—	3,440
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.87	1.57	14.0	13.4	0.02	0.56	—	0.56	0.51	—	0.51	—	2,456	2,456	0.10	0.02	—	2,464
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.56	2.44	< 0.005	0.10	—	0.10	0.09	—	0.09	—	407	407	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.55	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	102	102	0.01	< 0.005	0.35	104
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	0.02	0.01	0.37	0.14	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	304	304	0.02	0.05	0.53	319

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.53	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	96.6	96.6	< 0.005	< 0.005	0.01	98.1
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	0.02	0.01	0.40	0.14	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	304	304	0.02	0.05	0.01	319
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.36	0.00	0.00	69.8	69.8	0.00	6.99	6.99	—	69.5	69.5	< 0.005	< 0.005	0.11	70.7
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	0.02	0.01	0.28	0.10	< 0.005	< 0.005	44.8	44.8	< 0.005	4.49	4.49	—	218	218	0.01	0.03	0.16	228
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.5	11.5	< 0.005	< 0.005	0.02	11.7
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	0.05	0.02	< 0.005	< 0.005	8.17	8.18	< 0.005	0.82	0.82	—	36.0	36.0	< 0.005	0.01	0.03	37.8

3.10. Demolition (2028) - 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	2.61	2.19	19.6	18.7	0.03	0.78	—	0.78	0.71	—	0.71	—	3,429	3,429	0.14	0.03	—	3,440
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.61	2.19	19.6	18.7	0.03	0.78	—	0.78	0.71	—	0.71	—	3,429	3,429	0.14	0.03	—	3,440
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.87	1.57	14.0	13.4	0.02	0.56	—	0.56	0.51	—	0.51	—	2,456	2,456	0.10	0.02	—	2,464
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.56	2.44	< 0.005	0.10	—	0.10	0.09	—	0.09	—	407	407	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.55	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	102	102	0.01	< 0.005	0.35	104
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	0.02	0.01	0.37	0.14	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	304	304	0.02	0.05	0.53	319

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.53	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	96.6	96.6	< 0.005	< 0.005	0.01	98.1
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	0.02	0.01	0.40	0.14	< 0.005	0.01	62.5	62.5	0.01	6.26	6.27	—	304	304	0.02	0.05	0.01	319
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.36	0.00	0.00	69.8	69.8	0.00	6.99	6.99	—	69.5	69.5	< 0.005	< 0.005	0.11	70.7
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	0.02	0.01	0.28	0.10	< 0.005	< 0.005	44.8	44.8	< 0.005	4.49	4.49	—	218	218	0.01	0.03	0.16	228
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.5	11.5	< 0.005	< 0.005	0.02	11.7
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	0.05	0.02	< 0.005	< 0.005	8.17	8.18	< 0.005	0.82	0.82	—	36.0	36.0	< 0.005	0.01	0.03	37.8

3.11. Demolition (2029) - 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	2.55	2.14	18.6	18.5	0.03	0.74	—	0.74	0.68	—	0.68	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.55	2.14	18.6	18.5	0.03	0.74	—	0.74	0.68	—	0.68	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.82	1.53	13.3	13.2	0.02	0.53	—	0.53	0.48	—	0.48	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.28	2.42	2.41	< 0.005	0.10	—	0.10	0.09	—	0.09	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.03	0.52	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	101	101	< 0.005	< 0.005	0.32	102
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	0.02	0.01	0.36	0.13	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	296	296	0.02	0.05	0.48	311

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.49	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	94.9	94.9	< 0.005	< 0.005	0.01	96.4
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	0.02	0.01	0.38	0.13	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	296	296	0.02	0.05	0.01	310
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.34	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	68.1	68.1	< 0.005	< 0.005	0.10	69.2
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	0.01	0.01	0.27	0.10	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	211	211	0.01	0.03	0.15	222
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.3	11.3	< 0.005	< 0.005	0.02	11.5
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	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	35.0	35.0	< 0.005	0.01	0.02	36.7

3.12. Demolition (2029) - 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	2.55	2.14	18.6	18.5	0.03	0.74	—	0.74	0.68	—	0.68	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.55	2.14	18.6	18.5	0.03	0.74	—	0.74	0.68	—	0.68	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.82	1.53	13.3	13.2	0.02	0.53	—	0.53	0.48	—	0.48	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.28	2.42	2.41	< 0.005	0.10	—	0.10	0.09	—	0.09	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.03	0.52	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	101	101	< 0.005	< 0.005	0.32	102
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	0.02	0.01	0.36	0.13	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	296	296	0.02	0.05	0.48	311

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.49	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	94.9	94.9	< 0.005	< 0.005	0.01	96.4
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	0.02	0.01	0.38	0.13	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	296	296	0.02	0.05	0.01	310
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.34	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	68.1	68.1	< 0.005	< 0.005	0.10	69.2
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	0.01	0.01	0.27	0.10	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	211	211	0.01	0.03	0.15	222
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.3	11.3	< 0.005	< 0.005	0.02	11.5
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	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	35.0	35.0	< 0.005	0.01	0.02	36.7

3.13. Demolition (2030) - 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	2.48	2.09	18.1	18.7	0.03	0.72	—	0.72	0.66	—	0.66	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.48	2.09	18.1	18.7	0.03	0.72	—	0.72	0.66	—	0.66	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.77	1.49	12.9	13.3	0.02	0.51	—	0.51	0.47	—	0.47	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.27	2.36	2.43	< 0.005	0.09	—	0.09	0.09	—	0.09	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.05	0.03	0.49	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	99.0	99.0	< 0.005	< 0.005	0.29	101
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	0.02	0.01	0.35	0.13	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	287	287	0.01	0.05	0.44	302

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.46	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	93.3	93.3	< 0.005	< 0.005	0.01	94.7
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	0.02	< 0.005	0.37	0.13	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	288	288	0.01	0.05	0.01	301
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.31	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	67.0	67.0	< 0.005	< 0.005	0.09	68.0
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	0.01	< 0.005	0.26	0.09	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	205	205	0.01	0.03	0.14	215
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.1	11.1	< 0.005	< 0.005	0.01	11.3
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	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	34.0	34.0	< 0.005	0.01	0.02	35.7

3.14. Demolition (2030) - 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	2.48	2.09	18.1	18.7	0.03	0.72	—	0.72	0.66	—	0.66	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.48	2.09	18.1	18.7	0.03	0.72	—	0.72	0.66	—	0.66	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.77	1.49	12.9	13.3	0.02	0.51	—	0.51	0.47	—	0.47	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.27	2.36	2.43	< 0.005	0.09	—	0.09	0.09	—	0.09	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.05	0.03	0.49	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	99.0	99.0	< 0.005	< 0.005	0.29	101
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	0.02	0.01	0.35	0.13	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	287	287	0.01	0.05	0.44	302

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.46	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	93.3	93.3	< 0.005	< 0.005	0.01	94.7
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	0.02	< 0.005	0.37	0.13	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	288	288	0.01	0.05	0.01	301
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.31	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	67.0	67.0	< 0.005	< 0.005	0.09	68.0
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	0.01	< 0.005	0.26	0.09	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	205	205	0.01	0.03	0.14	215
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	11.1	11.1	< 0.005	< 0.005	0.01	11.3
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	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	34.0	34.0	< 0.005	0.01	0.02	35.7

3.15. Demolition (2031) - 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	2.43	2.04	17.5	18.3	0.03	0.70	—	0.70	0.64	—	0.64	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.43	2.04	17.5	18.3	0.03	0.70	—	0.70	0.64	—	0.64	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.73	1.46	12.5	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.27	2.29	2.39	< 0.005	0.09	—	0.09	0.08	—	0.08	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.05	0.05	0.03	0.45	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	97.3	97.3	< 0.005	< 0.005	0.26	98.9
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	0.02	0.01	0.34	0.12	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	279	279	0.01	0.04	0.39	293

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.43	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	91.8	91.8	< 0.005	< 0.005	0.01	93.2
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	0.02	< 0.005	0.36	0.12	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	280	280	0.01	0.04	0.01	293
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.29	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	65.9	65.9	< 0.005	< 0.005	0.08	66.9
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	0.01	< 0.005	0.25	0.09	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	200	200	0.01	0.03	0.12	209
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.9	10.9	< 0.005	< 0.005	0.01	11.1
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	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	33.0	33.0	< 0.005	0.01	0.02	34.6

3.16. Demolition (2031) - 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	2.43	2.04	17.5	18.3	0.03	0.70	—	0.70	0.64	—	0.64	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.43	2.04	17.5	18.3	0.03	0.70	—	0.70	0.64	—	0.64	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.73	1.46	12.5	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.27	2.29	2.39	< 0.005	0.09	—	0.09	0.08	—	0.08	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.05	0.05	0.03	0.45	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	97.3	97.3	< 0.005	< 0.005	0.26	98.9
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	0.02	0.01	0.34	0.12	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	279	279	0.01	0.04	0.39	293

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.43	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	91.8	91.8	< 0.005	< 0.005	0.01	93.2
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	0.02	< 0.005	0.36	0.12	< 0.005	0.01	62.5	62.5	< 0.005	6.26	6.27	—	280	280	0.01	0.04	0.01	293
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.29	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	65.9	65.9	< 0.005	< 0.005	0.08	66.9
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	0.01	< 0.005	0.25	0.09	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	200	200	0.01	0.03	0.12	209
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.9	10.9	< 0.005	< 0.005	0.01	11.1
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	0.05	0.02	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	33.0	33.0	< 0.005	0.01	0.02	34.6

3.17. Demolition (2032) - 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	2.28	1.92	16.2	16.9	0.03	0.62	—	0.62	0.57	—	0.57	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.28	1.92	16.2	16.9	0.03	0.62	—	0.62	0.57	—	0.57	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.64	1.37	11.6	12.1	0.02	0.44	—	0.44	0.41	—	0.41	—	2,454	2,454	0.10	0.02	—	2,463
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.12	2.20	< 0.005	0.08	—	0.08	0.07	—	0.07	—	406	406	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.05	0.05	0.03	0.42	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	95.9	95.9	< 0.005	< 0.005	0.24	97.4
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	0.02	0.01	0.33	0.12	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	272	272	0.01	0.04	0.35	285

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.40	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	90.4	90.4	< 0.005	< 0.005	0.01	91.8
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	0.02	< 0.005	0.35	0.12	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	272	272	0.01	0.04	0.01	285
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.27	0.00	0.00	69.8	69.8	0.00	6.99	6.99	—	65.1	65.1	< 0.005	< 0.005	0.07	66.1
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	0.01	< 0.005	0.25	0.08	< 0.005	< 0.005	44.8	44.8	< 0.005	4.49	4.49	—	195	195	0.01	0.03	0.11	204
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.8	10.8	< 0.005	< 0.005	0.01	10.9
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	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	8.17	8.18	< 0.005	0.82	0.82	—	32.2	32.2	< 0.005	0.01	0.02	33.8

3.18. Demolition (2032) - 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	2.28	1.92	16.2	16.9	0.03	0.62	—	0.62	0.57	—	0.57	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.28	1.92	16.2	16.9	0.03	0.62	—	0.62	0.57	—	0.57	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.64	1.37	11.6	12.1	0.02	0.44	—	0.44	0.41	—	0.41	—	2,454	2,454	0.10	0.02	—	2,463
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.12	2.20	< 0.005	0.08	—	0.08	0.07	—	0.07	—	406	406	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.05	0.05	0.03	0.42	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	95.9	95.9	< 0.005	< 0.005	0.24	97.4
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	0.02	0.01	0.33	0.12	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	272	272	0.01	0.04	0.35	285

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.40	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	90.4	90.4	< 0.005	< 0.005	0.01	91.8
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	0.02	< 0.005	0.35	0.12	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	272	272	0.01	0.04	0.01	285
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.27	0.00	0.00	69.8	69.8	0.00	6.99	6.99	—	65.1	65.1	< 0.005	< 0.005	0.07	66.1
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	0.01	< 0.005	0.25	0.08	< 0.005	< 0.005	44.8	44.8	< 0.005	4.49	4.49	—	195	195	0.01	0.03	0.11	204
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.8	10.8	< 0.005	< 0.005	0.01	10.9
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	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	8.17	8.18	< 0.005	0.82	0.82	—	32.2	32.2	< 0.005	0.01	0.02	33.8

3.19. Demolition (2033) - 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	2.22	1.86	15.5	15.9	0.03	0.57	—	0.57	0.53	—	0.53	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.22	1.86	15.5	15.9	0.03	0.57	—	0.57	0.53	—	0.53	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.58	1.33	11.1	11.4	0.02	0.41	—	0.41	0.38	—	0.38	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.24	2.02	2.08	< 0.005	0.07	—	0.07	0.07	—	0.07	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.05	0.04	0.02	0.40	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	94.5	94.5	< 0.005	< 0.005	0.21	96.0
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	0.02	0.01	0.32	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	265	265	0.01	0.04	0.31	278

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.38	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	89.1	89.1	< 0.005	< 0.005	0.01	90.4
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	0.02	< 0.005	0.34	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	265	265	0.01	0.04	0.01	278
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.26	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	64.0	64.0	< 0.005	< 0.005	0.07	64.9
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	0.01	< 0.005	0.24	0.08	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	189	189	0.01	0.03	0.10	198
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.6	10.6	< 0.005	< 0.005	0.01	10.8
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	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	31.3	31.3	< 0.005	< 0.005	0.02	32.8

3.20. Demolition (2033) - 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	2.22	1.86	15.5	15.9	0.03	0.57	—	0.57	0.53	—	0.53	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.22	1.86	15.5	15.9	0.03	0.57	—	0.57	0.53	—	0.53	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.58	1.33	11.1	11.4	0.02	0.41	—	0.41	0.38	—	0.38	—	2,448	2,448	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.24	2.02	2.08	< 0.005	0.07	—	0.07	0.07	—	0.07	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.05	0.04	0.02	0.40	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	94.5	94.5	< 0.005	< 0.005	0.21	96.0
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	0.02	0.01	0.32	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	265	265	0.01	0.04	0.31	278

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.38	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	89.1	89.1	< 0.005	< 0.005	0.01	90.4
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	0.02	< 0.005	0.34	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	265	265	0.01	0.04	0.01	278
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.26	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	64.0	64.0	< 0.005	< 0.005	0.07	64.9
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	0.01	< 0.005	0.24	0.08	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	189	189	0.01	0.03	0.10	198
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.6	10.6	< 0.005	< 0.005	0.01	10.8
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	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	31.3	31.3	< 0.005	< 0.005	0.02	32.8

3.21. Demolition (2034) - 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	2.17	1.82	15.1	15.7	0.03	0.54	—	0.54	0.50	—	0.50	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.17	1.82	15.1	15.7	0.03	0.54	—	0.54	0.50	—	0.50	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.55	1.30	10.8	11.2	0.02	0.39	—	0.39	0.35	—	0.35	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.24	1.97	2.05	< 0.005	0.07	—	0.07	0.06	—	0.06	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.05	0.04	0.02	0.37	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	93.2	93.2	< 0.005	< 0.005	0.19	93.7
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	0.01	0.01	0.31	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	258	258	0.01	0.04	0.27	271

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.35	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	87.9	87.9	< 0.005	< 0.005	< 0.005	89.2
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	0.01	< 0.005	0.33	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	259	259	0.01	0.04	0.01	271
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.24	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	63.1	63.1	< 0.005	< 0.005	0.06	64.1
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	0.01	< 0.005	0.23	0.08	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	185	185	0.01	0.03	0.08	194
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.4	10.4	< 0.005	< 0.005	0.01	10.6
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	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	30.6	30.6	< 0.005	< 0.005	0.01	32.1

3.22. Demolition (2034) - 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	2.17	1.82	15.1	15.7	0.03	0.54	—	0.54	0.50	—	0.50	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.17	1.82	15.1	15.7	0.03	0.54	—	0.54	0.50	—	0.50	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.55	1.30	10.8	11.2	0.02	0.39	—	0.39	0.35	—	0.35	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.24	1.97	2.05	< 0.005	0.07	—	0.07	0.06	—	0.06	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.05	0.04	0.02	0.37	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	93.2	93.2	< 0.005	< 0.005	0.19	93.7
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	0.01	0.01	0.31	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	258	258	0.01	0.04	0.27	271

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.35	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	87.9	87.9	< 0.005	< 0.005	< 0.005	89.2
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	0.01	< 0.005	0.33	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	259	259	0.01	0.04	0.01	271
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.24	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	63.1	63.1	< 0.005	< 0.005	0.06	64.1
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	0.01	< 0.005	0.23	0.08	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	185	185	0.01	0.03	0.08	194
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.4	10.4	< 0.005	< 0.005	0.01	10.6
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	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	30.6	30.6	< 0.005	< 0.005	0.01	32.1

3.23. Demolition (2035) - 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	2.08	1.75	14.2	14.9	0.03	0.49	—	0.49	0.45	—	0.45	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.08	1.75	14.2	14.9	0.03	0.49	—	0.49	0.45	—	0.45	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.49	1.25	10.1	10.7	0.02	0.35	—	0.35	0.32	—	0.32	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	0.23	1.85	1.95	< 0.005	0.06	—	0.06	0.06	—	0.06	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.05	0.04	0.02	0.35	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	92.0	92.0	< 0.005	< 0.005	0.17	92.5
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	0.01	0.01	0.31	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	253	253	0.01	0.04	0.24	265

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.33	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	86.8	86.8	< 0.005	< 0.005	< 0.005	88.1
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	0.01	< 0.005	0.32	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	253	253	0.01	0.04	0.01	265
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.22	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	62.3	62.3	< 0.005	< 0.005	0.05	63.3
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	0.01	< 0.005	0.23	0.07	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	181	181	0.01	0.03	0.07	189
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.3	10.3	< 0.005	< 0.005	0.01	10.5
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	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	29.9	29.9	< 0.005	< 0.005	0.01	31.3

3.24. Demolition (2035) - 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	2.08	1.75	14.2	14.9	0.03	0.49	—	0.49	0.45	—	0.45	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	2.08	1.75	14.2	14.9	0.03	0.49	—	0.49	0.45	—	0.45	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.49	1.25	10.1	10.7	0.02	0.35	—	0.35	0.32	—	0.32	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	0.23	1.85	1.95	< 0.005	0.06	—	0.06	0.06	—	0.06	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.05	0.04	0.02	0.35	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	92.0	92.0	< 0.005	< 0.005	0.17	92.5
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	0.01	0.01	0.31	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	253	253	0.01	0.04	0.24	265

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.33	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	86.8	86.8	< 0.005	< 0.005	< 0.005	88.1
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	0.01	< 0.005	0.32	0.11	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	253	253	0.01	0.04	0.01	265
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.22	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	62.3	62.3	< 0.005	< 0.005	0.05	63.3
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	0.01	< 0.005	0.23	0.07	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	181	181	0.01	0.03	0.07	189
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.3	10.3	< 0.005	< 0.005	0.01	10.5
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	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	29.9	29.9	< 0.005	< 0.005	0.01	31.3

3.25. Demolition (2036) - 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	1.99	1.67	13.4	14.1	0.03	0.44	—	0.44	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.99	1.67	13.4	14.1	0.03	0.44	—	0.44	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.43	1.20	9.59	10.1	0.02	0.32	—	0.32	0.29	—	0.29	—	2,454	2,454	0.10	0.02	—	2,462
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.75	1.85	< 0.005	0.06	—	0.06	0.05	—	0.05	—	406	406	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.04	0.04	0.02	0.32	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	90.9	90.9	< 0.005	< 0.005	0.15	91.4
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	0.01	0.01	0.30	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	248	248	0.01	0.04	0.20	260

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.31	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	85.7	85.7	< 0.005	< 0.005	< 0.005	87.0
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	0.01	0.01	0.32	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	248	248	0.01	0.04	0.01	260
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.01	0.21	0.00	0.00	69.8	69.8	0.00	6.99	6.99	—	61.7	61.7	< 0.005	< 0.005	0.05	62.0
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	0.01	< 0.005	0.22	0.07	< 0.005	< 0.005	44.8	44.8	< 0.005	4.49	4.49	—	178	178	0.01	0.03	0.06	186
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.2	10.2	< 0.005	< 0.005	0.01	10.3
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	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	8.17	8.18	< 0.005	0.82	0.82	—	29.4	29.4	< 0.005	< 0.005	0.01	30.8

3.26. Demolition (2036) - 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	1.99	1.67	13.4	14.1	0.03	0.44	—	0.44	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.99	1.67	13.4	14.1	0.03	0.44	—	0.44	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.43	1.20	9.59	10.1	0.02	0.32	—	0.32	0.29	—	0.29	—	2,454	2,454	0.10	0.02	—	2,462
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.75	1.85	< 0.005	0.06	—	0.06	0.05	—	0.05	—	406	406	0.02	< 0.005	—	408
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.04	0.04	0.02	0.32	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	90.9	90.9	< 0.005	< 0.005	0.15	91.4
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	0.01	0.01	0.30	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	248	248	0.01	0.04	0.20	260

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.31	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	85.7	85.7	< 0.005	< 0.005	< 0.005	87.0
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	0.01	0.01	0.32	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	248	248	0.01	0.04	0.01	260
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.01	0.21	0.00	0.00	69.8	69.8	0.00	6.99	6.99	—	61.7	61.7	< 0.005	< 0.005	0.05	62.0
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	0.01	< 0.005	0.22	0.07	< 0.005	< 0.005	44.8	44.8	< 0.005	4.49	4.49	—	178	178	0.01	0.03	0.06	186
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.2	10.2	< 0.005	< 0.005	0.01	10.3
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	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	8.17	8.18	< 0.005	0.82	0.82	—	29.4	29.4	< 0.005	< 0.005	0.01	30.8

3.27. Demolition (2037) - 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	1.99	1.67	13.4	14.3	0.03	0.45	—	0.45	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.99	1.67	13.4	14.3	0.03	0.45	—	0.45	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.42	1.20	9.57	10.2	0.02	0.32	—	0.32	0.29	—	0.29	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.75	1.86	< 0.005	0.06	—	0.06	0.05	—	0.05	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.04	0.04	0.02	0.31	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	89.9	89.9	< 0.005	< 0.005	0.13	90.4
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	0.01	0.01	0.29	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	243	243	0.01	0.04	0.18	255

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.29	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	84.8	84.8	< 0.005	< 0.005	< 0.005	85.1
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	0.01	0.01	0.31	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	244	244	0.01	0.04	< 0.005	255
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.01	0.20	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	60.9	60.9	< 0.005	< 0.005	0.04	61.1
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	0.01	< 0.005	0.22	0.07	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	174	174	0.01	0.03	0.05	182
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.1	10.1	< 0.005	< 0.005	0.01	10.1
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	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	28.8	28.8	< 0.005	< 0.005	0.01	30.2

3.28. Demolition (2037) - 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	1.99	1.67	13.4	14.3	0.03	0.45	—	0.45	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.99	1.67	13.4	14.3	0.03	0.45	—	0.45	0.41	—	0.41	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.42	1.20	9.57	10.2	0.02	0.32	—	0.32	0.29	—	0.29	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.75	1.86	< 0.005	0.06	—	0.06	0.05	—	0.05	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.04	0.04	0.02	0.31	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	89.9	89.9	< 0.005	< 0.005	0.13	90.4
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	0.01	0.01	0.29	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	243	243	0.01	0.04	0.18	255

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.29	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	84.8	84.8	< 0.005	< 0.005	< 0.005	85.1
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	0.01	0.01	0.31	0.10	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	244	244	0.01	0.04	< 0.005	255
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.01	0.20	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	60.9	60.9	< 0.005	< 0.005	0.04	61.1
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	0.01	< 0.005	0.22	0.07	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	174	174	0.01	0.03	0.05	182
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	10.1	10.1	< 0.005	< 0.005	0.01	10.1
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	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	28.8	28.8	< 0.005	< 0.005	0.01	30.2

3.29. Demolition (2038) - 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	1.90	1.60	12.4	13.2	0.03	0.40	—	0.40	0.37	—	0.37	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.90	1.60	12.4	13.2	0.03	0.40	—	0.40	0.37	—	0.37	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.36	1.14	8.83	9.43	0.02	0.29	—	0.29	0.26	—	0.26	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.61	1.72	< 0.005	0.05	—	0.05	0.05	—	0.05	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.04	0.04	0.02	0.29	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	89.0	89.0	< 0.005	< 0.005	0.11	89.4
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	0.01	0.01	0.29	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	240	240	0.01	0.04	0.15	251

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.27	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	83.9	83.9	< 0.005	< 0.005	< 0.005	84.3
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	0.01	0.01	0.31	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	240	240	0.01	0.04	< 0.005	251
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.01	0.19	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	60.3	60.3	< 0.005	< 0.005	0.03	60.5
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	0.01	< 0.005	0.22	0.07	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	171	171	< 0.005	0.03	0.05	179
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	9.98	9.98	< 0.005	< 0.005	0.01	10.0
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	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	28.3	28.3	< 0.005	< 0.005	0.01	29.7

3.30. Demolition (2038) - 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	1.90	1.60	12.4	13.2	0.03	0.40	—	0.40	0.37	—	0.37	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.90	1.60	12.4	13.2	0.03	0.40	—	0.40	0.37	—	0.37	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.36	1.14	8.83	9.43	0.02	0.29	—	0.29	0.26	—	0.26	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.61	1.72	< 0.005	0.05	—	0.05	0.05	—	0.05	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.04	0.04	0.02	0.29	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	89.0	89.0	< 0.005	< 0.005	0.11	89.4
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	0.01	0.01	0.29	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	240	240	0.01	0.04	0.15	251

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.27	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	83.9	83.9	< 0.005	< 0.005	< 0.005	84.3
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	0.01	0.01	0.31	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	240	240	0.01	0.04	< 0.005	251
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.01	0.19	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	60.3	60.3	< 0.005	< 0.005	0.03	60.5
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	0.01	< 0.005	0.22	0.07	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	171	171	< 0.005	0.03	0.05	179
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	9.98	9.98	< 0.005	< 0.005	0.01	10.0
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	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	28.3	28.3	< 0.005	< 0.005	0.01	29.7

3.31. Demolition (2039) - 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	1.87	1.57	12.1	13.0	0.03	0.39	—	0.39	0.35	—	0.35	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.87	1.57	12.1	13.0	0.03	0.39	—	0.39	0.35	—	0.35	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.33	1.12	8.61	9.28	0.02	0.28	—	0.28	0.25	—	0.25	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.57	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.04	0.03	0.02	0.28	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	88.2	88.2	< 0.005	< 0.005	0.10	88.6
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	0.01	0.01	0.29	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	236	236	< 0.005	0.04	0.13	248

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.26	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	83.2	83.2	< 0.005	< 0.005	< 0.005	83.5
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	0.01	0.01	0.30	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	236	236	< 0.005	0.04	< 0.005	248
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.01	0.18	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	59.7	59.7	< 0.005	< 0.005	0.03	60.0
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	0.01	< 0.005	0.21	0.07	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	169	169	< 0.005	0.03	0.04	177
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	9.89	9.89	< 0.005	< 0.005	< 0.005	9.93
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	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	27.9	27.9	< 0.005	< 0.005	0.01	29.3

3.32. Demolition (2039) - 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	1.87	1.57	12.1	13.0	0.03	0.39	—	0.39	0.35	—	0.35	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.87	1.57	12.1	13.0	0.03	0.39	—	0.39	0.35	—	0.35	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	1.33	1.12	8.61	9.28	0.02	0.28	—	0.28	0.25	—	0.25	—	2,447	2,447	0.10	0.02	—	2,456
Demolition	—	—	—	—	—	—	0.28	0.28	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.57	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	405	405	0.02	< 0.005	—	407
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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	0.04	0.03	0.02	0.28	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	88.2	88.2	< 0.005	< 0.005	0.10	88.6
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	0.01	0.01	0.29	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	236	236	< 0.005	0.04	0.13	248

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.26	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	83.2	83.2	< 0.005	< 0.005	< 0.005	83.5
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	0.01	0.01	0.30	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	236	236	< 0.005	0.04	< 0.005	248
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.01	0.18	0.00	0.00	69.6	69.6	0.00	6.97	6.97	—	59.7	59.7	< 0.005	< 0.005	0.03	60.0
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	0.01	< 0.005	0.21	0.07	< 0.005	< 0.005	44.7	44.7	< 0.005	4.47	4.48	—	169	169	< 0.005	0.03	0.04	177
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	9.89	9.89	< 0.005	< 0.005	< 0.005	9.93
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	0.04	0.01	< 0.005	< 0.005	8.15	8.15	< 0.005	0.82	0.82	—	27.9	27.9	< 0.005	< 0.005	0.01	29.3

3.33. Demolition (2040) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.85	1.55	12.0	12.9	0.03	0.38	—	0.38	0.35	—	0.35	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—

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	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.70	6.70	< 0.005	< 0.005	—	6.73
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.11	1.11	< 0.005	< 0.005	—	1.11
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.25	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	82.5	82.5	< 0.005	< 0.005	< 0.005	82.9
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	0.01	0.01	0.30	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	233	233	< 0.005	0.04	< 0.005	245
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	0.19	0.19	0.00	0.02	0.02	—	0.16	0.16	< 0.005	< 0.005	< 0.005	0.16
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	< 0.005	< 0.005	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.48

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	0.03	0.03	0.00	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
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	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08

3.34. Demolition (2040) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.85	1.55	12.0	12.9	0.03	0.38	—	0.38	0.35	—	0.35	—	3,426	3,426	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	0.40	0.40	—	0.06	0.06	—	—	—	—	—	—	—
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	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.70	6.70	< 0.005	< 0.005	—	6.73
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.11	1.11	< 0.005	< 0.005	—	1.11

Demolitio	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.25	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	82.5	82.5	< 0.005	< 0.005	< 0.005	82.9
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	0.01	0.01	0.30	0.09	< 0.005	< 0.005	62.5	62.5	< 0.005	6.26	6.27	—	233	233	< 0.005	0.04	< 0.005	245
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	0.19	0.19	0.00	0.02	0.02	—	0.16	0.16	< 0.005	< 0.005	< 0.005	0.16
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	< 0.005	< 0.005	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.48
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	0.03	0.03	0.00	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
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	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08

3.35. Site Preparation (2024) - 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	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.14	1.80	17.7	16.2	0.02	0.79	—	0.79	0.73	—	0.73	—	2,612	2,612	0.11	0.02	—	2,621
Dust From Material Movement	—	—	—	—	—	—	9.69	9.69	—	4.98	4.98	—	—	—	—	—	—	—
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	0.39	0.33	3.24	2.96	< 0.005	0.14	—	0.14	0.13	—	0.13	—	432	432	0.02	< 0.005	—	434
Dust From Material Movement	—	—	—	—	—	—	1.77	1.77	—	0.91	0.91	—	—	—	—	—	—	—

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	0.10	0.09	0.06	0.86	0.00	0.00	114	114	0.00	11.4	11.4	—	129	129	0.01	0.01	0.56	131
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	0.81	0.00	0.00	114	114	0.00	11.4	11.4	—	122	122	0.01	0.01	0.01	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.38	0.00	0.00	56.1	56.1	0.00	5.61	5.61	—	60.2	60.2	< 0.005	< 0.005	0.12	61.2
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	0.01	0.01	0.01	0.07	0.00	0.00	10.2	10.2	0.00	1.02	1.02	—	9.97	9.97	< 0.005	< 0.005	0.02	10.1
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

3.36. Site Preparation (2024) - 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	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.14	1.80	17.7	16.2	0.02	0.79	—	0.79	0.73	—	0.73	—	2,612	2,612	0.11	0.02	—	2,621
Dust From Material Movement	—	—	—	—	—	—	9.69	9.69	—	4.98	4.98	—	—	—	—	—	—	—
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	0.39	0.33	3.24	2.96	< 0.005	0.14	—	0.14	0.13	—	0.13	—	432	432	0.02	< 0.005	—	434

Dust From Material Movement	—	—	—	—	—	—	1.77	1.77	—	0.91	0.91	—	—	—	—	—	—	—
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	0.10	0.09	0.06	0.86	0.00	0.00	114	114	0.00	11.4	11.4	—	129	129	0.01	0.01	0.56	131
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	0.81	0.00	0.00	114	114	0.00	11.4	11.4	—	122	122	0.01	0.01	0.01	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.38	0.00	0.00	56.1	56.1	0.00	5.61	5.61	—	60.2	60.2	< 0.005	< 0.005	0.12	61.2
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	0.01	0.01	0.01	0.07	0.00	0.00	10.2	10.2	0.00	1.02	1.02	—	9.97	9.97	< 0.005	< 0.005	0.02	10.1
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

3.37. Grading (2024) - 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	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
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	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
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	2.50	2.10	20.5	18.0	0.04	0.86	—	0.86	0.80	—	0.80	—	3,938	3,938	0.16	0.03	—	3,952
Dust From Material Movement	—	—	—	—	—	—	5.49	5.49	—	2.18	2.18	—	—	—	—	—	—	—
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	0.46	0.38	3.73	3.29	0.01	0.16	—	0.16	0.15	—	0.15	—	652	652	0.03	0.01	—	654
Dust From Material Movement	—	—	—	—	—	—	1.00	1.00	—	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	0.11	0.10	0.07	0.98	0.00	0.00	130	130	0.00	13.0	13.0	—	147	147	0.01	0.01	0.64	150
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	0.93	0.00	0.00	130	130	0.00	13.0	13.0	—	139	139	0.01	0.01	0.02	141
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.53	0.00	0.00	77.6	77.6	0.00	7.76	7.76	—	83.3	83.3	0.01	< 0.005	0.17	84.7
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	0.01	0.01	0.01	0.10	0.00	0.00	14.2	14.2	0.00	1.42	1.42	—	13.8	13.8	< 0.005	< 0.005	0.03	14.0
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

3.38. Grading (2024) - 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	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
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	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
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	2.50	2.10	20.5	18.0	0.04	0.86	—	0.86	0.80	—	0.80	—	3,938	3,938	0.16	0.03	—	3,952
Dust From Material Movement	—	—	—	—	—	—	5.49	5.49	—	2.18	2.18	—	—	—	—	—	—	—

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	0.46	0.38	3.73	3.29	0.01	0.16	—	0.16	0.15	—	0.15	—	652	652	0.03	0.01	—	654
Dust From Material Movement	—	—	—	—	—	—	1.00	1.00	—	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	0.11	0.10	0.07	0.98	0.00	0.00	130	130	0.00	13.0	13.0	—	147	147	0.01	0.01	0.64	150
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	0.93	0.00	0.00	130	130	0.00	13.0	13.0	—	139	139	0.01	0.01	0.02	141
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.53	0.00	0.00	77.6	77.6	0.00	7.76	7.76	—	83.3	83.3	0.01	< 0.005	0.17	84.7
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	0.01	0.01	0.01	0.10	0.00	0.00	14.2	14.2	0.00	1.42	1.42	—	13.8	13.8	< 0.005	< 0.005	0.03	14.0
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

3.39. Grading (2025) - 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	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
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	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
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	2.58	2.16	20.1	19.2	0.04	0.84	—	0.84	0.77	—	0.77	—	4,468	4,468	0.18	0.04	—	4,483

Dust From Material Movement	—	—	—	—	—	—	6.23	6.23	—	2.47	2.47	—	—	—	—	—	—	—
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	0.47	0.40	3.67	3.50	0.01	0.15	—	0.15	0.14	—	0.14	—	740	740	0.03	0.01	—	742
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.07	0.91	0.00	0.00	130	130	0.00	13.0	13.0	—	145	145	0.01	0.01	0.60	147
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.09	0.86	0.00	0.00	130	130	0.00	13.0	13.0	—	136	136	0.01	0.01	0.02	138
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.55	0.00	0.00	88.0	88.0	0.00	8.81	8.81	—	92.7	92.7	0.01	< 0.005	0.18	94.2
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	0.01	0.01	0.01	0.10	0.00	0.00	16.1	16.1	0.00	1.61	1.61	—	15.3	15.3	< 0.005	< 0.005	0.03	15.6
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

3.40. Grading (2025) - 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	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
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	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
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	2.58	2.16	20.1	19.2	0.04	0.84	—	0.84	0.77	—	0.77	—	4,468	4,468	0.18	0.04	—	4,483
Dust From Material Movement	—	—	—	—	—	—	6.23	6.23	—	2.47	2.47	—	—	—	—	—	—	—
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	0.47	0.40	3.67	3.50	0.01	0.15	—	0.15	0.14	—	0.14	—	740	740	0.03	0.01	—	742
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.07	0.91	0.00	0.00	130	130	0.00	13.0	13.0	—	145	145	0.01	0.01	0.60	147
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.09	0.86	0.00	0.00	130	130	0.00	13.0	13.0	—	136	136	0.01	0.01	0.02	138
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.55	0.00	0.00	88.0	88.0	0.00	8.81	8.81	—	92.7	92.7	0.01	< 0.005	0.18	94.2

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	0.01	0.01	0.01	0.10	0.00	0.00	16.1	16.1	0.00	1.61	1.61	—	15.3	15.3	< 0.005	< 0.005	0.03	15.6
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

3.41. Building Construction (2024) - 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	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
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	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
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	0.77	0.65	6.04	7.06	0.01	0.27	—	0.27	0.25	—	0.25	—	1,290	1,290	0.05	0.01	—	1,295
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	0.14	0.12	1.10	1.29	< 0.005	0.05	—	0.05	0.04	—	0.04	—	214	214	0.01	< 0.005	—	214
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	13.9	12.6	9.06	124	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	18,682	18,682	1.09	0.75	81.7	19,015
Vendor	1.09	0.59	16.3	8.20	0.07	0.14	2,224	2,225	0.14	223	223	—	10,783	10,783	0.48	1.60	27.8	11,298
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	13.8	12.4	11.7	117	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,605	17,605	1.31	0.75	2.12	17,864
Vendor	1.06	0.49	17.1	8.36	0.07	0.14	2,224	2,225	0.14	223	223	—	10,792	10,792	0.49	1.60	0.72	11,280
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	7.29	6.57	5.88	60.0	0.00	0.00	8,862	8,862	0.00	887	887	—	9,518	9,518	0.65	0.41	19.0	9,674
Vendor	0.58	0.31	9.04	4.45	0.04	0.08	1,197	1,197	0.08	120	120	—	5,805	5,805	0.26	0.86	6.43	6,074
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	1.33	1.20	1.07	11.0	0.00	0.00	1,617	1,617	0.00	162	162	—	1,576	1,576	0.11	0.07	3.14	1,602
Vendor	0.11	0.06	1.65	0.81	0.01	0.01	218	218	0.01	21.9	21.9	—	961	961	0.04	0.14	1.07	1,006
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

3.42. Building Construction (2024) - 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	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
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	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
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	0.77	0.65	6.04	7.06	0.01	0.27	—	0.27	0.25	—	0.25	—	1,290	1,290	0.05	0.01	—	1,295
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	0.14	0.12	1.10	1.29	< 0.005	0.05	—	0.05	0.04	—	0.04	—	214	214	0.01	< 0.005	—	214
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	13.9	12.6	9.06	124	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	18,682	18,682	1.09	0.75	81.7	19,015
Vendor	1.09	0.59	16.3	8.20	0.07	0.14	2,224	2,225	0.14	223	223	—	10,783	10,783	0.48	1.60	27.8	11,298

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	13.8	12.4	11.7	117	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,605	17,605	1.31	0.75	2.12	17,864
Vendor	1.06	0.49	17.1	8.36	0.07	0.14	2,224	2,225	0.14	223	223	—	10,792	10,792	0.49	1.60	0.72	11,280
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	7.29	6.57	5.88	60.0	0.00	0.00	8,862	8,862	0.00	887	887	—	9,518	9,518	0.65	0.41	19.0	9,674
Vendor	0.58	0.31	9.04	4.45	0.04	0.08	1,197	1,197	0.08	120	120	—	5,805	5,805	0.26	0.86	6.43	6,074
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	1.33	1.20	1.07	11.0	0.00	0.00	1,617	1,617	0.00	162	162	—	1,576	1,576	0.11	0.07	3.14	1,602
Vendor	0.11	0.06	1.65	0.81	0.01	0.01	218	218	0.01	21.9	21.9	—	961	961	0.04	0.14	1.07	1,006
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

3.43. Building Construction (2025) - 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	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
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	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
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	0.96	0.80	7.46	9.31	0.02	0.31	—	0.31	0.28	—	0.28	—	1,713	1,713	0.07	0.01	—	1,719
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	0.18	0.15	1.36	1.70	< 0.005	0.06	—	0.06	0.05	—	0.05	—	284	284	0.01	< 0.005	—	285
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	12.8	12.0	8.36	115	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	18,321	18,321	1.03	0.75	75.7	18,647
Vendor	1.00	0.50	15.5	7.64	0.07	0.14	2,224	2,225	0.14	223	223	—	10,593	10,593	0.48	1.52	27.6	11,087
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	12.7	11.9	11.0	109	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,267	17,267	1.26	0.75	1.97	17,525
Vendor	0.97	0.49	16.3	7.85	0.07	0.14	2,224	2,225	0.14	223	223	—	10,602	10,602	0.48	1.52	0.72	11,069
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	8.93	8.32	6.93	74.0	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	12,391	12,391	0.82	0.54	23.4	12,595
Vendor	0.71	0.36	11.5	5.55	0.05	0.10	1,589	1,589	0.10	159	159	—	7,569	7,569	0.34	1.09	8.54	7,911
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	1.63	1.52	1.26	13.5	0.00	0.00	2,147	2,147	0.00	215	215	—	2,052	2,052	0.14	0.09	3.87	2,085
Vendor	0.13	0.07	2.09	1.01	0.01	0.02	290	290	0.02	29.0	29.1	—	1,253	1,253	0.06	0.18	1.41	1,310
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

3.44. Building Construction (2025) - 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	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
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	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
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	0.96	0.80	7.46	9.31	0.02	0.31	—	0.31	0.28	—	0.28	—	1,713	1,713	0.07	0.01	—	1,719

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	0.18	0.15	1.36	1.70	< 0.005	0.06	—	0.06	0.05	—	0.05	—	284	284	0.01	< 0.005	—	285
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	12.8	12.0	8.36	115	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	18,321	18,321	1.03	0.75	75.7	18,647
Vendor	1.00	0.50	15.5	7.64	0.07	0.14	2,224	2,225	0.14	223	223	—	10,593	10,593	0.48	1.52	27.6	11,087
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	12.7	11.9	11.0	109	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,267	17,267	1.26	0.75	1.97	17,525
Vendor	0.97	0.49	16.3	7.85	0.07	0.14	2,224	2,225	0.14	223	223	—	10,602	10,602	0.48	1.52	0.72	11,069
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	8.93	8.32	6.93	74.0	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	12,391	12,391	0.82	0.54	23.4	12,595
Vendor	0.71	0.36	11.5	5.55	0.05	0.10	1,589	1,589	0.10	159	159	—	7,569	7,569	0.34	1.09	8.54	7,911
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	1.63	1.52	1.26	13.5	0.00	0.00	2,147	2,147	0.00	215	215	—	2,052	2,052	0.14	0.09	3.87	2,085
Vendor	0.13	0.07	2.09	1.01	0.01	0.02	290	290	0.02	29.0	29.1	—	1,253	1,253	0.06	0.18	1.41	1,310
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

3.45. 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	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
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	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
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	0.91	0.77	7.04	9.26	0.02	0.27	—	0.27	0.25	—	0.25	—	1,712	1,712	0.07	0.01	—	1,718
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	0.17	0.14	1.28	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
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	12.3	11.5	7.72	107	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,974	17,974	1.03	0.75	70.1	18,294
Vendor	0.97	0.49	14.8	7.15	0.07	0.14	2,224	2,225	0.14	223	223	—	10,395	10,395	0.48	1.52	25.0	10,886
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	12.2	11.3	9.75	102	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,943	16,943	1.20	0.75	1.82	17,199
Vendor	0.95	0.45	15.6	7.34	0.07	0.14	2,224	2,225	0.14	223	223	—	10,405	10,405	0.46	1.52	0.65	10,872
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	8.58	7.96	6.47	69.3	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	12,158	12,158	0.82	0.54	21.6	12,361
Vendor	0.70	0.34	11.0	5.19	0.05	0.10	1,589	1,589	0.10	159	159	—	7,428	7,428	0.34	1.09	7.74	7,769
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	1.57	1.45	1.18	12.6	0.00	0.00	2,147	2,147	0.00	215	215	—	2,013	2,013	0.14	0.09	3.58	2,046
Vendor	0.13	0.06	2.00	0.95	0.01	0.02	290	290	0.02	29.0	29.1	—	1,230	1,230	0.06	0.18	1.28	1,286
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

3.46. 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	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
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	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
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	0.91	0.77	7.04	9.26	0.02	0.27	—	0.27	0.25	—	0.25	—	1,712	1,712	0.07	0.01	—	1,718
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	0.17	0.14	1.28	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
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	12.3	11.5	7.72	107	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,974	17,974	1.03	0.75	70.1	18,294
Vendor	0.97	0.49	14.8	7.15	0.07	0.14	2,224	2,225	0.14	223	223	—	10,395	10,395	0.48	1.52	25.0	10,886
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	12.2	11.3	9.75	102	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,943	16,943	1.20	0.75	1.82	17,199

Vendor	0.95	0.45	15.6	7.34	0.07	0.14	2,224	2,225	0.14	223	223	—	10,405	10,405	0.46	1.52	0.65	10,872
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	8.58	7.96	6.47	69.3	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	12,158	12,158	0.82	0.54	21.6	12,361
Vendor	0.70	0.34	11.0	5.19	0.05	0.10	1,589	1,589	0.10	159	159	—	7,428	7,428	0.34	1.09	7.74	7,769
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	1.57	1.45	1.18	12.6	0.00	0.00	2,147	2,147	0.00	215	215	—	2,013	2,013	0.14	0.09	3.58	2,046
Vendor	0.13	0.06	2.00	0.95	0.01	0.02	290	290	0.02	29.0	29.1	—	1,230	1,230	0.06	0.18	1.28	1,286
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

3.47. 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	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
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	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
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	0.88	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
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	0.16	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284
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	11.8	10.5	7.13	99.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,637	17,637	0.98	0.70	64.6	17,934
Vendor	0.90	0.42	14.2	6.81	0.07	0.14	2,224	2,225	0.14	223	223	—	10,173	10,173	0.39	1.45	22.2	10,638
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	11.1	10.3	9.11	94.6	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,627	16,627	1.14	0.75	1.68	16,882
Vendor	0.86	0.38	15.0	6.98	0.07	0.14	2,224	2,225	0.14	223	223	—	10,184	10,184	0.39	1.45	0.58	10,627
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	7.88	7.30	6.01	64.6	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	11,932	11,932	0.78	0.54	19.9	12,132
Vendor	0.63	0.28	10.5	4.89	0.05	0.10	1,589	1,589	0.10	159	159	—	7,270	7,270	0.28	1.04	6.85	7,593
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	1.44	1.33	1.10	11.8	0.00	0.00	2,147	2,147	0.00	215	215	—	1,976	1,976	0.13	0.09	3.30	2,009

Vendor	0.11	0.05	1.92	0.89	0.01	0.02	290	290	0.02	29.0	29.1	—	1,204	1,204	0.05	0.17	1.13	1,257
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

3.48. 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	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
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	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
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	0.88	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
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	0.16	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284
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	11.8	10.5	7.13	99.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,637	17,637	0.98	0.70	64.6	17,934
Vendor	0.90	0.42	14.2	6.81	0.07	0.14	2,224	2,225	0.14	223	223	—	10,173	10,173	0.39	1.45	22.2	10,638
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	11.1	10.3	9.11	94.6	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,627	16,627	1.14	0.75	1.68	16,882
Vendor	0.86	0.38	15.0	6.98	0.07	0.14	2,224	2,225	0.14	223	223	—	10,184	10,184	0.39	1.45	0.58	10,627
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	7.88	7.30	6.01	64.6	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	11,932	11,932	0.78	0.54	19.9	12,132
Vendor	0.63	0.28	10.5	4.89	0.05	0.10	1,589	1,589	0.10	159	159	—	7,270	7,270	0.28	1.04	6.85	7,593
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	1.44	1.33	1.10	11.8	0.00	0.00	2,147	2,147	0.00	215	215	—	1,976	1,976	0.13	0.09	3.30	2,009
Vendor	0.11	0.05	1.92	0.89	0.01	0.02	290	290	0.02	29.0	29.1	—	1,204	1,204	0.05	0.17	1.13	1,257
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

3.49. Building Construction (2028) - 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	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
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	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
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	0.85	0.71	6.39	9.26	0.02	0.22	—	0.22	0.20	—	0.20	—	1,717	1,717	0.07	0.01	—	1,723
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	0.15	0.13	1.17	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	284	284	0.01	< 0.005	—	285
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	11.0	10.2	6.49	93.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,317	17,317	0.98	0.70	59.4	17,608
Vendor	0.81	0.40	13.6	6.40	0.07	0.14	2,224	2,225	0.14	223	223	—	9,919	9,919	0.39	1.44	19.7	10,377
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	10.8	10.00	8.47	89.0	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,326	16,326	0.61	0.75	1.54	16,568

Vendor	0.78	0.38	14.3	6.63	0.07	0.14	2,224	2,225	0.14	223	223	—	9,930	9,930	0.39	1.45	0.51	10,373
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	7.58	7.04	5.57	60.6	0.00	0.00	11,795	11,795	0.00	1,180	1,180	—	11,749	11,749	0.36	0.54	18.4	11,937
Vendor	0.57	0.28	10.1	4.65	0.05	0.10	1,593	1,593	0.10	160	160	—	7,107	7,107	0.28	1.04	6.10	7,431
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	1.38	1.28	1.02	11.1	0.00	0.00	2,153	2,153	0.00	215	215	—	1,945	1,945	0.06	0.09	3.04	1,976
Vendor	0.10	0.05	1.84	0.85	0.01	0.02	291	291	0.02	29.1	29.1	—	1,177	1,177	0.05	0.17	1.01	1,230
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

3.50. Building Construction (2028) - 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	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
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	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
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	0.85	0.71	6.39	9.26	0.02	0.22	—	0.22	0.20	—	0.20	—	1,717	1,717	0.07	0.01	—	1,723
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	0.15	0.13	1.17	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	284	284	0.01	< 0.005	—	285
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	11.0	10.2	6.49	93.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,317	17,317	0.98	0.70	59.4	17,608
Vendor	0.81	0.40	13.6	6.40	0.07	0.14	2,224	2,225	0.14	223	223	—	9,919	9,919	0.39	1.44	19.7	10,377
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	10.8	10.00	8.47	89.0	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,326	16,326	0.61	0.75	1.54	16,568
Vendor	0.78	0.38	14.3	6.63	0.07	0.14	2,224	2,225	0.14	223	223	—	9,930	9,930	0.39	1.45	0.51	10,373
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	7.58	7.04	5.57	60.6	0.00	0.00	11,795	11,795	0.00	1,180	1,180	—	11,749	11,749	0.36	0.54	18.4	11,937
Vendor	0.57	0.28	10.1	4.65	0.05	0.10	1,593	1,593	0.10	160	160	—	7,107	7,107	0.28	1.04	6.10	7,431
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	1.38	1.28	1.02	11.1	0.00	0.00	2,153	2,153	0.00	215	215	—	1,945	1,945	0.06	0.09	3.04	1,976

Vendor	0.10	0.05	1.84	0.85	0.01	0.02	291	291	0.02	29.1	29.1	—	1,177	1,177	0.05	0.17	1.01	1,230
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

3.51. Building Construction (2029) - 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	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
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	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
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	0.82	0.69	6.13	9.22	0.02	0.20	—	0.20	0.18	—	0.18	—	1,712	1,712	0.07	0.01	—	1,718
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	0.15	0.13	1.12	1.68	< 0.005	0.04	—	0.04	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
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	10.5	9.77	5.85	87.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,010	17,010	0.45	0.70	54.2	17,283
Vendor	0.81	0.40	13.0	6.07	0.07	0.14	2,224	2,225	0.14	223	223	—	9,640	9,640	0.38	1.37	17.5	10,075
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	10.3	9.49	7.83	82.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,039	16,039	0.56	0.75	1.41	16,279
Vendor	0.77	0.37	13.7	6.28	0.07	0.14	2,224	2,225	0.14	223	223	—	9,652	9,652	0.38	1.38	0.45	10,073
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	7.28	6.74	5.10	56.6	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	11,510	11,510	0.36	0.54	16.8	11,696
Vendor	0.57	0.28	9.56	4.41	0.05	0.10	1,589	1,589	0.10	159	159	—	6,889	6,889	0.27	0.98	5.39	7,193
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	1.33	1.23	0.93	10.3	0.00	0.00	2,147	2,147	0.00	215	215	—	1,906	1,906	0.06	0.09	2.77	1,936
Vendor	0.10	0.05	1.74	0.80	0.01	0.02	290	290	0.02	29.0	29.1	—	1,141	1,141	0.05	0.16	0.89	1,191
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

3.52. Building Construction (2029) - 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	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
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	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
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	0.82	0.69	6.13	9.22	0.02	0.20	—	0.20	0.18	—	0.18	—	1,712	1,712	0.07	0.01	—	1,718
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	0.15	0.13	1.12	1.68	< 0.005	0.04	—	0.04	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
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	10.5	9.77	5.85	87.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	17,010	17,010	0.45	0.70	54.2	17,283
Vendor	0.81	0.40	13.0	6.07	0.07	0.14	2,224	2,225	0.14	223	223	—	9,640	9,640	0.38	1.37	17.5	10,075
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	10.3	9.49	7.83	82.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,039	16,039	0.56	0.75	1.41	16,279

Vendor	0.77	0.37	13.7	6.28	0.07	0.14	2,224	2,225	0.14	223	223	—	9,652	9,652	0.38	1.38	0.45	10,073
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	7.28	6.74	5.10	56.6	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	11,510	11,510	0.36	0.54	16.8	11,696
Vendor	0.57	0.28	9.56	4.41	0.05	0.10	1,589	1,589	0.10	159	159	—	6,889	6,889	0.27	0.98	5.39	7,193
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	1.33	1.23	0.93	10.3	0.00	0.00	2,147	2,147	0.00	215	215	—	1,906	1,906	0.06	0.09	2.77	1,936
Vendor	0.10	0.05	1.74	0.80	0.01	0.02	290	290	0.02	29.0	29.1	—	1,141	1,141	0.05	0.16	0.89	1,191
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

3.53. Building Construction (2030) - 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	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
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	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
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	0.80	0.67	5.99	9.20	0.02	0.19	—	0.19	0.17	—	0.17	—	1,712	1,712	0.07	0.01	—	1,718
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	0.15	0.12	1.09	1.68	< 0.005	0.03	—	0.03	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
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	10.0	9.27	5.27	82.0	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,719	16,719	0.39	0.70	49.3	16,985
Vendor	0.72	0.39	12.5	5.82	0.07	0.14	2,224	2,225	0.14	223	223	—	9,345	9,345	0.31	1.37	15.3	9,776
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	9.44	9.22	7.19	77.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,766	15,766	0.56	0.75	1.28	16,005
Vendor	0.70	0.37	13.2	6.02	0.07	0.14	2,224	2,225	0.14	223	223	—	9,357	9,357	0.31	1.37	0.40	9,773
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	7.00	6.46	4.64	52.9	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	11,315	11,315	0.32	0.50	15.2	11,486
Vendor	0.51	0.28	9.20	4.22	0.05	0.10	1,589	1,589	0.10	159	159	—	6,678	6,678	0.22	0.98	4.74	6,980
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	1.28	1.18	0.85	9.65	0.00	0.00	2,147	2,147	0.00	215	215	—	1,873	1,873	0.05	0.08	2.52	1,902

Vendor	0.09	0.05	1.68	0.77	0.01	0.02	290	290	0.02	29.0	29.1	—	1,106	1,106	0.04	0.16	0.78	1,156
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

3.54. Building Construction (2030) - 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	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
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	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
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	0.80	0.67	5.99	9.20	0.02	0.19	—	0.19	0.17	—	0.17	—	1,712	1,712	0.07	0.01	—	1,718
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	0.15	0.12	1.09	1.68	< 0.005	0.03	—	0.03	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
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	10.0	9.27	5.27	82.0	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,719	16,719	0.39	0.70	49.3	16,985
Vendor	0.72	0.39	12.5	5.82	0.07	0.14	2,224	2,225	0.14	223	223	—	9,345	9,345	0.31	1.37	15.3	9,776
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	9.44	9.22	7.19	77.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,766	15,766	0.56	0.75	1.28	16,005
Vendor	0.70	0.37	13.2	6.02	0.07	0.14	2,224	2,225	0.14	223	223	—	9,357	9,357	0.31	1.37	0.40	9,773
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	7.00	6.46	4.64	52.9	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	11,315	11,315	0.32	0.50	15.2	11,486
Vendor	0.51	0.28	9.20	4.22	0.05	0.10	1,589	1,589	0.10	159	159	—	6,678	6,678	0.22	0.98	4.74	6,980
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	1.28	1.18	0.85	9.65	0.00	0.00	2,147	2,147	0.00	215	215	—	1,873	1,873	0.05	0.08	2.52	1,902
Vendor	0.09	0.05	1.68	0.77	0.01	0.02	290	290	0.02	29.0	29.1	—	1,106	1,106	0.04	0.16	0.78	1,156
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

3.55. Building Construction (2031) - 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	1.10	0.92	8.12	12.8	0.02	0.24	—	0.24	0.22	—	0.22	—	2,397	2,397	0.10	0.02	—	2,405
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	1.10	0.92	8.12	12.8	0.02	0.24	—	0.24	0.22	—	0.22	—	2,397	2,397	0.10	0.02	—	2,405
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	0.78	0.66	5.80	9.18	0.02	0.17	—	0.17	0.16	—	0.16	—	1,712	1,712	0.07	0.01	—	1,718
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	0.14	0.12	1.06	1.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
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	9.05	8.88	4.63	76.6	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,447	16,447	0.39	0.70	44.7	16,709
Vendor	0.71	0.32	12.0	5.57	0.07	0.14	2,224	2,225	0.07	223	223	—	9,044	9,044	0.31	1.30	13.3	9,452
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	8.99	8.71	6.61	72.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,510	15,510	0.50	0.75	1.16	15,748

Vendor	0.70	0.30	12.7	5.77	0.07	0.14	2,224	2,225	0.07	223	223	—	9,056	9,056	0.31	1.30	0.35	9,451
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	6.30	6.14	4.22	49.5	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	11,131	11,131	0.32	0.50	13.8	11,301
Vendor	0.51	0.22	8.84	4.04	0.05	0.10	1,589	1,589	0.05	159	159	—	6,464	6,464	0.22	0.93	4.11	6,750
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	1.15	1.12	0.77	9.04	0.00	0.00	2,147	2,147	0.00	215	215	—	1,843	1,843	0.05	0.08	2.28	1,871
Vendor	0.09	0.04	1.61	0.74	0.01	0.02	290	290	0.01	29.0	29.0	—	1,070	1,070	0.04	0.15	0.68	1,117
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

3.56. Building Construction (2031) - 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	1.10	0.92	8.12	12.8	0.02	0.24	—	0.24	0.22	—	0.22	—	2,397	2,397	0.10	0.02	—	2,405
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	1.10	0.92	8.12	12.8	0.02	0.24	—	0.24	0.22	—	0.22	—	2,397	2,397	0.10	0.02	—	2,405
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	0.78	0.66	5.80	9.18	0.02	0.17	—	0.17	0.16	—	0.16	—	1,712	1,712	0.07	0.01	—	1,718
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	0.14	0.12	1.06	1.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
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	9.05	8.88	4.63	76.6	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,447	16,447	0.39	0.70	44.7	16,709
Vendor	0.71	0.32	12.0	5.57	0.07	0.14	2,224	2,225	0.07	223	223	—	9,044	9,044	0.31	1.30	13.3	9,452
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	8.99	8.71	6.61	72.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,510	15,510	0.50	0.75	1.16	15,748
Vendor	0.70	0.30	12.7	5.77	0.07	0.14	2,224	2,225	0.07	223	223	—	9,056	9,056	0.31	1.30	0.35	9,451
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	6.30	6.14	4.22	49.5	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	11,131	11,131	0.32	0.50	13.8	11,301
Vendor	0.51	0.22	8.84	4.04	0.05	0.10	1,589	1,589	0.05	159	159	—	6,464	6,464	0.22	0.93	4.11	6,750
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	1.15	1.12	0.77	9.04	0.00	0.00	2,147	2,147	0.00	215	215	—	1,843	1,843	0.05	0.08	2.28	1,871

Vendor	0.09	0.04	1.61	0.74	0.01	0.02	290	290	0.01	29.0	29.0	—	1,070	1,070	0.04	0.15	0.68	1,117
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

3.57. Building Construction (2032) - 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	1.07	0.90	7.87	12.8	0.02	0.22	—	0.22	0.21	—	0.21	—	2,397	2,397	0.10	0.02	—	2,405
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	1.07	0.90	7.87	12.8	0.02	0.22	—	0.22	0.21	—	0.21	—	2,397	2,397	0.10	0.02	—	2,405
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	0.77	0.64	5.64	9.16	0.02	0.16	—	0.16	0.15	—	0.15	—	1,717	1,717	0.07	0.01	—	1,723
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	0.14	0.12	1.03	1.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	284	284	0.01	< 0.005	—	285
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	8.60	7.90	4.57	71.3	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,195	16,195	0.34	0.70	40.3	16,451
Vendor	0.64	0.32	11.5	5.41	0.07	0.07	2,224	2,225	0.07	223	223	—	8,750	8,750	0.30	1.30	11.4	9,156
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	8.49	7.74	5.96	68.1	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,274	15,274	0.45	0.75	1.04	15,511
Vendor	0.62	0.28	12.3	5.53	0.07	0.07	2,224	2,225	0.07	223	223	—	8,763	8,763	0.30	1.30	0.30	9,157
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	6.04	5.50	3.81	46.4	0.00	0.00	11,795	11,795	0.00	1,180	1,180	—	10,992	10,992	0.28	0.50	12.5	11,160
Vendor	0.45	0.22	8.55	3.89	0.05	0.05	1,593	1,593	0.05	160	160	—	6,271	6,271	0.21	0.93	3.54	6,557
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	1.10	1.00	0.70	8.47	0.00	0.00	2,153	2,153	0.00	215	215	—	1,820	1,820	0.05	0.08	2.06	1,848
Vendor	0.08	0.04	1.56	0.71	0.01	0.01	291	291	0.01	29.1	29.1	—	1,038	1,038	0.04	0.15	0.59	1,086
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

3.58. Building Construction (2032) - 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	1.07	0.90	7.87	12.8	0.02	0.22	—	0.22	0.21	—	0.21	—	2,397	2,397	0.10	0.02	—	2,405
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	1.07	0.90	7.87	12.8	0.02	0.22	—	0.22	0.21	—	0.21	—	2,397	2,397	0.10	0.02	—	2,405
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	0.77	0.64	5.64	9.16	0.02	0.16	—	0.16	0.15	—	0.15	—	1,717	1,717	0.07	0.01	—	1,723
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	0.14	0.12	1.03	1.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	284	284	0.01	< 0.005	—	285
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	8.60	7.90	4.57	71.3	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	16,195	16,195	0.34	0.70	40.3	16,451
Vendor	0.64	0.32	11.5	5.41	0.07	0.07	2,224	2,225	0.07	223	223	—	8,750	8,750	0.30	1.30	11.4	9,156
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	8.49	7.74	5.96	68.1	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,274	15,274	0.45	0.75	1.04	15,511

Vendor	0.62	0.28	12.3	5.53	0.07	0.07	2,224	2,225	0.07	223	223	—	8,763	8,763	0.30	1.30	0.30	9,157
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	6.04	5.50	3.81	46.4	0.00	0.00	11,795	11,795	0.00	1,180	1,180	—	10,992	10,992	0.28	0.50	12.5	11,160
Vendor	0.45	0.22	8.55	3.89	0.05	0.05	1,593	1,593	0.05	160	160	—	6,271	6,271	0.21	0.93	3.54	6,557
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	1.10	1.00	0.70	8.47	0.00	0.00	2,153	2,153	0.00	215	215	—	1,820	1,820	0.05	0.08	2.06	1,848
Vendor	0.08	0.04	1.56	0.71	0.01	0.01	291	291	0.01	29.1	29.1	—	1,038	1,038	0.04	0.15	0.59	1,086
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

3.59. Building Construction (2033) - 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	1.05	0.88	7.67	12.8	0.02	0.20	—	0.20	0.19	—	0.19	—	2,397	2,397	0.10	0.02	—	2,405
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	1.05	0.88	7.67	12.8	0.02	0.20	—	0.20	0.19	—	0.19	—	2,397	2,397	0.10	0.02	—	2,405
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	0.75	0.63	5.48	9.13	0.02	0.15	—	0.15	0.13	—	0.13	—	1,712	1,712	0.07	0.01	—	1,718
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	0.14	0.11	1.00	1.67	< 0.005	0.03	—	0.03	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
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	8.27	7.57	3.99	67.2	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,963	15,963	0.34	0.70	36.2	16,215
Vendor	0.63	0.32	11.2	5.17	0.07	0.07	2,224	2,225	0.07	223	223	—	8,465	8,465	0.30	1.23	9.74	8,847
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	8.21	7.51	5.38	63.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,056	15,056	0.45	0.70	0.94	15,276
Vendor	0.61	0.30	11.8	5.36	0.07	0.07	2,224	2,225	0.07	223	223	—	8,478	8,478	0.30	1.23	0.25	8,851
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	5.82	5.33	3.35	43.5	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,806	10,806	0.28	0.50	11.1	10,972
Vendor	0.44	0.22	8.27	3.76	0.05	0.05	1,589	1,589	0.05	159	159	—	6,050	6,050	0.21	0.88	3.01	6,320
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	1.06	0.97	0.61	7.93	0.00	0.00	2,147	2,147	0.00	215	215	—	1,789	1,789	0.05	0.08	1.84	1,817

Vendor	0.08	0.04	1.51	0.69	0.01	0.01	290	290	0.01	29.0	29.0	—	1,002	1,002	0.04	0.15	0.50	1,046
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

3.60. Building Construction (2033) - 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	1.05	0.88	7.67	12.8	0.02	0.20	—	0.20	0.19	—	0.19	—	2,397	2,397	0.10	0.02	—	2,405
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	1.05	0.88	7.67	12.8	0.02	0.20	—	0.20	0.19	—	0.19	—	2,397	2,397	0.10	0.02	—	2,405
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	0.75	0.63	5.48	9.13	0.02	0.15	—	0.15	0.13	—	0.13	—	1,712	1,712	0.07	0.01	—	1,718
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	0.14	0.11	1.00	1.67	< 0.005	0.03	—	0.03	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
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	8.27	7.57	3.99	67.2	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,963	15,963	0.34	0.70	36.2	16,215
Vendor	0.63	0.32	11.2	5.17	0.07	0.07	2,224	2,225	0.07	223	223	—	8,465	8,465	0.30	1.23	9.74	8,847
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	8.21	7.51	5.38	63.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,056	15,056	0.45	0.70	0.94	15,276
Vendor	0.61	0.30	11.8	5.36	0.07	0.07	2,224	2,225	0.07	223	223	—	8,478	8,478	0.30	1.23	0.25	8,851
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	5.82	5.33	3.35	43.5	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,806	10,806	0.28	0.50	11.1	10,972
Vendor	0.44	0.22	8.27	3.76	0.05	0.05	1,589	1,589	0.05	159	159	—	6,050	6,050	0.21	0.88	3.01	6,320
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	1.06	0.97	0.61	7.93	0.00	0.00	2,147	2,147	0.00	215	215	—	1,789	1,789	0.05	0.08	1.84	1,817
Vendor	0.08	0.04	1.51	0.69	0.01	0.01	290	290	0.01	29.0	29.0	—	1,002	1,002	0.04	0.15	0.50	1,046
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

3.61. Building Construction (2034) - 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	1.03	0.86	7.52	12.8	0.02	0.19	—	0.19	0.18	—	0.18	—	2,397	2,397	0.10	0.02	—	2,405
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	1.03	0.86	7.52	12.8	0.02	0.19	—	0.19	0.18	—	0.18	—	2,397	2,397	0.10	0.02	—	2,405
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	0.74	0.62	5.37	9.12	0.02	0.14	—	0.14	0.13	—	0.13	—	1,712	1,712	0.07	0.01	—	1,718
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	0.13	0.11	0.98	1.66	< 0.005	0.03	—	0.03	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
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	7.87	7.23	3.93	62.5	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,745	15,745	0.34	0.17	32.2	15,835
Vendor	0.63	0.32	10.8	5.02	0.07	0.07	2,224	2,225	0.07	223	223	—	8,191	8,191	0.23	1.23	8.33	8,571
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	7.87	7.18	4.79	59.2	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,850	14,850	0.39	0.70	0.83	15,068

Vendor	0.61	0.30	11.5	5.20	0.07	0.07	2,224	2,225	0.07	223	223	—	8,204	8,204	0.23	1.23	0.22	8,576
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	5.54	5.05	2.93	40.3	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,659	10,659	0.28	0.50	9.94	10,824
Vendor	0.44	0.22	7.97	3.64	0.05	0.05	1,589	1,589	0.05	159	159	—	5,855	5,855	0.16	0.88	2.57	6,122
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	1.01	0.92	0.53	7.35	0.00	0.00	2,147	2,147	0.00	215	215	—	1,765	1,765	0.05	0.08	1.65	1,792
Vendor	0.08	0.04	1.45	0.67	0.01	0.01	290	290	0.01	29.0	29.0	—	969	969	0.03	0.15	0.43	1,014
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

3.62. Building Construction (2034) - 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	1.03	0.86	7.52	12.8	0.02	0.19	—	0.19	0.18	—	0.18	—	2,397	2,397	0.10	0.02	—	2,405
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	1.03	0.86	7.52	12.8	0.02	0.19	—	0.19	0.18	—	0.18	—	2,397	2,397	0.10	0.02	—	2,405
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	0.74	0.62	5.37	9.12	0.02	0.14	—	0.14	0.13	—	0.13	—	1,712	1,712	0.07	0.01	—	1,718
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	0.13	0.11	0.98	1.66	< 0.005	0.03	—	0.03	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
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	7.87	7.23	3.93	62.5	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,745	15,745	0.34	0.17	32.2	15,835
Vendor	0.63	0.32	10.8	5.02	0.07	0.07	2,224	2,225	0.07	223	223	—	8,191	8,191	0.23	1.23	8.33	8,571
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	7.87	7.18	4.79	59.2	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,850	14,850	0.39	0.70	0.83	15,068
Vendor	0.61	0.30	11.5	5.20	0.07	0.07	2,224	2,225	0.07	223	223	—	8,204	8,204	0.23	1.23	0.22	8,576
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	5.54	5.05	2.93	40.3	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,659	10,659	0.28	0.50	9.94	10,824
Vendor	0.44	0.22	7.97	3.64	0.05	0.05	1,589	1,589	0.05	159	159	—	5,855	5,855	0.16	0.88	2.57	6,122
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	1.01	0.92	0.53	7.35	0.00	0.00	2,147	2,147	0.00	215	215	—	1,765	1,765	0.05	0.08	1.65	1,792

Vendor	0.08	0.04	1.45	0.67	0.01	0.01	290	290	0.01	29.0	29.0	—	969	969	0.03	0.15	0.43	1,014
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

3.63. Building Construction (2035) - 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	1.01	0.85	7.34	12.7	0.02	0.18	—	0.18	0.17	—	0.17	—	2,397	2,397	0.10	0.02	—	2,405
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	1.01	0.85	7.34	12.7	0.02	0.18	—	0.18	0.17	—	0.17	—	2,397	2,397	0.10	0.02	—	2,405
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	0.72	0.61	5.24	9.06	0.02	0.13	—	0.13	0.12	—	0.12	—	1,712	1,712	0.07	0.01	—	1,718
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	0.13	0.11	0.96	1.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
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	7.71	7.07	3.35	58.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,545	15,545	0.28	0.17	28.4	15,631
Vendor	0.56	0.32	10.5	4.94	0.07	0.07	2,224	2,225	0.07	223	223	—	7,931	7,931	0.21	1.15	7.02	8,288
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	7.12	6.95	4.74	55.6	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,663	14,663	0.39	0.70	0.74	14,881
Vendor	0.52	0.30	11.1	5.04	0.07	0.07	2,224	2,225	0.07	223	223	—	7,945	7,945	0.21	1.15	0.18	8,294
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	5.05	4.93	2.89	38.0	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,524	10,524	0.24	0.50	8.81	10,687
Vendor	0.39	0.22	7.77	3.59	0.05	0.05	1,589	1,589	0.05	159	159	—	5,669	5,669	0.15	0.82	2.17	5,921
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	0.92	0.90	0.53	6.93	0.00	0.00	2,147	2,147	0.00	215	215	—	1,742	1,742	0.04	0.08	1.46	1,769
Vendor	0.07	0.04	1.42	0.65	0.01	0.01	290	290	0.01	29.0	29.0	—	939	939	0.03	0.14	0.36	980
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

3.64. Building Construction (2035) - 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	1.01	0.85	7.34	12.7	0.02	0.18	—	0.18	0.17	—	0.17	—	2,397	2,397	0.10	0.02	—	2,405
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	1.01	0.85	7.34	12.7	0.02	0.18	—	0.18	0.17	—	0.17	—	2,397	2,397	0.10	0.02	—	2,405
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	0.72	0.61	5.24	9.06	0.02	0.13	—	0.13	0.12	—	0.12	—	1,712	1,712	0.07	0.01	—	1,718
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	0.13	0.11	0.96	1.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
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	7.71	7.07	3.35	58.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,545	15,545	0.28	0.17	28.4	15,631
Vendor	0.56	0.32	10.5	4.94	0.07	0.07	2,224	2,225	0.07	223	223	—	7,931	7,931	0.21	1.15	7.02	8,288
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	7.12	6.95	4.74	55.6	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,663	14,663	0.39	0.70	0.74	14,881

Vendor	0.52	0.30	11.1	5.04	0.07	0.07	2,224	2,225	0.07	223	223	—	7,945	7,945	0.21	1.15	0.18	8,294
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	5.05	4.93	2.89	38.0	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,524	10,524	0.24	0.50	8.81	10,687
Vendor	0.39	0.22	7.77	3.59	0.05	0.05	1,589	1,589	0.05	159	159	—	5,669	5,669	0.15	0.82	2.17	5,921
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	0.92	0.90	0.53	6.93	0.00	0.00	2,147	2,147	0.00	215	215	—	1,742	1,742	0.04	0.08	1.46	1,769
Vendor	0.07	0.04	1.42	0.65	0.01	0.01	290	290	0.01	29.0	29.0	—	939	939	0.03	0.14	0.36	980
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

3.65. Building Construction (2036) - 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	0.99	0.83	7.12	12.6	0.02	0.17	—	0.17	0.16	—	0.16	—	2,397	2,397	0.10	0.02	—	2,405
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	0.99	0.83	7.12	12.6	0.02	0.17	—	0.17	0.16	—	0.16	—	2,397	2,397	0.10	0.02	—	2,405
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	0.71	0.60	5.10	9.03	0.02	0.12	—	0.12	0.11	—	0.11	—	1,717	1,717	0.07	0.01	—	1,723
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	0.13	0.11	0.93	1.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	284	284	0.01	< 0.005	—	285
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	6.95	6.84	3.29	54.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,354	15,354	0.28	0.17	25.0	15,436
Vendor	0.56	0.32	10.2	4.79	0.07	0.07	2,224	2,225	0.07	223	223	—	7,698	7,698	0.21	1.15	5.90	8,053
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	7.01	6.84	4.10	52.2	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,483	14,483	0.39	0.70	0.65	14,701
Vendor	0.52	0.30	10.9	4.96	0.07	0.07	2,224	2,225	0.07	223	223	—	7,711	7,711	0.21	1.15	0.15	8,061
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	4.86	4.78	2.48	35.7	0.00	0.00	11,795	11,795	0.00	1,180	1,180	—	10,424	10,424	0.24	0.12	7.75	10,473
Vendor	0.39	0.22	7.55	3.48	0.05	0.05	1,593	1,593	0.05	160	160	—	5,518	5,518	0.15	0.83	1.82	5,770
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	0.89	0.87	0.45	6.52	0.00	0.00	2,153	2,153	0.00	215	215	—	1,726	1,726	0.04	0.02	1.28	1,734

Vendor	0.07	0.04	1.38	0.64	0.01	0.01	291	291	0.01	29.1	29.1	—	913	913	0.03	0.14	0.30	955
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

3.66. Building Construction (2036) - 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	0.99	0.83	7.12	12.6	0.02	0.17	—	0.17	0.16	—	0.16	—	2,397	2,397	0.10	0.02	—	2,405
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	0.99	0.83	7.12	12.6	0.02	0.17	—	0.17	0.16	—	0.16	—	2,397	2,397	0.10	0.02	—	2,405
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	0.71	0.60	5.10	9.03	0.02	0.12	—	0.12	0.11	—	0.11	—	1,717	1,717	0.07	0.01	—	1,723
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	0.13	0.11	0.93	1.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	284	284	0.01	< 0.005	—	285
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	6.95	6.84	3.29	54.9	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,354	15,354	0.28	0.17	25.0	15,436
Vendor	0.56	0.32	10.2	4.79	0.07	0.07	2,224	2,225	0.07	223	223	—	7,698	7,698	0.21	1.15	5.90	8,053
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	7.01	6.84	4.10	52.2	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,483	14,483	0.39	0.70	0.65	14,701
Vendor	0.52	0.30	10.9	4.96	0.07	0.07	2,224	2,225	0.07	223	223	—	7,711	7,711	0.21	1.15	0.15	8,061
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	4.86	4.78	2.48	35.7	0.00	0.00	11,795	11,795	0.00	1,180	1,180	—	10,424	10,424	0.24	0.12	7.75	10,473
Vendor	0.39	0.22	7.55	3.48	0.05	0.05	1,593	1,593	0.05	160	160	—	5,518	5,518	0.15	0.83	1.82	5,770
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	0.89	0.87	0.45	6.52	0.00	0.00	2,153	2,153	0.00	215	215	—	1,726	1,726	0.04	0.02	1.28	1,734
Vendor	0.07	0.04	1.38	0.64	0.01	0.01	291	291	0.01	29.1	29.1	—	913	913	0.03	0.14	0.30	955
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

3.67. Building Construction (2037) - 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	0.98	0.82	6.99	12.5	0.02	0.16	—	0.16	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
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	0.98	0.82	6.99	12.5	0.02	0.16	—	0.16	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
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	0.70	0.58	4.99	8.93	0.02	0.11	—	0.11	0.10	—	0.10	—	1,712	1,712	0.07	0.01	—	1,718
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	0.13	0.11	0.91	1.63	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
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	6.62	6.51	2.76	52.0	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,186	15,186	0.28	0.17	21.8	15,265
Vendor	0.56	0.32	9.99	4.72	0.07	0.07	2,224	2,225	0.07	223	223	—	7,487	7,487	0.21	1.08	4.82	7,820
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	6.56	6.45	4.10	49.0	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,325	14,325	0.34	0.17	0.57	14,384

Vendor	0.51	0.28	10.6	4.88	0.07	0.07	2,224	2,225	0.07	223	223	—	7,501	7,501	0.21	1.08	0.13	7,829
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	4.61	4.53	2.43	33.4	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,282	10,282	0.24	0.12	6.76	10,330
Vendor	0.38	0.21	7.39	3.42	0.05	0.05	1,589	1,589	0.05	159	159	—	5,352	5,352	0.15	0.77	1.49	5,588
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	0.84	0.83	0.44	6.10	0.00	0.00	2,147	2,147	0.00	215	215	—	1,702	1,702	0.04	0.02	1.12	1,710
Vendor	0.07	0.04	1.35	0.62	0.01	0.01	290	290	0.01	29.0	29.0	—	886	886	0.03	0.13	0.25	925
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

3.68. Building Construction (2037) - 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	0.98	0.82	6.99	12.5	0.02	0.16	—	0.16	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
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	0.98	0.82	6.99	12.5	0.02	0.16	—	0.16	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
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	0.70	0.58	4.99	8.93	0.02	0.11	—	0.11	0.10	—	0.10	—	1,712	1,712	0.07	0.01	—	1,718
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	0.13	0.11	0.91	1.63	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
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	6.62	6.51	2.76	52.0	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,186	15,186	0.28	0.17	21.8	15,265
Vendor	0.56	0.32	9.99	4.72	0.07	0.07	2,224	2,225	0.07	223	223	—	7,487	7,487	0.21	1.08	4.82	7,820
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	6.56	6.45	4.10	49.0	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,325	14,325	0.34	0.17	0.57	14,384
Vendor	0.51	0.28	10.6	4.88	0.07	0.07	2,224	2,225	0.07	223	223	—	7,501	7,501	0.21	1.08	0.13	7,829
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	4.61	4.53	2.43	33.4	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,282	10,282	0.24	0.12	6.76	10,330
Vendor	0.38	0.21	7.39	3.42	0.05	0.05	1,589	1,589	0.05	159	159	—	5,352	5,352	0.15	0.77	1.49	5,588
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	0.84	0.83	0.44	6.10	0.00	0.00	2,147	2,147	0.00	215	215	—	1,702	1,702	0.04	0.02	1.12	1,710

Vendor	0.07	0.04	1.35	0.62	0.01	0.01	290	290	0.01	29.0	29.0	—	886	886	0.03	0.13	0.25	925
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

3.69. Building Construction (2038) - 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	0.97	0.81	6.89	12.5	0.02	0.15	—	0.15	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
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	0.97	0.81	6.89	12.5	0.02	0.15	—	0.15	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
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	0.69	0.58	4.92	8.90	0.02	0.11	—	0.11	0.10	—	0.10	—	1,712	1,712	0.07	0.01	—	1,718
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	0.13	0.11	0.90	1.62	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
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	6.28	6.17	2.70	49.3	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,036	15,036	0.22	0.17	18.9	15,110
Vendor	0.49	0.32	9.74	4.65	0.07	0.07	2,224	2,225	0.07	223	223	—	7,297	7,297	0.21	1.08	3.97	7,630
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	6.34	6.17	3.51	46.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,183	14,183	0.34	0.17	0.49	14,242
Vendor	0.44	0.28	10.3	4.75	0.07	0.07	2,224	2,225	0.07	223	223	—	7,311	7,311	0.20	1.08	0.10	7,639
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	4.41	4.33	2.43	31.7	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,180	10,180	0.20	0.12	5.84	10,227
Vendor	0.32	0.21	7.21	3.32	0.05	0.05	1,589	1,589	0.05	159	159	—	5,217	5,217	0.14	0.77	1.23	5,452
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	0.80	0.79	0.44	5.78	0.00	0.00	2,147	2,147	0.00	215	215	—	1,685	1,685	0.03	0.02	0.97	1,693
Vendor	0.06	0.04	1.31	0.61	0.01	0.01	290	290	0.01	29.0	29.0	—	864	864	0.02	0.13	0.20	903
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

3.70. Building Construction (2038) - 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	0.97	0.81	6.89	12.5	0.02	0.15	—	0.15	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
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	0.97	0.81	6.89	12.5	0.02	0.15	—	0.15	0.14	—	0.14	—	2,397	2,397	0.10	0.02	—	2,405
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	0.69	0.58	4.92	8.90	0.02	0.11	—	0.11	0.10	—	0.10	—	1,712	1,712	0.07	0.01	—	1,718
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	0.13	0.11	0.90	1.62	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
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	6.28	6.17	2.70	49.3	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	15,036	15,036	0.22	0.17	18.9	15,110
Vendor	0.49	0.32	9.74	4.65	0.07	0.07	2,224	2,225	0.07	223	223	—	7,297	7,297	0.21	1.08	3.97	7,630
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	6.34	6.17	3.51	46.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,183	14,183	0.34	0.17	0.49	14,242

Vendor	0.44	0.28	10.3	4.75	0.07	0.07	2,224	2,225	0.07	223	223	—	7,311	7,311	0.20	1.08	0.10	7,639
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	4.41	4.33	2.43	31.7	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,180	10,180	0.20	0.12	5.84	10,227
Vendor	0.32	0.21	7.21	3.32	0.05	0.05	1,589	1,589	0.05	159	159	—	5,217	5,217	0.14	0.77	1.23	5,452
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	0.80	0.79	0.44	5.78	0.00	0.00	2,147	2,147	0.00	215	215	—	1,685	1,685	0.03	0.02	0.97	1,693
Vendor	0.06	0.04	1.31	0.61	0.01	0.01	290	290	0.01	29.0	29.0	—	864	864	0.02	0.13	0.20	903
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

3.71. Building Construction (2039) - 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	0.96	0.80	6.78	12.4	0.02	0.15	—	0.15	0.13	—	0.13	—	2,397	2,397	0.10	0.02	—	2,405
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	0.96	0.80	6.78	12.4	0.02	0.15	—	0.15	0.13	—	0.13	—	2,397	2,397	0.10	0.02	—	2,405
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	0.69	0.57	4.84	8.86	0.02	0.10	—	0.10	0.10	—	0.10	—	1,712	1,712	0.07	0.01	—	1,718
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	0.13	0.10	0.88	1.62	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
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	5.95	5.84	2.65	47.1	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,900	14,900	0.22	0.17	16.3	14,972
Vendor	0.45	0.30	9.55	4.51	0.07	0.07	2,224	2,225	0.07	223	223	—	7,126	7,126	0.13	1.08	3.24	7,456
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	6.00	5.89	3.46	44.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,056	14,056	0.34	0.17	0.42	14,115
Vendor	0.43	0.27	10.2	4.66	0.07	0.07	2,224	2,225	0.07	223	223	—	7,140	7,140	0.13	1.08	0.08	7,467
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	4.25	4.13	2.01	30.0	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,089	10,089	0.20	0.12	5.04	10,134
Vendor	0.31	0.20	7.07	3.27	0.05	0.05	1,589	1,589	0.05	159	159	—	5,094	5,094	0.09	0.77	1.00	5,328
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	0.78	0.75	0.37	5.48	0.00	0.00	2,147	2,147	0.00	215	215	—	1,670	1,670	0.03	0.02	0.83	1,678

Vendor	0.06	0.04	1.29	0.60	0.01	0.01	290	290	0.01	29.0	29.0	—	843	843	0.02	0.13	0.17	882
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

3.72. Building Construction (2039) - 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	0.96	0.80	6.78	12.4	0.02	0.15	—	0.15	0.13	—	0.13	—	2,397	2,397	0.10	0.02	—	2,405
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	0.96	0.80	6.78	12.4	0.02	0.15	—	0.15	0.13	—	0.13	—	2,397	2,397	0.10	0.02	—	2,405
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	0.69	0.57	4.84	8.86	0.02	0.10	—	0.10	0.10	—	0.10	—	1,712	1,712	0.07	0.01	—	1,718
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	0.13	0.10	0.88	1.62	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
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	5.95	5.84	2.65	47.1	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,900	14,900	0.22	0.17	16.3	14,972
Vendor	0.45	0.30	9.55	4.51	0.07	0.07	2,224	2,225	0.07	223	223	—	7,126	7,126	0.13	1.08	3.24	7,456
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	6.00	5.89	3.46	44.4	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	14,056	14,056	0.34	0.17	0.42	14,115
Vendor	0.43	0.27	10.2	4.66	0.07	0.07	2,224	2,225	0.07	223	223	—	7,140	7,140	0.13	1.08	0.08	7,467
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	4.25	4.13	2.01	30.0	0.00	0.00	11,762	11,762	0.00	1,177	1,177	—	10,089	10,089	0.20	0.12	5.04	10,134
Vendor	0.31	0.20	7.07	3.27	0.05	0.05	1,589	1,589	0.05	159	159	—	5,094	5,094	0.09	0.77	1.00	5,328
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	0.78	0.75	0.37	5.48	0.00	0.00	2,147	2,147	0.00	215	215	—	1,670	1,670	0.03	0.02	0.83	1,678
Vendor	0.06	0.04	1.29	0.60	0.01	0.01	290	290	0.01	29.0	29.0	—	843	843	0.02	0.13	0.17	882
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

3.73. Building Construction (2040) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	6.71	12.4	0.02	0.14	—	0.14	0.13	—	0.13	—	2,397	2,397	0.10	0.02	—	2,405
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	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.69	4.69	< 0.005	< 0.005	—	4.71
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	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.78	0.78	< 0.005	< 0.005	—	0.78
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.61	5.50	2.87	42.1	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	13,942	13,942	0.28	0.17	0.36	13,999
Vendor	0.43	0.27	9.98	4.59	0.07	0.07	2,224	2,225	0.07	223	223	—	6,985	6,985	0.13	1.01	0.07	7,290
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	0.01	0.01	0.01	0.08	0.00	0.00	32.2	32.2	0.00	3.22	3.22	—	27.4	27.4	< 0.005	< 0.005	0.01	27.5
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	4.35	4.35	< 0.005	0.44	0.44	—	13.7	13.7	< 0.005	< 0.005	< 0.005	14.3
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	5.88	5.88	0.00	0.59	0.59	—	4.54	4.54	< 0.005	< 0.005	< 0.005	4.56
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.79	0.79	< 0.005	0.08	0.08	—	2.26	2.26	< 0.005	< 0.005	< 0.005	2.36
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

3.74. Building Construction (2040) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	6.71	12.4	0.02	0.14	—	0.14	0.13	—	0.13	—	2,397	2,397	0.10	0.02	—	2,405
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	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.69	4.69	< 0.005	< 0.005	—	4.71
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	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.78	0.78	< 0.005	< 0.005	—	0.78
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.61	5.50	2.87	42.1	0.00	0.00	16,467	16,467	0.00	1,648	1,648	—	13,942	13,942	0.28	0.17	0.36	13,999
Vendor	0.43	0.27	9.98	4.59	0.07	0.07	2,224	2,225	0.07	223	223	—	6,985	6,985	0.13	1.01	0.07	7,290
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	0.01	0.01	0.01	0.08	0.00	0.00	32.2	32.2	0.00	3.22	3.22	—	27.4	27.4	< 0.005	< 0.005	0.01	27.5
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	4.35	4.35	< 0.005	0.44	0.44	—	13.7	13.7	< 0.005	< 0.005	< 0.005	14.3
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	5.88	5.88	0.00	0.59	0.59	—	4.54	4.54	< 0.005	< 0.005	< 0.005	4.56
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.79	0.79	< 0.005	0.08	0.08	—	2.26	2.26	< 0.005	< 0.005	< 0.005	2.36
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

3.75. Paving (2024) - 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	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.36	0.31	2.81	3.61	0.01	0.14	—	0.14	0.13	—	0.13	—	544	544	0.02	< 0.005	—	546
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.07	0.06	0.51	0.66	< 0.005	0.03	—	0.03	0.02	—	0.02	—	90.1	90.1	< 0.005	< 0.005	—	90.4
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.08	0.07	0.05	0.73	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	111	111	0.01	< 0.005	0.48	113
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.08	0.07	0.07	0.69	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	104	104	0.01	< 0.005	0.01	106
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.24	0.00	0.00	35.1	35.1	0.00	3.51	3.51	—	37.7	37.7	< 0.005	< 0.005	0.08	38.3
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	0.00	0.00	0.00	0.00	0.00	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	0.01	< 0.005	< 0.005	0.04	0.00	0.00	6.41	6.41	0.00	0.64	0.64	—	6.24	6.24	< 0.005	< 0.005	0.01	6.34
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

3.76. Paving (2024) - 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	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517

Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.36	0.31	2.81	3.61	0.01	0.14	—	0.14	0.13	—	0.13	—	544	544	0.02	< 0.005	—	546
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.07	0.06	0.51	0.66	< 0.005	0.03	—	0.03	0.02	—	0.02	—	90.1	90.1	< 0.005	< 0.005	—	90.4
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.08	0.07	0.05	0.73	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	111	111	0.01	< 0.005	0.48	113
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.69	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	104	104	0.01	< 0.005	0.01	106
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.24	0.00	0.00	35.1	35.1	0.00	3.51	3.51	—	37.7	37.7	< 0.005	< 0.005	0.08	38.3

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	0.00	0.00	0.00	0.00	0.00	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	0.01	< 0.005	< 0.005	0.04	0.00	0.00	6.41	6.41	0.00	0.64	0.64	—	6.24	6.24	< 0.005	< 0.005	0.01	6.34
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

3.77. Paving (2025) - 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	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.51	0.43	4.03	5.39	0.01	0.19	—	0.19	0.17	—	0.17	—	816	816	0.03	0.01	—	819

Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.73	0.98	< 0.005	0.03	—	0.03	0.03	—	0.03	—	135	135	0.01	< 0.005	—	136
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.08	0.07	0.05	0.68	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	108	108	0.01	< 0.005	0.45	110
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.65	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	102	102	0.01	< 0.005	0.01	104
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.33	0.00	0.00	52.6	52.6	0.00	5.27	5.27	—	55.5	55.5	< 0.005	< 0.005	0.10	56.4
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	0.00	0.00	0.00	0.00	0.00	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	0.01	0.01	0.01	0.06	0.00	0.00	9.61	9.61	0.00	0.96	0.96	—	9.18	9.18	< 0.005	< 0.005	0.02	9.33
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

3.78. Paving (2025) - 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	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.51	0.43	4.03	5.39	0.01	0.19	—	0.19	0.17	—	0.17	—	816	816	0.03	0.01	—	819
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.73	0.98	< 0.005	0.03	—	0.03	0.03	—	0.03	—	135	135	0.01	< 0.005	—	136

Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.08	0.07	0.05	0.68	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	108	108	0.01	< 0.005	0.45	110
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.65	0.00	0.00	97.5	97.5	0.00	9.75	9.75	—	102	102	0.01	< 0.005	0.01	104
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.33	0.00	0.00	52.6	52.6	0.00	5.27	5.27	—	55.5	55.5	< 0.005	< 0.005	0.10	56.4
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	0.00	0.00	0.00	0.00	0.00	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	0.01	0.01	0.01	0.06	0.00	0.00	9.61	9.61	0.00	0.96	0.96	—	9.18	9.18	< 0.005	< 0.005	0.02	9.33
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

3.79. Architectural Coating (2024) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.03	0.02	0.16	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Architectural Coatings	—	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.98	3.98	< 0.005	< 0.005	—	3.99
Architectural Coatings	—	4.90	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.75	2.47	2.34	23.5	0.00	0.00	3,293	3,293	0.00	330	330	—	3,521	3,521	0.26	0.15	0.42	3,573
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.49	0.44	0.39	4.02	0.00	0.00	593	593	0.00	59.3	59.3	—	637	637	0.04	0.03	1.27	647
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	0.09	0.08	0.07	0.73	0.00	0.00	108	108	0.00	10.8	10.8	—	105	105	0.01	< 0.005	0.21	107
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

3.80. Architectural Coating (2024) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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	0.03	0.02	0.16	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Architectural Coatings	—	26.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.98	3.98	< 0.005	< 0.005	—	3.99
Architectural Coatings	—	4.90	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.75	2.47	2.34	23.5	0.00	0.00	3,293	3,293	0.00	330	330	—	3,521	3,521	0.26	0.15	0.42	3,573
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.49	0.44	0.39	4.02	0.00	0.00	593	593	0.00	59.3	59.3	—	637	637	0.04	0.03	1.27	647
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	0.09	0.08	0.07	0.73	0.00	0.00	108	108	0.00	10.8	10.8	—	105	105	0.01	< 0.005	0.21	107
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

3.81. Architectural Coating (2025) - 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	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.11	0.09	0.63	0.81	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architectural Coatings	—	106	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.12	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architectural Coatings	—	19.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	2.57	2.41	1.67	23.0	0.00	0.00	3,293	3,293	0.00	330	330	—	3,664	3,664	0.21	0.15	15.1	3,729
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.55	2.37	2.20	21.8	0.00	0.00	3,293	3,293	0.00	330	330	—	3,453	3,453	0.25	0.15	0.39	3,505
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.79	1.66	1.39	14.8	0.00	0.00	2,352	2,352	0.00	235	235	—	2,478	2,478	0.16	0.11	4.68	2,519
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	0.33	0.30	0.25	2.70	0.00	0.00	429	429	0.00	43.0	43.0	—	410	410	0.03	0.02	0.77	417
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

3.82. Architectural Coating (2025) - 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	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.11	0.09	0.63	0.81	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architectural Coatings	—	106	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.12	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architectural Coatings	—	19.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	2.57	2.41	1.67	23.0	0.00	0.00	3,293	3,293	0.00	330	330	—	3,664	3,664	0.21	0.15	15.1	3,729
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.55	2.37	2.20	21.8	0.00	0.00	3,293	3,293	0.00	330	330	—	3,453	3,453	0.25	0.15	0.39	3,505
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.79	1.66	1.39	14.8	0.00	0.00	2,352	2,352	0.00	235	235	—	2,478	2,478	0.16	0.11	4.68	2,519
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	0.33	0.30	0.25	2.70	0.00	0.00	429	429	0.00	43.0	43.0	—	410	410	0.03	0.02	0.77	417
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

3.83. Architectural Coating (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.31	1.31	< 0.005	< 0.005	—	1.31
Architectural Coatings	—	1.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.22	0.22	< 0.005	< 0.005	—	0.22
Architectural Coatings	—	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.43	2.26	1.95	20.3	0.00	0.00	3,293	3,293	0.00	330	330	—	3,389	3,389	0.24	0.15	0.36	3,440
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.19	0.00	0.00	32.2	32.2	0.00	3.22	3.22	—	33.3	33.3	< 0.005	< 0.005	0.06	33.9
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	5.88	5.88	0.00	0.59	0.59	—	5.51	5.51	< 0.005	< 0.005	0.01	5.61
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

3.84. Architectural Coating (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.31	1.31	< 0.005	< 0.005	—	1.31
Architectural Coatings	—	1.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.22	0.22	< 0.005	< 0.005	—	0.22
Architectural Coatings	—	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.43	2.26	1.95	20.3	0.00	0.00	3,293	3,293	0.00	330	330	—	3,389	3,389	0.24	0.15	0.36	3,440
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.19	0.00	0.00	32.2	32.2	0.00	3.22	3.22	—	33.3	33.3	< 0.005	< 0.005	0.06	33.9
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	5.88	5.88	0.00	0.59	0.59	—	5.51	5.51	< 0.005	< 0.005	0.01	5.61
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

4.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	10.0	9.85	2.79	18.7	0.01	0.01	0.00	0.01	0.01	0.00	0.01	—	744	744	0.41	0.28	0.00	839
Apartments Low Rise	54.3	52.0	25.1	261	0.66	0.31	27.1	27.4	0.29	4.74	5.03	—	66,924	66,924	2.95	3.10	50.6	67,973
Regional Shopping Center	83.3	81.4	25.8	198	0.23	0.16	7.23	7.39	0.15	1.26	1.41	—	22,942	22,942	3.61	2.77	13.5	23,872
Total	148	143	53.6	478	0.89	0.48	34.4	34.8	0.45	6.01	6.46	—	90,611	90,611	6.97	6.16	64.1	92,684
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	10.1	9.84	3.28	27.7	0.01	0.01	0.00	0.01	0.01	0.00	0.01	—	763	763	0.54	0.32	0.00	873
Apartments Low Rise	54.4	51.9	29.6	277	0.63	0.31	27.1	27.4	0.29	4.74	5.03	—	63,963	63,963	3.52	3.45	1.31	65,081
Regional Shopping Center	83.7	81.3	30.4	264	0.22	0.16	7.23	7.39	0.15	1.26	1.41	—	22,284	22,284	4.65	3.14	0.35	23,336
Total	148	143	63.3	569	0.86	0.48	34.4	34.8	0.45	6.01	6.46	—	87,011	87,011	8.71	6.92	1.66	89,291
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	1.37	1.34	0.42	3.26	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	—	94.5	94.5	0.06	0.04	0.00	107
Apartments Low Rise	8.75	8.35	4.52	42.3	0.10	0.05	4.43	4.48	0.05	0.78	0.82	—	9,514	9,514	0.48	0.49	3.24	9,676
Regional Shopping Center	11.9	11.6	4.07	33.0	0.03	0.02	0.98	1.00	0.02	0.17	0.19	—	2,781	2,781	0.55	0.39	0.71	2,911
Total	22.0	21.2	9.01	78.6	0.13	0.07	5.41	5.48	0.07	0.95	1.02	—	12,390	12,390	1.09	0.92	3.95	12,694

4.1.2. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	10.0	9.85	2.79	18.7	0.01	0.01	0.00	0.01	0.01	0.00	0.01	—	744	744	0.41	0.28	0.00	839
Apartments Low Rise	54.3	52.0	25.1	261	0.66	0.31	27.1	27.4	0.29	4.74	5.03	—	66,924	66,924	2.95	3.10	50.6	67,973
Regional Shopping Center	83.3	81.4	25.8	198	0.23	0.16	7.23	7.39	0.15	1.26	1.41	—	22,942	22,942	3.61	2.77	13.5	23,872
Total	148	143	53.6	478	0.89	0.48	34.4	34.8	0.45	6.01	6.46	—	90,611	90,611	6.97	6.16	64.1	92,684
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	10.1	9.84	3.28	27.7	0.01	0.01	0.00	0.01	0.01	0.00	0.01	—	763	763	0.54	0.32	0.00	873
Apartments Low Rise	54.4	51.9	29.6	277	0.63	0.31	27.1	27.4	0.29	4.74	5.03	—	63,963	63,963	3.52	3.45	1.31	65,081
Regional Shopping Center	83.7	81.3	30.4	264	0.22	0.16	7.23	7.39	0.15	1.26	1.41	—	22,284	22,284	4.65	3.14	0.35	23,336
Total	148	143	63.3	569	0.86	0.48	34.4	34.8	0.45	6.01	6.46	—	87,011	87,011	8.71	6.92	1.66	89,291
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	1.37	1.34	0.42	3.26	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	—	94.5	94.5	0.06	0.04	0.00	107

Apartme Low Rise	8.75	8.35	4.52	42.3	0.10	0.05	4.43	4.48	0.05	0.78	0.82	—	9,514	9,514	0.48	0.49	3.24	9,676
Regional Shopping Center	11.9	11.6	4.07	33.0	0.03	0.02	0.98	1.00	0.02	0.17	0.19	—	2,781	2,781	0.55	0.39	0.71	2,911
Total	22.0	21.2	9.01	78.6	0.13	0.07	5.41	5.48	0.07	0.95	1.02	—	12,390	12,390	1.09	0.92	3.95	12,694

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	5,955	5,955	0.96	0.12	—	6,014
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	5,120	5,120	0.83	0.10	—	5,170
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	4,048	4,048	0.65	0.08	—	4,088
Total	—	—	—	—	—	—	—	—	—	—	—	—	15,122	15,122	2.45	0.30	—	15,272
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	5,955	5,955	0.96	0.12	—	6,014

Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	5,120	5,120	0.83	0.10	—	5,170
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	4,048	4,048	0.65	0.08	—	4,088
Total	—	—	—	—	—	—	—	—	—	—	—	—	15,122	15,122	2.45	0.30	—	15,272
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	986	986	0.16	0.02	—	996
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	848	848	0.14	0.02	—	856
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	670	670	0.11	0.01	—	677
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,504	2,504	0.41	0.05	—	2,528

4.2.2. Electricity Emissions By Land Use - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	5,955	5,955	0.96	0.12	—	6,014
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	5,120	5,120	0.83	0.10	—	5,170

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	4,048	4,048	0.65	0.08	—	4,088
Total	—	—	—	—	—	—	—	—	—	—	—	—	15,122	15,122	2.45	0.30	—	15,272
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	5,955	5,955	0.96	0.12	—	6,014
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	5,120	5,120	0.83	0.10	—	5,170
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	4,048	4,048	0.65	0.08	—	4,088
Total	—	—	—	—	—	—	—	—	—	—	—	—	15,122	15,122	2.45	0.30	—	15,272
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	986	986	0.16	0.02	—	996
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	848	848	0.14	0.02	—	856
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	670	670	0.11	0.01	—	677
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,504	2,504	0.41	0.05	—	2,528

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.34	0.17	3.10	2.60	0.02	0.24	—	0.24	0.24	—	0.24	—	3,696	3,696	0.33	0.01	—	3,706
Apartments Low Rise	2.30	1.15	19.6	8.36	0.13	1.59	—	1.59	1.59	—	1.59	—	24,936	24,936	2.21	0.05	—	25,006
Regional Shopping Center	0.15	0.08	1.40	1.18	0.01	0.11	—	0.11	0.11	—	0.11	—	1,675	1,675	0.15	< 0.005	—	1,680
Total	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	30,307	30,307	2.68	0.06	—	30,391
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.34	0.17	3.10	2.60	0.02	0.24	—	0.24	0.24	—	0.24	—	3,696	3,696	0.33	0.01	—	3,706
Apartments Low Rise	2.30	1.15	19.6	8.36	0.13	1.59	—	1.59	1.59	—	1.59	—	24,936	24,936	2.21	0.05	—	25,006
Regional Shopping Center	0.15	0.08	1.40	1.18	0.01	0.11	—	0.11	0.11	—	0.11	—	1,675	1,675	0.15	< 0.005	—	1,680
Total	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	30,307	30,307	2.68	0.06	—	30,391
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.06	0.03	0.57	0.47	< 0.005	0.04	—	0.04	0.04	—	0.04	—	612	612	0.05	< 0.005	—	614
Apartments Low Rise	0.42	0.21	3.59	1.53	0.02	0.29	—	0.29	0.29	—	0.29	—	4,129	4,129	0.37	0.01	—	4,140
Regional Shopping Center	0.03	0.01	0.26	0.22	< 0.005	0.02	—	0.02	0.02	—	0.02	—	277	277	0.02	< 0.005	—	278

Total	0.51	0.25	4.41	2.22	0.03	0.35	—	0.35	0.35	—	0.35	—	5,018	5,018	0.44	0.01	—	5,032

4.2.4. Natural Gas Emissions By Land Use - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.34	0.17	3.10	2.60	0.02	0.24	—	0.24	0.24	—	0.24	—	3,696	3,696	0.33	0.01	—	3,706
Apartments Low Rise	2.30	1.15	19.6	8.36	0.13	1.59	—	1.59	1.59	—	1.59	—	24,936	24,936	2.21	0.05	—	25,006
Regional Shopping Center	0.15	0.08	1.40	1.18	0.01	0.11	—	0.11	0.11	—	0.11	—	1,675	1,675	0.15	< 0.005	—	1,680
Total	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	30,307	30,307	2.68	0.06	—	30,391
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.34	0.17	3.10	2.60	0.02	0.24	—	0.24	0.24	—	0.24	—	3,696	3,696	0.33	0.01	—	3,706
Apartments Low Rise	2.30	1.15	19.6	8.36	0.13	1.59	—	1.59	1.59	—	1.59	—	24,936	24,936	2.21	0.05	—	25,006
Regional Shopping Center	0.15	0.08	1.40	1.18	0.01	0.11	—	0.11	0.11	—	0.11	—	1,675	1,675	0.15	< 0.005	—	1,680
Total	2.79	1.40	24.1	12.1	0.15	1.93	—	1.93	1.93	—	1.93	—	30,307	30,307	2.68	0.06	—	30,391
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	0.06	0.03	0.57	0.47	< 0.005	0.04	—	0.04	0.04	—	0.04	—	612	612	0.05	< 0.005	—	614
Apartments Low Rise	0.42	0.21	3.59	1.53	0.02	0.29	—	0.29	0.29	—	0.29	—	4,129	4,129	0.37	0.01	—	4,140
Regional Shopping Center	0.03	0.01	0.26	0.22	< 0.005	0.02	—	0.02	0.02	—	0.02	—	277	277	0.02	< 0.005	—	278
Total	0.51	0.25	4.41	2.22	0.03	0.35	—	0.35	0.35	—	0.35	—	5,018	5,018	0.44	0.01	—	5,032

4.3. Area Emissions by Source

4.3.2. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	95.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	13.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	25.8	24.2	2.03	226	0.01	0.14	—	0.14	0.18	—	0.18	—	688	688	0.03	0.01	—	691
Total	25.8	133	2.03	226	0.01	0.14	—	0.14	0.18	—	0.18	0.00	688	688	0.03	0.01	—	691
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	95.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	13.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	109	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	17.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	2.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.23	3.03	0.25	28.2	< 0.005	0.02	—	0.02	0.02	—	0.02	—	78.1	78.1	< 0.005	< 0.005	—	78.3
Total	3.23	22.9	0.25	28.2	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	78.1	78.1	< 0.005	< 0.005	—	78.3

4.3.1. Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	95.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	13.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	25.8	24.2	2.03	226	0.01	0.14	—	0.14	0.18	—	0.18	—	688	688	0.03	0.01	—	691
Total	25.8	133	2.03	226	0.01	0.14	—	0.14	0.18	—	0.18	0.00	688	688	0.03	0.01	—	691
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	95.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	13.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	109	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	17.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	2.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.23	3.03	0.25	28.2	< 0.005	0.02	—	0.02	0.02	—	0.02	—	78.1	78.1	< 0.005	< 0.005	—	78.3
Total	3.23	22.9	0.25	28.2	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	78.1	78.1	< 0.005	< 0.005	—	78.3

4.4. Water Emissions by Land Use

4.4.2. 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	—	—	—	—	—	—	—	—	—	—	—	174	274	448	17.9	0.43	—	1,022
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	233	367	600	23.9	0.57	—	1,369
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	124	196	320	12.8	0.31	—	731
Total	—	—	—	—	—	—	—	—	—	—	—	531	837	1,368	54.5	1.31	—	3,121
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	174	274	448	17.9	0.43	—	1,022
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	233	367	600	23.9	0.57	—	1,369
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	124	196	320	12.8	0.31	—	731
Total	—	—	—	—	—	—	—	—	—	—	—	531	837	1,368	54.5	1.31	—	3,121
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	28.8	45.4	74.1	2.96	0.07	—	169

Apartme Low Rise	—	—	—	—	—	—	—	—	—	—	—	38.5	60.8	99.3	3.96	0.10	—	227
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	20.6	32.4	53.0	2.11	0.05	—	121
Total	—	—	—	—	—	—	—	—	—	—	—	87.8	139	226	9.03	0.22	—	517

4.4.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	139	219	358	14.3	0.34	—	817
Apartme nts Low Rise	—	—	—	—	—	—	—	—	—	—	—	186	294	480	19.1	0.46	—	1,095
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	99.4	157	256	10.2	0.25	—	585
Total	—	—	—	—	—	—	—	—	—	—	—	424	670	1,094	43.6	1.05	—	2,497
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	139	219	358	14.3	0.34	—	817
Apartme nts Low Rise	—	—	—	—	—	—	—	—	—	—	—	186	294	480	19.1	0.46	—	1,095

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	99.4	157	256	10.2	0.25	—	585
Total	—	—	—	—	—	—	—	—	—	—	—	424	670	1,094	43.6	1.05	—	2,497
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	23.0	36.3	59.3	2.36	0.06	—	135
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	30.8	48.6	79.4	3.17	0.08	—	181
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	16.4	26.0	42.4	1.69	0.04	—	96.8
Total	—	—	—	—	—	—	—	—	—	—	—	70.3	111	181	7.22	0.17	—	413

4.5. Waste Emissions by Land Use

4.5.2. 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	—	—	—	—	—	—	—	—	—	—	—	256	0.00	256	25.5	0.00	—	894
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	873	0.00	873	87.2	0.00	—	3,054
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	495	0.00	495	49.5	0.00	—	1,732

Total	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	256	0.00	256	25.5	0.00	—	894
Apartme nts Low Rise	—	—	—	—	—	—	—	—	—	—	—	873	0.00	873	87.2	0.00	—	3,054
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	495	0.00	495	49.5	0.00	—	1,732
Total	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	42.3	0.00	42.3	4.23	0.00	—	148
Apartme nts Low Rise	—	—	—	—	—	—	—	—	—	—	—	145	0.00	145	14.4	0.00	—	506
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	82.0	0.00	82.0	8.19	0.00	—	287
Total	—	—	—	—	—	—	—	—	—	—	—	269	0.00	269	26.9	0.00	—	941

4.5.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	256	0.00	256	25.5	0.00	—	894
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	873	0.00	873	87.2	0.00	—	3,054
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	495	0.00	495	49.5	0.00	—	1,732
Total	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	256	0.00	256	25.5	0.00	—	894
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	873	0.00	873	87.2	0.00	—	3,054
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	495	0.00	495	49.5	0.00	—	1,732
Total	—	—	—	—	—	—	—	—	—	—	—	1,624	0.00	1,624	162	0.00	—	5,681
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	42.3	0.00	42.3	4.23	0.00	—	148
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	145	0.00	145	14.4	0.00	—	506
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	82.0	0.00	82.0	8.19	0.00	—	287
Total	—	—	—	—	—	—	—	—	—	—	—	269	0.00	269	26.9	0.00	—	941

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.24	1.24
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22.0	22.0
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.20	4.20
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.24	1.24
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22.0	22.0
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.20	4.20
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.21	0.21
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.65	3.65
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.70	0.70
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.55	4.55

4.6.2. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.24	1.24
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22.0	22.0
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.20	4.20
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.24	1.24

Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22.0	22.0
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.20	4.20
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.21	0.21
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.65	3.65
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.70	0.70
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.55	4.55

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

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)

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

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)

Vegetatio	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
Demolition	Demolition	1/1/2024	01/1/2040	5.00	4,175	—
Site Preparation	Site Preparation	2/03/2024	10/11/2024	5.00	180	—
Grading	Grading	03/02/2024	12/12/2025	5.00	465	—
Building Construction	Building Construction	04/01/2024	1/1/2040	5.00	4,110	—
Paving	Paving	07/1/2024	10/3/2025	5.00	330	—
Architectural Coating	Architectural Coating	10/01/2024	1/5/2026	5.00	330	—

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

Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	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
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38

Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	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
Demolition	—	—	—	—
Demolition	Worker	15.0	9.47	LDA,LDT1,LDT2
Demolition	Vendor	—	6.03	HHDT,MHDT

Demolition	Hauling	4.56	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	9.47	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.03	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	9.47	LDA,LDT1,LDT2
Grading	Vendor	—	6.03	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	2,534	9.47	LDA,LDT1,LDT2
Building Construction	Vendor	538	6.03	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	9.47	LDA,LDT1,LDT2
Paving	Vendor	—	6.03	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	507	9.47	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.03	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
Demolition	—	—	—	—
Demolition	Worker	15.0	9.47	LDA,LDT1,LDT2
Demolition	Vendor	—	6.03	HHDT,MHDT
Demolition	Hauling	4.56	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	9.47	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.03	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	9.47	LDA,LDT1,LDT2
Grading	Vendor	—	6.03	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	2,534	9.47	LDA,LDT1,LDT2
Building Construction	Vendor	538	6.03	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	9.47	LDA,LDT1,LDT2
Paving	Vendor	—	6.03	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT

Architectural Coating	—	—	—	—
Architectural Coating	Worker	507	9.47	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.03	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	5,880,600	1,960,200	2,077,796	692,599	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	1,653,879	—
Site Preparation	—	—	270	0.00	—
Grading	—	—	1,395	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

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
General Office Building	0.00	0%
Apartments Low Rise	—	0%
Regional Shopping 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
2024	0.00	204	0.03	< 0.005
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005
2028	0.00	204	0.03	< 0.005
2029	0.00	204	0.03	< 0.005
2030	0.00	204	0.03	< 0.005
2031	0.00	204	0.03	< 0.005
2032	0.00	204	0.03	< 0.005
2033	0.00	204	0.03	< 0.005
2034	0.00	204	0.03	< 0.005
2035	0.00	204	0.03	< 0.005
2036	0.00	204	0.03	< 0.005
2037	0.00	204	0.03	< 0.005
2038	0.00	204	0.03	< 0.005
2039	0.00	204	0.03	< 0.005
2040	0.00	204	0.03	< 0.005

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
General Office Building	4,967	1,127	357	1,372,457	0.00	0.00	0.00	0.00
Apartments Low Rise	21,257	23,639	18,237	7,725,594	89,281	99,282	76,596	32,447,496
Regional Shopping Center	33,031	40,355	18,462	11,678,631	19,673	26,465	12,108	7,140,421

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Office Building	4,967	1,127	357	1,372,457	0.00	0.00	0.00	0.00
Apartments Low Rise	21,257	23,639	18,237	7,725,594	89,281	99,282	76,596	32,447,496
Regional Shopping Center	33,031	40,355	18,462	11,678,631	19,673	26,465	12,108	7,140,421

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Low Rise	—
Wood Fireplaces	0
Gas Fireplaces	2904

Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Low Rise	—
Wood Fireplaces	0
Gas Fireplaces	2904
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

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)
5880600	1,960,200	2,077,796	692,599	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

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)
General Office Building	10,655,421	204	0.0330	0.0040	11,531,783
Apartments Low Rise	9,160,950	204	0.0330	0.0040	77,808,163
Regional Shopping Center	7,242,543	204	0.0330	0.0040	5,226,267

5.11.2. Mitigated

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)
General Office Building	10,655,421	204	0.0330	0.0040	11,531,783
Apartments Low Rise	9,160,950	204	0.0330	0.0040	77,808,163
Regional Shopping Center	7,242,543	204	0.0330	0.0040	5,226,267

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	90,644,211	0.00
Apartments Low Rise	121,407,818	0.00
Regional Shopping Center	64,813,456	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	72,515,369	0.00
Apartments Low Rise	97,126,255	0.00
Regional Shopping Center	51,850,765	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	474.30	0.00
Apartments Low Rise	1619.68	0.00
Regional Shopping Center	918.75	0.00

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	474.30	0.00
Apartments Low Rise	1619.68	0.00
Regional Shopping Center	918.75	0.00

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
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.14.2. Mitigated

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
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

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

5.15.2. Mitigated

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

5.18.1.2. 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	6.01	annual days of extreme heat
Extreme Precipitation	1.90	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	31.4	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 (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth 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 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
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	10.6

AQ-PM	2.56
AQ-DPM	25.6
Drinking Water	49.2
Lead Risk Housing	42.6
Pesticides	80.5
Toxic Releases	5.90
Traffic	35.6
Effect Indicators	—
CleanUp Sites	68.9
Groundwater	59.6
Haz Waste Facilities/Generators	53.5
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	75.5
Cardio-vascular	44.0
Low Birth Weights	62.6
Socioeconomic Factor Indicators	—
Education	60.9
Housing	50.3
Linguistic	84.9
Poverty	73.3
Unemployment	41.8

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	38.31643783
Employed	47.36301809
Median HI	28.41011164
Education	—
Bachelor's or higher	27.48620557
High school enrollment	100
Preschool enrollment	78.95547286
Transportation	—
Auto Access	36.49428975
Active commuting	44.45014757
Social	—
2-parent households	2.438085461
Voting	55.37020403
Neighborhood	—
Alcohol availability	24.95829591
Park access	35.51905556
Retail density	51.50776338
Supermarket access	65.81547543
Tree canopy	54.27948159
Housing	—
Homeownership	24.80431156
Housing habitability	36.09649686
Low-inc homeowner severe housing cost burden	13.08866932
Low-inc renter severe housing cost burden	52.59848582
Uncrowded housing	46.38778391
Health Outcomes	—

Insured adults	47.60682664
Arthritis	0.0
Asthma ER Admissions	34.3
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	50.1
Cognitively Disabled	11.3
Physically Disabled	21.7
Heart Attack ER Admissions	42.4
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	77.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	72.4

Elderly	28.2
English Speaking	32.3
Foreign-born	45.9
Outdoor Workers	59.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	30.3
Traffic Density	40.7
Traffic Access	0.0
Other Indices	—
Hardship	49.5
Other Decision Support	—
2016 Voting	44.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	51.0
Healthy Places Index Score for Project Location (b)	41.0
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
Land Use	Land uses based on project description. Population based on project description.
Operations: Hearths	—
Characteristics: Project Details	Consistent with project description
Construction: Construction Phases	Phase lengths default except building construction and demolition ending at operational year. Start dates adjusted to estimate worst case impacts.
Construction: Architectural Coatings	MBARD Rule 426
Operations: Architectural Coatings	MBARD Rule 426
Operations: Vehicle Data	Adjusted trip lengths to match VMT.
Operations: Road Dust	Roads would be paved in specific plan area.

Appendix E

Marina Downtown Traffic Study

Kimley»Horn

MEMORANDUM

From: Frederik Venter, P.E. and Marissa Garcia
Kimley-Horn and Associates

To: Brian McMinn, P.E. & Alexander Barton
City of Marina

Date: February 14, 2019

Re: Marina Downtown Traffic Study

Summary of Findings

The City of Marina is planning to redevelop their Downtown and turn it into a vibrant, fun place to be. The proposed land use redevelopment includes housing, office and retail. A successful Downtown will also comprise multimodal access, slow traveling cars and amenities that promotes daytime and nighttime activity for residents and visitors to the Monterey Bay area. This study evaluates the potential impacts of the proposed Downtown Redevelopment on the transportation infrastructure, including cars, trucks, bicycles and pedestrians.

The existing Reservation Road and Del Monte Boulevard are four-lane facilities and this analysis studies the continued four lane use and the feasibility of a two-lane road diet along Reservation Road and Del Monte Blvd. Narrowing the entire Reservation Road and Del Monte Boulevard to two lanes only, will result in congested travel behavior and a potential shift in traffic to Imjin Parkway. Reservation Road between Crescent Avenue and Del Monte Boulevard carries high traffic volumes, and it is recommended that the roadway be retained as four lanes. Although the level of service, which only analyzes individual intersections, shows that the intersections would operate acceptably, the street system has significant queuing spilling back onto Del Monte Boulevard, Reservation Road, and other side streets.

Seven intersections were considered for the conversion from signal control to roundabout intersection control. Roundabout control could be a feasible alternative to signalized intersections at the studied intersections. Dual lane roundabouts are feasible at some intersections along Del Monte Boulevard and Reservation Road in the Downtown area. A single lane roundabout is sufficient at the future intersection of Del Monte Boulevard and Patton Parkway.

However, mixing signals and roundabouts on a closely spaced grid system in the downtown area will result in traffic congestion even with four lanes and a median. The reason for this is that arrival and departure patterns between roundabouts and signals are not conducive to traffic flow and operations. We thus recommend that dual lane roundabouts be considered only at Del Monte Boulevard and State Route 1 Ramps, Del Monte Boulevard and Reindollar Avenue, Reservation Road and Crescent Avenue, Reservation Road and California Avenue, and Reservation Road and Salinas Avenue. These roundabouts will be used as the “gateway” to the Downtown corridor (see **Figure 5**).

The Downtown Marina area currently provides access to several bicycle and pedestrian facilities; however, these facilities are basic and lack state of the art amenities and features, such as buffered or protected bike lanes, special markings for the bike lanes and crosswalk striping that promotes safety and increased use. Green colored pavement at the beginning of bicycle facilities, transitional green striping at intersections and right turn pockets are improvements to make cyclists more visible and provide continuity through the corridor. Narrowing of travel lanes should take into consideration the Monterey Salinas Transit (MST) buses that travel to and from the Marina Transit Center. No lanes wider than 11 feet are recommended since wide lanes promote speeding.

Reservation Road has extensive off-street parking facilities and on-street parking is also provided. A couple of options exist for providing parking facilities along Reservation Road; all parking could be off-site, or parking could be provided on the street, but with a diagonal parking configuration, which is more typical in downtowns. A mix of both on-street and off-street parking could also be provided based on the parking needs and Floor Area Ratio (FAR) of adjacent land uses. On-street parking demand along Reservation Road was surveyed. There is higher demand for on-street parking adjacent to residential land uses in the downtown core area, and only moderate demand for on-street parking east of Crescent Ave.

Extensive redevelopment of land-uses in downtown should consider placement of parking behind downtown buildings that will face Del Monte Boulevard and Reservation Road.

Introduction

This memorandum discusses the effect of the implementation of the Downtown Specific Plan to the circulation network due in the City of Marina. The proposed Downtown Plan would include up to 2,904 new multifamily dwelling units, 874,669 square feet of retail land uses, and 284,448 square feet of office land uses.

The Specific Plan area, or Project area, occupies approximately 267 acres generally bounded by the parcels along the north side of Reservation Road, the west side of Del Monte Boulevard, and the south side of Reindollar Avenue, west of Sunset Avenue. The purpose of this study is to identify impacts of the proposed development on the surrounding transportation system and to recommend improved multimodal facilities that is complimentary to Downtown redevelopment.

Reservation Road is a 96 feet wide 4-lane arterial with a posted speed of 35 mph and wide raised or two-way left-turn lane median. There are marked bike lanes and pedestrian facilities on both sides of the street as well as some on-street parking. Surrounding land uses are retail, restaurant, office and residential. Del Monte Boulevard is a 90 feet 4-lane arterial with a posted speed limit of 35 mph. Del Monte Boulevard has pedestrian facilities on both sides of the street. The pedestrian facilities on the west side of Del Monte Boulevard connect to the Monterey Peninsula Recreational Trail (MPRT).

Reservation Road and Del Monte Boulevard does not only serve local Marina traffic, but also regional traffic between Salinas and the Monterey Bay. Imjin Parkway also serves regional travel needs in the Monterey Bay Area, more so than Reservation Road. Traffic conditions along Imjin Parkway determines the extent of diverted travel onto Reservation Road and Del Monte Boulevard.

The Project's location is shown in **Figure 1**.

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Figure 1
Vicinity Map
Marina Downtown Study

Project Land Uses

The existing land uses have been categorized as Retail, Office/Light Manufacturing, or Multi-family residential that currently occupy the Project site include the following:

Table 1 – Existing Downtown Land Uses

	Acres	Square Footage	Residential Units
Core	**56.45**	**411,864**	**286**
Retail	--	*375,277*	
Office	--	*36,587*	
Multi-Family Residential	**106.66**	**--**	**1,638**
Transition	**104.00**	**593,894**	**377**
Retail	--	*316,428*	
Office/Light Manufacturing	--	*277,466*	
Total	**267.08**	**1,005,758**	**2,301**

Source: City of Marina, 2018.

Proposed Project Land Uses

The Downtown Specific Plan provides a maximum and minimum range for expected development to give flexibility for future development. The proposed future land uses have been categorized as Retail, Office, or Multi-family residential, the Project site include the following:

Table 2 – Proposed Downtown Specific Plan Land Uses

	Acres	Square Footage	Residential Units	Change in Square Footage	Change in Residential Units
Core	**56.45**	**729,630 - 1,313,334**	**1,497 – 1,658**	**317,766 - 901,470**	**1,211 – 1,372**
Retail	--	*583,704 - 1,050,667*	--	*208,427 - 675,390*	--
Office	--	*145,926 - 262,667*	--	*109,339 - 226,080*	--
Multi-Family Residential	**106.66**	**--**	**1,618 - 1,792**	**--**	**0 - 154**
Transition	**104.00**	**808,216 - 1,077,621**	**1,586 - 1,755**	**70,352 - 199,279**	**1,209 – 1,378**
Retail	--	*386,780 - 515,707*	--	*70,352 - 199,279*	--
Office	--	*421,436 - 561,914*	--	*143,970 - 284,448*	--
Total	**267.08**	**1,537,846 - 2,390,955**	**4,701 – 5,205**	**532,088 - 1,385,197**	**2,400 – 2,904**

Source: City of Marina, 2018.

Proposed Project Trip Generation

The change in land use assumptions from Existing Conditions to the Downtown Land use assumptions for the proposed uses are as follows:

1. Multi-Family (ITE Land Use: Multi-Family Housing (Low-Rise) [220])
2. Retail (ITE Land Use: Shopping Center [820])
3. Office (ITE Land Use: General Office Building [710])

As shown in **Table 3**, proposed conditions trip generation estimates indicate that the proposed land uses will generate approximately 35,520 – 58,740 gross daily trips, 1,753 – 2,495 gross AM peak hour trips, and 2,757 – 4,997 gross PM peak hour trips. After applying the ITE Recommended Internal Capture Reduction Method (NCHRP 851) and incorporating a 10 percent reduction due to Alternative Transportation modes, the total net project trip generation would be 26,640 – 42,880 net daily trips, 1,435 – 2,137 net AM peak hour trips, and 1,874 – 3,303 net PM peak hour trips. The reduction due to Alternative Transportation Modes is based on the 2016 American Community Survey, Commute Characteristics to Work Table (S0801).

Interaction in travel between the land uses within Downtown, within Marina also outside of Marina with the proposed Downtown is more accurately reflected by using the AMABG travel demand model to estimate traffic flows on the street system. Subsequently, the trip generation in the AMBAG model yields a lower trip generation because of the additional interaction. The model also assumes some level of multimodal travel, furthermore it also takes into consideration through traffic and diverts some traffic to Imjin Parkway as volumes increases in Downtown Marina. As such the traffic volumes from the model were used in this analysis.

The AMBAG model inputs increase in housing units and jobs at lesser rate that the Downtown Plan assumes. Therefore, it should be noted that if the upper threshold of residential units and retail/office square footage is built, the level of service at intersections will degrade and the queue lengths will increase. Based on the level of service findings for the future conditions there is sufficient capacity for the full buildout of the Downtown Plan and still meet the level of service threshold set by the City of Marina.

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Table 3 - Project Trip Generation

	ITE No.	Project Size			MINIMUM					MAXIMUM				
					Daily	AM Peak Hour		PM Peak Hour		Daily	AM Peak Hour		PM Peak Hour	
		Min	Max	Units		Total	In / Out	Total	In / Out		Total	In / Out	Total	In / Out
Trip Generation Rates[1]														
Multifamily - Multi-Family Housing (Low-Rise)[1]	220	-		DU			23% / 77%		63% / 37%			23% / 77%		63% / 37%
Office - General Office Building[2]	710	-		KSF			86% / 14%		16% / 84%			86% / 14%		16% / 84%
Retail - Shopping Center[3]	820	-		KSF			62% / 38%		48% / 52%			62% / 38%		48% / 52%
Project Trips														
Core														
Retail	820	208	675	KSF	9,906	256	159 / 97	936	449 / 487	22,035	489	303 / 186	2,233	1,072 / 1,161
Office	710	109	226	KSF	1,157	129	111 / 18	124	60 / 64	2,341	239	206 / 33	247	119 / 128
Multifamily	220	1,211	1,372	DU	9,114	510	117 / 393	544	343 / 201	10,331	574	132 / 442	608	383 / 225
Sub-Total					*20,177*	*895*	*387 / 508*	*1,604*	*852 / 752*	*34,707*	*1,302*	*641 / 661*	*3,088*	*1,574 / 1,514*
Residential														
Multifamily	220	0	154	DU	0	0	0 / 0	0	0 / 0	1,123	72	17 / 55	87	55 / 32
Sub-Total					*0*	*0*	*0 / 0*	*0*	*0 / 0*	*1,123*	*72*	*17 / 55*	*87*	*55 / 32*
Transition														
Retail	820	70	199	KSF	4,733	187	116 / 71	419	201 / 218	9,608	251	156 / 95	905	434 / 471
Office	710	144	284	KSF	1,511	162	139 / 23	161	26 / 135	2,925	294	253 / 41	307	49 / 258
Multifamily	220	1,209	1,378	DU	9,099	509	117 / 392	543	342 / 201	10,377	576	132 / 444	610	384 / 226
Sub-Total					*15,343*	*858*	*372 / 486*	*1,123*	*569 / 554*	*22,910*	*1,121*	*541 / 580*	*1,822*	*867 / 955*
TOTAL														
Total Retail	820	279	875	KSF	14,639	443	275 / 168	1,355	650 / 705	31,643	740	459 / 281	3,138	1,506 / 1,632
Total Office	710	253	511	KSF	2,668	291	250 / 41	285	86 / 199	5,266	533	459 / 74	554	168 / 386
Total Residential	220	2,420	2,904	DU	18,213	1,019	234 / 785	1,087	685 / 402	21,831	1,222	281 / 941	1,305	822 / 483
New Trips					*35,520*	*1,753*	*759 / 994*	*2,727*	*1,421 / 1,306*	*58,740*	*2,495*	*1,199 / 1,296*	*4,997*	*2,496 / 2,501*
Trip Reduction														
Internal Capture (NCHRP 851)					-5,328	-158	-79 / -79	-644	-322 / -322	-9,986	-136	-68 / -68	-1,332	-666 / -666
Transit Trips (3.1%)[2]					-1,101	-50	-21 / -29	-65	-34 / -31	-1,821	-68	-32 / -36	-109	-54 / -55
Non-motorized (Walk, Bike, Tele-commute (6.9%)[2]					-2,451	-110	-47 / -63	-144	-76 / -68	-4,053	-154	-74 / -80	-253	-126 / -127
Total Trip Reduction					*-8,880*	*-318*	*-147 / -171*	*-853*	*-432 / -421*	*-15,860*	*-358*	*-174 / -184*	*-1,694*	*-846 / -848*
NET NEW TRIPS					**26,640**	**1,435**	**612 / 823**	**1,874**	**989 / 885**	**42,880**	**2,137**	**1,025 / 1,112**	**3,303**	**1,650 / 1,653**

Notes:
1. ITE Trip Generation Manual, 10th Edition Trip Generation Equations used for Multi-family, Office and Retail Land Uses
2. Alternative Transportation Mode Share is based on the American Community Survey's 2016 Commute Characteristics for Marina, California

Intersection Operations Evaluation

The following intersections were analyzed as part of this memorandum:

1. Del Monte Boulevard and State Route 1 Ramps
2. Del Monte Boulevard and Reindollar Avenue
3. Del Monte Boulevard and Palm Avenue
4. Del Monte Boulevard and Reservation Road
5. Reservation Road and Vista Del Camino
6. Reservation Road and Seacrest Ave
7. Reservation Road and Shopping Center Driveways
8. Reservation Road and De Forest Road
9. Reservation Road and Crescent Avenue
10. Reservation Road and California Avenue
11. Reservation Road and Salinas Avenue
12. Reservation Road and Eucalyptus Avenue
13. Del Monte Boulevard and Patton Parkway (Future Conditions only)

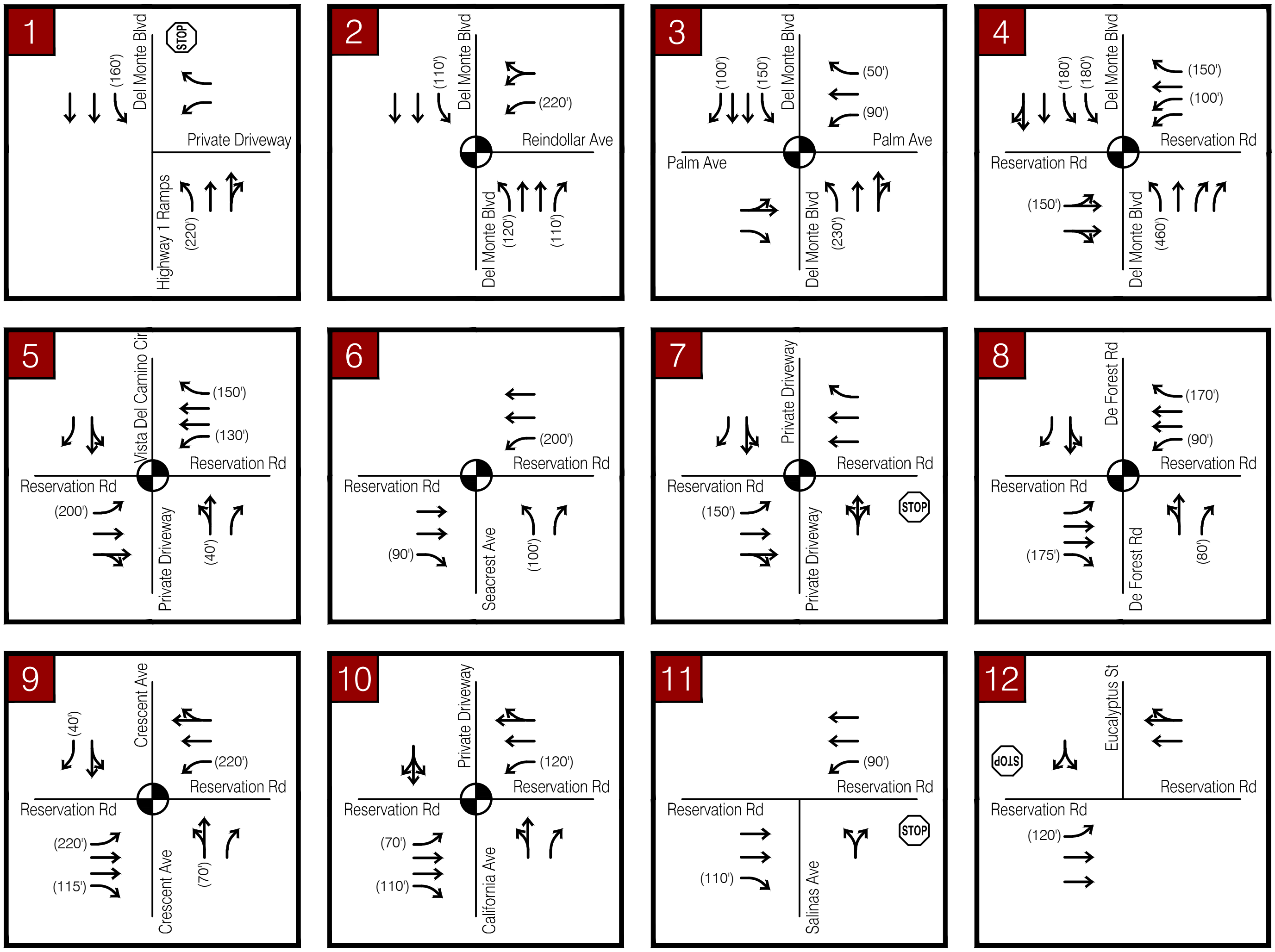
Operations Methodology

The study intersections were modeled in Synchro 10 software. Roundabout controlled intersections were studied using Sidra 7.0. Highway Capacity Manual (HCM) 6th Edition was used to analyze intersection operations and report intersection delay.

Additionally, queues at the Study Intersections were analyzed in SimTraffic and reported based on an average of ten seedings per run.

The City of Marina recognizes LOS D as the acceptable Level of Service for intersections within its jurisdiction. The intersection of Del Monte Avenue and the State Route 1 Ramps is within the jurisdiction of Caltrans, the anticipated level of service conditions for intersections would be D or worse per the Caltrans State Routes 1 & 183 Corridor System Management Plan.

Weekday intersection turning movement counts were collected for 11 study intersections on September 26, 2018. (Wednesday). These counts included vehicles, bicycles, and pedestrians and represents typical traffic conditions. Volumes for intersections were collected during the AM and PM peak periods of 7:00-9:00 a.m. and 4:00-6:00 p.m., respectively. These traffic counts were taken when local schools were in session and the weather was fair. Existing roadway geometry is shown in **Figure 2**, Existing peak hour turning movements are summarized in **Figure 3**. Intersection volume data sheets for all traffic counts are provided in the **Appendix**.



LEGEND

X	INTERSECTION #
	TRAFFIC SIGNAL
STOP	STOP SIGN
(XX')	STORAGE LENGTH

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Figure 2
Existing Conditions - Geometry
Marina Downtown Study

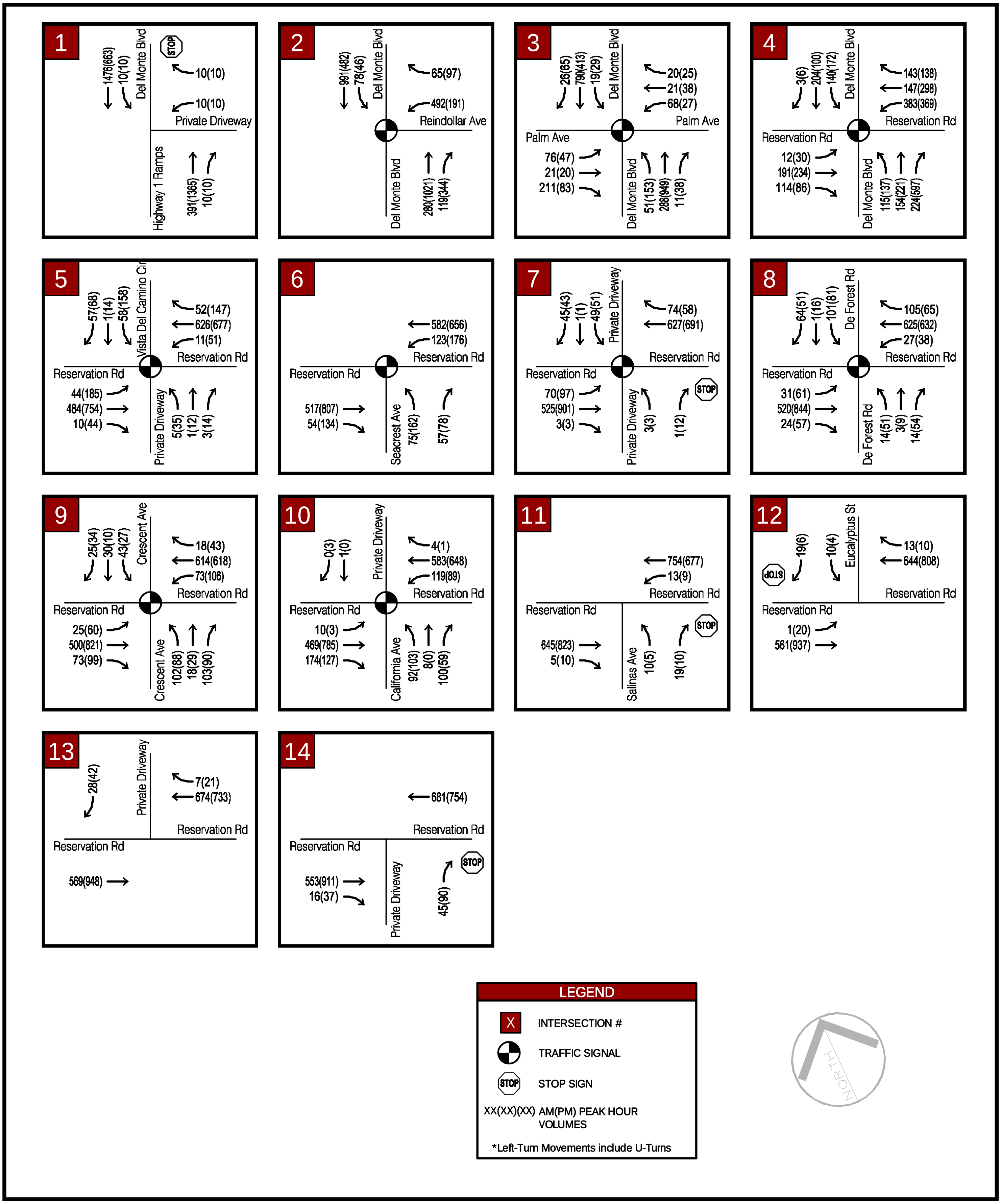

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Figure 3
Existing Conditions - Volumes
Marina Downtown Study

Level of Service (LOS) Operations

Traffic operations were evaluated at the study intersections based on Existing Conditions lane geometry, traffic control, and peak hour traffic volumes. No individual study intersection operates at unacceptable LOS in Existing Conditions. **Table 4** summarizes the Existing Conditions LOS.

Table 4 – Existing Conditions Intersection Level of Service

<table>
<tr><th rowspan="3">Intersection</th><th rowspan="3">City/ Caltrans[1]</th><th rowspan="3" colspan="2">Control[2]</th><th colspan="4">Existing Conditions</th></tr>
<tr><th colspan="2">AM Peak Hour</th><th colspan="2">PM Peak Hour</th></tr>
<tr><th>Delay</th><th>LOS</th><th>Delay</th><th>LOS</th></tr>
<tr><td rowspan="2">1 Del Monte Blvd/ SR-1 Ramps</td><td rowspan="2">Caltrans</td><td rowspan="2">SSSC</td><td>Overall</td><td>0.2</td><td>A</td><td>0.3</td><td>A</td></tr>
<tr><td>Worst Approach</td><td>12.9</td><td>B (WB)</td><td>22.2</td><td>C (WB)</td></tr>
<tr><td>2 Del Monte Blvd/ Reindollar Ave</td><td>City</td><td>Signal</td><td>Overall</td><td>10.3</td><td>B</td><td>10.4</td><td>B</td></tr>
<tr><td>3 Del Monte Blvd/ Palm Ave</td><td>City</td><td>Signal</td><td>Overall</td><td>18.0</td><td>B</td><td>16.2</td><td>B</td></tr>
<tr><td>4 Del Monte Blvd/ Reservation Rd</td><td>City</td><td>Signal</td><td>Overall</td><td>21.9</td><td>C</td><td>21.9</td><td>C</td></tr>
<tr><td>5 Reservation Rd/ Vista Del Camino</td><td>City</td><td>Signal</td><td>Overall</td><td>8.6</td><td>A</td><td>17.2</td><td>B</td></tr>
<tr><td>6 Reservation Rd/ Seacrest Ave</td><td>City</td><td>Signal</td><td>Overall</td><td>9.6</td><td>A</td><td>11.8</td><td>B</td></tr>
<tr><td>7 Reservation Rd/ Shopping Center</td><td>City</td><td>Signal</td><td>Overall</td><td>8.4</td><td>A</td><td>10.4</td><td>B</td></tr>
<tr><td>8 Reservation Rd/ De Forest Rd</td><td>City</td><td>Signal</td><td>Overall</td><td>16.6</td><td>B</td><td>18.0</td><td>B</td></tr>
<tr><td>9 Reservation Rd/ Crescent Ave</td><td>City</td><td>Signal</td><td>Overall</td><td>29.5</td><td>C</td><td>31.4</td><td>C</td></tr>
<tr><td>10 Reservation Rd/ California Ave</td><td>City</td><td>Signal</td><td>Overall</td><td>12.2</td><td>A</td><td>11.2</td><td>B</td></tr>
<tr><td rowspan="2">11 Reservation Rd/ Salinas Ave</td><td rowspan="2">City</td><td rowspan="2">SSSC</td><td>Overall</td><td>0.4</td><td>A</td><td>0.2</td><td>A</td></tr>
<tr><td>Worst Approach</td><td>13.1</td><td>B (NB)</td><td>14.6</td><td>B (NB)</td></tr>
<tr><td rowspan="2">12 Reservation Rd/ Eucalyptus St</td><td rowspan="2">City</td><td rowspan="2">SSSC</td><td>Overall</td><td>0.3</td><td>A</td><td>0.2</td><td>A</td></tr>
<tr><td>Worst Approach</td><td>12.8</td><td>B (SB)</td><td>15.4</td><td>C (SB)</td></tr>
<tr><td>13 Del Monte Blvd/ Patton Pkwy</td><td>City</td><td>RAB</td><td>Overall</td><td colspan="4">Does Not Exist</td></tr>
</table>

Note:
1. LOS Standard for Caltrans is LOS C, for the City of Marina is LOS D, Intersections Operating at below the Standard are **highlighted/ bolded**.
2. SSSC = Side Street Stop Control, AWSC = All-Way Stop Control, RAB = Roundabout for SSSC Worst Approach governs LOS.
3. HCM 6th Edition

Queueing Operations

SimTraffic was used to evaluate 95th percentile queues at the study intersections. The results are based on the average results of ten (10) simulation runs. **Table 5** summarizes the queueing results.

Table 5: Existing Conditions 95th Percentile Queue Summary

Intersection		MVMT	Pocket Length (ft)	Queue Length (ft)		# Vehicles	
				AM Peak	PM Peak	AM Peak	PM Peak
2	Del Monte Blvd/ Reindollar Ave	SBL	125	106	75	5	3
		WBL	-	198	108	8	5
		WBL/R	150	**170**	69	**6**	3
3	Del Monte Blvd / Palm Ave	NBL	225	69	174	3	7
		SBL	150	59	55	3	3
		EBL/T	-	100	78	4	4
		WBL	80	75	45	3	2
4	Del Monte Blvd / Reservation Rd	NBL	450	130	155	6	7
		SBL	150	53	96	3	4
		SBL2	150	100	120	5	5
		EBL/T	150	147	**159**	6	**7**
		WBL	100	**141**	**142**	**6**	**6**
		WBL2	590	187	209	8	9
5	Reservation Rd/ Vista Del Camino	NBL/T	-	21	64	1	3
		SBL/T	-	65	152	3	7
		EBL	175	62	164	3	7
		WBL	135	32	89	2	4
6	Reservation Rd/ Seacrest Ave	NBL	100	77	**119**	4	**5**
		WBL	200	116	151	5	7
7	Reservation Rd/ Shopping Center	NBL/T/R	-	15	32	1	2
		SBL/T	-	52	51	3	3
		EBL	145	60	72	3	3
8	Reservation Rd/ De Forest Rd	NBL/T	-	70	64	3	3
		SBL/T	-	83	78	4	4
		EBL	200	50	77	2	4
		WBL	175	51	80	3	4
9	Reservation Rd/ Crescent Ave	NBL/T	75	**102**	**100**	**5**	**4**
		SBL/T	-	93	67	4	3
		EBL	220	58	135	3	6
		WBL	220	98	135	4	6
10	Reservation Rd/ California Ave	NBL/T	-	96	96	4	4
		SBL/T/R	-	11	17	1	1
		EBL	75	39	21	2	1
		WBL	150	123	96	5	4

Note: Assumes 25 feet per vehicle spacing.
Intersections that exceed the pocket length are **bolded**, those that exceed the pocket length by more than one vehicle length are **bolded/highlighted**

The 95th queue length is rarely exceeded and is a representation of the absolute worst-case scenario of queueing at an intersection. Queueing was only studied at signalized intersections at left turn movements or shared left turn-through movements as they typically have greater impact to queueing spillback on the roadway segments.

Intersections # 2, 4, 6, and 9 have queues which exceed turn pocket lengths on one or more of the movements. Those intersections with queues that exceed turn pocket lengths by one or more car lengths are highlighted. The westbound left movement at Reservation Road and Del Monte Boulevard has a 95th percentile queue which exceeds the turn pocket length by two vehicles in the AM and PM peak hour. The shared northbound left and through movement at Reservation Road and Crescent exceeds the turn pocket length by two vehicles in the AM peak hour and one vehicle in the PM peak hour.

Future Conditions Analysis

Future Conditions describes the conditions anticipated in 2040. The Association of Monterey Bay Area Government (AMBAG) Regional Travel Demand Model was used to determine future traffic on Reservation Road and Del Monte Boulevard with the proposed Downtown Plan Redevelopment representing the average trips that would be generated. The 2018 Regional Travel Demand Model incorporates regional growth, traffic congestion, and alternative transportation mode share. The volumes were developed by furnessing the AMBAG Baseline (2015) and Metropolitan Transportation Plan Year (2040) data as well as existing traffic counts. **Figure 4** illustrates future conditions peak hour turning movement counts for the study intersections.

For the Future conditions, the extension of Del Monte Boulevard from the State Route 1 Ramps to Imjin Parkway is assumed to be completed. The same intersection control is assumed for Existing and Future conditions for Intersection #1.

Additional sections analyze a Road Diet Scenario for Reservation Road and Del Monte Boulevard and the conversion of some study intersections to roundabout control.

LOS Operations

Traffic operations were evaluated at the study intersections based on Future Conditions lane geometry, traffic control, and peak hour traffic volumes. The intersection of Del Monte Boulevard and State Route 1 Ramps (Intersection #1) operates at unacceptable levels in the PM Peak in Future Conditions. **Table 6** summarizes the Future Conditions level of service analysis.

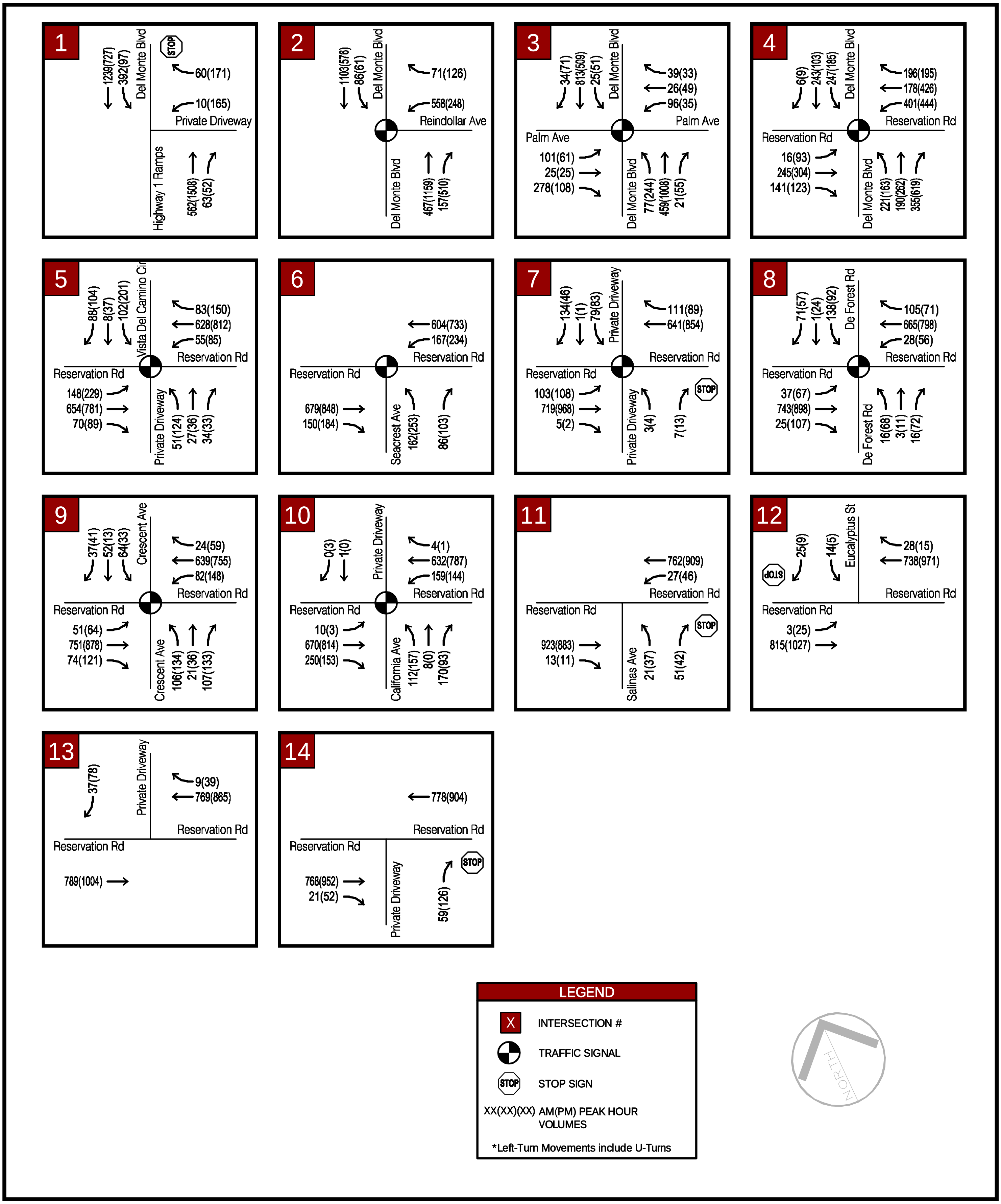

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Figure 4
Future Conditions - Volumes
Marina Downtown Study

Table 6 – Future Conditions Intersection Level of Service on Existing Road Network

Intersection	City/ Caltrans[1]	Control[2]		Future Conditions			
				AM Peak Hour		PM Peak Hour	
				Delay	LOS	Delay	LOS
1 Del Monte Blvd/ SR-1 Ramps	Caltrans	SSSC	Overall	2.7	A	33.2	D
			Worst Approach	*22.2*	*C (WB)*	***263.3***	***F (WB)***
2 Del Monte Blvd/ Reindollar Ave	City	Signal	Overall	11.5	B	12.0	B
3 Del Monte Blvd/ Palm Ave	City	Signal	Overall	22.7	C	19.2	B
4 Del Monte Blvd/ Reservation Rd	City	Signal	Overall	26.1	C	29.9	D
5 Reservation Rd/ Vista Del Camino	City	Signal	Overall	14.5	B	22.7	C
6 Reservation Rd/ Seacrest Ave	City	Signal	Overall	11.8	B	13.5	B
7 Reservation Rd/ Shopping Center	City	Signal	Overall	10.2	B	11.3	B
8 Reservation Rd/ De Forest Rd	City	Signal	Overall	25.5	C	21.4	C
9 Reservation Rd/ Crescent Ave	City	Signal	Overall	31.5	C	34.8	C
10 Reservation Rd/ California Ave	City	Signal	Overall	15.0	B	13.8	B
11 Reservation Rd/ Salinas Ave	City	SSSC	Overall	0.9	A	1.2	A
			Worst Approach	*17.2*	*C (NB)*	*22.5*	*C (NB)*
12 Reservation Rd/ Eucalyptus St	City	SSSC	Overall	0.3	A	0.2	A
			Worst Approach	*14.5*	*B (SB)*	*17.1*	*C (SB)*
13 Del Monte Blvd/ Patton Pkwy	City	RAB	Overall	5.4	A	4.3	A

Note:
1. LOS Standard for Caltrans is LOS C, for the City of Marina is LOS D, Intersections Operating at below the Standard are **highlighted/ bolded**.
2. AWSC = All-Way Stop Control, RAB = Roundabout, SSSC = Side Street Stop Control, for SSSC Worst Approach governs LOS.
3. HCM 6th Edition

Intersection #1 which operates at less than significant levels in Future Conditions, is programmed to become a roundabout with the extension of Del Monte Boulevard to Imjin Parkway. The implementation of a roundabout at this intersection will improve operations to acceptable conditions. The results of this analysis are discussed in the Roundabout Intersection Control section.

Queueing Operations

SimTraffic was used to evaluate 95th percentile queues at the study intersections. The results are based on the average results of ten (10) simulation runs. **Table 7** summarizes the queueing results for Future Conditions.

Table 7: Future Conditions 95th Percentile Queue Summary on Existing Network

Intersection		MVMT	Pocket Length (ft)	Queue Length (ft)		# Vehicles	
				AM Peak	PM Peak	AM Peak	PM Peak
2	Del Monte Blvd/ Reindollar Ave	SBL	125	138	91	6	4
		WBL	-	268	142	11	6
		WBL/R	150	**211**	101	**9**	5
3	Del Monte Blvd/ Palm Ave	NBL	225	104	215	5	9
		SBL	150	104	83	5	4
		EBL/T	-	159	83	7	4
		WBL	80	**96**	58	**4**	3
4	Del Monte Blvd/ Reservation Rd	NBL	450	235	169	6	7
		SBL	150	137	98	5	4
		SBL2	150	**163**	121	**7**	5
		EBL/T	150	**206**	**211**	**9**	**9**
		WBL	100	**148**	**154**	**6**	**7**
		WBL2	590	240	456	10	19
5	Reservation Rd/ Vista Del Camino	NBL/T	-	85	158	4	7
		SBL/T	-	102	258	5	11
		EBL	175	136	**200**	6	**8**
		WBL	135	92	**152**	4	**7**
6	Reservation Rd/ Seacrest Ave	NBL	100	**119**	**142**	**5**	**6**
		WBL	200	150	**201**	6	**9**
7	Reservation Rd/ Shopping Center	NBL/T/R	-	27	34	2	2
		SBL/T	-	70	74	3	3
		EBL	145	74	74	3	3
8	Reservation Rd/ De Forest Rd	NBL/T	-	32	74	2	3
		SBL/T	-	104	98	5	4
		EBL	200	56	73	3	3
		WBL	175	58	127	3	6
9	Reservation Rd/ Crescent Ave	NBL/T	75	**108**	**115**	**5**	**5**
		SBL/T	-	144	91	6	41
		EBL	220	110	183	5	8
		WBL	220	142	216	6	9
10	Reservation Rd/ California Ave	NBL/T	-	116	187	5	8
		SBL/T/R	-	12	17	1	1
		EBL	75	49	24	2	1
		WBL	150	**156**	150	**7**	6

Note: Assumes 25 feet per vehicle spacing.
Intersections that exceed the pocket length are **bolded**, those that exceed the pocket length by more than one vehicle length are **bolded/highlighted**

The 95th queue length is rarely exceeded and is a representation of the absolute worst-case scenario of queueing at an intersection. Queueing was studied at signalized intersections at left turn movements or shared left turn-through movements as they have greater impact to queueing spillback on the roadway segments.

Intersections # 2, 3, 4, 5, 6, 9 and 10 have queues which exceed turn pocket lengths. Queues that exceed turn pocket lengths by one or more car lengths are highlighted. The following intersections have a movement that exceeds the turn pocket length by more than one vehicle:

- # 2 – Del Monte Boulevard/ Reindollar Avenue – WBL/R, exceeds by 3 vehicles (AM Peak)
- # 4 – Del Monte Boulevard / Reservation Road – EBL/T, exceeds by 3 vehicles (AM & PM Peak)
- # 4 – Del Monte Boulevard / Reservation Road – WBL, exceeds by 2-3 vehicles (AM & PM Peak)
- # 6 – Del Monte Boulevard / Seacrest Avenue – NBL, exceeds by 2 vehicles (PM Peak)
- # 9 – Del Monte Boulevard / Crescent Avenue – NBL/T, exceeds by 2 vehicles (AM & PM Peak)

Reservation Road Diet

The scope of the study included the analysis of a road diet along Reservation Road and Del Monte Boulevard (i.e. converting the current five-lane facility to a three-lane facility). Analysis with the Road Diet option for roundabout control and signal control.

An initial review of volumes on Del Monte Boulevard eliminated the option of road diet on Del Monte Boulevard. The road diet along Reservation Road extend from just east of the intersection with Del Monte Boulevard to just west of the intersection with Crescent Avenue. **Table 8** summarizes the intersection level of service; a road diet is implemented between Del Monte Boulevard and Crescent Avenue.

Table 8 – Road Diet Intersection Level of Service

Intersection	City/ Caltrans[1]	Control[2]		Road Diet Conditions			
				AM Peak Hour		PM Peak Hour	
				Delay	LOS	Delay	LOS
4 Del Monte Blvd/ Reservation Rd	City	Signal	Overall	28.9	C	32.8	C
5 Reservation Rd/ Vista Del Camino	City	Signal	Overall	21.9	C	42.9	D
6 Reservation Rd/ Seacrest Ave	City	Signal	Overall	15.3	B	26.1	C
7 Reservation Rd/ Shopping Center	City	Signal	Overall	13.9	B	19.0	B
8 Reservation Rd/ De Forest Rd	City	Signal	Overall	32.6	C	30.8	C
9 Reservation Rd/ Crescent Ave	City	Signal	Overall	31.4	C	34.5	C
12 Reservation Rd/ Eucalyptus St	City	SSSC	Overall	0.4	A	0.3	A
			Worst Approach	*18.7*	*C (SB)*	*23.4*	*C (SB)*

Note: 1. LOS Standard for Caltrans is LOS C, for the City of Marina is LOS D, Intersections Operating at unacceptable levels are **highlighted/ bolded**.

2. AWSC = All-Way Stop Control, RAB = Roundabout, SSSC = Side Street Stop Control, for SSSC Worst Approach governs LOS.

3. HCM 6th Edition

The level of services of the intersections affected by the road diet lessen but do not reach unacceptable levels per the City of Marina Standard in the AM and PM peak hour.

Table 9 summarizes the queueing results from the Road Diet in the Future Conditions Scenario.

Table 9: Future Conditions 95th Percentile Queue Summary with Road Diet Conditions

Intersection		MVMT	Pocket Length (ft)	Queue Length (ft)		# Vehicles	
				AM Peak	PM Peak	AM Peak	PM Peak
4	Del Monte Blvd/ Reservation Rd	NBL	450	252	**551**	10	**23**
		SBL	150	**175**	**183**	**7**	**8**
		SBL2	150	**184**	**214**	**8**	**9**
		EBL/T	150	**226**	**1,214**	**8**	**49**
		WBL	100	**148**	**150**	**6**	**6**
		WBL2	590	233	258	10	11
5	Reservation Rd/ Vista Del Camino	NBL/T	-	92	196	4	8
		SBL/T	-	116	701	4	29
		EBL	175	137	**248**	6	**10**
		WBL	135	**221**	**157**	**9**	7
6	Reservation Rd/ Seacrest Ave	NBL	100	**129**	**143**	**6**	**6**
		WBL	200	173	**265**	7	**5**
7	Reservation Rd/ Shopping Center	NBL/T/R	-	28	35	2	2
		SBL/T	-	73	78	3	4
		EBL	145	78	80	4	4
8	Reservation Rd/ De Forest Rd	NBL/T	-	34	182	2	8
		SBL/T	-	128	164	6	7
		EBL	200	80	80	4	4
		WBL	175	158	**242**	3	**10**
9	Reservation Rd/ Crescent Ave	NBL/T	75	**110**	**115**	**5**	**5**
		SBL/T	-	164	109	7	5
		EBL	220	124	159	5	7
		WBL	220	**240**	**335**	**10**	**14**

Note: Assumes 25 feet per vehicle spacing.
Intersections that exceed the pocket length are **bolded**, those that exceed the pocket length by more than one vehicle length are **bolded/highlighted**

In the AM peak hour there are queue lengths that exceed turn pocket lengths. During the AM peak hour traffic flows, however in the PM peak hour the analysis shows gridlock in the transportation network. Queues extend onto Del Monte Boulevard/ SR-1 Northbound Off Ramp.

Roundabout Intersection Control

Roundabout intersection control was evaluated for six of the thirteen study intersections, the roundabouts were analyzed using Future Conditions:

- # 1 – Del Monte Boulevard/ SR-1 Ramps Avenue
- # 2 – Del Monte Boulevard/ Reindollar Avenue
- # 4 – Del Monte Boulevard / Reservation Road
- # 8 – Reservation Road / De Forest Road
- # 9 – Reservation Road / Crescent Avenue
- # 10 – Reservation Road / California Avenue
- # 11 – Reservation Road / Salinas Avenue
- # 13 – Del Monte Boulevard / Patton Parkway

Intersections # 8, 9, and 10 were analyzed as both single and dual lane roundabouts, to determine if a Road Diet with roundabouts was feasible along Reservation Road. Intersection #1 and #4 were analyzed as a dual-lane roundabouts and Intersection #13 was analyzed as a single lane roundabout.

Table 10 summarizes the Future Conditions level of service analysis for the proposed roundabout locations.

Table 10 – Future Conditions RAB Analysis, for 1 or 2 Circulating Lanes/Approach Lanes

	Intersection	City/ Caltrans[1]	Circulating Lanes	Future Conditions					
				AM Peak Hour			PM Peak Hour		
				Delay	LOS	V/C	Delay	LOS	V/C
1	Del Monte Blvd/ SR-1 Ramps	Caltrans	2	7.4	A	0.557	10.1	B	0.592
2	Del Monte Blvd/ Reindollar Ave	City	2	11.8	B	0.729	9.1	A	0.604
4	Del Monte Blvd/ Reservation Rd	City	2	10.6	B	0.492	13.3	B	0.744
8	Reservation Rd/ De Forest Rd	City	2	6.9	A	0.389	8.1	A	0.478
			1	13.5	B	0.767	24.7	**C**	**0.947**
9	Reservation Rd/ Crescent Ave	City	2	8.1	A	0.433	10.3	B	0.584
			1	17.8	**B**	**0.854**	41.5	**D**	**1.018**
10	Reservation Rd/ California Ave	City	2	7.5	A	0.447	7.8	A	0.441
			1	18.0	**B**	**0.880**	19.4	**B**	**0.869**
11	Reservation Rd/ Salinas Ave	City	2	5.9	A	0.374	6.8	A	0.408
13	Del Monte Blvd/ Patton Pkwy	City	1	5.4	A	0.369	4.3	A	0.241

Note: 1. LOS Standard for Caltrans is LOS C, for the City of Marina is LOS D, Intersections Operating at below the Standard are **highlighted/ bolded**.
2. Intersections with a volume to capacity ratio (V/C) should not exceed 0.800 to ensure sufficient intersection capacity.
2. HCM 6th Edition

In addition to average overall delay and level of service at the intersection, the volume-to-capacity ratio (V/C) was evaluated. The V/C ratio is used to evaluate if the roundabout is operating past the recommended practical capacity. The recommended practical capacity is the condition in which delay, and queue length increase at a higher rate and the variability of delay times increases as a result of increased overflows. To prevent the roundabout from operating past its practical capacity it is recommended that the roundabout be designed with V/C ratios less than 0.80-0.85. In the case of the single lane roundabout at intersections #8, #9, and #10 it is not recommended that a single lane roundabout be implemented. If roundabouts were to be utilized at these locations it is recommended that the roundabouts have two circulating lanes to ensure sufficient operating capacity.

Mixing signals and roundabout on a closely spaced grid system similar to the downtown area will result in traffic congestion even with four lanes and a median. The reason for this is that arrival and departure patterns between roundabouts and signals are not conducive to optimum operations. We thus recommend that roundabouts be considered at the following intersections:

- Del Monte Boulevard and State Route 1 Ramps,
- Del Monte Boulevard and Reindollar Avenue,
- Reservation Road and Crescent Avenue,
- Reservation Road and California Avenue, and
- Reservation Road and Salinas Avenue.

The proposed roundabouts are desirable because they allow for defining entry to the downtown area on all the major roadways; Reservation Road from east and the west, and Del Monte Boulevard from the north and the south. It also has a traffic calming and placemaking effect on downtown center.

Figure 5 shows the proposed roundabout locations on the transportation network, including existing roundabouts.

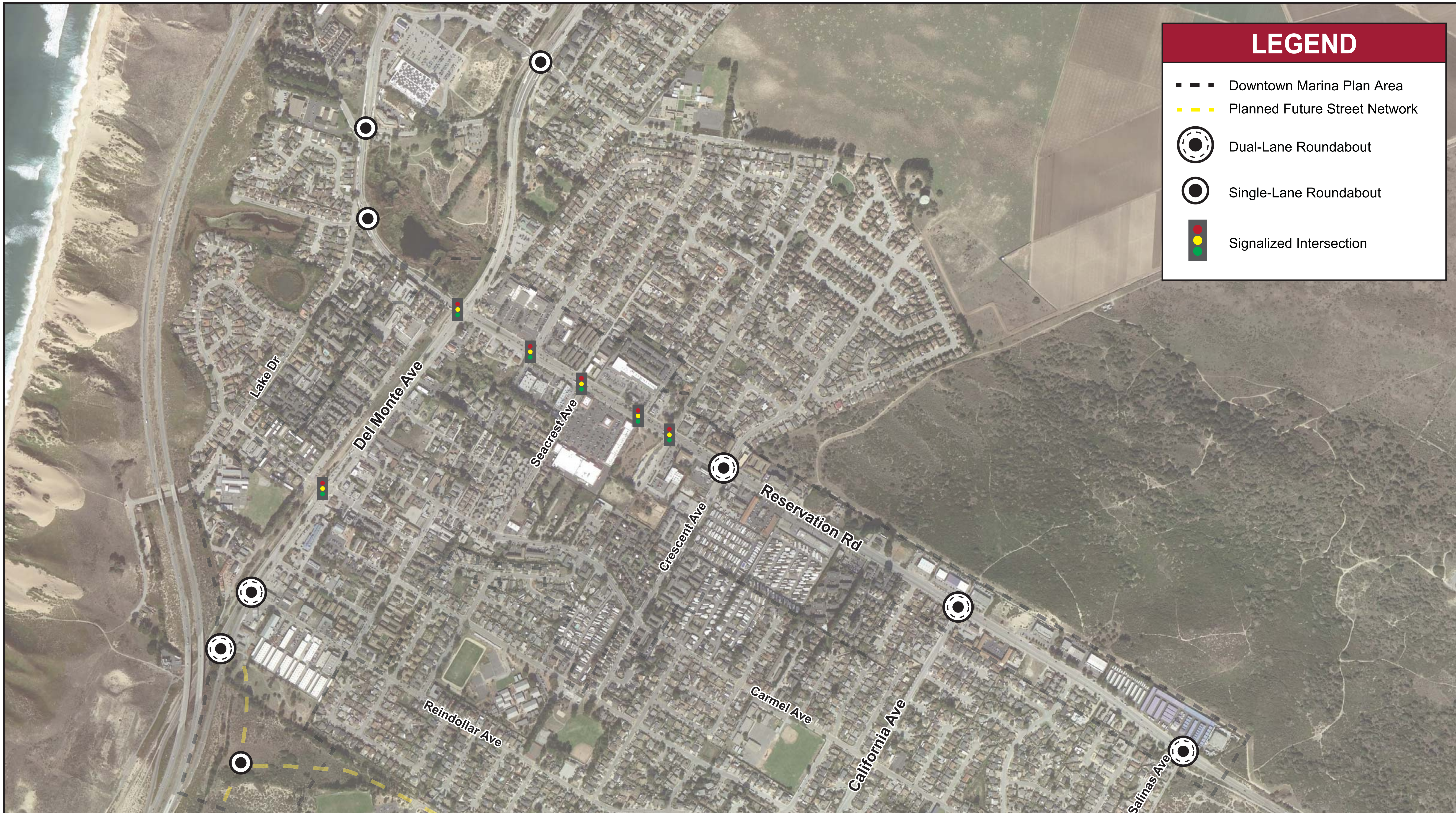

Figure 5
Recommended Roundabout Locations
Marina Downtown Study

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Multi Modal Connectivity Analysis

A review of pedestrian, bicycle and transit facilities on Del Monte Boulevard and Reservation Road. **Figure 6** illustrates the Existing Bicycle and Pedestrian facilities and **Figure 7** illustrates the gaps in existing infrastructure and other planned improvements.

Del Monte Boulevard

Del Monte Boulevard provides access to a Class I recreation path, this path runs along the westside of Del Monte Boulevard and connects to the regional recreation trail the Monterey Peninsula Recreation Trail (MPRT). On the eastside a sidewalk is available of pedestrians just south of the intersection of Reindollar Avenue and has a small gap in continuous sidewalk in front two small business which have extended driveway width. The path of travel for pedestrians is unclear and puts them in conflict with onsite circulation. There are no bicycle facilities in the northbound direction of Del Monte Boulevard.

Potential future bicycle and pedestrian improvements include the addition of bicycle facilities in the northbound direction, widening of the Class I recreation path, and closing the gap in the sidewalk infrastructure with future redevelopment. The extension of Del Monte Boulevard to Imjin Parkway will provide an additional multi-modal connection, there is both potential to extend the sidewalk or make room for a Class I path alongside the new extension.

Reservation Road

Class II bicycle lanes run along Reservation Road from Salinas Avenue to Robin Drive. There are connections to Class I facilities at Locke-Paddon Park and at Salinas Ave. Sidewalks run along both sides of Reservation Road from Del Monte Boulevard to just west of Salinas Avenue. There are several small gaps in the network due to a few extended driveways widths and undeveloped sites along Reservation Road. Most of the gaps in sidewalk infrastructure occur between Crescent and Salinas Avenue.

Potential future bicycle and pedestrian improvements include the addition of buffering along bicycle lanes, transitional green striping at turn pockets or intersections, bicycle facilities in the northbound direction, widening of the Class I recreation path, and closing the gap in the sidewalk infrastructure with future redevelopment. The extension of Del Monte Boulevard to Imjin Parkway will provide an additional multi-modal connection, there is both potential to extend the sidewalk or make room for a Class I path alongside the new extension.

Gaps in the sidewalk network after the Crescent Avenue on North side potential for green transitional striping or buffering.

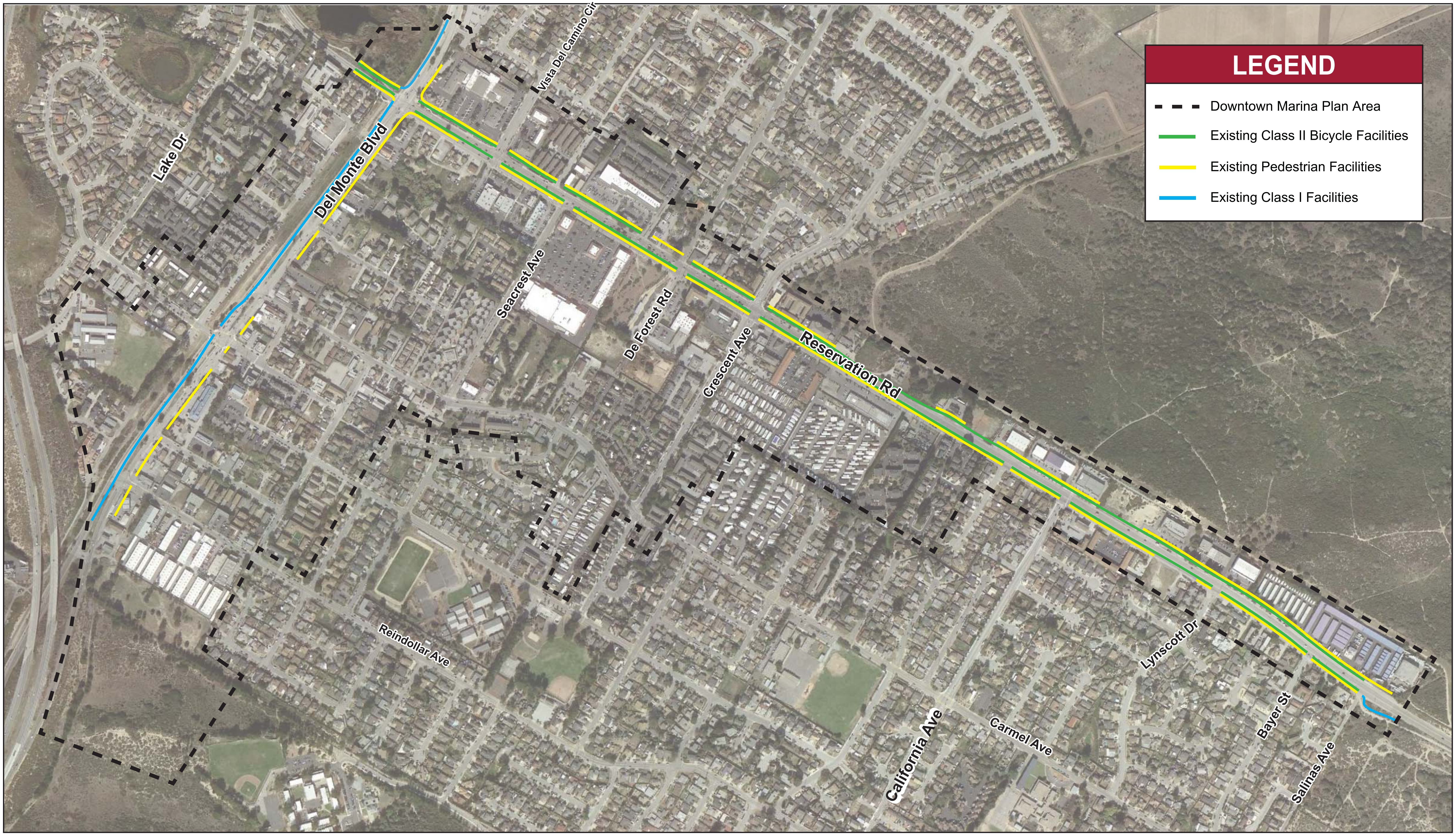

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Figure 6
Existing Pedestrian and Bicycle Facilties
Marina Downtown Study

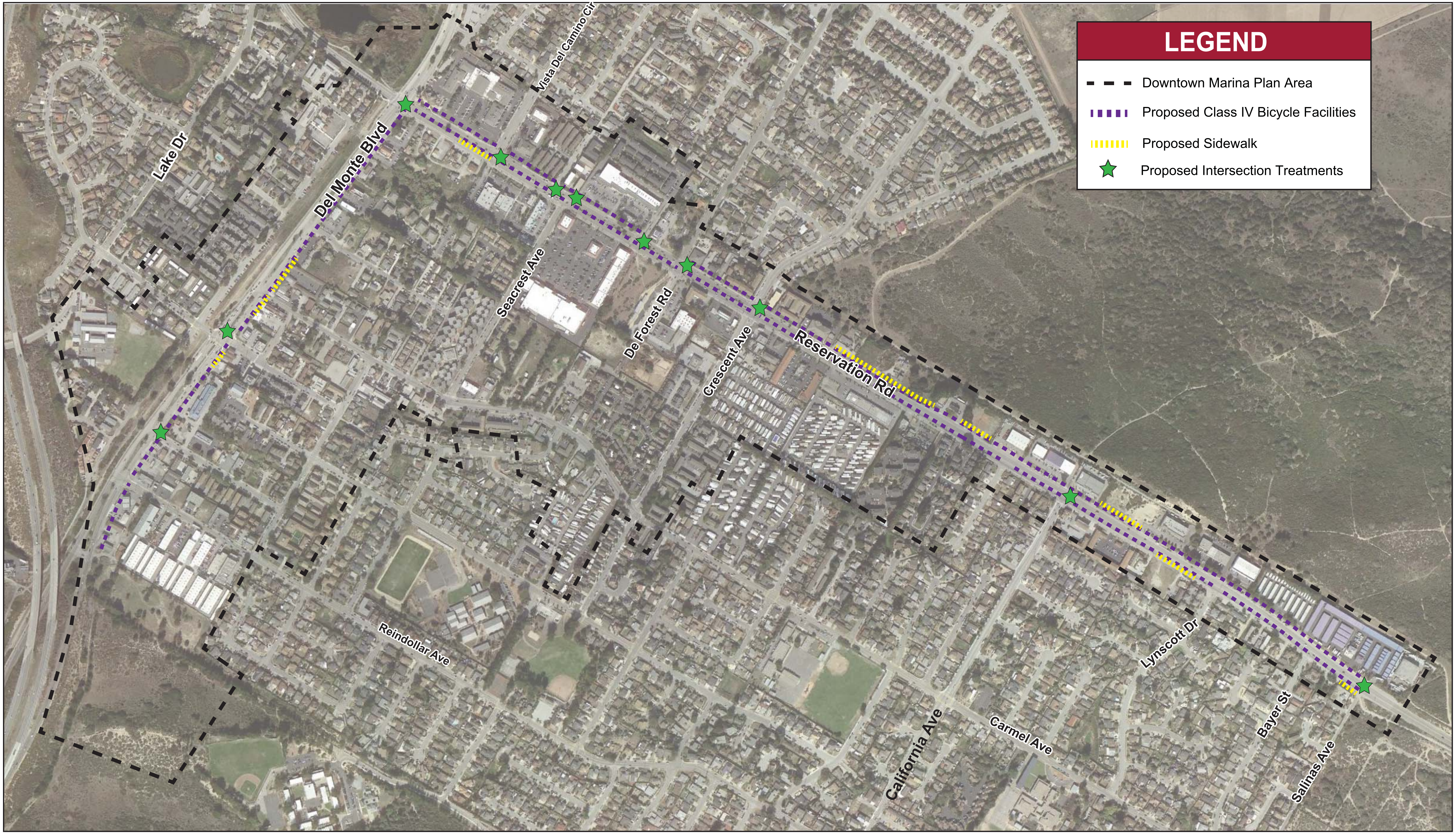

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Figure 7
Proposed Pedestrian and Bicycle Facilties
Marina Downtown Study

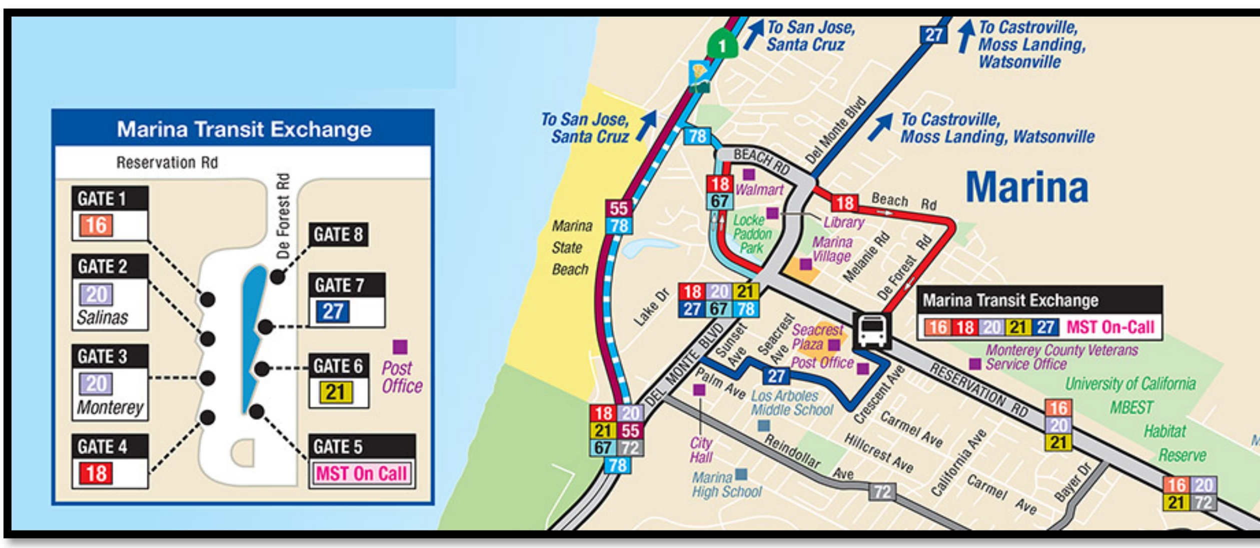
Monterey Salinas Transit

Monterey Salinas Transit (MST) is the local transit agency for Monterey County, MST serves over 130,000 passengers a year. Marina is served by fourteen MST transit line, in addition to the MST On-Call service. The following is a list of transit lines which serve the Reservation Road or Del Monte Boulevard with one or more bus stops:

- 16 – ***Marina – CSUMB*** – Marina Transit Exchange/ Reservation Road
- 18 – ***Monterey – Marina*** – Del Monte Boulevard/ Marina Transit Exchange/ Reservation Road
- 20 – ***Salinas – Monterey*** *via Marina* – Del Monte Boulevard/ Marina Transit Exchange/ Reservation Road
- 21 – ***Pebble Beach – Salinas Express*** – Marina Transit Exchange/ Reservation Road
- 27 – ***Watsonville – Marina*** – Del Monte Boulevard/ Marina Transit Exchange/ Reservation Road
- 67 – ***Presidio – Marina*** – Del Monte Boulevard
- 78 – ***Presidio – Santa Cruz Express*** – Del Monte Boulevard
- ***MST On-Call Service*** - Marina Transit Exchange

Figure 8 illustrates the MST line routes serving the Downtown Area of Marina.

Figure 8 – Marina Downtown MST Transit Lines



Source: Monterey Salinas Transit, 2019

Parking

The following sections discuss parking in the downtown area of Marina including special events and existing on-street parking.

Special Events

The Monterey Bay Peninsula is frequently home to special events, such as Car Week, the Monterey Jazz Festival, PGA Pro Am, and Sea Otter Classic as well as many other smaller regional events. There is at least one major event in Monterey Bay every month, and every weekend in the summer. Marina, along with the rest of the Monterey Peninsula, is part of the event destinations, and should provide tourism-based activities and world class facilities, which it does not have now. In coordination with other Cities and the Monterey Visitors Bureau, pre-planning for event coordination should be considered to ensure Marina's sharing in the events and the benefits they bring to the region. Marina should not merely provide parking, but the downtown should also be a destination. Events that will directly impact downtown Marina parking should be reviewed when more detail on event location and event size have been communicated.

Special Event parking must be managed and no calculation of parking supply for the downtown should be based on special event parking demand.

On-Street Parking

On-Street parking demand was evaluated along Reservation Road to determine the impact to parking if it is converted to an alternative use such as sidewalks, landscaping, or bicycle facilities. Data was collected January 22, 2019. **Figure 9** shows the available on-street parking along Reservation Road.

On Street Parking information was not collected for Del Monte Boulevard as between Reservation Road and the State Route 1 Ramps no on-street parking is available.

Table 11 summarizes the On-Street parking supply for Reservation Road and **Table 12** summarizes the On-Street parking demand and occupancy along Reservation Road.

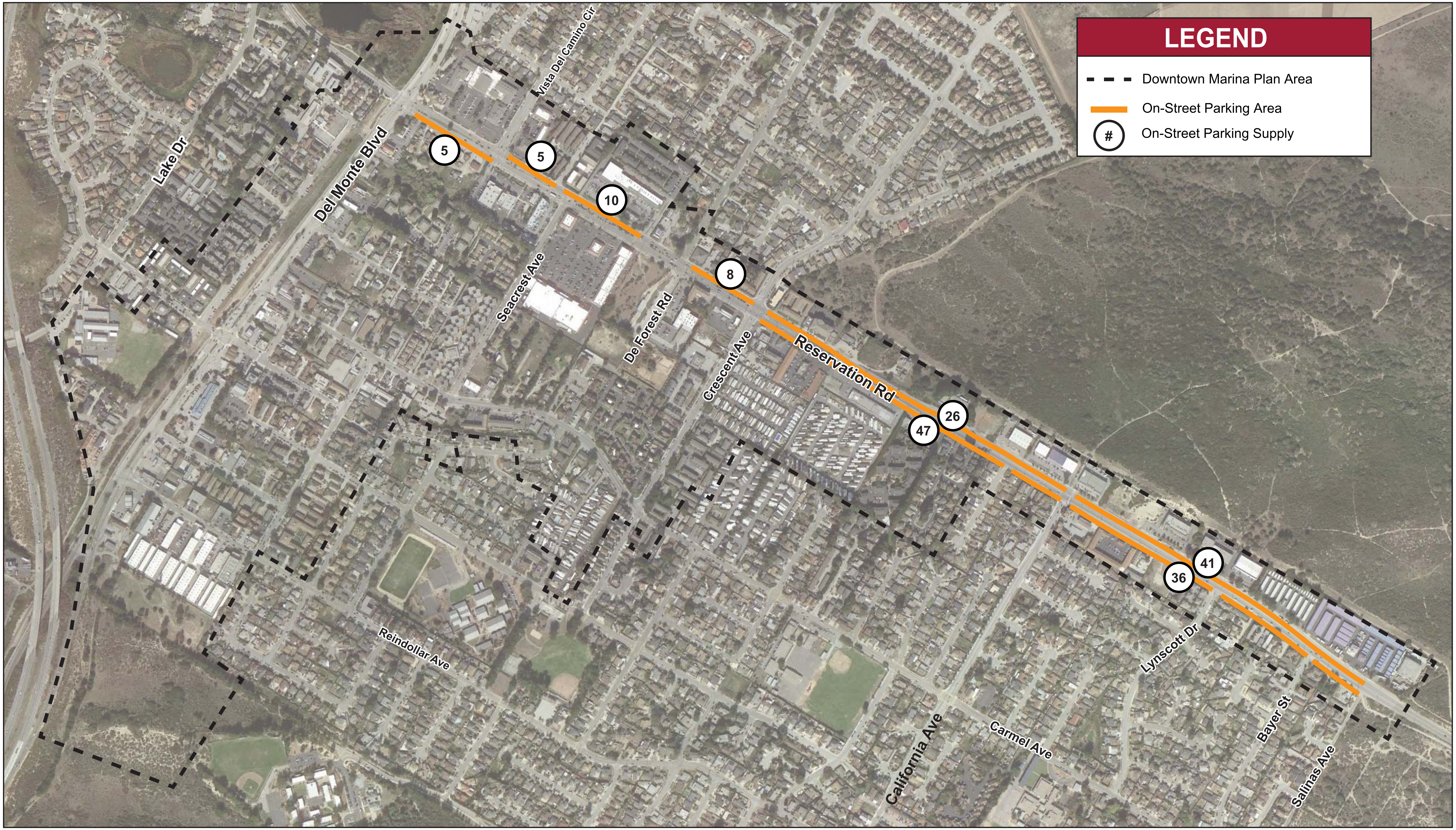


Figure 9
On-Street Parking Supply
Marina Downtown Study

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Table 11 – Reservation Road On-Street Parking Supply

Segment	Eastbound	Westbound	Total
1. Del Monte Blvd to Vista Del Camino	5		5
2. Vista Del Camino to Seacrest Ave		5	5
3. Seacrest Ave to Shopping Center Dwy		10	10
4. De Forest Rd to Crescent Ave		8	8
5. Crescent Ave to California Ave	47	26	73
6. California Ave to Salinas Ave	36	43	79
TOTAL	**88**	**92**	**180**

Source: Kimley-Horn, 2019

Table 12 – Reservation Road On-Street Parking Demand

Segment	Average Demand				Peak Demand			
	EB	WB	Total	% Occu	EB	WB	Total	% Occu
1. Del Monte Blvd to Vista Del Camino	0		0	0%	0		0	0%
2. Vista Del Camino to Seacrest Ave[1]		4	4	80%		3	3	60%
3. Seacrest Ave to Shopping Center Dwy		0	0	0%		0	0	0%
4. De Forest Rd to Crescent Ave Rd[1]		8	8	80%		10	10	100%
5. Crescent Ave to California Ave	23	9	32	44%	24	11	35	49%
6. California Ave to Salinas Ave	8	12	20	25%	9	10	19	24%
TOTAL	**31**	**33**	**64**	**36%**	**33**	**34**	**67**	**38%**

Source: Kimley-Horn, 2019
Note: Peak Parking Demand occurred after 5:00 PM
1 Adjacent to Residential Land Uses

Due to the number of off-street parking lots, there is low utilization of on-street parking near retail and restaurant land uses. The two segments with highest on-street parking demand are adjacent to Residential land uses. Outside of the current downtown core area, Reservation Road (Segment 5 and 6) has moderate parking demand. This area has a mix of residential, hotel, and light industrial land uses.

This area is under parked, meaning that there are more parking spaces empty than used. With the implementation of the Downtown plan on-street parking demand will increase, and to prevent parking intrusion from downtown businesses into the residential areas, sufficient off-street parking should be provided and managed. Parking may be provided in the rear of the business so that it does not affect the aesthetics of the downtown plan.

Appendix

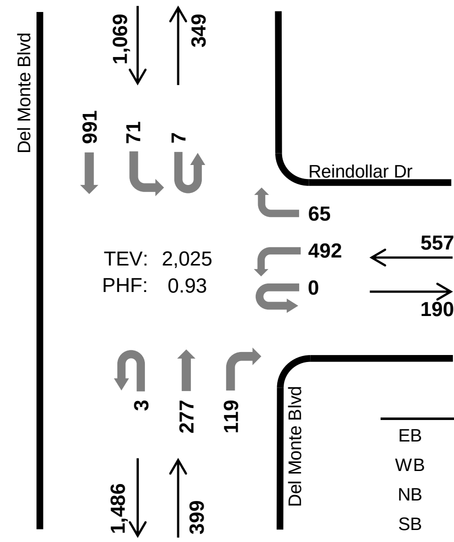
TRAFFIC COUNTS
AM & PM PEAK HOUR

Del Monte Blvd
Reindollar Dr

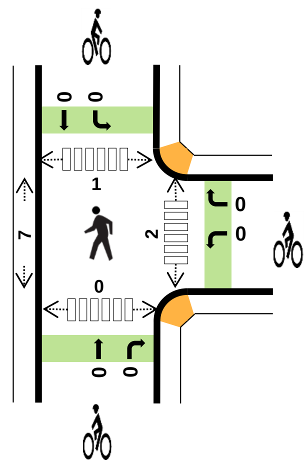
N

Peak Hour

Date: 09-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM



	HV %:	PHF
EB	-	-
WB	1.1%	0.80
NB	2.5%	0.62
SB	1.6%	0.86
TOTAL	1.6%	0.93



Two-Hour Count Summaries

Interval Start	0 Eastbound UT	LT	TH	RT	Reindollar Dr Westbound UT	LT	TH	RT	Del Monte Blvd Northbound UT	LT	TH	RT	Del Monte Blvd Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	0	0	0	0	160	0	14	1	0	40	13	3	18	291	0	540	0
7:15 AM	0	0	0	0	0	155	0	9	0	0	59	21	1	13	285	0	543	0
7:30 AM	0	0	0	0	0	105	0	19	2	0	70	32	2	27	234	0	491	0
7:45 AM	0	0	0	0	0	72	0	23	0	0	108	53	1	13	181	0	451	2,025
8:00 AM	0	0	0	0	0	80	0	14	3	0	104	38	0	14	148	0	401	1,886
8:15 AM	0	0	0	0	0	80	0	21	2	0	81	30	5	7	161	0	387	1,730
8:30 AM	0	0	0	0	0	54	0	11	0	0	99	23	2	14	209	0	412	1,651
8:45 AM	0	0	0	0	0	50	0	13	3	0	87	23	0	13	166	0	355	1,555
Count Total	0	0	0	0	0	756	0	124	11	0	648	233	14	119	1,675	0	3,580	0
Peak Hour All	0	0	0	0	0	492	0	65	3	0	277	119	7	71	991	0	2,025	0
Peak Hour HV	0	0	0	0	0	5	0	1	0	0	8	2	1	3	13	0	33	0
Peak Hour HV%	-	-	-	-	-	1%	-	2%	0%	-	3%	2%	14%	4%	1%	-	2%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	0	1	2	5	*8*	0	0	0	0	*0*	0	1	0	0	*1*
7:15 AM	0	3	0	2	*5*	0	0	0	0	*0*	0	1	1	0	*2*
7:30 AM	0	1	4	3	*8*	0	0	0	0	*0*	2	1	0	0	*3*
7:45 AM	0	1	4	7	*12*	0	0	0	0	*0*	0	4	0	0	*4*
8:00 AM	0	0	2	5	*7*	0	0	0	0	*0*	1	2	3	0	*6*
8:15 AM	0	4	3	4	*11*	0	0	0	0	*0*	2	4	2	0	*8*
8:30 AM	0	0	6	5	*11*	0	0	0	0	*0*	0	3	0	0	*3*
8:45 AM	0	1	3	4	*8*	0	0	0	0	*0*	0	2	1	0	*3*
Count Total	0	11	24	35	*70*	0	0	0	0	*0*	5	18	7	0	*30*
Peak Hr	0	6	10	17	*33*	0	0	0	0	*0*	2	7	1	0	*10*

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	0				Reindollar Dr				Del Monte Blvd				Del Monte Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**5**	**0**	**8**	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**5**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**4**	**0**	**1**	**0**	**2**	**0**	**8**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**2**	**5**	**0**	**12**	**33**
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	5	0	7	32
8:15 AM	0	0	0	0	0	4	0	0	0	0	1	2	0	0	4	0	11	38
8:30 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	5	0	11	41
8:45 AM	0	0	0	0	0	1	0	0	0	0	2	1	0	0	4	0	8	37
Count Total	0	0	0	0	0	10	0	1	0	0	18	6	1	3	31	0	70	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**1**	**0**	**0**	**8**	**2**	**1**	**3**	**13**	**0**	**33**	**0**

Two-Hour Count Summaries - Bikes

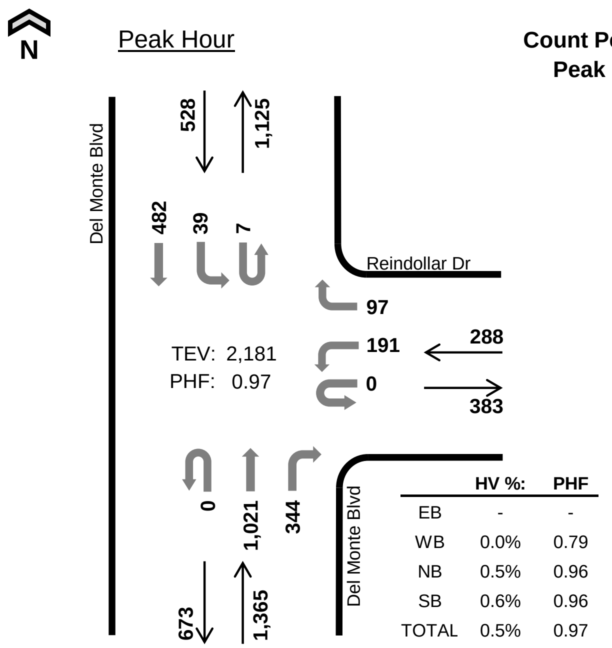
Interval Start	0			Reindollar Dr			Del Monte Blvd			Del Monte Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

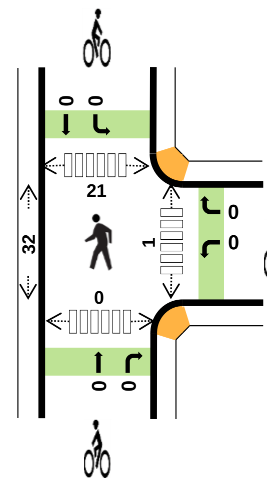
Del Monte Blvd
Reindollar Dr

Peak Hour

Date: 09-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	-	-
WB	0.0%	0.79
NB	0.5%	0.96
SB	0.6%	0.96
TOTAL	0.5%	0.97



Two-Hour Count Summaries

Interval Start	0				Reindollar Dr				Del Monte Blvd				Del Monte Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	30	0	22	2	0	199	66	2	9	132	0	462	0
4:15 PM	0	0	0	0	0	37	0	25	0	0	236	91	1	6	116	0	512	0
4:30 PM	0	0	0	0	0	43	0	21	0	0	227	81	2	11	133	0	518	0
4:45 PM	0	0	0	0	0	42	0	18	2	0	269	79	2	9	116	0	537	2,029
5:00 PM	**0**	**0**	**0**	**0**	**0**	**58**	**0**	**33**	**0**	**0**	**255**	**97**	**3**	**12**	**106**	**0**	**564**	2,131
5:15 PM	**0**	**0**	**0**	**0**	**0**	**45**	**0**	**18**	**0**	**0**	**262**	**92**	**1**	**13**	**118**	**0**	**549**	2,168
5:30 PM	**0**	**0**	**0**	**0**	**0**	**35**	**0**	**27**	**0**	**0**	**260**	**70**	**2**	**7**	**128**	**0**	**529**	2,179
5:45 PM	**0**	**0**	**0**	**0**	**0**	**53**	**0**	**19**	**0**	**0**	**244**	**85**	**1**	**7**	**130**	**0**	**539**	**2,181**
Count Total	0	0	0	0	0	343	0	183	4	0	1,952	661	14	74	979	0	4,210	0
Peak Hour All	**0**	**0**	**0**	**0**	**0**	**191**	**0**	**97**	**0**	**0**	**1,021**	**344**	**7**	**39**	**482**	**0**	**2,181**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**1**	**0**	**0**	**3**	**0**	**10**	**0**
Peak Hour HV%	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**0%**	**-**	**-**	**1%**	**0%**	**0%**	**0%**	**1%**	**-**	**0%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	3	4	*7*	0	0	0	0	*0*	0	2	1	0	*3*
4:15 PM	0	0	5	2	*7*	0	0	0	0	*0*	0	10	0	0	*10*
4:30 PM	0	0	3	1	*4*	0	0	0	0	*0*	0	3	2	0	*5*
4:45 PM	0	2	4	2	*8*	0	0	0	0	*0*	0	3	2	0	*5*
5:00 PM	**0**	**0**	**2**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**1**	**0**	*3*
5:15 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**2**	**0**	*4*
5:30 PM	**0**	**0**	**2**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**1**	**6**	**1**	**0**	*8*
5:45 PM	**0**	**0**	**2**	**2**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**22**	**17**	**0**	*39*
Count Total	0	2	22	12	*36*	0	0	0	0	*0*	1	50	26	0	*77*
Peak Hr	**0**	**0**	**7**	**3**	***10***	**0**	**0**	**0**	**0**	***0***	**1**	**32**	**21**	**0**	***54***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	0				Reindollar Dr				Del Monte Blvd				Del Monte Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	1	0	1	3	0	7	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	4	1	0	0	2	0	7	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	2	1	0	0	1	0	4	0
4:45 PM	0	0	0	0	0	2	0	0	0	0	4	0	0	0	2	0	8	26
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	21
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**2**	16
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	14
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**4**	**10**
Count Total	0	0	0	0	0	2	0	0	0	0	18	4	0	1	11	0	36	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**1**	**0**	**0**	**3**	**0**	**10**	**0**

Two-Hour Count Summaries - Bikes

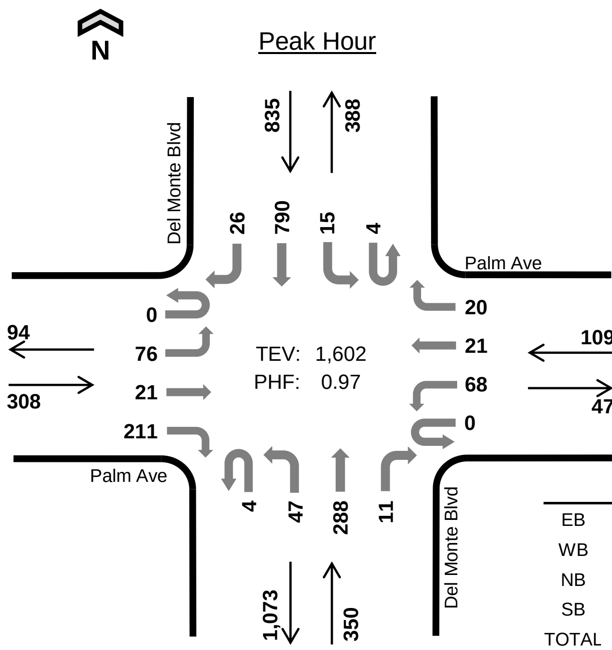
Interval Start	0			Reindollar Dr			Del Monte Blvd			Del Monte Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

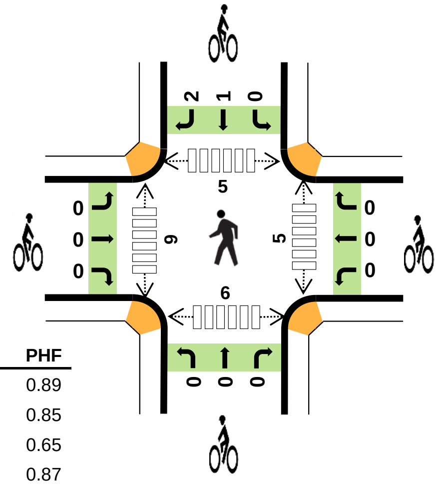
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

www.idaxdata.com

Del Monte Blvd
Palm Ave

Date: 09-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM





	HV %:	PHF
EB	0.3%	0.89
WB	1.8%	0.85
NB	3.1%	0.65
SB	1.8%	0.87
TOTAL	1.8%	0.97

Two-Hour Count Summaries

Interval Start		Palm Ave Eastbound UT	LT	TH	RT	Palm Ave Westbound UT	LT	TH	RT	Del Monte Blvd Northbound UT	LT	TH	RT	Del Monte Blvd Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		**0**	**9**	**7**	**60**	**0**	**13**	**2**	**6**	**0**	**8**	**45**	**3**	**1**	**1**	**235**	**2**	**392**	0
7:15 AM		**0**	**20**	**4**	**61**	**0**	**28**	**1**	**3**	**1**	**7**	**54**	**4**	**0**	**5**	**211**	**6**	**405**	0
7:30 AM		**0**	**24**	**5**	**58**	**0**	**15**	**3**	**6**	**1**	**8**	**82**	**2**	**3**	**3**	**196**	**7**	**413**	0
7:45 AM		**0**	**23**	**5**	**32**	**0**	**12**	**15**	**5**	**2**	**24**	**107**	**2**	**0**	**6**	**148**	**11**	**392**	**1,602**
8:00 AM		0	9	12	33	0	7	15	8	1	23	99	3	1	4	111	12	338	1,548
8:15 AM		0	13	9	26	0	16	18	9	4	17	81	5	2	9	149	22	380	1,523
8:30 AM		0	28	4	58	0	11	14	9	2	22	83	3	1	3	153	15	406	1,516
8:45 AM		0	16	3	33	0	9	5	3	6	6	88	5	4	2	134	5	319	1,443
Count Total		0	142	49	361	0	111	73	49	17	115	639	27	12	33	1,337	80	3,045	0
Peak Hour	**All**	**0**	**76**	**21**	**211**	**0**	**68**	**21**	**20**	**4**	**47**	**288**	**11**	**4**	**15**	**790**	**26**	**1,602**	**0**
	HV	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**	**9**	**1**	**0**	**0**	**15**	**0**	**29**	**0**
	HV%	**-**	**0%**	**0%**	**0%**	**-**	**1%**	**0%**	**5%**	**0%**	**2%**	**3%**	**9%**	**0%**	**0%**	**2%**	**0%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	**1**	**1**	**2**	**4**	***8***	**0**	**0**	**0**	**1**	***1***	**1**	**0**	**2**	**1**	*4*
7:15 AM	**0**	**0**	**1**	**3**	***4***	**0**	**0**	**0**	**1**	***1***	**1**	**2**	**0**	**1**	*4*
7:30 AM	**0**	**0**	**5**	**4**	***9***	**0**	**0**	**0**	**1**	***1***	**2**	**4**	**0**	**1**	*7*
7:45 AM	**0**	**1**	**3**	**4**	***8***	**0**	**0**	**0**	**0**	***0***	**1**	**3**	**3**	**3**	***10***
8:00 AM	0	0	1	4	*5*	0	0	0	0	*0*	1	1	0	2	*4*
8:15 AM	0	0	1	5	*6*	0	0	0	0	*0*	2	3	0	5	*10*
8:30 AM	2	1	7	5	*15*	0	0	0	0	*0*	0	1	3	2	*6*
8:45 AM	2	0	2	3	*7*	0	0	0	0	*0*	1	1	0	3	*5*
Count Total	5	3	22	32	*62*	0	0	0	3	*3*	9	15	8	18	*50*
Peak Hour	**1**	**2**	**11**	**15**	***29***	**0**	**0**	**0**	**3**	***3***	**5**	**9**	**5**	**6**	***25***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Palm Ave				Palm Ave				Del Monte Blvd				Del Monte Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**4**	**0**	**8**	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**4**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**	**0**	**0**	**0**	**4**	**0**	**9**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**4**	**0**	**8**	**29**
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	5	26
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	5	0	6	28
8:30 AM	0	2	0	0	0	0	1	0	0	2	5	0	0	1	3	1	15	34
8:45 AM	0	0	0	2	0	0	0	0	0	0	1	1	0	1	2	0	7	33
Count Total	0	2	0	3	0	1	1	1	0	3	17	2	0	2	29	1	62	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**	**9**	**1**	**0**	**0**	**15**	**0**	**29**	**0**

Two-Hour Count Summaries - Bikes

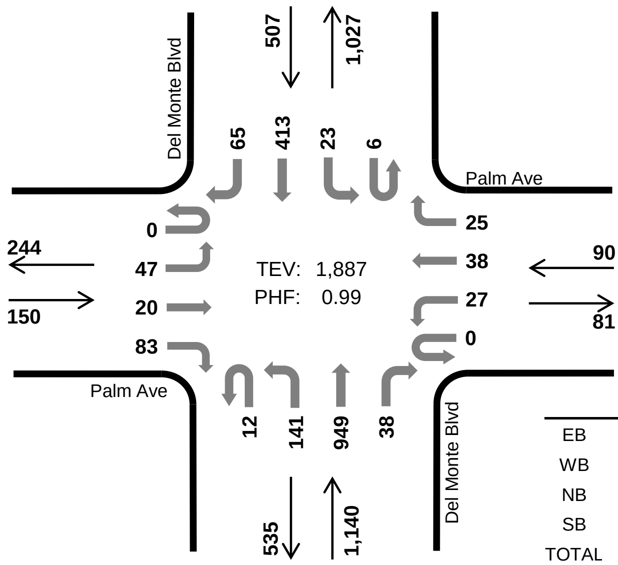
Interval Start	Palm Ave			Palm Ave			Del Monte Blvd			Del Monte Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	1	2	3	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**3**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

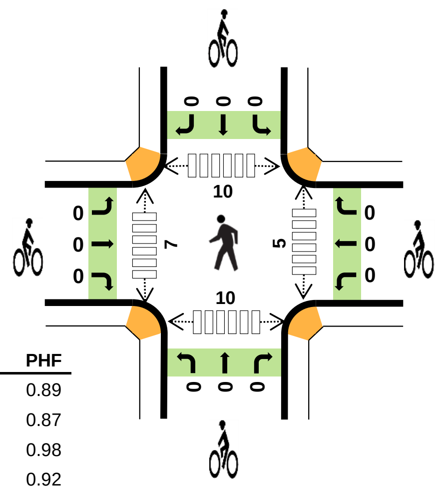
Del Monte Blvd
Palm Ave

Date: 09-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM

Peak Hour



	HV %:	PHF
EB	0.0%	0.89
WB	2.2%	0.87
NB	0.9%	0.98
SB	1.0%	0.92
TOTAL	0.9%	0.99



Two-Hour Count Summaries

Interval Start	Palm Ave Eastbound UT	LT	TH	RT	Palm Ave Westbound UT	LT	TH	RT	Del Monte Blvd Northbound UT	LT	TH	RT	Del Monte Blvd Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	10	3	23	0	10	5	8	1	34	176	9	1	4	115	6	405	0
4:15 PM	0	5	2	17	0	4	6	4	1	48	213	9	1	7	94	11	422	0
4:30 PM	0	6	3	25	0	14	12	5	2	27	210	5	2	4	113	10	438	0
4:45 PM	**0**	**17**	**1**	**24**	**0**	**7**	**7**	**5**	**3**	**26**	**253**	**8**	**1**	**5**	**94**	**11**	**462**	1,727
5:00 PM	**0**	**8**	**10**	**17**	**0**	**4**	**7**	**9**	**4**	**35**	**236**	**11**	**3**	**4**	**102**	**20**	**470**	1,792
5:15 PM	**0**	**11**	**5**	**21**	**0**	**4**	**14**	**8**	**4**	**36**	**235**	**11**	**1**	**5**	**100**	**23**	**478**	1,848
5:30 PM	**0**	**11**	**4**	**21**	**0**	**12**	**10**	**3**	**1**	**44**	**225**	**8**	**1**	**9**	**117**	**11**	**477**	**1,887**
5:45 PM	0	12	2	20	0	7	6	6	1	41	214	9	1	3	112	3	437	1,862
Count Total	0	80	30	168	0	62	67	48	17	291	1,762	70	11	41	847	95	3,589	0
Peak Hour All	**0**	**47**	**20**	**83**	**0**	**27**	**38**	**25**	**12**	**141**	**949**	**38**	**6**	**23**	**413**	**65**	**1,887**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**10**	**0**	**0**	**2**	**3**	**0**	**17**	**0**
Peak Hour HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**3%**	**4%**	**0%**	**0%**	**1%**	**0%**	**0%**	**9%**	**1%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	0	1	3	3	*7*	0	0	0	0	*0*	0	3	1	4	*8*
4:15 PM	0	0	3	2	*5*	0	0	0	0	*0*	0	3	0	3	*6*
4:30 PM	0	0	2	2	*4*	0	0	1	0	*1*	1	3	5	2	*11*
4:45 PM	**0**	**0**	**5**	**2**	*7*	**0**	**0**	**0**	**0**	*0*	**3**	**0**	**0**	**3**	*6*
5:00 PM	**0**	**1**	**2**	**0**	*3*	**0**	**0**	**0**	**0**	*0*	**0**	**0**	**3**	**3**	*6*
5:15 PM	**0**	**0**	**1**	**2**	*3*	**0**	**0**	**0**	**0**	*0*	**0**	**2**	**3**	**2**	*7*
5:30 PM	**0**	**1**	**2**	**1**	*4*	**0**	**0**	**0**	**0**	*0*	**2**	**5**	**4**	**2**	*13*
5:45 PM	0	0	2	3	*5*	0	0	0	0	*0*	3	3	6	4	*16*
Count Total	0	3	20	15	*38*	0	0	1	0	*1*	9	19	22	23	*73*
Peak Hour	**0**	**2**	**10**	**5**	***17***	**0**	**0**	**0**	**0**	***0***	**5**	**7**	**10**	**10**	***32***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Palm Ave				Palm Ave				Del Monte Blvd				Del Monte Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	1	0	0	0	0	3	0	0	0	3	0	7	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	5	0
4:30 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0	4	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**2**	**0**	**7**	23
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**3**	19
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**0**	**3**	17
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**4**	**17**
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	5	15
Count Total	0	0	0	0	0	1	1	1	0	1	19	0	0	3	12	0	38	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**10**	**0**	**0**	**2**	**3**	**0**	**17**	**0**

Two-Hour Count Summaries - Bikes

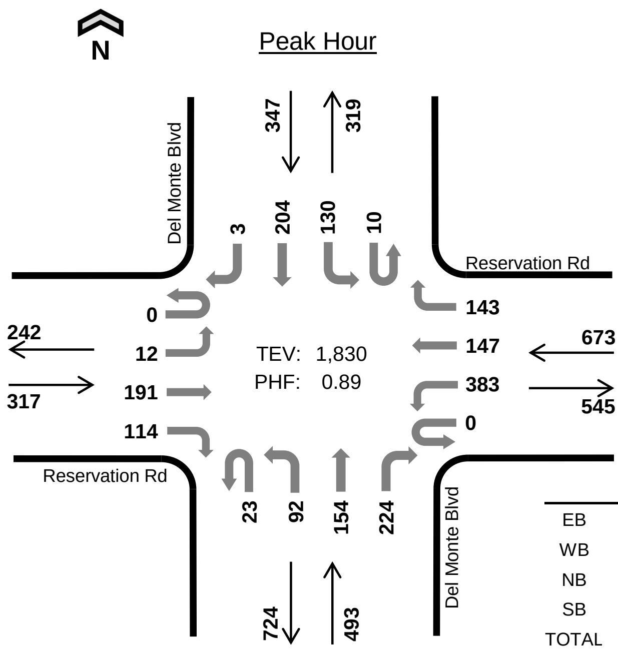
Interval Start	Palm Ave			Palm Ave			Del Monte Blvd			Del Monte Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

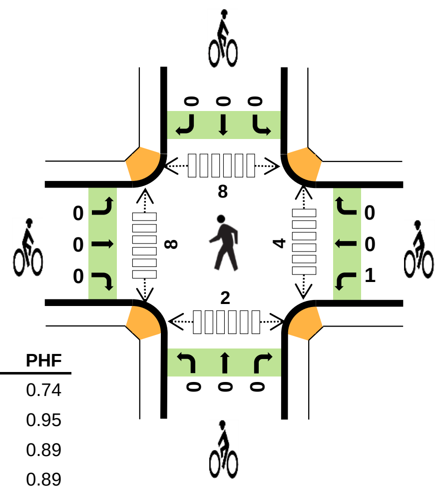
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Del Monte Blvd
Reservation Rd

Date: 09-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

Peak Hour





	HV %:	PHF
EB	3.5%	0.74
WB	3.6%	0.95
NB	1.6%	0.89
SB	3.2%	0.89
TOTAL	3.0%	0.89

Two-Hour Count Summaries

Interval Start		Reservation Rd Eastbound UT	LT	TH	RT	Reservation Rd Westbound UT	LT	TH	RT	Del Monte Blvd Northbound UT	LT	TH	RT	Del Monte Blvd Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	4	38	16	0	158	24	29	7	19	15	21	0	17	25	0	373	0
7:15 AM		0	1	41	22	0	129	24	17	5	11	23	38	1	29	46	0	387	0
7:30 AM		**0**	**1**	**64**	**31**	**0**	**117**	**21**	**33**	**3**	**20**	**36**	**55**	**0**	**23**	**68**	**1**	**473**	0
7:45 AM		**0**	**8**	**63**	**36**	**0**	**88**	**36**	**48**	**3**	**20**	**50**	**66**	**3**	**39**	**55**	**0**	**515**	1,748
8:00 AM		**0**	**2**	**36**	**20**	**0**	**83**	**36**	**33**	**6**	**19**	**38**	**57**	**4**	**33**	**41**	**1**	**409**	1,784
8:15 AM		**0**	**1**	**28**	**27**	**0**	**95**	**54**	**29**	**11**	**33**	**30**	**46**	**3**	**35**	**40**	**1**	**433**	**1,830**
8:30 AM		0	5	51	20	0	114	38	20	6	17	28	62	3	34	25	0	423	1,780
8:45 AM		0	2	40	14	0	90	30	19	5	13	36	67	1	13	23	2	355	1,620
Count Total		0	24	361	186	0	874	263	228	46	152	256	412	15	223	323	5	3,368	0
Peak Hour	**All**	**0**	**12**	**191**	**114**	**0**	**383**	**147**	**143**	**23**	**92**	**154**	**224**	**10**	**130**	**204**	**3**	**1,830**	**0**
	HV	**0**	**0**	**9**	**2**	**0**	**14**	**5**	**5**	**0**	**2**	**0**	**6**	**0**	**6**	**5**	**0**	**54**	**0**
	HV%	**-**	**0%**	**5%**	**2%**	**-**	**4%**	**3%**	**3%**	**0%**	**2%**	**0%**	**3%**	**0%**	**5%**	**2%**	**0%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	4	7	3	3	*17*	0	0	0	0	*0*	4	2	0	1	*7*
7:15 AM	3	3	0	1	*7*	0	1	0	0	*1*	2	1	1	0	*4*
7:30 AM	**4**	**7**	**2**	**1**	***14***	**0**	**1**	**0**	**0**	***1***	**0**	**4**	**2**	**0**	*6*
7:45 AM	**4**	**4**	**3**	**2**	***13***	**0**	**0**	**0**	**0**	***0***	**1**	**3**	**0**	**2**	*6*
8:00 AM	**2**	**8**	**2**	**5**	***17***	**0**	**0**	**0**	**0**	***0***	**3**	**1**	**3**	**0**	*7*
8:15 AM	**1**	**5**	**1**	**3**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**3**	**0**	***3***
8:30 AM	1	6	5	2	*14*	0	0	0	0	*0*	0	6	2	0	*8*
8:45 AM	0	6	3	1	*10*	0	0	0	0	*0*	3	1	3	0	*7*
Count Total	19	46	19	18	*102*	0	2	0	0	*2*	13	18	14	3	*48*
Peak Hour	**11**	**24**	**8**	**11**	***54***	**0**	**1**	**0**	**0**	***1***	**4**	**8**	**8**	**2**	***22***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound UT	LT	TH	RT	Reservation Rd Westbound UT	LT	TH	RT	Del Monte Blvd Northbound UT	LT	TH	RT	Del Monte Blvd Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	3	1	0	0	4	1	2	0	0	1	2	0	2	1	0	17	0
7:15 AM	0	0	2	1	0	3	0	0	0	0	0	0	0	1	0	0	7	0
7:30 AM	**0**	**0**	**4**	**0**	**0**	**3**	**2**	**2**	**0**	**1**	**0**	**1**	**0**	**0**	**1**	**0**	**14**	0
7:45 AM	**0**	**0**	**2**	**2**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**2**	**0**	**13**	51
8:00 AM	**0**	**0**	**2**	**0**	**0**	**4**	**2**	**2**	**0**	**1**	**0**	**1**	**0**	**3**	**2**	**0**	**17**	51
8:15 AM	**0**	**0**	**1**	**0**	**0**	**3**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**3**	**0**	**0**	**10**	**54**
8:30 AM	0	0	1	0	0	5	0	1	0	1	0	4	0	1	1	0	14	54
8:45 AM	0	0	0	0	0	5	1	0	0	0	1	2	0	1	0	0	10	51
Count Total	0	3	13	3	0	31	7	8	0	3	2	14	0	11	7	0	102	0
Peak Hour	**0**	**0**	**9**	**2**	**0**	**14**	**5**	**5**	**0**	**2**	**0**	**6**	**0**	**6**	**5**	**0**	**54**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd Eastbound LT	TH	RT	Reservation Rd Westbound LT	TH	RT	Del Monte Blvd Northbound LT	TH	RT	Del Monte Blvd Southbound LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	0
7:30 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	2	0	0	0	0	0	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

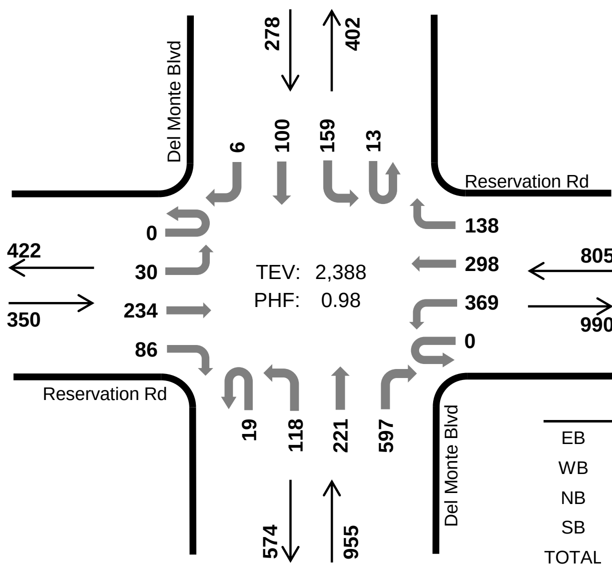
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

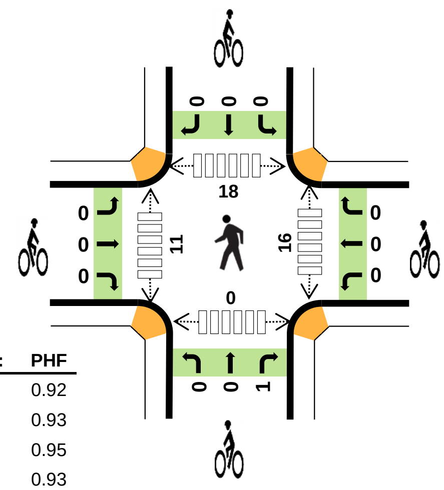
www.idaxdata.com

Del Monte Blvd
Reservation Rd

Date: 09-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM

Peak Hour





	HV %:	PHF
EB	2.9%	0.92
WB	1.2%	0.93
NB	1.0%	0.95
SB	1.8%	0.93
TOTAL	1.5%	0.98

Two-Hour Count Summaries

Interval Start		Reservation Rd Eastbound				Reservation Rd Westbound				Del Monte Blvd Northbound				Del Monte Blvd Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	5	48	27	0	85	62	37	5	23	38	113	3	47	25	2	520	0
4:15 PM		0	2	54	22	0	76	54	30	6	25	35	133	3	36	19	1	496	0
4:30 PM		0	5	74	21	1	98	62	32	4	28	38	137	8	38	24	0	570	0
4:45 PM		**0**	**8**	**58**	**20**	**0**	**81**	**70**	**30**	**4**	**31**	**49**	**167**	**6**	**38**	**29**	**1**	**592**	2,178
5:00 PM		**0**	**5**	**53**	**28**	**0**	**82**	**78**	**35**	**6**	**32**	**68**	**138**	**3**	**36**	**24**	**2**	**590**	2,248
5:15 PM		**0**	**8**	**57**	**18**	**0**	**103**	**75**	**35**	**7**	**29**	**47**	**156**	**3**	**39**	**21**	**1**	**599**	2,351
5:30 PM		**0**	**9**	**66**	**20**	**0**	**103**	**75**	**38**	**2**	**26**	**57**	**136**	**1**	**46**	**26**	**2**	**607**	**2,388**
5:45 PM		0	7	49	21	0	93	86	30	1	28	38	151	10	38	21	1	574	2,370
Count Total		0	49	459	177	1	721	562	267	35	222	370	1,131	37	318	189	10	4,548	0
Peak Hour	**All**	**0**	**30**	**234**	**86**	**0**	**369**	**298**	**138**	**19**	**118**	**221**	**597**	**13**	**159**	**100**	**6**	**2,388**	**0**
	HV	**0**	**1**	**7**	**2**	**0**	**4**	**3**	**3**	**0**	**1**	**5**	**4**	**0**	**3**	**2**	**0**	**35**	**0**
	HV%	**-**	**3%**	**3%**	**2%**	**-**	**1%**	**1%**	**2%**	**0%**	**1%**	**2%**	**1%**	**0%**	**2%**	**2%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	3	2	2	*9*	0	0	0	0	*0*	7	4	5	1	*17*
4:15 PM	0	3	4	1	*8*	0	0	0	0	*0*	4	3	5	0	*12*
4:30 PM	2	1	1	2	*6*	0	0	1	0	*1*	5	5	6	0	*16*
4:45 PM	**5**	**4**	**5**	**1**	***15***	**0**	**0**	**0**	**0**	***0***	**4**	**2**	**6**	**0**	*12*
5:00 PM	**1**	**3**	**3**	**2**	***9***	**0**	**0**	**1**	**0**	***1***	**1**	**2**	**1**	**0**	*4*
5:15 PM	**2**	**3**	**0**	**0**	***5***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**2**	**0**	*4*
5:30 PM	**2**	**0**	**2**	**2**	***6***	**0**	**0**	**0**	**0**	***0***	**9**	**7**	**9**	**0**	***25***
5:45 PM	1	4	3	0	*8*	0	0	0	0	*0*	1	3	7	1	*12*
Count Total	15	21	20	10	*66*	0	0	2	0	*2*	33	26	41	2	*102*
Peak Hour	**10**	**10**	**10**	**5**	***35***	**0**	**0**	**1**	**0**	***1***	**16**	**11**	**18**	**0**	***45***

Project Manager: (415) 310-6469

project.manager.ca@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Del Monte Blvd Northbound				Del Monte Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	2	0	1	1	1	0	1	0	1	0	1	0	1	9	0
4:15 PM	0	0	0	0	0	2	0	1	0	1	1	2	0	1	0	0	8	0
4:30 PM	0	0	2	0	0	0	1	0	0	0	0	1	0	0	2	0	6	0
4:45 PM	**0**	**1**	**3**	**1**	**0**	**2**	**2**	**0**	**0**	**1**	**2**	**2**	**0**	**1**	**0**	**0**	**15**	38
5:00 PM	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**2**	**1**	**0**	**1**	**1**	**0**	**9**	38
5:15 PM	**0**	**0**	**1**	**1**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	35
5:30 PM	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**1**	**1**	**0**	**6**	**35**
5:45 PM	0	0	1	0	0	2	2	0	0	1	0	2	0	0	0	0	8	28
Count Total	0	1	10	4	0	9	7	5	0	4	6	10	0	5	4	1	66	0
Peak Hour	**0**	**1**	**7**	**2**	**0**	**4**	**3**	**3**	**0**	**1**	**5**	**4**	**0**	**3**	**2**	**0**	**35**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd Eastbound			Reservation Rd Westbound			Del Monte Blvd Northbound			Del Monte Blvd Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	2
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	0	2	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**

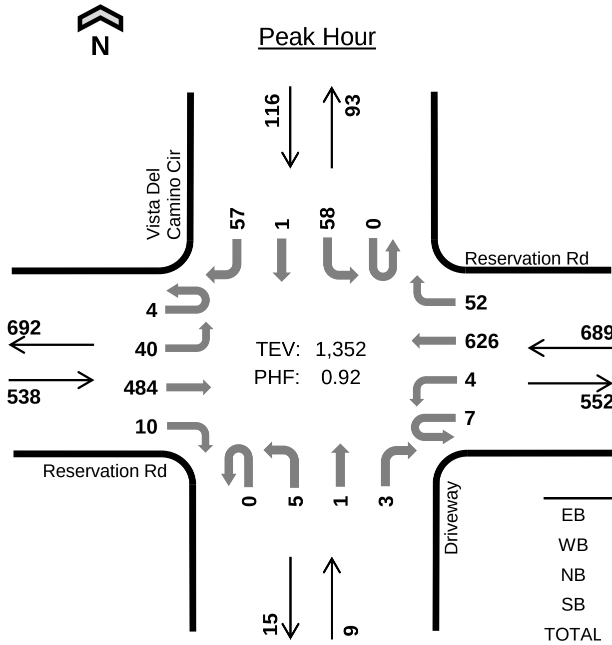
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469 project.manager.ca@idaxdata.com

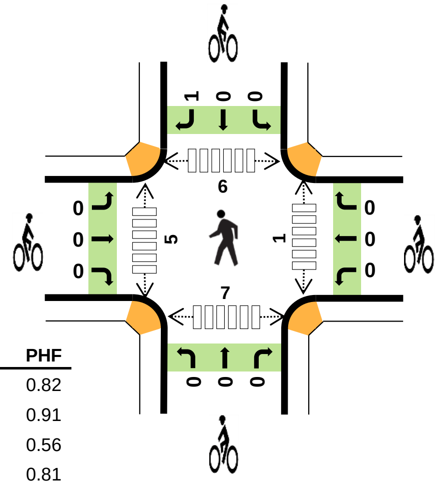
Vista Del Camino Cir
Reservation Rd

Date: 09-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

Peak Hour



	HV %:	PHF
EB	3.9%	0.82
WB	3.5%	0.91
NB	0.0%	0.56
SB	1.7%	0.81
TOTAL	3.5%	0.92



Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound UT	LT	TH	RT	Reservation Rd Westbound UT	LT	TH	RT	Driveway Northbound UT	LT	TH	RT	Vista Del Camino Cir Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	2	73	0	2	0	183	5	0	0	0	0	0	7	0	21	293	0
7:15 AM	3	3	101	0	1	0	158	6	0	1	0	0	0	6	0	10	289	0
7:30 AM	**1**	**12**	**124**	**2**	**1**	**1**	**161**	**6**	**0**	**1**	**1**	**0**	**0**	**8**	**0**	**19**	**337**	0
7:45 AM	**2**	**11**	**149**	**2**	**2**	**1**	**156**	**14**	**0**	**2**	**0**	**0**	**0**	**16**	**1**	**11**	**367**	1,286
8:00 AM	**1**	**10**	**115**	**1**	**2**	**2**	**136**	**18**	**0**	**1**	**0**	**0**	**0**	**19**	**0**	**17**	**322**	1,315
8:15 AM	**0**	**7**	**96**	**5**	**2**	**0**	**173**	**14**	**0**	**1**	**0**	**3**	**0**	**15**	**0**	**10**	**326**	**1,352**
8:30 AM	4	11	127	4	5	1	142	11	0	5	0	1	0	8	2	14	335	1,350
8:45 AM	2	17	96	2	5	1	124	19	0	2	1	2	0	8	1	12	292	1,275
Count Total	13	73	881	16	20	6	1,233	93	0	13	2	6	0	87	4	114	2,561	0
Peak Hour All	**4**	**40**	**484**	**10**	**7**	**4**	**626**	**52**	**0**	**5**	**1**	**3**	**0**	**58**	**1**	**57**	**1,352**	**0**
Peak Hour HV	**0**	**4**	**17**	**0**	**0**	**1**	**21**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**47**	**0**
Peak Hour HV%	**0%**	**10%**	**4%**	**0%**	**0%**	**25%**	**3%**	**4%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**4%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	5	5	0	0	*10*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	3	3	0	0	*6*	0	1	0	0	*1*	0	0	0	1	*1*
7:30 AM	**5**	**7**	**0**	**1**	***13***	**0**	**0**	**0**	**1**	***1***	**1**	**2**	**2**	**2**	*7*
7:45 AM	**5**	**3**	**0**	**0**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**1**	**1**	*4*
8:00 AM	**6**	**10**	**0**	**1**	***17***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**2**	*3*
8:15 AM	**5**	**4**	**0**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**2**	**2**	***5***
8:30 AM	6	4	0	0	*10*	0	0	0	0	*0*	2	1	1	1	*5*
8:45 AM	3	5	0	1	*9*	0	0	0	0	*0*	0	1	2	2	*5*
Count Total	38	41	0	3	*82*	0	1	0	1	*2*	3	7	9	11	*30*
Peak Hour	**21**	**24**	**0**	**2**	***47***	**0**	**0**	**0**	**1**	***1***	**1**	**5**	**6**	**7**	***19***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Driveway Northbound				Vista Del Camino Cir Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	10	0
7:15 AM	0	0	3	0	0	0	2	1	0	0	0	0	0	0	0	0	6	0
7:30 AM	**0**	**1**	**4**	**0**	**0**	**0**	**6**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**13**	0
7:45 AM	**0**	**1**	**4**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	37
8:00 AM	**0**	**1**	**5**	**0**	**0**	**1**	**8**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**17**	44
8:15 AM	**0**	**1**	**4**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**47**
8:30 AM	0	2	4	0	0	0	4	0	0	0	0	0	0	0	0	0	10	44
8:45 AM	0	0	3	0	0	0	4	1	0	0	0	0	0	1	0	0	9	45
Count Total	0	6	32	0	0	1	36	4	0	0	0	0	0	1	0	2	82	0
Peak Hour	**0**	**4**	**17**	**0**	**0**	**1**	**21**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**47**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd Eastbound			Reservation Rd Westbound			Driveway Northbound			Vista Del Camino Cir Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	1	0	0	0	0	0	0	1	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

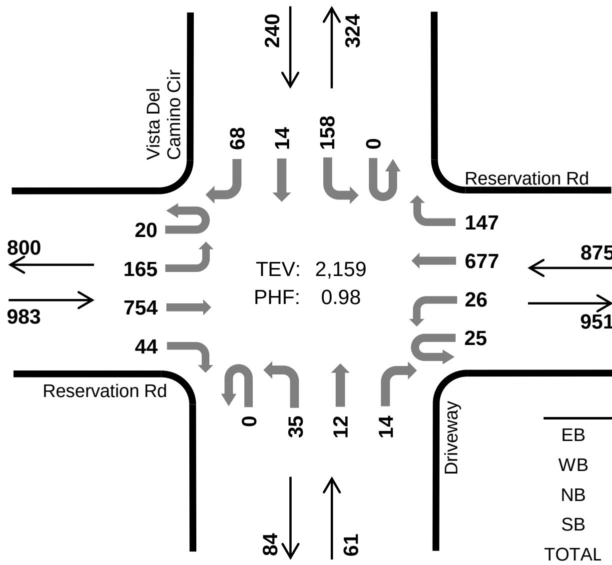
Vista Del Camino Cir
Reservation Rd

idax

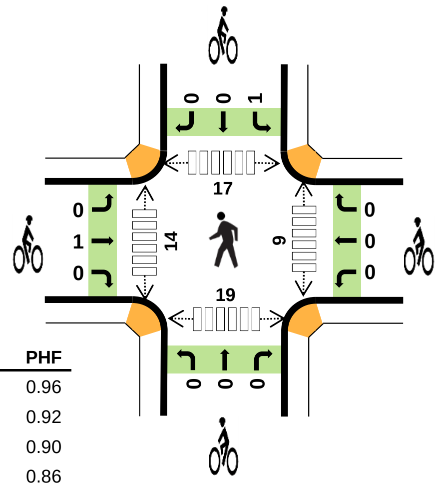
Date: 09-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

N

Peak Hour



	HV %:	PHF
EB	1.1%	0.96
WB	1.0%	0.92
NB	0.0%	0.90
SB	0.0%	0.86
TOTAL	0.9%	0.98



Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				Driveway Northbound				Vista Del Camino Cir Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	7	34	155	6	9	4	152	36	0	6	2	9	0	22	2	18	462	0
4:15 PM	3	41	175	7	6	4	132	32	0	5	0	2	0	33	5	20	465	0
4:30 PM	4	23	208	13	6	0	150	35	0	10	0	4	0	33	2	21	509	0
4:45 PM	3	61	201	4	6	2	151	31	0	6	2	3	0	46	3	10	529	1,965
5:00 PM	**6**	**35**	**186**	**10**	**7**	**6**	**180**	**44**	**0**	**10**	**2**	**5**	**0**	**39**	**4**	**14**	**548**	2,051
5:15 PM	**4**	**41**	**201**	**11**	**3**	**5**	**166**	**36**	**0**	**9**	**3**	**1**	**0**	**31**	**3**	**17**	**531**	2,117
5:30 PM	**5**	**39**	**195**	**12**	**8**	**10**	**158**	**30**	**0**	**7**	**6**	**3**	**0**	**42**	**2**	**18**	**535**	2,143
5:45 PM	**5**	**50**	**172**	**11**	**7**	**5**	**173**	**37**	**0**	**9**	**1**	**5**	**0**	**46**	**5**	**19**	**545**	**2,159**
Count Total	37	324	1,493	74	52	36	1,262	281	0	62	16	32	0	292	26	137	4,124	0
Peak Hour All	**20**	**165**	**754**	**44**	**25**	**26**	**677**	**147**	**0**	**35**	**12**	**14**	**0**	**158**	**14**	**68**	**2,159**	**0**
Peak Hour HV	**0**	**0**	**11**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**0**
Peak Hour HV%	**0%**	**0%**	**1%**	**0%**	**0%**	**0%**	**1%**	**0%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	3	0	0	*5*	0	0	1	1	*2*	4	2	2	4	*12*
4:15 PM	3	3	0	1	*7*	0	0	0	0	*0*	7	6	4	5	*22*
4:30 PM	3	3	0	0	*6*	1	0	0	0	*1*	1	1	5	1	*8*
4:45 PM	6	3	0	0	*9*	1	0	0	0	*1*	2	4	5	11	*22*
5:00 PM	**3**	**4**	**0**	**0**	***7***	**1**	**0**	**0**	**0**	***1***	**1**	**3**	**2**	**2**	*8*
5:15 PM	**1**	**1**	**0**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**4**	**4**	**5**	**4**	*17*
5:30 PM	**4**	**0**	**0**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**1**	**3**	**8**	**4**	*16*
5:45 PM	**3**	**4**	**0**	**0**	***7***	**0**	**0**	**0**	**1**	***1***	**3**	**4**	**2**	**9**	***18***
Count Total	25	21	0	1	*47*	3	0	1	2	*6*	23	27	33	40	*123*
Peak Hour	**11**	**9**	**0**	**0**	***20***	**1**	**0**	**0**	**1**	***2***	**9**	**14**	**17**	**19**	***59***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd				Reservation Rd				Driveway				Vista Del Camino Cir				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	2	0	0	0	2	1	0	0	0	0	0	0	0	0	5	0
4:15 PM	0	0	3	0	0	0	3	0	0	0	0	0	0	0	1	0	7	0
4:30 PM	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	6	0
4:45 PM	0	1	5	0	0	0	3	0	0	0	0	0	0	0	0	0	9	27
5:00 PM	**0**	**0**	**3**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	29
5:15 PM	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	24
5:30 PM	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	22
5:45 PM	**0**	**0**	**3**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**20**
Count Total	0	1	24	0	0	0	20	1	0	0	0	0	0	0	1	0	47	0
Peak Hour	**0**	**0**	**11**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd			Reservation Rd			Driveway			Vista Del Camino Cir			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	4
5:00 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**2**
Count Total	0	3	0	0	0	0	0	1	0	1	1	0	6	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**

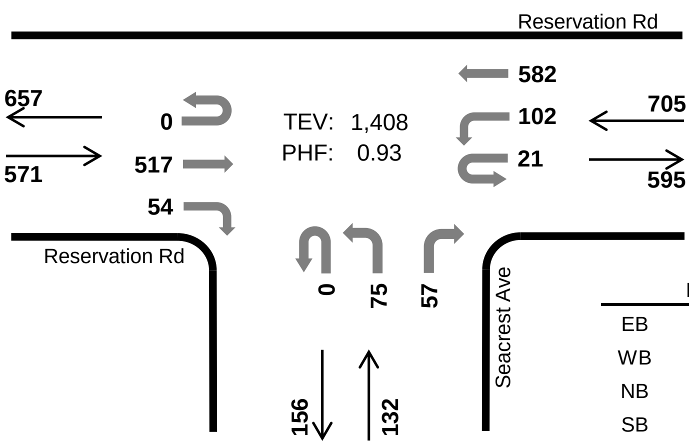
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

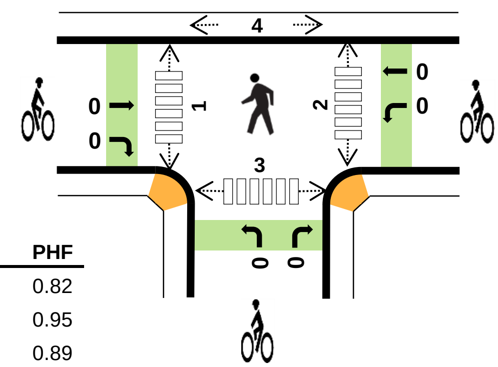
Seacrest Ave
Reservation Rd

N

Peak Hour

Date: 09-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM





	HV %:	PHF
EB	3.2%	0.82
WB	3.4%	0.95
NB	1.5%	0.89
SB	-	-
TOTAL	3.1%	0.93

Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound UT	LT	TH	RT	Reservation Rd Westbound UT	LT	TH	RT	Seacrest Ave Northbound UT	LT	TH	RT	0 Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	0	74	2	1	11	183	0	0	3	0	10	0	0	0	0	284	0
7:15 AM	0	0	102	6	7	13	149	0	0	9	0	10	0	0	0	0	296	0
7:30 AM	0	0	120	11	3	30	145	0	0	15	0	9	0	0	0	0	333	0
7:45 AM	**0**	**0**	**160**	**14**	**3**	**25**	**146**	**0**	**0**	**20**	**0**	**10**	**0**	**0**	**0**	**0**	**378**	1,291
8:00 AM	**0**	**0**	**123**	**13**	**6**	**23**	**137**	**0**	**0**	**20**	**0**	**11**	**0**	**0**	**0**	**0**	**333**	1,340
8:15 AM	**0**	**0**	**101**	**13**	**5**	**26**	**154**	**0**	**0**	**22**	**0**	**12**	**0**	**0**	**0**	**0**	**333**	1,377
8:30 AM	**0**	**0**	**133**	**14**	**7**	**28**	**145**	**0**	**0**	**13**	**0**	**24**	**0**	**0**	**0**	**0**	**364**	**1,408**
8:45 AM	0	0	90	16	5	14	126	0	0	19	0	16	0	0	0	0	286	1,316
Count Total	0	0	903	89	37	170	1,185	0	0	121	0	102	0	0	0	0	2,607	0
Peak Hour All	**0**	**0**	**517**	**54**	**21**	**102**	**582**	**0**	**0**	**75**	**0**	**57**	**0**	**0**	**0**	**0**	**1,408**	**0**
Peak Hour HV	**0**	**0**	**18**	**0**	**0**	**3**	**21**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**44**	**0**
Peak Hour HV%	**-**	**-**	**3%**	**0%**	**0%**	**3%**	**4%**	**-**	**-**	**3%**	**-**	**0%**	**-**	**-**	**-**	**-**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	5	6	0	0	*11*	0	0	0	0	*0*	1	0	1	0	*2*
7:15 AM	2	5	0	0	*7*	0	1	0	0	*1*	0	0	0	1	*1*
7:30 AM	5	7	1	0	*13*	0	0	0	0	*0*	1	1	3	1	*6*
7:45 AM	**5**	**4**	**1**	**0**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**1**	*2*
8:00 AM	**5**	**9**	**0**	**0**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**1**	*2*
8:15 AM	**4**	**5**	**0**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**2**	**1**	*4*
8:30 AM	**4**	**6**	**1**	**0**	***11***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**1**	**0**	***2***
8:45 AM	4	5	0	0	*9*	0	0	0	0	*0*	4	0	6	3	*13*
Count Total	34	47	3	0	*84*	0	1	0	0	*1*	8	2	14	8	*32*
Peak Hr	**18**	**24**	**2**	**0**	***44***	**0**	**0**	**0**	**0**	***0***	**2**	**1**	**4**	**3**	***10***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd				Reservation Rd				Seacrest Ave				0				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	5	0	0	0	6	0	0	0	0	0	0	0	0	0	11	0
7:15 AM	0	0	1	1	0	2	3	0	0	0	0	0	0	0	0	0	7	0
7:30 AM	0	0	5	0	0	1	6	0	0	1	0	0	0	0	0	0	13	0
7:45 AM	**0**	**0**	**5**	**0**	**0**	**1**	**3**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	41
8:00 AM	**0**	**0**	**5**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	44
8:15 AM	**0**	**0**	**4**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	46
8:30 AM	**0**	**0**	**4**	**0**	**0**	**2**	**4**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**44**
8:45 AM	0	0	4	0	0	0	5	0	0	0	0	0	0	0	0	0	9	43
Count Total	0	0	33	1	0	6	41	0	0	3	0	0	0	0	0	0	84	0
Peak Hour	**0**	**0**	**18**	**0**	**0**	**3**	**21**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**44**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd			Reservation Rd			Seacrest Ave			0			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	1	0	0	0	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

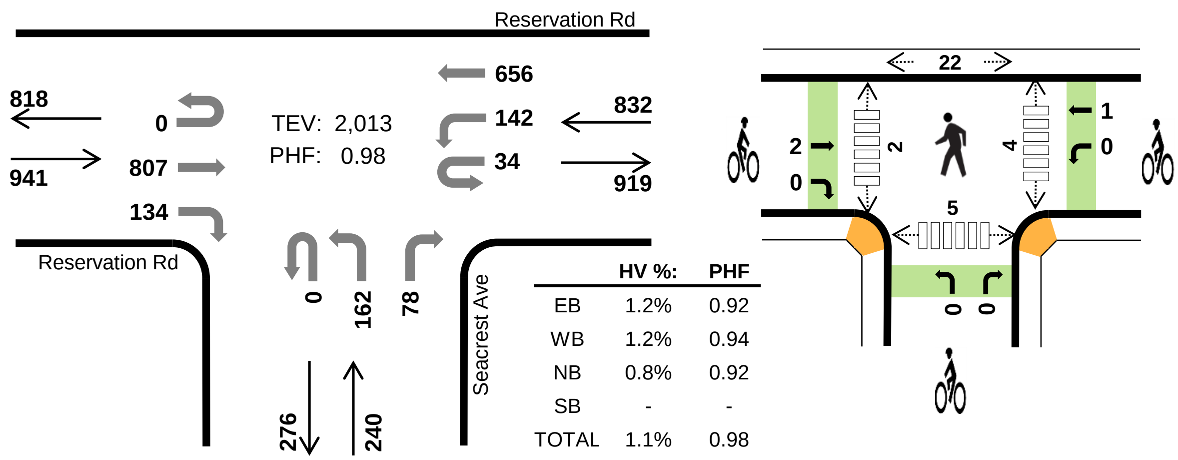
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Seacrest Ave
Reservation Rd

N

Peak Hour

Date: 09-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	1.2%	0.92
WB	1.2%	0.94
NB	0.8%	0.92
SB	-	-
TOTAL	1.1%	0.98

Two-Hour Count Summaries

Interval Start		Reservation Rd Eastbound				Reservation Rd Westbound				Seacrest Ave Northbound				0 Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	178	27	5	35	149	0	0	36	0	25	0	0	0	0	455	0
4:15 PM		0	0	173	36	10	37	141	0	0	33	0	20	0	0	0	0	450	0
4:30 PM		0	0	221	24	14	33	131	0	0	42	0	18	0	0	0	0	483	0
4:45 PM		0	0	219	33	10	21	157	0	0	26	0	16	0	0	0	0	482	1,870
5:00 PM		**0**	**0**	**192**	**37**	**8**	**26**	**164**	**0**	**0**	**43**	**0**	**22**	**0**	**0**	**0**	**0**	**492**	1,907
5:15 PM		**0**	**0**	**204**	**27**	**6**	**47**	**168**	**0**	**0**	**36**	**0**	**21**	**0**	**0**	**0**	**0**	**509**	1,966
5:30 PM		**0**	**0**	**221**	**34**	**8**	**35**	**154**	**0**	**0**	**44**	**0**	**15**	**0**	**0**	**0**	**0**	**511**	1,994
5:45 PM		**0**	**0**	**190**	**36**	**12**	**34**	**170**	**0**	**0**	**39**	**0**	**20**	**0**	**0**	**0**	**0**	**501**	**2,013**
Count Total		0	0	1,598	254	73	268	1,234	0	0	299	0	157	0	0	0	0	3,883	0
Peak Hour	**All**	**0**	**0**	**807**	**134**	**34**	**142**	**656**	**0**	**0**	**162**	**0**	**78**	**0**	**0**	**0**	**0**	**2,013**	**0**
	HV	**0**	**0**	**9**	**2**	**0**	**2**	**8**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**23**	**0**
	HV%	**-**	**-**	**1%**	**1%**	**0%**	**1%**	**1%**	**-**	**-**	**1%**	**-**	**1%**	**-**	**-**	**-**	**-**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	4	1	0	*7*	0	0	0	0	*0*	4	0	4	1	*9*
4:15 PM	3	2	1	0	*6*	0	0	0	0	*0*	0	1	1	1	*3*
4:30 PM	2	3	0	0	*5*	1	0	0	0	*1*	1	2	8	2	*13*
4:45 PM	7	4	0	0	*11*	1	0	0	0	*1*	0	0	6	4	*10*
5:00 PM	**2**	**3**	**0**	**0**	***5***	**1**	**0**	**0**	**0**	***1***	**0**	**1**	**5**	**1**	*7*
5:15 PM	**2**	**3**	**0**	**0**	***5***	**0**	**1**	**0**	**0**	***1***	**1**	**0**	**3**	**2**	*6*
5:30 PM	**4**	**1**	**1**	**0**	***6***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**6**	**1**	*8*
5:45 PM	**3**	**3**	**1**	**0**	***7***	**1**	**0**	**0**	**0**	***1***	**2**	**1**	**8**	**1**	***12***
Count Total	25	23	4	0	*52*	4	1	0	0	*5*	9	5	41	13	*68*
Peak Hr	**11**	**10**	**2**	**0**	***23***	**2**	**1**	**0**	**0**	***3***	**4**	**2**	**22**	**5**	***33***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd				Reservation Rd				Seacrest Ave				0				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	2	0	0	1	3	0	0	0	0	1	0	0	0	0	7	0
4:15 PM	0	0	3	0	0	0	2	0	0	1	0	0	0	0	0	0	6	0
4:30 PM	0	0	2	0	0	1	2	0	0	0	0	0	0	0	0	0	5	0
4:45 PM	0	0	6	1	0	0	4	0	0	0	0	0	0	0	0	0	11	29
5:00 PM	**0**	**0**	**1**	**1**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	27
5:15 PM	**0**	**0**	**2**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	26
5:30 PM	**0**	**0**	**3**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**6**	27
5:45 PM	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**23**
Count Total	0	0	22	3	0	4	19	0	0	2	0	2	0	0	0	0	52	0
Peak Hour	**0**	**0**	**9**	**2**	**0**	**2**	**8**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**23**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd			Reservation Rd			Seacrest Ave			0			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	2
5:00 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
5:15 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	4
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
5:45 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**
Count Total	0	3	1	0	1	0	0	0	0	0	0	0	5	0
Peak Hour	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**

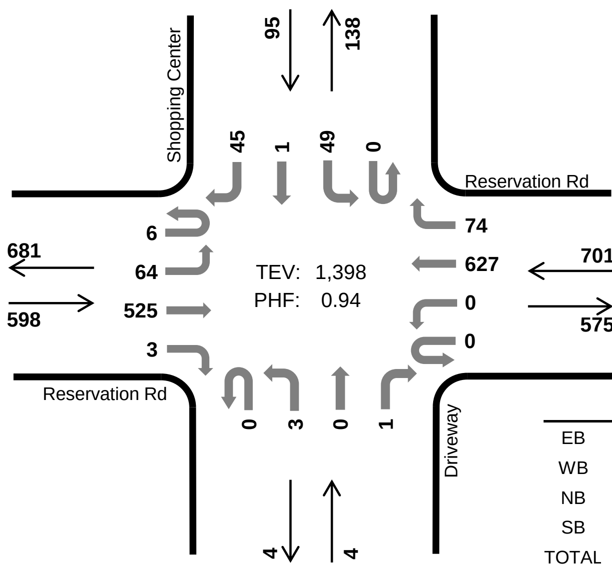
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

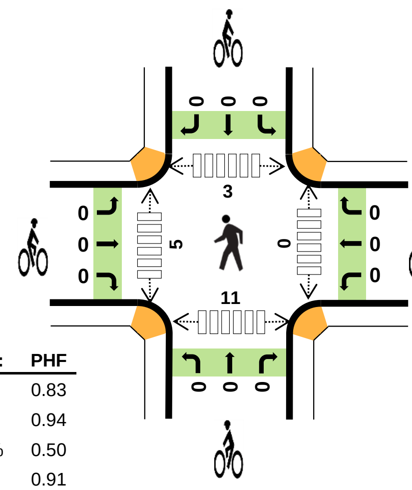
Shopping Center
Reservation Rd

Date: 09-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

N

Peak Hour





	HV %:	PHF
EB	2.8%	0.83
WB	3.7%	0.94
NB	50.0%	0.50
SB	0.0%	0.91
TOTAL	3.2%	0.94

Two-Hour Count Summaries

Interval Start		Reservation Rd Eastbound				Reservation Rd Westbound				Driveway Northbound				Shopping Center Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		1	12	76	0	0	0	182	12	0	0	0	0	0	4	0	11	298	0
7:15 AM		3	13	101	0	0	0	151	12	0	1	0	0	0	14	0	11	306	0
7:30 AM		**1**	**10**	**134**	**0**	**0**	**0**	**161**	**18**	**0**	**1**	**0**	**1**	**0**	**14**	**0**	**12**	**352**	0
7:45 AM		**1**	**17**	**161**	**1**	**0**	**0**	**156**	**14**	**0**	**1**	**0**	**0**	**0**	**13**	**1**	**8**	**373**	1,329
8:00 AM		**1**	**20**	**117**	**1**	**0**	**0**	**146**	**19**	**0**	**1**	**0**	**0**	**0**	**13**	**0**	**11**	**329**	1,360
8:15 AM		**3**	**17**	**113**	**1**	**0**	**0**	**164**	**23**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**14**	**344**	**1,398**
8:30 AM		2	16	127	1	1	0	151	14	0	0	1	0	0	18	0	11	342	1,388
8:45 AM		7	17	92	0	0	0	119	15	0	0	0	0	0	9	1	6	266	1,281
Count Total		19	122	921	4	1	0	1,230	127	0	4	1	1	0	94	2	84	2,610	0
Peak Hour	**All**	**6**	**64**	**525**	**3**	**0**	**0**	**627**	**74**	**0**	**3**	**0**	**1**	**0**	**49**	**1**	**45**	**1,398**	**0**
	HV	**0**	**0**	**17**	**0**	**0**	**0**	**26**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**45**	**0**
	HV%	**0%**	**0%**	**3%**	**0%**	**-**	**-**	**4%**	**0%**	**-**	**67%**	**-**	**0%**	**-**	**0%**	**0%**	**0%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	5	8	0	0	*13*	0	0	0	0	*0*	0	3	1	4	*8*
7:15 AM	1	4	1	0	*6*	0	1	0	0	*1*	0	2	0	2	*4*
7:30 AM	**4**	**7**	**1**	**0**	***12***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**2**	*4*
7:45 AM	**4**	**5**	**0**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**3**	*3*
8:00 AM	**6**	**9**	**1**	**0**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**2**	**5**	*10*
8:15 AM	**3**	**5**	**0**	**0**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**1**	***2***
8:30 AM	4	7	0	0	*11*	0	0	0	0	*0*	0	0	1	0	*1*
8:45 AM	4	6	0	0	*10*	0	0	0	0	*0*	0	0	1	7	*8*
Count Total	31	51	3	0	*85*	0	1	0	0	*1*	0	10	6	24	*40*
Peak Hour	**17**	**26**	**2**	**0**	***45***	**0**	**0**	**0**	**0**	***0***	**0**	**5**	**3**	**11**	***19***

Project Manager: (415) 310-6469

project.manager.ca@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd				Reservation Rd				Driveway				Shopping Center				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	5	0	0	0	7	1	0	0	0	0	0	0	0	0	13	0
7:15 AM	0	0	1	0	0	0	4	0	0	1	0	0	0	0	0	0	6	0
7:30 AM	**0**	**0**	**4**	**0**	**0**	**0**	**7**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	0
7:45 AM	**0**	**0**	**4**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	40
8:00 AM	**0**	**0**	**6**	**0**	**0**	**0**	**9**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	43
8:15 AM	**0**	**0**	**3**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**45**
8:30 AM	0	0	4	0	0	0	7	0	0	0	0	0	0	0	0	0	11	44
8:45 AM	0	0	4	0	0	0	5	1	0	0	0	0	0	0	0	0	10	45
Count Total	0	0	31	0	0	0	49	2	0	3	0	0	0	0	0	0	85	0
Peak Hour	**0**	**0**	**17**	**0**	**0**	**0**	**26**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**45**	**0**

Two-Hour Count Summaries - Bikes

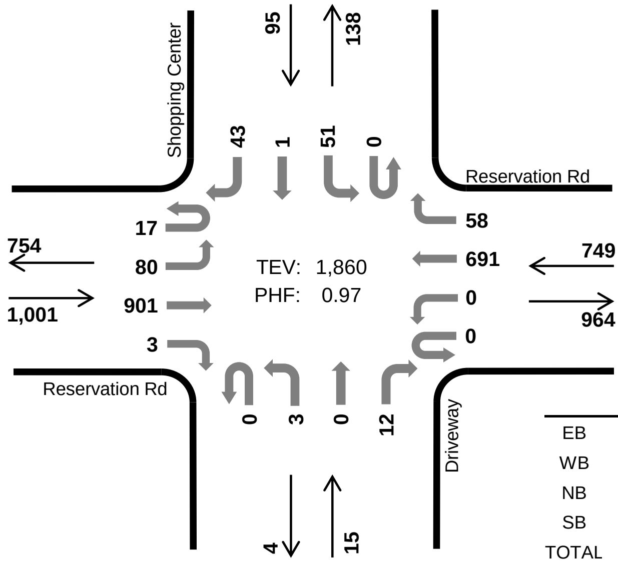
Interval Start	Reservation Rd			Reservation Rd			Driveway			Shopping Center			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	1	0	0	0	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

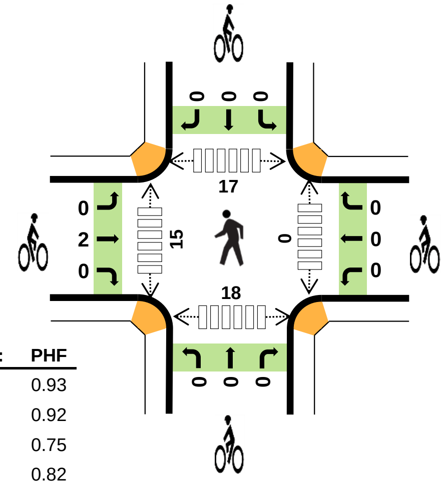
Shopping Center
Reservation Rd

Date: 09-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

Peak Hour



	HV %:	PHF
EB	1.3%	0.93
WB	1.5%	0.92
NB	0.0%	0.75
SB	2.1%	0.82
TOTAL	1.4%	0.97



Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound UT	LT	TH	RT	Reservation Rd Westbound UT	LT	TH	RT	Driveway Northbound UT	LT	TH	RT	Shopping Center Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	8	21	177	3	0	0	168	15	0	0	0	1	0	13	0	6	412	0
4:15 PM	6	24	185	2	0	0	157	15	0	0	1	1	0	15	1	5	412	0
4:30 PM	**7**	**19**	**243**	**1**	**0**	**0**	**160**	**11**	**0**	**0**	**0**	**3**	**0**	**11**	**1**	**9**	**465**	0
4:45 PM	**3**	**25**	**228**	**1**	**0**	**0**	**160**	**21**	**0**	**1**	**0**	**3**	**0**	**12**	**0**	**13**	**467**	1,756
5:00 PM	**3**	**22**	**210**	**0**	**0**	**0**	**179**	**14**	**0**	**1**	**0**	**2**	**0**	**13**	**0**	**7**	**451**	1,795
5:15 PM	**4**	**14**	**220**	**1**	**0**	**0**	**192**	**12**	**0**	**1**	**0**	**4**	**0**	**15**	**0**	**14**	**477**	**1,860**
5:30 PM	2	26	222	0	0	0	158	12	0	1	1	2	0	19	0	11	454	1,849
5:45 PM	7	33	196	0	0	0	198	18	0	1	0	1	0	11	1	10	476	1,858
Count Total	40	184	1,681	8	0	0	1,372	118	0	5	2	17	0	109	3	75	3,614	0
Peak Hour All	**17**	**80**	**901**	**3**	**0**	**0**	**691**	**58**	**0**	**3**	**0**	**12**	**0**	**51**	**1**	**43**	**1,860**	**0**
Peak Hour HV	**0**	**1**	**11**	**1**	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**26**	**0**
Peak Hour HV%	**0%**	**1%**	**1%**	**33%**	**-**	**-**	**2%**	**0%**	**-**	**0%**	**-**	**0%**	**-**	**2%**	**0%**	**2%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	3	6	0	0	*9*	0	0	0	0	*0*	0	4	8	5	*17*
4:15 PM	4	3	1	1	*9*	0	0	0	0	*0*	0	1	2	6	*9*
4:30 PM	**3**	**3**	**0**	**0**	***6***	**1**	**0**	**0**	**0**	***1***	**0**	**9**	**2**	**5**	*16*
4:45 PM	**6**	**5**	**0**	**1**	***12***	**0**	**0**	**0**	**0**	***0***	**0**	**4**	**6**	**5**	*15*
5:00 PM	**2**	**2**	**0**	**1**	***5***	**1**	**0**	**0**	**0**	***1***	**0**	**1**	**4**	**5**	*10*
5:15 PM	**2**	**1**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**5**	**3**	***9***
5:30 PM	4	1	0	0	*5*	0	0	0	0	*0*	0	3	2	5	*10*
5:45 PM	2	3	0	1	*6*	1	0	0	0	*1*	0	8	4	3	*15*
Count Total	26	24	1	4	*55*	3	0	0	0	*3*	0	31	33	37	*101*
Peak Hour	**13**	**11**	**0**	**2**	***26***	**2**	**0**	**0**	**0**	***2***	**0**	**15**	**17**	**18**	***50***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd				Reservation Rd				Driveway				Shopping Center				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	3	0	0	0	5	1	0	0	0	0	0	0	0	0	9	0
4:15 PM	0	1	3	0	0	0	3	0	0	0	1	0	0	0	1	0	9	0
4:30 PM	**0**	**1**	**2**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	0
4:45 PM	**0**	**0**	**5**	**1**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**12**	36
5:00 PM	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**5**	32
5:15 PM	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**26**
5:30 PM	0	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	5	25
5:45 PM	0	0	2	0	0	0	3	0	0	0	0	0	0	0	1	0	6	19
Count Total	0	2	23	1	0	0	23	1	0	0	1	0	0	1	2	1	55	0
Peak Hour	**0**	**1**	**11**	**1**	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**26**	**0**

Two-Hour Count Summaries - Bikes

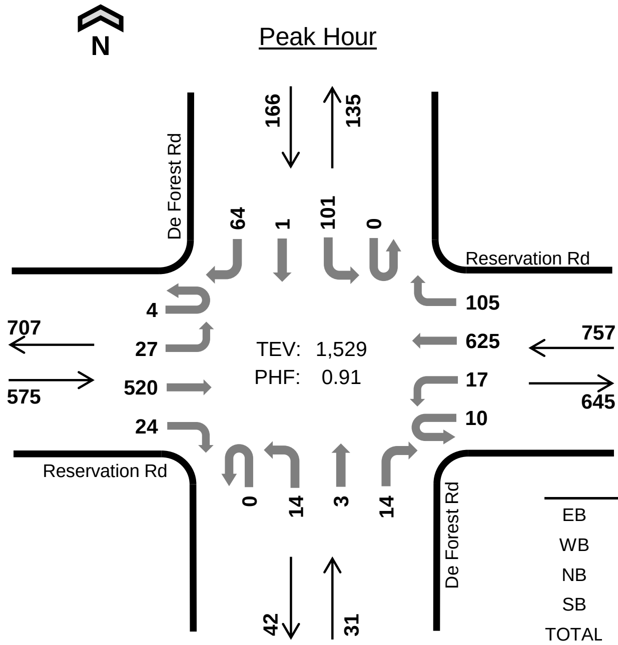
Interval Start	Reservation Rd			Reservation Rd			Driveway			Shopping Center			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:00 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	2
Count Total	0	3	0	0	0	0	0	0	0	0	0	0	3	0
Peak Hour	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

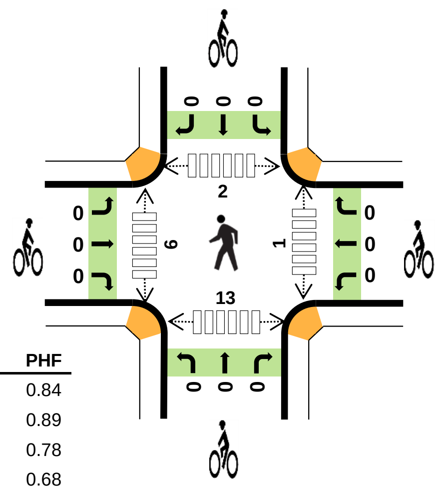
De Forest Rd
Reservation Rd

Date: 09-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

Peak Hour



	HV %:	PHF
EB	3.1%	0.84
WB	2.9%	0.89
NB	25.8%	0.78
SB	0.0%	0.68
TOTAL	3.1%	0.91



Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound UT	LT	TH	RT	Reservation Rd Westbound UT	LT	TH	RT	De Forest Rd Northbound UT	LT	TH	RT	De Forest Rd Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	1	72	8	1	4	177	12	0	3	0	3	0	9	1	22	313	0
7:15 AM	2	4	99	10	2	10	137	13	0	7	2	2	0	27	0	15	330	0
7:30 AM	**2**	**7**	**137**	**4**	**3**	**4**	**152**	**27**	**0**	**2**	**1**	**4**	**0**	**38**	**0**	**23**	**404**	0
7:45 AM	**2**	**9**	**154**	**6**	**6**	**6**	**154**	**47**	**0**	**2**	**1**	**2**	**0**	**19**	**0**	**11**	**419**	1,466
8:00 AM	**0**	**6**	**118**	**6**	**0**	**6**	**149**	**20**	**0**	**7**	**0**	**3**	**0**	**24**	**0**	**16**	**355**	1,508
8:15 AM	**0**	**5**	**111**	**8**	**1**	**1**	**170**	**11**	**0**	**3**	**1**	**5**	**0**	**20**	**1**	**14**	**351**	**1,529**
8:30 AM	2	6	133	7	1	10	138	14	0	10	1	3	0	10	2	13	350	1,475
8:45 AM	2	6	79	9	0	4	116	12	0	4	1	10	0	7	1	8	259	1,315
Count Total	10	44	903	58	14	45	1,193	156	0	38	7	32	0	154	5	122	2,781	0
Peak Hour All	**4**	**27**	**520**	**24**	**10**	**17**	**625**	**105**	**0**	**14**	**3**	**14**	**0**	**101**	**1**	**64**	**1,529**	**0**
Peak Hour HV	**0**	**0**	**14**	**4**	**0**	**3**	**17**	**2**	**0**	**5**	**0**	**3**	**0**	**0**	**0**	**0**	**48**	**0**
Peak Hour HV%	**0%**	**0%**	**3%**	**17%**	**0%**	**18%**	**3%**	**2%**	**-**	**36%**	**0%**	**21%**	**-**	**0%**	**0%**	**0%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	5	5	2	0	*12*	0	0	0	0	*0*	0	1	0	0	*1*
7:15 AM	1	3	3	0	*7*	0	0	0	1	*1*	1	3	0	10	*14*
7:30 AM	**4**	**5**	**2**	**0**	***11***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**3**	*4*
7:45 AM	**4**	**6**	**1**	**0**	***11***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**0**	**2**	*4*
8:00 AM	**6**	**7**	**4**	**0**	***17***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**2**	**4**	*9*
8:15 AM	**4**	**4**	**1**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**4**	***5***
8:30 AM	4	7	3	0	*14*	0	0	0	0	*0*	0	2	1	3	*6*
8:45 AM	4	5	4	1	*14*	0	0	0	0	*0*	0	2	1	5	*8*
Count Total	32	42	20	1	*95*	0	0	0	1	*1*	2	14	4	31	*51*
Peak Hour	**18**	**22**	**8**	**0**	***48***	**0**	**0**	**0**	**0**	***0***	**1**	**6**	**2**	**13**	***22***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				De Forest Rd Northbound				De Forest Rd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	3	2	0	1	4	0	0	2	0	0	0	0	0	0	12	0
7:15 AM	0	0	1	0	0	1	2	0	0	2	0	1	0	0	0	0	7	0
7:30 AM	**0**	**0**	**3**	**1**	**0**	**1**	**4**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**11**	0
7:45 AM	**0**	**0**	**2**	**2**	**0**	**1**	**3**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	41
8:00 AM	**0**	**0**	**6**	**0**	**0**	**1**	**6**	**0**	**0**	**3**	**0**	**1**	**0**	**0**	**0**	**0**	**17**	46
8:15 AM	**0**	**0**	**3**	**1**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**9**	**48**
8:30 AM	0	0	3	1	0	3	4	0	0	2	0	1	0	0	0	0	14	51
8:45 AM	0	0	3	1	0	1	4	0	0	1	0	3	0	0	1	0	14	54
Count Total	0	0	24	8	0	9	31	2	0	12	0	8	0	0	1	0	95	0
Peak Hour	**0**	**0**	**14**	**4**	**0**	**3**	**17**	**2**	**0**	**5**	**0**	**3**	**0**	**0**	**0**	**0**	**48**	**0**

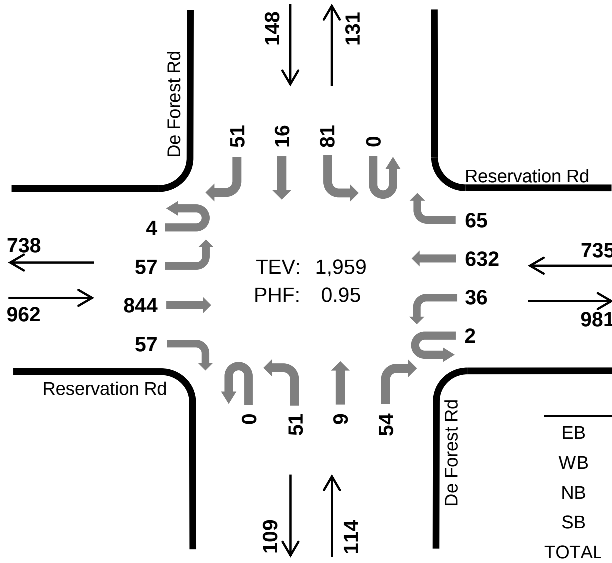
Two-Hour Count Summaries - Bikes

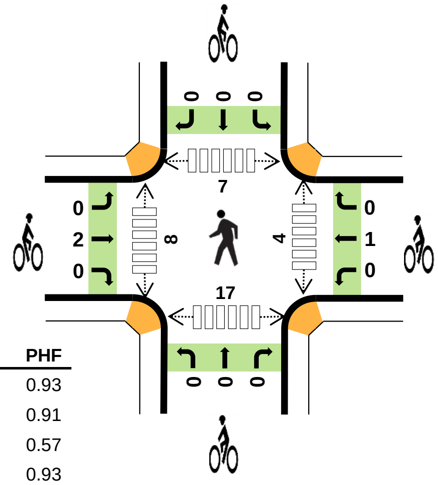
Interval Start	Reservation Rd Eastbound			Reservation Rd Westbound			De Forest Rd Northbound			De Forest Rd Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	1	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

De Forest Rd
Reservation Rd

Date: 09-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM





	HV %:	PHF
EB	1.1%	0.93
WB	1.9%	0.91
NB	7.9%	0.57
SB	1.4%	0.93
TOTAL	1.8%	0.95

Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound				Reservation Rd Westbound				De Forest Rd Northbound				De Forest Rd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	9	174	14	0	5	154	12	0	13	1	13	0	11	0	8	414	0
4:15 PM	4	12	165	15	1	12	146	8	0	20	2	13	0	8	2	6	414	0
4:30 PM	**1**	**10**	**230**	**19**	**0**	**13**	**139**	**13**	**0**	**12**	**0**	**7**	**0**	**18**	**5**	**16**	**483**	0
4:45 PM	**0**	**16**	**209**	**20**	**1**	**11**	**154**	**16**	**0**	**20**	**6**	**24**	**0**	**19**	**4**	**14**	**514**	1,825
5:00 PM	**1**	**15**	**199**	**7**	**0**	**5**	**163**	**19**	**0**	**13**	**1**	**11**	**0**	**20**	**4**	**8**	**466**	1,877
5:15 PM	**2**	**16**	**206**	**11**	**1**	**7**	**176**	**17**	**0**	**6**	**2**	**12**	**0**	**24**	**3**	**13**	**496**	**1,959**
5:30 PM	1	17	222	4	1	6	165	15	0	8	1	10	0	16	3	8	477	1,953
5:45 PM	1	17	187	3	2	3	183	16	0	10	0	5	0	10	2	13	452	1,891
Count Total	10	112	1,592	93	6	62	1,280	116	0	102	13	95	0	126	23	86	3,716	0
Peak Hour All	**4**	**57**	**844**	**57**	**2**	**36**	**632**	**65**	**0**	**51**	**9**	**54**	**0**	**81**	**16**	**51**	**1,959**	**0**
Peak Hour HV	**0**	**0**	**9**	**2**	**0**	**6**	**8**	**0**	**0**	**3**	**1**	**5**	**0**	**1**	**1**	**0**	**36**	**0**
Peak Hour HV%	**0%**	**0%**	**1%**	**4%**	**0%**	**17%**	**1%**	**0%**	**-**	**6%**	**11%**	**9%**	**-**	**1%**	**6%**	**0%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	3	4	1	1	*9*	0	0	0	0	*0*	0	0	11	3	*14*
4:15 PM	3	3	2	1	*9*	0	0	0	0	*0*	0	1	3	3	*7*
4:30 PM	**3**	**5**	**1**	**0**	***9***	**1**	**0**	**0**	**0**	***1***	**0**	**1**	**1**	**3**	*5*
4:45 PM	**5**	**6**	**6**	**1**	***18***	**0**	**0**	**0**	**0**	***0***	**4**	**0**	**2**	**2**	*8*
5:00 PM	**2**	**2**	**0**	**1**	***5***	**1**	**1**	**0**	**0**	***2***	**0**	**7**	**4**	**8**	*19*
5:15 PM	**1**	**1**	**2**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**4**	*4*
5:30 PM	4	1	2	0	*7*	0	0	0	0	*0*	2	1	2	3	*8*
5:45 PM	2	3	2	1	*8*	1	0	0	0	*1*	1	1	2	2	*6*
Count Total	23	25	16	5	*69*	3	1	0	0	*4*	7	11	25	28	*71*
Peak Hour	**11**	**14**	**9**	**2**	***36***	**2**	**1**	**0**	**0**	***3***	**4**	**8**	**7**	**17**	***36***

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd				Reservation Rd				De Forest Rd				De Forest Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	2	0	0	1	3	0	0	0	0	1	0	0	0	1	9	0
4:15 PM	0	0	2	1	0	1	2	0	0	1	0	1	0	1	0	0	9	0
4:30 PM	**0**	**0**	**3**	**0**	**0**	**2**	**3**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**9**	0
4:45 PM	**0**	**0**	**4**	**1**	**0**	**2**	**4**	**0**	**0**	**2**	**1**	**3**	**0**	**0**	**1**	**0**	**18**	45
5:00 PM	**0**	**0**	**1**	**1**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**5**	41
5:15 PM	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**4**	**36**
5:30 PM	0	0	2	2	0	1	0	0	0	1	0	1	0	0	0	0	7	34
5:45 PM	0	0	1	1	0	1	2	0	0	2	0	0	0	0	1	0	8	24
Count Total	0	1	16	6	0	10	15	0	0	7	1	8	0	2	2	1	69	0
Peak Hour	**0**	**0**	**9**	**2**	**0**	**6**	**8**	**0**	**0**	**3**	**1**	**5**	**0**	**1**	**1**	**0**	**36**	**0**

Two-Hour Count Summaries - Bikes

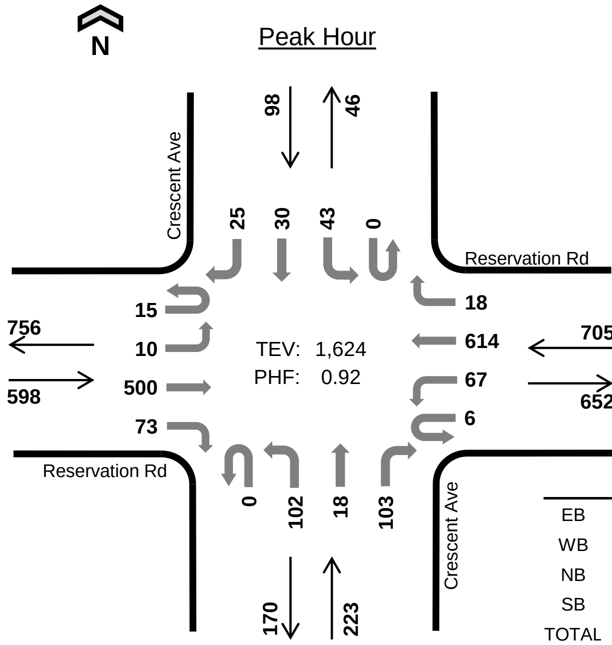
Interval Start	Reservation Rd			Reservation Rd			De Forest Rd			De Forest Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:00 PM	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	3
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	3
Count Total	0	3	0	0	1	0	0	0	0	0	0	0	4	0
Peak Hour	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**

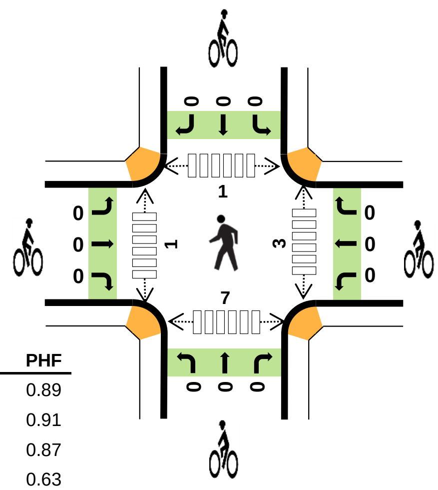
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Crescent Ave
Reservation Rd

Date: 10-02-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

Peak Hour





	HV %:	PHF
EB	3.0%	0.89
WB	3.3%	0.91
NB	0.9%	0.87
SB	4.1%	0.63
TOTAL	2.9%	0.92

Two-Hour Count Summaries

Interval Start		Reservation Rd Eastbound UT	LT	TH	RT	Reservation Rd Westbound UT	LT	TH	RT	Crescent Ave Northbound UT	LT	TH	RT	Crescent Ave Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		1	1	86	7	1	10	140	1	0	9	1	17	0	10	5	19	308	0
7:15 AM		2	4	104	18	0	10	132	1	0	14	3	17	0	15	8	9	337	0
7:30 AM		**1**	**1**	**141**	**20**	**0**	**12**	**155**	**4**	**0**	**21**	**5**	**23**	**0**	**21**	**13**	**5**	**422**	0
7:45 AM		**4**	**1**	**144**	**19**	**4**	**14**	**172**	**4**	**0**	**27**	**5**	**28**	**0**	**6**	**6**	**5**	**439**	1,506
8:00 AM		**4**	**3**	**118**	**21**	**0**	**26**	**145**	**8**	**0**	**21**	**2**	**27**	**0**	**9**	**6**	**8**	**398**	1,596
8:15 AM		**6**	**5**	**97**	**13**	**2**	**15**	**142**	**2**	**0**	**33**	**6**	**25**	**0**	**7**	**5**	**7**	**365**	**1,624**
8:30 AM		3	5	98	9	2	12	134	5	0	21	1	16	0	10	2	7	325	1,527
8:45 AM		1	4	98	15	1	3	144	3	0	14	2	22	0	7	2	7	323	1,411
Count Total		22	24	886	122	10	102	1,164	28	0	160	25	175	0	85	47	67	2,917	0
Peak Hour	**All**	**15**	**10**	**500**	**73**	**6**	**67**	**614**	**18**	**0**	**102**	**18**	**103**	**0**	**43**	**30**	**25**	**1,624**	**0**
	HV	**1**	**0**	**13**	**4**	**0**	**1**	**21**	**1**	**0**	**2**	**0**	**0**	**0**	**3**	**1**	**0**	**47**	**0**
	HV%	**7%**	**0%**	**3%**	**5%**	**0%**	**1%**	**3%**	**6%**	**-**	**2%**	**0%**	**0%**	**-**	**7%**	**3%**	**0%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	3	2	0	0	*5*	0	0	1	0	*1*	0	8	3	2	*13*
7:15 AM	2	7	1	0	*10*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	**7**	**1**	**1**	**2**	***11***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**1**	**2**	*5*
7:45 AM	**3**	**9**	**1**	**0**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**1**	*2*
8:00 AM	**5**	**7**	**0**	**1**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
8:15 AM	**3**	**6**	**0**	**1**	***10***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**3**	***4***
8:30 AM	3	4	1	0	*8*	0	0	0	0	*0*	1	0	0	2	*3*
8:45 AM	6	4	1	1	*12*	0	0	1	0	*1*	0	0	1	2	*3*
Count Total	32	40	5	5	*82*	0	0	2	0	*2*	4	9	5	13	*31*
Peak Hour	**18**	**23**	**2**	**4**	***47***	**0**	**0**	**0**	**0**	***0***	**3**	**1**	**1**	**7**	***12***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd				Reservation Rd				Crescent Ave				Crescent Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	5	0
7:15 AM	0	0	2	0	0	0	7	0	0	1	0	0	0	0	0	0	10	0
7:30 AM	**0**	**0**	**4**	**3**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**1**	**0**	**11**	0
7:45 AM	**0**	**0**	**2**	**1**	**0**	**0**	**8**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	39
8:00 AM	**1**	**0**	**4**	**0**	**0**	**1**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**13**	47
8:15 AM	**0**	**0**	**3**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**10**	**47**
8:30 AM	0	0	3	0	0	1	3	0	0	0	0	1	0	0	0	0	8	44
8:45 AM	0	0	5	1	0	0	4	0	0	1	0	0	0	1	0	0	12	43
Count Total	1	0	26	5	0	2	37	1	0	4	0	1	0	4	1	0	82	0
Peak Hour	**1**	**0**	**13**	**4**	**0**	**1**	**21**	**1**	**0**	**2**	**0**	**0**	**0**	**3**	**1**	**0**	**47**	**0**

Two-Hour Count Summaries - Bikes

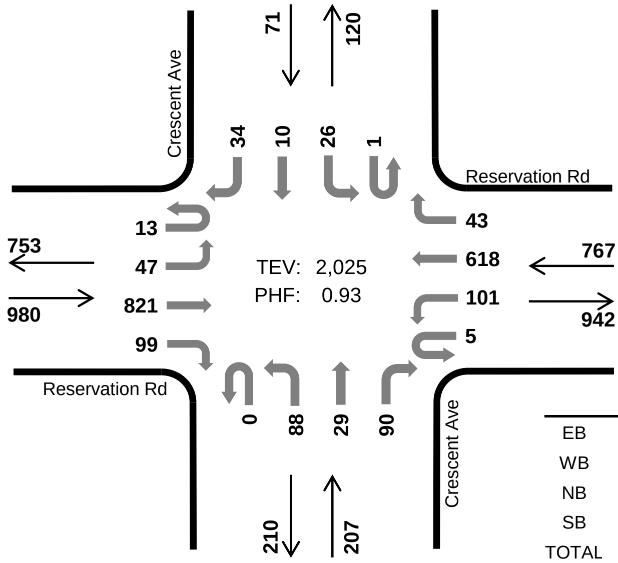
Interval Start	Reservation Rd			Reservation Rd			Crescent Ave			Crescent Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Count Total	0	0	0	0	0	0	2	0	0	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

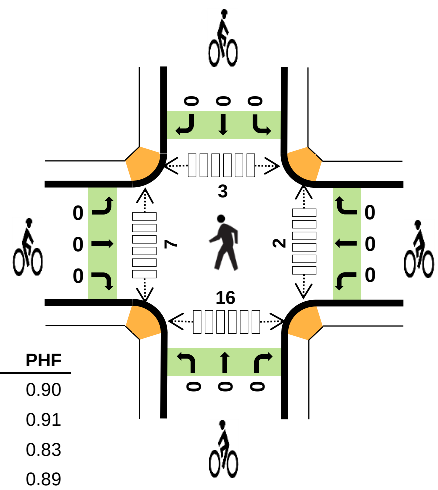
Crescent Ave
Reservation Rd

Date: 10-02-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

Peak Hour



	HV %:	PHF
EB	1.5%	0.90
WB	1.2%	0.91
NB	1.4%	0.83
SB	1.4%	0.89
TOTAL	1.4%	0.93



Two-Hour Count Summaries

Interval Start	Reservation Rd				Reservation Rd				Crescent Ave				Crescent Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	6	9	170	17	0	12	155	7	0	19	5	16	0	6	2	8	432	0
4:15 PM	2	9	230	20	0	19	148	5	0	15	7	20	0	7	2	4	488	0
4:30 PM	**4**	**10**	**181**	**22**	**1**	**32**	**160**	**17**	**0**	**19**	**7**	**21**	**0**	**5**	**4**	**8**	**491**	0
4:45 PM	**4**	**12**	**187**	**22**	**0**	**25**	**141**	**7**	**0**	**21**	**3**	**20**	**1**	**5**	**2**	**11**	**461**	1,872
5:00 PM	**3**	**13**	**233**	**24**	**1**	**18**	**143**	**11**	**0**	**22**	**10**	**30**	**0**	**10**	**2**	**8**	**528**	1,968
5:15 PM	**2**	**12**	**220**	**31**	**3**	**26**	**174**	**8**	**0**	**26**	**9**	**19**	**0**	**6**	**2**	**7**	**545**	**2,025**
5:30 PM	3	16	177	23	1	26	169	5	0	20	4	15	0	5	5	3	472	2,006
5:45 PM	2	12	182	23	1	22	137	15	0	15	4	14	0	6	2	10	445	1,990
Count Total	26	93	1,580	182	7	180	1,227	75	0	157	49	155	1	50	21	59	3,862	0
Peak Hour All	**13**	**47**	**821**	**99**	**5**	**101**	**618**	**43**	**0**	**88**	**29**	**90**	**1**	**26**	**10**	**34**	**2,025**	**0**
Peak Hour HV	**1**	**0**	**12**	**2**	**0**	**0**	**9**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**1**	**28**	**0**
Peak Hour HV%	**8%**	**0%**	**1%**	**2%**	**0%**	**0%**	**1%**	**0%**	**-**	**2%**	**0%**	**1%**	**0%**	**0%**	**0%**	**3%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	5	2	0	0	*7*	0	0	0	0	*0*	8	3	1	0	*12*
4:15 PM	5	2	0	0	*7*	0	0	0	0	*0*	3	2	3	2	*10*
4:30 PM	**3**	**2**	**1**	**0**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**4**	**3**	**5**	*12*
4:45 PM	**4**	**3**	**1**	**1**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**4**	*6*
5:00 PM	**5**	**1**	**0**	**0**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**7**	*8*
5:15 PM	**3**	**3**	**1**	**0**	***7***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	***2***
5:30 PM	1	0	0	0	*1*	0	0	0	0	*0*	2	2	0	0	*4*
5:45 PM	2	2	0	0	*4*	0	0	0	0	*0*	2	2	0	0	*4*
Count Total	28	15	3	1	*47*	0	0	0	0	*0*	17	16	7	18	*58*
Peak Hour	**15**	**9**	**3**	**1**	***28***	**0**	**0**	**0**	**0**	***0***	**2**	**7**	**3**	**16**	***28***

Two-Hour Count Summaries - Heavy Vehicles

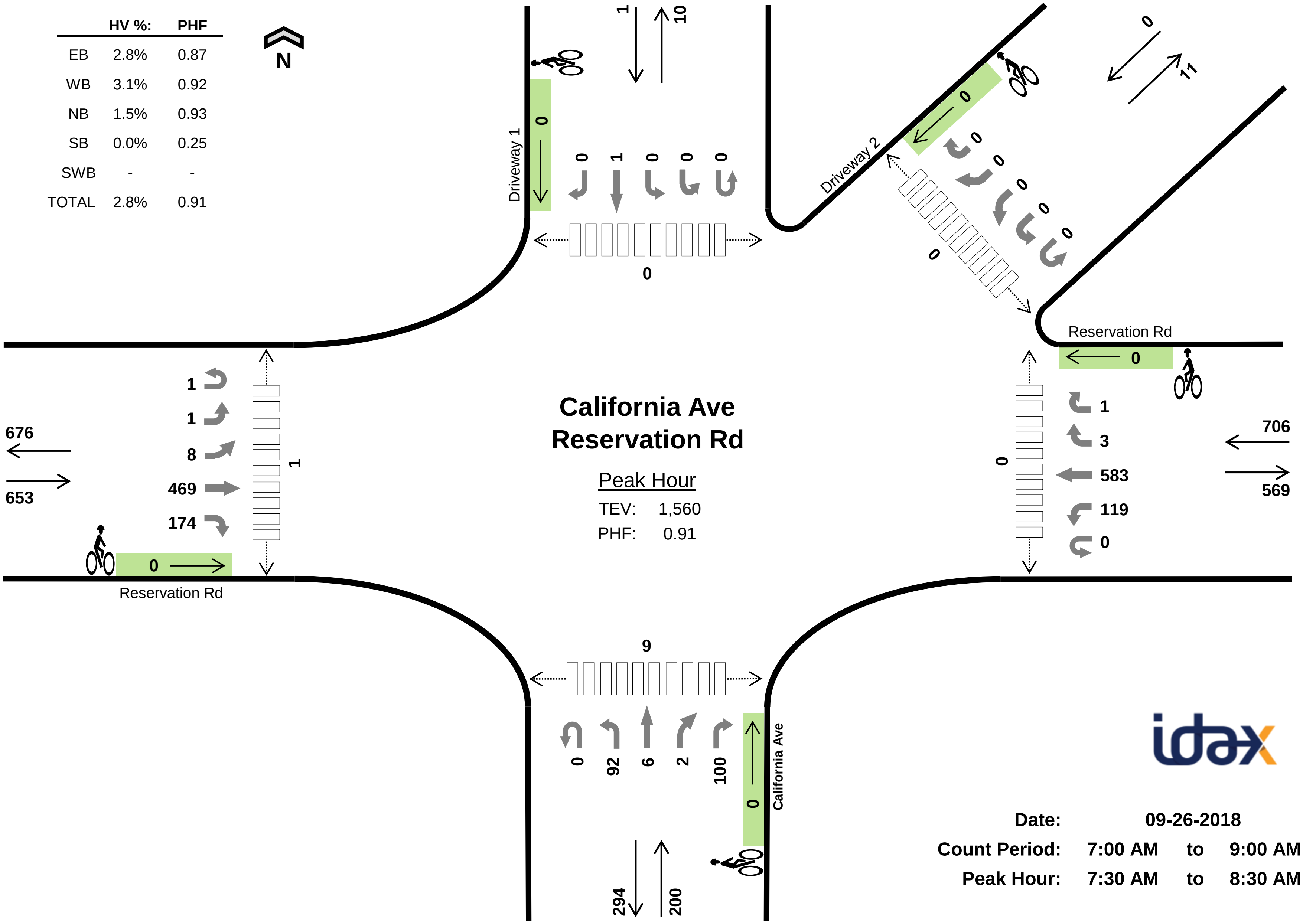
Interval Start	Reservation Rd Eastbound UT	LT	TH	RT	Reservation Rd Westbound UT	LT	TH	RT	Crescent Ave Northbound UT	LT	TH	RT	Crescent Ave Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	0	5	0	0	0	2	0	0	0	0	0	0	0	0	0	7	0
4:15 PM	0	0	4	1	0	0	2	0	0	0	0	0	0	0	0	0	7	0
4:30 PM	**1**	**0**	**1**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**6**	0
4:45 PM	**0**	**0**	**3**	**1**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**9**	29
5:00 PM	**0**	**0**	**5**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	28
5:15 PM	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**28**
5:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	23
5:45 PM	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	4	18
Count Total	1	0	23	4	0	0	15	0	0	2	0	1	0	0	0	1	47	0
Peak Hour	**1**	**0**	**12**	**2**	**0**	**0**	**9**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**1**	**28**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd Eastbound LT	TH	RT	Reservation Rd Westbound LT	TH	RT	Crescent Ave Northbound LT	TH	RT	Crescent Ave Southbound LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

	HV %:	PHF
EB	2.8%	0.87
WB	3.1%	0.92
NB	1.5%	0.93
SB	0.0%	0.25
SWB	-	-
TOTAL	2.8%	0.91



California Ave
Reservation Rd

Peak Hour

TEV: 1,560

PHF: 0.91

Date:	**09-26-2018**			
Count Period:	**7:00 AM**	**to**	**9:00 AM**	
Peak Hour:	**7:30 AM**	**to**	**8:30 AM**	

Two-Hour Count Summaries

Interval Start	Reservation Rd					Reservation Rd					California Ave					Driveway 1					Driveway 2					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Southwestbound						
	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	HL	BL	BR	HR		
7:00 AM	0	0	0	83	17	0	24	145	0	1	0	6	1	2	15	0	0	1	0	0	0	0	0	0	0	295	0
7:15 AM	0	0	2	106	31	0	24	124	2	3	0	11	0	0	17	0	0	0	0	0	0	0	0	0	0	320	0
7:30 AM	**0**	**1**	**1**	**120**	**66**	**0**	**39**	**147**	**0**	**1**	**0**	**26**	**2**	**0**	**25**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**428**	0
7:45 AM	**1**	**0**	**4**	**127**	**49**	**0**	**40**	**151**	**1**	**0**	**0**	**26**	**1**	**1**	**26**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**427**	1,470
8:00 AM	**0**	**0**	**2**	**122**	**32**	**0**	**24**	**144**	**2**	**0**	**0**	**20**	**2**	**1**	**27**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**377**	1,552
8:15 AM	**0**	**0**	**1**	**100**	**27**	**0**	**16**	**141**	**0**	**0**	**0**	**20**	**1**	**0**	**22**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**328**	**1,560**
8:30 AM	0	0	0	138	20	0	21	129	0	2	0	14	0	0	15	0	0	0	0	0	0	0	0	0	0	339	1,471
8:45 AM	0	0	2	73	24	0	8	104	0	0	0	10	0	0	12	0	0	0	0	0	0	0	0	1	0	234	1,278
Count Total	1	1	12	869	266	0	196	1,085	5	7	0	133	7	4	159	0	0	1	1	0	0	0	0	1	0	2,748	0
Peak Hour All	**1**	**1**	**8**	**469**	**174**	**0**	**119**	**583**	**3**	**1**	**0**	**92**	**6**	**2**	**100**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1,560**	**0**
Peak Hour HV	**0**	**0**	**0**	**15**	**3**	**0**	**3**	**19**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**43**	**0**
Peak Hour HV%	**0%**	**0%**	**0%**	**3%**	**2%**	**-**	**3%**	**3%**	**0%**	**0%**	**-**	**1%**	**0%**	**0%**	**2%**	**-**	**-**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**-**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals						Bicycles						Pedestrians (Crossing Leg)					
	EB	WB	NB	SB	SWB	Total	EB	WB	NB	SB	SWB	Total	East	West	North	South	Northeast	Total
7:00 AM	3	5	0	0	0	*8*	0	0	0	0	0	*0*	0	0	0	1	0	*1*
7:15 AM	2	2	0	0	0	*4*	0	0	0	0	0	*0*	0	0	0	0	0	*0*
7:30 AM	**4**	**5**	**3**	**0**	**0**	***12***	**0**	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**3**	**0**	***3***
7:45 AM	**3**	**6**	**0**	**0**	**0**	***9***	**0**	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	**0**	***2***
8:00 AM	**6**	**6**	**0**	**0**	**0**	***12***	**0**	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**3**	**0**	***3***
8:15 AM	**5**	**5**	**0**	**0**	**0**	***10***	**0**	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**1**	**0**	***2***
8:30 AM	2	4	1	0	0	*7*	0	0	0	0	0	*0*	0	0	0	0	0	*0*
8:45 AM	3	3	0	0	0	*6*	0	0	0	0	0	*0*	0	0	0	0	0	*0*
Count Total	28	36	4	0	0	*68*	0	0	0	0	0	*0*	0	1	0	10	0	*11*
Peak Hr	**18**	**22**	**3**	**0**	**0**	***43***	**0**	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**9**	**0**	*10*

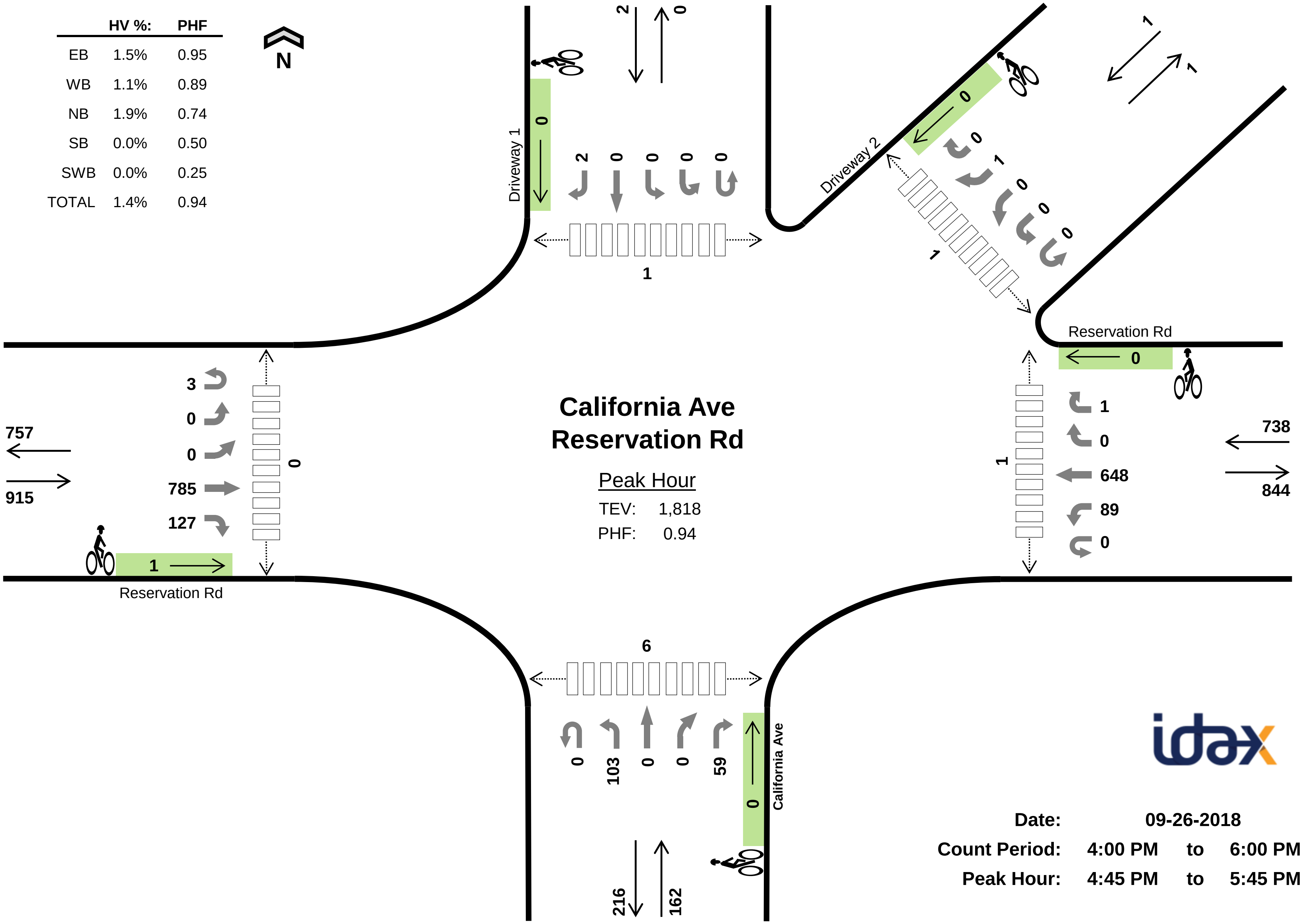
Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd					Reservation Rd					California Ave					Driveway 1					Driveway 2					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Southwestbound						
	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	HL	BL	BR	HR		
7:00 AM	0	0	0	3	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
7:15 AM	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
7:30 AM	**0**	**0**	**0**	**3**	**1**	**0**	**2**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	0
7:45 AM	**0**	**0**	**0**	**2**	**1**	**0**	**1**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	33
8:00 AM	**0**	**0**	**0**	**5**	**1**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	37
8:15 AM	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**43**
8:30 AM	0	0	0	2	0	0	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7	38
8:45 AM	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	35
Count Total	0	0	0	25	3	0	5	31	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	68	0
Peak Hour	**0**	**0**	**0**	**15**	**3**	**0**	**3**	**19**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	43	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd					Reservation Rd					California Ave					Driveway 1					Driveway 2					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Southwestbound						
	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	HL	BL	BR	HR		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	**0**

	HV %:	PHF
EB	1.5%	0.95
WB	1.1%	0.89
NB	1.9%	0.74
SB	0.0%	0.50
SWB	0.0%	0.25
TOTAL	1.4%	0.94



California Ave
Reservation Rd

Peak Hour

TEV: 1,818

PHF: 0.94

Date: 09-26-2018

Count Period: 4:00 PM to 6:00 PM

Peak Hour: 4:45 PM to 5:45 PM

Two-Hour Count Summaries

Interval Start	Reservation Rd					Reservation Rd					California Ave					Driveway 1					Driveway 2					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Southwestbound						
	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	HL	BL	BR	HR		
4:00 PM	0	0	1	145	38	0	11	126	0	0	0	27	0	1	17	0	0	1	2	1	0	0	0	0	0	370	0
4:15 PM	0	0	0	151	25	0	18	116	0	0	0	20	0	0	16	0	0	2	2	0	0	0	0	0	0	350	0
4:30 PM	0	0	0	168	31	0	22	152	0	1	0	33	0	0	28	0	0	0	3	0	0	0	0	0	0	438	0
4:45 PM	**1**	**0**	**0**	**203**	**34**	**0**	**16**	**147**	**0**	**1**	**0**	**22**	**0**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**440**	1,598
5:00 PM	**1**	**0**	**0**	**194**	**26**	**0**	**13**	**147**	**0**	**0**	**0**	**36**	**0**	**0**	**19**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**437**	1,665
5:15 PM	**0**	**0**	**0**	**187**	**27**	**0**	**32**	**176**	**0**	**0**	**0**	**23**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**458**	1,773
5:30 PM	**1**	**0**	**0**	**201**	**40**	**0**	**28**	**178**	**0**	**0**	**0**	**22**	**0**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**483**	**1,818**
5:45 PM	0	0	0	139	41	1	22	160	0	0	0	39	0	0	19	0	0	0	0	0	0	0	0	0	0	421	1,799
Count Total	3	0	1	1,388	262	1	162	1,202	0	2	0	222	0	1	139	0	0	3	7	3	0	0	0	1	0	3,397	0
Peak Hour All	**3**	**0**	**0**	**785**	**127**	**0**	**89**	**648**	**0**	**1**	**0**	**103**	**0**	**0**	**59**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**1,818**	**0**
Peak Hour HV	**0**	**0**	**0**	**13**	**1**	**0**	**0**	**8**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**25**	**0**
Peak Hour HV%	**0%**	**-**	**-**	**2%**	**1%**	**-**	**0%**	**1%**	**-**	**0%**	**-**	**3%**	**-**	**-**	**0%**	**-**	**-**	**-**	**-**	**0%**	**-**	**-**	**-**	**0%**	**-**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals						Bicycles						Pedestrians (Crossing Leg)					
	EB	WB	NB	SB	SWB	Total	EB	WB	NB	SB	SWB	Total	East	West	North	South	Northeast	Total
4:00 PM	4	3	1	1	0	*9*	0	0	0	0	0	*0*	0	0	0	2	0	*2*
4:15 PM	3	3	2	0	0	*8*	0	0	0	0	0	*0*	0	0	0	0	0	*0*
4:30 PM	2	3	0	0	0	*5*	1	0	0	0	0	*1*	0	0	0	1	0	*1*
4:45 PM	**4**	**4**	**1**	**0**	**0**	***9***	**1**	**0**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**2**	**0**	***2***
5:00 PM	**5**	**3**	**0**	**0**	**0**	***8***	**0**	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	**0**	***2***
5:15 PM	**2**	**0**	**1**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	**0**	***2***
5:30 PM	**3**	**1**	**1**	**0**	**0**	***5***	**0**	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**1**	**0**	**1**	***3***
5:45 PM	3	3	0	0	0	*6*	0	0	0	0	0	*0*	0	0	0	3	0	*3*
Count Total	26	20	6	1	0	*53*	2	0	0	0	0	*2*	1	0	1	12	1	*15*
Peak Hr	**14**	**8**	**3**	**0**	**0**	***25***	**1**	**0**	**0**	**0**	**0**	***1***	**1**	**0**	**1**	**6**	**1**	*9*

Two-Hour Count Summaries - Heavy Vehicles

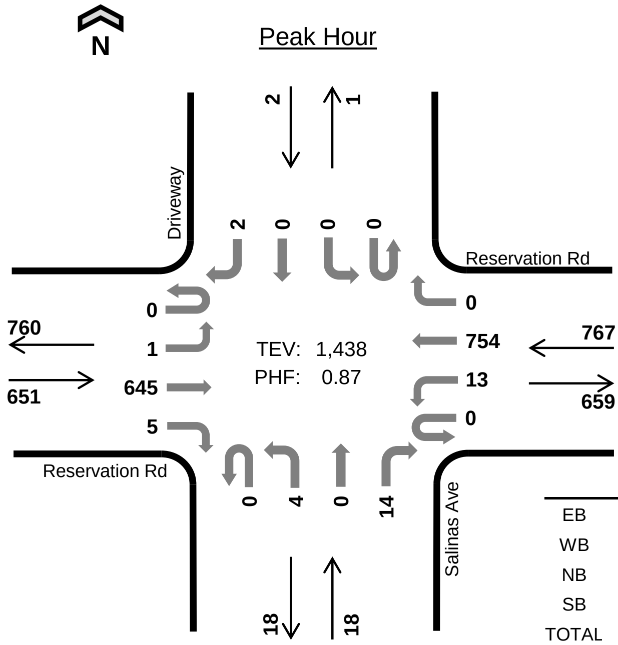
Interval Start	Reservation Rd					Reservation Rd					California Ave					Driveway 1					Driveway 2					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Southwestbound						
	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	HL	BL	BR	HR		
4:00 PM	0	0	0	4	0	0	1	2	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	9	0
4:15 PM	0	0	0	3	0	0	0	3	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	8	0
4:30 PM	0	0	0	2	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
4:45 PM	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	31
5:00 PM	**0**	**0**	**0**	**4**	**1**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	30
5:15 PM	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	25
5:30 PM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**25**
5:45 PM	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	22
Count Total	0	0	0	24	2	0	2	18	0	0	0	4	0	0	2	0	0	0	0	1	0	0	0	0	0	53	0
Peak Hour	**0**	**0**	**0**	**13**	**1**	**0**	**0**	**8**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	25	**0**

Two-Hour Count Summaries - Bikes

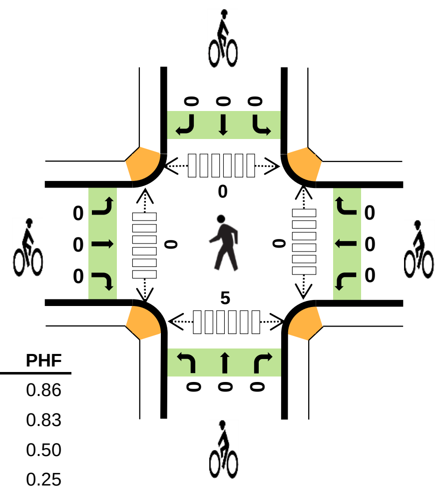
Interval Start	Reservation Rd					Reservation Rd					California Ave					Driveway 1					Driveway 2					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Southwestbound						
	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	HL	BL	BR	HR		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1	**0**

Salinas Ave
Reservation Rd

Date: 10-02-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM



	HV %:	PHF
EB	1.7%	0.86
WB	2.6%	0.83
NB	0.0%	0.50
SB	0.0%	0.25
TOTAL	2.2%	0.87



Two-Hour Count Summaries

Interval Start		Reservation Rd Eastbound UT	LT	TH	RT	Reservation Rd Westbound UT	LT	TH	RT	Salinas Ave Northbound UT	LT	TH	RT	Driveway Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	1	120	2	0	1	149	0	0	2	0	2	0	0	0	0	277	0
7:15 AM		**0**	**0**	**145**	**2**	**0**	**2**	**155**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**307**	0
7:30 AM		**0**	**0**	**189**	**1**	**0**	**4**	**214**	**0**	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**412**	0
7:45 AM		**0**	**0**	**158**	**1**	**0**	**4**	**227**	**0**	**0**	**1**	**0**	**8**	**0**	**0**	**0**	**0**	**399**	1,395
8:00 AM		**0**	**1**	**153**	**1**	**0**	**3**	**158**	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**320**	**1,438**
8:15 AM		0	0	112	1	1	2	155	0	0	1	0	2	0	0	0	0	274	1,405
8:30 AM		0	0	122	0	0	0	135	0	0	1	0	0	0	0	0	0	258	1,251
8:45 AM		0	0	79	0	0	0	111	0	0	2	0	1	0	0	0	0	193	1,045
Count Total		0	2	1,078	8	1	16	1,304	0	0	10	0	19	0	0	0	2	2,440	0
Peak Hour	**All**	**0**	**1**	**645**	**5**	**0**	**13**	**754**	**0**	**0**	**4**	**0**	**14**	**0**	**0**	**0**	**2**	**1,438**	**0**
	HV	**0**	**0**	**10**	**1**	**0**	**1**	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**31**	**0**
	HV%	**-**	**0%**	**2%**	**20%**	**-**	**8%**	**3%**	**-**	**-**	**0%**	**-**	**0%**	**-**	**-**	**-**	**0%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	4	3	0	0	*7*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	**4**	**7**	**0**	**0**	***11***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	*2*
7:30 AM	**3**	**2**	**0**	**0**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**1**	**5**	**0**	**0**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
8:00 AM	**3**	**6**	**0**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	***2***
8:15 AM	0	2	0	0	*2*	0	0	0	0	*0*	0	0	0	1	*1*
8:30 AM	6	3	0	0	*9*	0	0	0	0	*0*	0	0	0	2	*2*
8:45 AM	2	2	2	0	*6*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	23	30	2	0	*55*	0	0	0	0	*0*	0	0	0	8	*8*
Peak Hour	**11**	**20**	**0**	**0**	***31***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**5**	***5***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound UT	LT	TH	RT	Reservation Rd Westbound UT	LT	TH	RT	Salinas Ave Northbound UT	LT	TH	RT	Driveway Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	0	4	0	0	1	2	0	0	0	0	0	0	0	0	0	7	0
7:15 AM	**0**	**0**	**3**	**1**	**0**	**1**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	0
7:30 AM	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	0
7:45 AM	**0**	**0**	**1**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	29
8:00 AM	**0**	**0**	**3**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**31**
8:15 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	22
8:30 AM	0	0	6	0	0	0	3	0	0	0	0	0	0	0	0	0	9	26
8:45 AM	0	0	2	0	0	0	2	0	0	2	0	0	0	0	0	0	6	26
Count Total	0	0	22	1	0	2	28	0	0	2	0	0	0	0	0	0	55	0
Peak Hour	**0**	**0**	**10**	**1**	**0**	**1**	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**31**	**0**

Two-Hour Count Summaries - Bikes

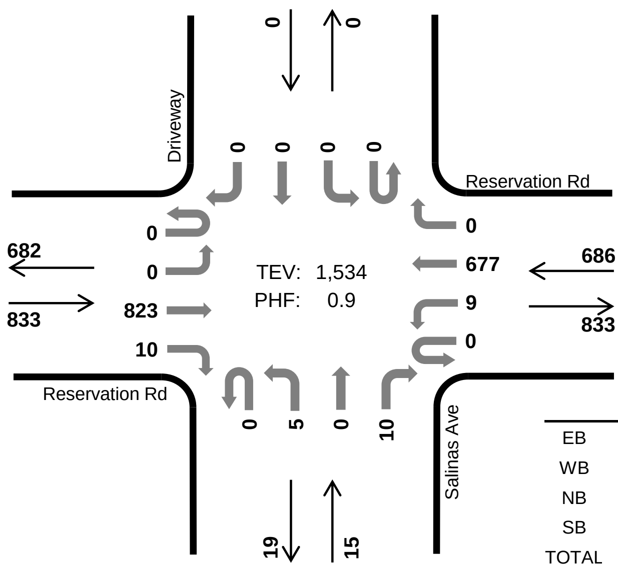
Interval Start	Reservation Rd Eastbound LT	TH	RT	Reservation Rd Westbound LT	TH	RT	Salinas Ave Northbound LT	TH	RT	Driveway Southbound LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

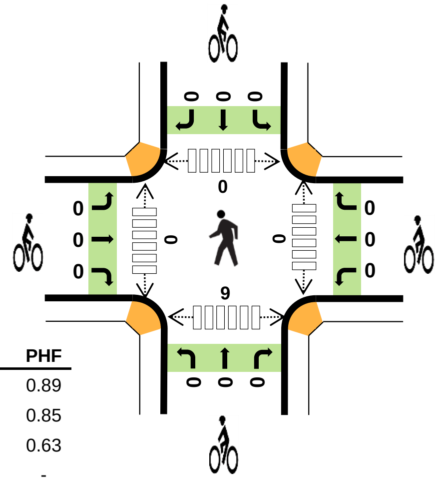
Salinas Ave
Reservation Rd

Date: 10-02-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM

Peak Hour



	HV %:	PHF
EB	1.2%	0.89
WB	0.9%	0.85
NB	0.0%	0.63
SB	-	-
TOTAL	1.0%	0.90



Two-Hour Count Summaries

Interval Start	Reservation Rd Eastbound UT	LT	TH	RT	Reservation Rd Westbound UT	LT	TH	RT	Salinas Ave Northbound UT	LT	TH	RT	Driveway Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	0	178	0	0	0	141	0	0	0	0	3	0	0	0	0	322	0
4:15 PM	0	0	186	2	0	0	144	0	0	0	0	1	0	0	0	4	337	0
4:30 PM	0	0	176	1	0	0	166	0	0	1	0	3	0	0	0	0	347	0
4:45 PM	**0**	**0**	**196**	**2**	**0**	**1**	**140**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**342**	1,348
5:00 PM	**0**	**0**	**230**	**3**	**0**	**2**	**148**	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**387**	1,413
5:15 PM	**0**	**0**	**216**	**3**	**0**	**5**	**196**	**0**	**0**	**1**	**0**	**5**	**0**	**0**	**0**	**0**	**426**	1,502
5:30 PM	**0**	**0**	**181**	**2**	**0**	**1**	**193**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**379**	**1,534**
5:45 PM	1	0	147	2	0	5	165	0	0	0	0	4	0	0	0	0	324	1,516
Count Total	1	0	1,510	15	0	14	1,293	0	0	6	0	21	0	0	0	4	2,864	0
Peak Hour All	**0**	**0**	**823**	**10**	**0**	**9**	**677**	**0**	**0**	**5**	**0**	**10**	**0**	**0**	**0**	**0**	**1,534**	**0**
Peak Hour HV	**0**	**0**	**10**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**0**
Peak Hour HV%	**-**	**-**	**1%**	**0%**	**-**	**0%**	**1%**	**-**	**-**	**0%**	**-**	**0%**	**-**	**-**	**-**	**-**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	4	2	0	0	*6*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	2	2	0	0	*4*	0	0	0	0	*0*	0	0	0	3	*3*
4:30 PM	2	3	0	0	*5*	0	0	0	0	*0*	0	0	0	0	*0*
4:45 PM	**1**	**1**	**0**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**4**	*4*
5:00 PM	**5**	**2**	**0**	**0**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:15 PM	**3**	**1**	**0**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**4**	*4*
5:30 PM	**1**	**2**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
5:45 PM	1	1	0	0	*2*	0	0	0	0	*0*	0	0	6	0	*6*
Count Total	19	14	0	0	*33*	0	0	0	0	*0*	0	0	6	12	*18*
Peak Hour	**10**	**6**	**0**	**0**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**9**	***9***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd Eastbound UT	LT	TH	RT	Reservation Rd Westbound UT	LT	TH	RT	Salinas Ave Northbound UT	LT	TH	RT	Driveway Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	6	0
4:15 PM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	4	0
4:30 PM	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	5	0
4:45 PM	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	17
5:00 PM	**0**	**0**	**5**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	18
5:15 PM	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	18
5:30 PM	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**16**
5:45 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	16
Count Total	0	0	19	0	0	0	14	0	0	0	0	0	0	0	0	0	33	0
Peak Hour	**0**	**0**	**10**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**0**

Two-Hour Count Summaries - Bikes

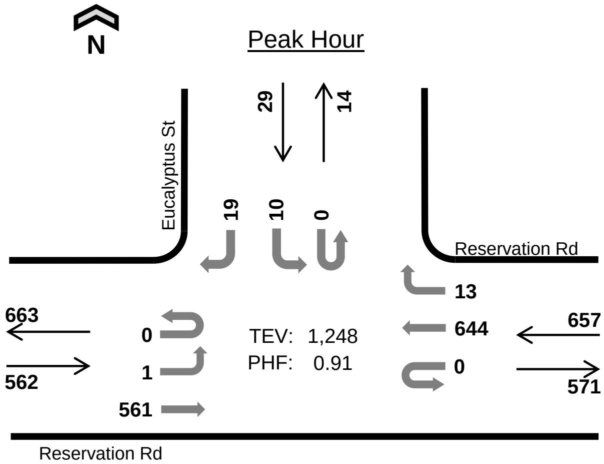
Interval Start	Reservation Rd Eastbound LT	TH	RT	Reservation Rd Westbound LT	TH	RT	Salinas Ave Northbound LT	TH	RT	Driveway Southbound LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

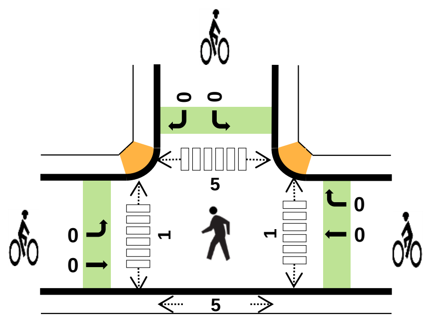
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Eucalyptus St
Reservation Rd

Date: 09-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM

Peak Hour





	HV %:	PHF
EB	3.2%	0.82
WB	3.5%	0.93
NB	-	-
SB	0.0%	0.73
TOTAL	3.3%	0.91

Two-Hour Count Summaries

Interval Start		Reservation Rd Eastbound UT	LT	TH	RT	Reservation Rd Westbound UT	LT	TH	RT	0 Northbound UT	LT	TH	RT	Eucalyptus St Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	0	75	0	0	0	186	0	0	0	0	0	0	1	0	5	267	0
7:15 AM		0	1	106	0	0	0	157	1	0	0	0	0	0	2	0	4	271	0
7:30 AM		0	0	129	0	0	0	159	1	0	0	0	0	0	2	0	1	292	0
7:45 AM		**0**	**0**	**172**	**0**	**0**	**0**	**164**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**3**	**343**	1,173
8:00 AM		**0**	**0**	**135**	**0**	**0**	**0**	**152**	**5**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**296**	1,202
8:15 AM		**0**	**0**	**110**	**0**	**0**	**0**	**171**	**5**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**6**	**296**	1,227
8:30 AM		**0**	**1**	**144**	**0**	**0**	**0**	**157**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**7**	**313**	**1,248**
8:45 AM		0	3	104	0	0	0	143	2	0	0	0	0	0	2	0	0	254	1,159
Count Total		0	5	975	0	0	0	1,289	17	0	0	0	0	0	17	0	29	2,332	0
Peak Hour	**All**	**0**	**1**	**561**	**0**	**0**	**0**	**644**	**13**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**19**	**1,248**	**0**
	HV	**0**	**0**	**18**	**0**	**0**	**0**	**23**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**41**	**0**
	HV%	**-**	**0%**	**3%**	**-**	**-**	**-**	**4%**	**0%**	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**0%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	5	6	0	0	*11*	0	0	0	0	*0*	0	0	1	0	*1*
7:15 AM	2	3	0	0	*5*	0	1	0	0	*1*	0	0	0	1	*1*
7:30 AM	5	7	0	0	*12*	0	0	0	0	*0*	1	0	3	1	*5*
7:45 AM	**5**	**4**	**0**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**1**	**2**	*5*
8:00 AM	**5**	**9**	**0**	**0**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	*1*
8:15 AM	**4**	**5**	**0**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**2**	**2**	*4*
8:30 AM	**4**	**5**	**0**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**1**	***2***
8:45 AM	4	5	0	0	*9*	0	0	0	0	*0*	0	0	5	2	*7*
Count Total	34	44	0	0	*78*	0	1	0	0	*1*	2	1	14	9	*26*
Peak Hr	**18**	**23**	**0**	**0**	***41***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**5**	**5**	***12***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd				Reservation Rd				0				Eucalyptus St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	5	0	0	0	6	0	0	0	0	0	0	0	0	0	11	0
7:15 AM	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	5	0
7:30 AM	0	0	5	0	0	0	7	0	0	0	0	0	0	0	0	0	12	0
7:45 AM	**0**	**0**	**5**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	37
8:00 AM	**0**	**0**	**5**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	40
8:15 AM	**0**	**0**	**4**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	44
8:30 AM	**0**	**0**	**4**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**41**
8:45 AM	0	0	4	0	0	0	5	0	0	0	0	0	0	0	0	0	9	41
Count Total	0	0	34	0	0	0	44	0	0	0	0	0	0	0	0	0	78	0
Peak Hour	**0**	**0**	**18**	**0**	**0**	**0**	**23**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**41**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd			Reservation Rd			0			Eucalyptus St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	1	0	0	0	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

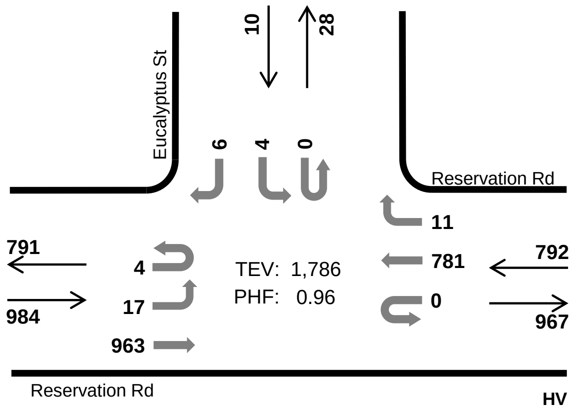
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

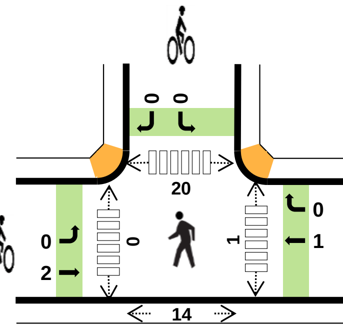
Eucalyptus St
Reservation Rd

N

Peak Hour

Date: 09-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM





	HV %:	PHF
EB	1.5%	0.94
WB	1.1%	0.96
NB	-	-
SB	0.0%	0.63
TOTAL	1.3%	0.96

Two-Hour Count Summaries

Interval Start		Reservation Rd Eastbound UT	LT	TH	RT	Reservation Rd Westbound UT	LT	TH	RT	0 Northbound UT	LT	TH	RT	Eucalyptus St Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM		0	5	203	0	0	0	180	5	0	0	0	0	0	2	0	3	398	0
4:15 PM		0	2	205	0	0	0	171	3	0	0	0	0	0	4	0	3	388	0
4:30 PM		0	2	243	0	0	0	170	3	0	0	0	0	0	2	0	2	422	0
4:45 PM		**1**	**3**	**250**	**0**	**0**	**0**	**181**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**440**	1,648
5:00 PM		**0**	**3**	**229**	**0**	**0**	**0**	**204**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**441**	1,691
5:15 PM		**3**	**4**	**230**	**0**	**0**	**0**	**203**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**442**	1,745
5:30 PM		**0**	**7**	**254**	**0**	**0**	**0**	**193**	**5**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**463**	**1,786**
5:45 PM		1	2	224	0	0	0	208	1	0	0	0	0	0	2	0	1	439	1,785
Count Total		5	28	1,838	0	0	0	1,510	23	0	0	0	0	0	14	0	15	3,433	0
Peak Hour	**All**	**4**	**17**	**963**	**0**	**0**	**0**	**781**	**11**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**6**	**1,786**	**0**
	HV	**0**	**0**	**15**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**24**	**0**
	HV%	**0%**	**0%**	**2%**	**-**	**-**	**-**	**1%**	**0%**	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	2	3	0	0	*5*	0	0	0	0	*0*	0	0	6	3	*9*
4:15 PM	3	3	0	0	*6*	0	0	0	0	*0*	1	1	4	2	*8*
4:30 PM	2	2	0	0	*4*	1	0	0	0	*1*	2	0	10	2	*14*
4:45 PM	**7**	**4**	**0**	**0**	***11***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**5**	**5**	*10*
5:00 PM	**2**	**3**	**0**	**0**	***5***	**1**	**0**	**0**	**0**	***1***	**1**	**0**	**4**	**3**	*8*
5:15 PM	**2**	**2**	**0**	**0**	***4***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**2**	**5**	*7*
5:30 PM	**4**	**0**	**0**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**9**	**1**	***10***
5:45 PM	3	4	0	0	*7*	1	0	0	0	*1*	1	1	5	3	*10*
Count Total	25	21	0	0	*46*	4	1	0	0	*5*	5	2	45	24	*76*
Peak Hr	**15**	**9**	**0**	**0**	***24***	**2**	**1**	**0**	**0**	***3***	**1**	**0**	**20**	**14**	***35***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Reservation Rd				Reservation Rd				0				Eucalyptus St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	5	0
4:15 PM	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	6	0
4:30 PM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	4	0
4:45 PM	**0**	**0**	**7**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	26
5:00 PM	**0**	**0**	**2**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	26
5:15 PM	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	24
5:30 PM	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**24**
5:45 PM	0	0	3	0	0	0	4	0	0	0	0	0	0	0	0	0	7	20
Count Total	0	0	25	0	0	0	21	0	0	0	0	0	0	0	0	0	46	0
Peak Hour	**0**	**0**	**15**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**24**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Reservation Rd			Reservation Rd			0			Eucalyptus St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
5:00 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
5:15 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	4
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	3
Count Total	0	4	0	0	1	0	0	0	0	0	0	0	5	0
Peak Hour	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

SYNCHRO LEVEL OF SERVICE REPORTS

EXISTING CONDITIONS

AM & PM PEAK HOUR

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	10	10	0	391	10	10	1476
Future Vol, veh/h	10	10	0	391	10	10	1476
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	225	-	-	150	-
Veh in Median Storage, #	2	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	11	11	0	420	11	11	1587

Major/Minor	Minor1		Major1			Major2	
Conflicting Flow All	1242	216	1587	0	0	431	0
Stage 1	426	-	-	-	-	-	-
Stage 2	816	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	167	789	138	-	-	1125	-
Stage 1	627	-	-	-	-	-	-
Stage 2	395	-	-	-	-	-	-
Platoon blocked, %				-	-		-
Mov Cap-1 Maneuver	165	789	138	-	-	1125	-
Mov Cap-2 Maneuver	336	-	-	-	-	-	-
Stage 1	621	-	-	-	-	-	-
Stage 2	395	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.9	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBU	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	138	-	-	336	789	1125	-
HCM Lane V/C Ratio	-	-	-	0.032	0.014	0.01	-
HCM Control Delay (s)	0	-	-	16.1	9.6	8.2	-
HCM Lane LOS	A	-	-	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	492	65	0	280	119	78	991
Future Volume (veh/h)	492	65	0	280	119	78	991
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1870	1900		1870	1870	1870	1870
Adj Flow Rate, veh/h	594	0		301	128	84	1066
Peak Hour Factor	0.93	0.93		0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0		2	2	2	2
Cap, veh/h	935	423		1084	482	138	1686
Arrive On Green	0.26	0.00		0.31	0.31	0.08	0.47
Sat Flow, veh/h	3563	1610		3647	1580	1781	3647
Grp Volume(v), veh/h	594	0		301	128	84	1066
Grp Sat Flow(s),veh/h/ln	1781	1610		1777	1580	1781	1777
Q Serve(g_s), s	5.6	0.0		2.4	2.3	1.7	8.6
Cycle Q Clear(g_c), s	5.6	0.0		2.4	2.3	1.7	8.6
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	935	423		1084	482	138	1686
V/C Ratio(X)	0.64	0.00		0.28	0.27	0.61	0.63
Avail Cap(c_a), veh/h	2811	1271		2804	1247	1406	2804
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	0.0		10.0	10.0	17.0	7.5
Incr Delay (d2), s/veh	0.7	0.0		0.1	0.3	4.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0		0.7	0.7	0.7	1.9
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	13.1	0.0		10.2	10.3	21.3	7.9
LnGrp LOS	B	A		B	B	C	A
Approach Vol, veh/h	594			429			1150
Approach Delay, s/veh	13.1			10.2			8.9
Approach LOS	B			B			A

Timer - Assigned Phs	1	2	6	8
Phs Duration (G+Y+Rc), s	6.4	16.6	23.0	15.0
Change Period (Y+Rc), s	3.5	5.0	5.0	5.0
Max Green Setting (Gmax), s	30.0	30.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	3.7	4.4	10.6	7.6
Green Ext Time (p_c), s	0.2	2.3	7.5	2.3

Intersection Summary	
HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B

Notes
User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	21	211	68	21	20	51	288	11	19	790	26
Future Volume (veh/h)	76	21	211	68	21	20	51	288	11	19	790	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	78	22	218	70	22	21	53	297	11	20	814	27
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	325	92	359	144	151	123	70	1401	52	34	1354	580
Arrive On Green	0.23	0.23	0.23	0.08	0.08	0.08	0.04	0.40	0.40	0.02	0.38	0.38
Sat Flow, veh/h	1404	396	1552	1781	1870	1520	1781	3492	129	1781	3554	1523
Grp Volume(v), veh/h	100	0	218	70	22	21	53	151	157	20	814	27
Grp Sat Flow(s),veh/h/ln	1800	0	1552	1781	1870	1520	1781	1777	1844	1781	1777	1523
Q Serve(g_s), s	2.7	0.0	7.5	2.2	0.7	0.8	1.8	3.3	3.3	0.7	11.0	0.7
Cycle Q Clear(g_c), s	2.7	0.0	7.5	2.2	0.7	0.8	1.8	3.3	3.3	0.7	11.0	0.7
Prop In Lane	0.78		1.00	1.00		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	417	0	359	144	151	123	70	713	740	34	1354	580
V/C Ratio(X)	0.24	0.00	0.61	0.49	0.15	0.17	0.76	0.21	0.21	0.59	0.60	0.05
Avail Cap(c_a), veh/h	1354	0	1168	596	625	508	596	713	740	447	1783	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	0.0	20.5	26.3	25.6	25.6	28.5	11.7	11.7	29.1	14.9	11.7
Incr Delay (d2), s/veh	1.1	0.0	5.9	2.5	0.4	0.7	6.2	0.7	0.7	6.1	0.2	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(50%),veh/ln	1.2	0.0	3.1	1.0	0.3	0.3	0.8	1.3	1.3	0.3	3.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.8	0.0	26.4	28.8	26.0	26.3	34.7	12.4	12.4	35.2	15.0	11.7
LnGrp LOS	B	A	C	C	C	C	C	B	B	D	B	B
Approach Vol, veh/h		318			113			361			861	
Approach Delay, s/veh		24.3			27.8			15.7			15.4	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	4	5	6	8
Phs Duration (G+Y+Rc), s	4.6	28.5	17.9	5.8	27.3	8.8
Change Period (Y+Rc), s	3.5	4.5	4.0	3.5	4.5	4.0
Max Green Setting (Gmax), s	15.0	24.0	45.0	20.0	30.0	20.0
Max Q Clear Time (g_c+I1), s	2.7	5.3	9.5	3.8	13.0	4.2
Green Ext Time (p_c), s	0.0	0.5	4.2	0.0	2.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	191	114	383	147	143	115	154	224	140	204	3
Future Volume (veh/h)	12	191	114	383	147	143	115	154	224	140	204	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	215	128	430	165	161	129	173	252	157	229	3
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	20	333	204	698	378	310	172	496	726	330	947	12
Arrive On Green	0.16	0.16	0.16	0.20	0.20	0.20	0.10	0.27	0.27	0.10	0.26	0.26
Sat Flow, veh/h	124	2068	1268	3456	1870	1538	1781	1870	2737	3456	3590	47
Grp Volume(v), veh/h	195	0	161	430	165	161	129	173	252	157	113	119
Grp Sat Flow(s),veh/h/ln	1864	0	1596	1728	1870	1538	1781	1870	1369	1728	1777	1860
Q Serve(g_s), s	5.7	0.0	5.4	6.6	4.5	5.4	4.1	4.3	4.3	2.5	2.9	2.9
Cycle Q Clear(g_c), s	5.7	0.0	5.4	6.6	4.5	5.4	4.1	4.3	4.3	2.5	2.9	2.9
Prop In Lane	0.07		0.79	1.00		1.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	300	0	257	698	378	310	172	496	726	330	469	491
V/C Ratio(X)	0.65	0.00	0.63	0.62	0.44	0.52	0.75	0.35	0.35	0.48	0.24	0.24
Avail Cap(c_a), veh/h	645	0	552	1792	970	798	924	970	1420	1195	1229	1286
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	0.0	22.6	21.0	20.2	20.6	25.4	17.2	17.2	24.8	16.7	16.7
Incr Delay (d2), s/veh	2.4	0.0	2.5	0.9	0.8	1.3	6.4	0.4	0.3	1.1	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	2.1	2.5	1.9	1.9	1.9	1.7	1.2	1.0	1.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	0.0	25.1	21.9	21.0	21.9	31.8	17.6	17.5	25.9	17.0	17.0
LnGrp LOS	C	A	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		356			756			554			389	
Approach Delay, s/veh		25.1			21.7			20.9			20.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	19.3		13.3	9.6	19.3		15.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	20.0	30.0		20.0	30.0	40.0		30.0
Max Q Clear Time (g_c+I1), s	4.5	6.3		7.7	6.1	4.9		8.6
Green Ext Time (p_c), s	0.4	2.0		1.7	0.3	1.3		3.1

Intersection Summary		
HCM 6th Ctrl Delay		21.9
HCM 6th LOS		C

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	484	10	11	626	52	5	1	3	58	1	57
Future Volume (veh/h)	44	484	10	11	626	52	5	1	3	58	1	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.98		0.98	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	526	11	12	680	0	5	1	3	63	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	1956	41	55	1533		348	57	266	385	5	
Arrive On Green	0.15	0.55	0.55	0.03	0.43	0.00	0.17	0.17	0.17	0.17	0.17	0.00
Sat Flow, veh/h	1781	3558	74	1781	3554	1585	1202	335	1552	1346	29	1585
Grp Volume(v), veh/h	48	262	275	12	680	0	6	0	3	64	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1856	1781	1777	1585	1536	0	1552	1375	0	1585
Q Serve(g_s), s	1.1	3.6	3.6	0.3	6.2	0.0	0.0	0.0	0.1	1.8	0.0	0.0
Cycle Q Clear(g_c), s	1.1	3.6	3.6	0.3	6.2	0.0	0.1	0.0	0.1	1.9	0.0	0.0
Prop In Lane	1.00		0.04	1.00		1.00	0.83		1.00	0.98		1.00
Lane Grp Cap(c), veh/h	266	977	1020	55	1533		406	0	266	390	0	
V/C Ratio(X)	0.18	0.27	0.27	0.22	0.44		0.01	0.00	0.01	0.16	0.00	
Avail Cap(c_a), veh/h	615	1897	1982	423	1571		1098	0	1004	946	0	
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	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.2	5.5	5.5	21.9	9.3	0.0	16.0	0.0	15.9	16.8	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.1	0.1	2.0	0.2	0.0	0.0	0.0	0.0	0.2	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(50%),veh/ln	0.4	0.9	1.0	0.1	1.9	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.6	5.7	5.7	23.9	9.5	0.0	16.0	0.0	16.0	17.0	0.0	0.0
LnGrp LOS	B	A	A	C	A		B	A	B	B	A	
Approach Vol, veh/h		585			692	A		9			64	A
Approach Delay, s/veh		6.6			9.7			16.0			17.0	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.9	4.9	29.5		11.9	10.4	24.0				
Change Period (Y+Rc), s		4.0	3.5	4.0		4.0	3.5	4.0				
Max Green Setting (Gmax), s		30.0	11.0	49.5		26.5	16.0	20.5				
Max Q Clear Time (g_c+I1), s		2.1	2.3	5.6		3.9	3.1	8.2				
Green Ext Time (p_c), s		0.0	0.0	3.6		0.3	0.1	3.7				

Intersection Summary			
HCM 6th Ctrl Delay			8.8
HCM 6th LOS			A

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	517	54	123	582	75	57
Future Volume (veh/h)	517	54	123	582	75	57
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	556	58	132	626	81	61
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1412	629	296	2283	304	270
Arrive On Green	0.40	0.40	0.17	0.64	0.17	0.17
Sat Flow, veh/h	3647	1583	1781	3647	1781	1585
Grp Volume(v), veh/h	556	58	132	626	81	61
Grp Sat Flow(s),veh/h/ln	1777	1583	1781	1777	1781	1585
Q Serve(g_s), s	5.7	1.2	3.4	3.9	2.0	1.7
Cycle Q Clear(g_c), s	5.7	1.2	3.4	3.9	2.0	1.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1412	629	296	2283	304	270
V/C Ratio(X)	0.39	0.09	0.45	0.27	0.27	0.23
Avail Cap(c_a), veh/h	2100	935	1018	2283	1053	937
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.9	9.6	19.1	3.9	18.3	18.2
Incr Delay (d2), s/veh	0.2	0.1	1.0	0.1	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.3	1.4	0.8	0.8	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.1	9.6	20.1	4.0	18.8	18.6
LnGrp LOS	B	A	C	A	B	B
Approach Vol, veh/h	614			758	142	
Approach Delay, s/veh	11.0			6.8	18.7	
Approach LOS	B			A	B	

Timer - Assigned Phs	2	3	4	8
Phs Duration (G+Y+Rc), s	13.6	12.4	24.7	37.1
Change Period (Y+Rc), s	5.0	4.0	4.5	4.5
Max Green Setting (Gmax), s	30.0	29.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	4.0	5.4	7.7	5.9
Green Ext Time (p_c), s	0.4	0.3	4.0	4.5

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	525	3	0	627	74	3	0	1	49	1	45
Future Volume (veh/h)	70	525	3	0	627	74	3	0	1	49	1	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.98	0.98		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	559	3	0	667	79	3	0	1	52	1	48
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, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	119	2150	12	0	1600	711	331	19	71	450	7	329
Arrive On Green	0.07	0.59	0.59	0.00	0.45	0.45	0.21	0.00	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1781	3624	19	0	3647	1580	919	92	337	1400	34	1568
Grp Volume(v), veh/h	74	274	288	0	667	79	4	0	0	53	0	48
Grp Sat Flow(s),veh/h/ln	1781	1777	1867	0	1777	1580	1349	0	0	1435	0	1568
Q Serve(g_s), s	1.9	3.4	3.4	0.0	5.8	1.3	0.0	0.0	0.0	0.0	0.0	1.1
Cycle Q Clear(g_c), s	1.9	3.4	3.4	0.0	5.8	1.3	1.1	0.0	0.0	1.1	0.0	1.1
Prop In Lane	1.00		0.01	0.00		1.00	0.75		0.25	0.98		1.00
Lane Grp Cap(c), veh/h	119	1054	1107	0	1600	711	421	0	0	457	0	329
V/C Ratio(X)	0.62	0.26	0.26	0.00	0.42	0.11	0.01	0.00	0.00	0.12	0.00	0.15
Avail Cap(c_a), veh/h	603	1164	1223	0	2329	1035	736	0	0	1077	0	1027
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.8	4.5	4.5	0.0	8.5	7.3	14.3	0.0	0.0	14.7	0.0	14.7
Incr Delay (d2), s/veh	5.3	0.1	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.8	0.8	0.0	1.7	0.4	0.0	0.0	0.0	0.4	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	4.6	4.6	0.0	8.7	7.4	14.3	0.0	0.0	14.8	0.0	14.9
LnGrp LOS	C	A	A	A	A	A	B	A	A	B	A	B
Approach Vol, veh/h		636			746			4			101	
Approach Delay, s/veh		7.1			8.6			14.3			14.9	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		13.6		32.2		13.6	6.5	25.6
Change Period (Y+Rc), s		4.0		5.0		4.0	3.5	5.0
Max Green Setting (Gmax), s		20.0		30.0		30.0	15.5	30.0
Max Q Clear Time (g_c+I1), s		3.1		5.4		3.1	3.9	7.8
Green Ext Time (p_c), s		0.0		3.5		0.4	0.1	5.0

Intersection Summary	
HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	520	24	27	625	105	14	3	14	101	1	64
Future Volume (veh/h)	31	520	24	27	625	105	14	3	14	101	1	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	571	26	30	687	115	15	3	15	111	1	70
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	1155	490	71	1141	498	135	16	660	153	1	665
Arrive On Green	0.04	0.33	0.33	0.04	0.32	0.32	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	1781	3554	1506	1781	3554	1550	17	38	1564	33	2	1576
Grp Volume(v), veh/h	34	571	26	30	687	115	18	0	15	112	0	70
Grp Sat Flow(s),veh/h/ln	1781	1777	1506	1781	1777	1550	54	0	1564	35	0	1576
Q Serve(g_s), s	1.0	6.7	0.6	0.8	8.4	2.8	0.3	0.0	0.3	0.5	0.0	1.4
Cycle Q Clear(g_c), s	1.0	6.7	0.6	0.8	8.4	2.8	21.8	0.0	0.3	21.8	0.0	1.4
Prop In Lane	1.00		1.00	1.00		1.00	0.83		1.00	0.99		1.00
Lane Grp Cap(c), veh/h	79	1155	490	71	1141	498	151	0	660	153	0	665
V/C Ratio(X)	0.43	0.49	0.05	0.42	0.60	0.23	0.12	0.00	0.02	0.73	0.00	0.11
Avail Cap(c_a), veh/h	689	1685	714	689	1650	720	156	0	666	159	0	671
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.1	14.0	12.0	24.2	14.8	12.9	13.1	0.0	8.7	25.7	0.0	9.0
Incr Delay (d2), s/veh	3.7	0.3	0.0	3.9	0.5	0.2	0.3	0.0	0.0	15.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.4	0.2	0.4	3.0	0.9	0.1	0.0	0.1	1.9	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.8	14.4	12.0	28.1	15.3	13.1	13.4	0.0	8.7	40.9	0.0	9.1
LnGrp LOS	C	B	B	C	B	B	B	A	A	D	A	A
Approach Vol, veh/h		631			832			33			182	
Approach Delay, s/veh		15.0			15.4			11.3			28.6	
Approach LOS		B			B			B			C	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		25.9	5.6	20.4		25.9	5.8	20.2
Change Period (Y+Rc), s		4.0	3.5	3.5		4.0	3.5	3.5
Max Green Setting (Gmax), s		22.0	20.0	24.5		22.0	20.0	24.0
Max Q Clear Time (g_c+I1), s		23.8	2.8	8.7		23.8	3.0	10.4
Green Ext Time (p_c), s		0.0	0.0	3.6		0.0	0.0	4.3

Intersection Summary			
HCM 6th Ctrl Delay			16.6
HCM 6th LOS			B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	500	73	73	614	18	102	18	103	43	30	25
Future Volume (veh/h)	25	500	73	73	614	18	102	18	103	43	30	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	543	79	79	667	20	111	20	112	47	33	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	824	361	105	924	28	386	70	398	244	171	360
Arrive On Green	0.03	0.23	0.23	0.06	0.26	0.26	0.25	0.25	0.25	0.23	0.23	0.23
Sat Flow, veh/h	1781	3554	1558	1781	3520	106	1520	274	1566	1067	750	1577
Grp Volume(v), veh/h	27	543	79	79	336	351	131	0	112	80	0	27
Grp Sat Flow(s),veh/h/ln	1781	1777	1558	1781	1777	1849	1794	0	1566	1817	0	1577
Q Serve(g_s), s	1.2	11.3	3.3	3.6	14.0	14.1	4.8	0.0	4.7	2.9	0.0	1.1
Cycle Q Clear(g_c), s	1.2	11.3	3.3	3.6	14.0	14.1	4.8	0.0	4.7	2.9	0.0	1.1
Prop In Lane	1.00		1.00	1.00		0.06	0.85		1.00	0.59		1.00
Lane Grp Cap(c), veh/h	50	824	361	105	467	486	456	0	398	415	0	360
V/C Ratio(X)	0.54	0.66	0.22	0.75	0.72	0.72	0.29	0.00	0.28	0.19	0.00	0.07
Avail Cap(c_a), veh/h	874	1744	764	874	872	907	881	0	769	892	0	774
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.1	28.4	25.3	37.8	27.3	27.3	24.5	0.0	24.4	25.4	0.0	24.7
Incr Delay (d2), s/veh	8.8	0.9	0.3	10.4	2.1	2.0	0.3	0.0	0.4	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.8	1.2	1.8	6.0	6.2	2.0	0.0	1.7	1.2	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.9	29.3	25.6	48.1	29.5	29.4	24.8	0.0	24.8	25.6	0.0	24.8
LnGrp LOS	D	C	C	D	C	C	C	A	C	C	A	C
Approach Vol, veh/h		649			766			243			107	
Approach Delay, s/veh		29.6			31.4			24.8			25.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.7	8.3	23.9		23.6	5.8	26.4				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		40.0	40.0	40.0		40.0	40.0	40.0				
Max Q Clear Time (g_c+I1), s		6.8	5.6	13.3		4.9	3.2	16.1				
Green Ext Time (p_c), s		1.2	0.2	4.2		0.5	0.0	4.5				

Intersection Summary			
HCM 6th Ctrl Delay			29.5
HCM 6th LOS			C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	469	174	119	583	4	92	8	100	0	1	0
Future Volume (veh/h)	10	469	174	119	583	4	92	8	100	0	1	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	515	191	131	641	4	101	9	110	0	1	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	1464	645	177	1800	11	201	18	189	0	10	0
Arrive On Green	0.01	0.41	0.41	0.10	0.50	0.50	0.12	0.12	0.12	0.00	0.01	0.00
Sat Flow, veh/h	1781	3554	1566	1781	3620	23	1642	146	1546	0	1870	0
Grp Volume(v), veh/h	11	515	191	131	315	330	110	0	110	0	1	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1566	1781	1777	1866	1788	0	1546	0	1870	0
Q Serve(g_s), s	0.3	4.8	4.0	3.5	5.2	5.3	2.8	0.0	3.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	4.8	4.0	3.5	5.2	5.3	2.8	0.0	3.3	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	0.92		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	25	1464	645	177	884	928	219	0	189	0	10	0
V/C Ratio(X)	0.43	0.35	0.30	0.74	0.36	0.36	0.50	0.00	0.58	0.00	0.10	0.00
Avail Cap(c_a), veh/h	972	2196	968	1339	1098	1153	1326	0	1147	0	1117	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	23.7	9.8	9.6	21.2	7.5	7.5	19.9	0.0	20.1	0.0	24.0	0.0
Incr Delay (d2), s/veh	11.3	0.1	0.3	5.9	0.2	0.2	1.8	0.0	2.8	0.0	4.1	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(50%),veh/ln	0.2	1.5	1.1	1.6	1.6	1.6	1.2	0.0	1.2	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.1	10.0	9.8	27.2	7.7	7.7	21.7	0.0	22.9	0.0	28.1	0.0
LnGrp LOS	D	A	A	C	A	A	C	A	C	A	C	A
Approach Vol, veh/h		717			776			220			1	
Approach Delay, s/veh		10.3			11.0			22.3			28.1	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.2	29.1		9.9	8.3	25.0		5.3				
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	26.5	30.0		36.0	36.5	30.0		29.0				
Max Q Clear Time (g_c+I1), s	2.3	7.3		5.3	5.5	6.8		2.0				
Green Ext Time (p_c), s	0.0	4.1		1.0	0.4	4.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay			12.2
HCM 6th LOS			B

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	645	5	13	754	10	19
Future Vol, veh/h	645	5	13	754	10	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	150	-	-	-
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	701	5	14	820	11	21

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	706	0	1139	351
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	438	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	888	-	195	645
Stage 1	-	-	-	-	453	-
Stage 2	-	-	-	-	618	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	888	-	192	645
Mov Cap-2 Maneuver	-	-	-	-	319	-
Stage 1	-	-	-	-	446	-
Stage 2	-	-	-	-	618	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	13.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	477	-	-	888	-
HCM Lane V/C Ratio	0.066	-	-	0.016	-
HCM Control Delay (s)	13.1	-	-	9.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	561	644	13	10	19
Future Vol, veh/h	1	561	644	13	10	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	616	708	14	11	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	722	0	-	0	1025	361
Stage 1	-	-	-	-	715	-
Stage 2	-	-	-	-	310	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	876	-	-	-	231	636
Stage 1	-	-	-	-	446	-
Stage 2	-	-	-	-	717	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	876	-	-	-	231	636
Mov Cap-2 Maneuver	-	-	-	-	347	-
Stage 1	-	-	-	-	446	-
Stage 2	-	-	-	-	717	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	876	-	-	-	494
HCM Lane V/C Ratio	0.001	-	-	-	0.065
HCM Control Delay (s)	9.1	-	-	-	12.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	10	10	0	1365	10	10	663
Future Vol, veh/h	10	10	0	1365	10	10	663
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	225	-	-	150	-
Veh in Median Storage, #	2	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	11	11	0	1468	11	11	713

Major/Minor	Minor1		Major1			Major2	
Conflicting Flow All	1853	740	713	0	0	1479	0
Stage 1	1474	-	-	-	-	-	-
Stage 2	379	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	66	359	507	-	-	451	-
Stage 1	177	-	-	-	-	-	-
Stage 2	662	-	-	-	-	-	-
Platoon blocked, %				-	-		-
Mov Cap-1 Maneuver	64	359	507	-	-	451	-
Mov Cap-2 Maneuver	161	-	-	-	-	-	-
Stage 1	173	-	-	-	-	-	-
Stage 2	662	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.2	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBU	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	507	-	-	161	359	451	-
HCM Lane V/C Ratio	-	-	-	0.067	0.03	0.024	-
HCM Control Delay (s)	0	-	-	29	15.3	13.2	-
HCM Lane LOS	A	-	-	D	C	B	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0.1	-

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT						
Lane Configurations													
Traffic Volume (veh/h)	191	97	0	1021	344	46	482						
Future Volume (veh/h)	191	97	0	1021	344	46	482						
Initial Q (Qb), veh	0	0		0	0	0	0						
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00							
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00						
Work Zone On Approach	No			No			No						
Adj Sat Flow, veh/h/ln	1870	1900		1870	1870	1870	1870						
Adj Flow Rate, veh/h	154	158		1098	370	49	518						
Peak Hour Factor	0.93	0.93		0.93	0.93	0.93	0.93						
Percent Heavy Veh, %	2	0		2	2	2	2						
Cap, veh/h	368	333		1633	728	89	2073						
Arrive On Green	0.21	0.21		0.46	0.46	0.05	0.58						
Sat Flow, veh/h	1781	1610		3647	1583	1781	3647						
Grp Volume(v), veh/h	154	158		1098	370	49	518						
Grp Sat Flow(s),veh/h/ln	1781	1610		1777	1583	1781	1777						
Q Serve(g_s), s	3.6	4.1		11.5	7.8	1.3	3.4						
Cycle Q Clear(g_c), s	3.6	4.1		11.5	7.8	1.3	3.4						
Prop In Lane	1.00	1.00			1.00	1.00							
Lane Grp Cap(c), veh/h	368	333		1633	728	89	2073						
V/C Ratio(X)	0.42	0.47		0.67	0.51	0.55	0.25						
Avail Cap(c_a), veh/h	1123	1015		2240	998	1123	2240						
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00						
Uniform Delay (d), s/veh	16.4	16.6		10.1	9.1	22.1	4.8						
Incr Delay (d2), s/veh	0.8	1.1		0.5	0.6	5.2	0.1						
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	1.4	1.5		3.3	2.3	0.6	0.7						
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	17.2	17.7		10.5	9.6	27.3	4.9						
LnGrp LOS	B	B		B	A	C	A						
Approach Vol, veh/h	312			1468			567						
Approach Delay, s/veh	17.4			10.3			6.8						
Approach LOS	B			B			A						

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	5.9	26.9				32.8		14.8
Change Period (Y+Rc), s	3.5	5.0				5.0		5.0
Max Green Setting (Gmax), s	30.0	30.0				30.0		30.0
Max Q Clear Time (g_c+I1), s	3.3	13.5				5.4		6.1
Green Ext Time (p_c), s	0.1	8.4				3.5		1.0

Intersection Summary		
HCM 6th Ctrl Delay		10.4
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	20	83	27	38	25	153	949	38	29	413	65
Future Volume (veh/h)	47	20	83	27	38	25	153	949	38	29	413	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.94	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	20	84	27	38	25	155	959	38	29	417	66
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	169	72	203	142	149	120	205	1589	63	47	1307	569
Arrive On Green	0.13	0.13	0.13	0.08	0.08	0.08	0.12	0.46	0.46	0.03	0.37	0.37
Sat Flow, veh/h	1268	539	1524	1781	1870	1496	1781	3481	138	1781	3554	1548
Grp Volume(v), veh/h	67	0	84	27	38	25	155	489	508	29	417	66
Grp Sat Flow(s),veh/h/ln	1807	0	1524	1781	1870	1496	1781	1777	1842	1781	1777	1548
Q Serve(g_s), s	1.8	0.0	2.7	0.7	1.0	0.8	4.4	10.9	10.9	0.8	4.4	1.5
Cycle Q Clear(g_c), s	1.8	0.0	2.7	0.7	1.0	0.8	4.4	10.9	10.9	0.8	4.4	1.5
Prop In Lane	0.70		1.00	1.00		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	240	0	203	142	149	120	205	811	841	47	1307	569
V/C Ratio(X)	0.28	0.00	0.41	0.19	0.25	0.21	0.76	0.60	0.60	0.62	0.32	0.12
Avail Cap(c_a), veh/h	1547	0	1305	678	712	569	678	811	841	508	2028	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.5	0.0	20.9	22.6	22.7	22.6	22.5	10.7	10.7	25.3	11.9	11.0
Incr Delay (d2), s/veh	2.3	0.0	4.9	0.6	0.9	0.9	5.6	3.3	3.2	12.6	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.2	0.3	0.5	0.3	2.0	4.0	4.1	0.5	1.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	0.0	25.8	23.2	23.6	23.5	28.2	14.0	13.9	38.0	12.0	11.1
LnGrp LOS	C	A	C	C	C	C	C	B	B	D	B	B
Approach Vol, veh/h		151			90			1152			512	
Approach Delay, s/veh		24.4			23.5			15.9			13.4	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	28.5		11.0	9.5	23.8		8.2
Change Period (Y+Rc), s	3.5	4.5		4.0	3.5	4.5		4.0
Max Green Setting (Gmax), s	15.0	24.0		45.0	20.0	30.0		20.0
Max Q Clear Time (g_c+I1), s	2.8	12.9		4.7	6.4	6.4		3.0
Green Ext Time (p_c), s	0.0	4.7		2.0	0.3	2.9		0.3

Intersection Summary	
HCM 6th Ctrl Delay	16.2
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	234	86	369	298	138	137	221	597	172	100	6
Future Volume (veh/h)	30	234	86	369	298	138	137	221	597	172	100	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.96	1.00		0.97	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	31	239	88	377	304	141	140	226	609	176	102	6
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	45	354	135	802	434	354	184	545	1439	297	932	54
Arrive On Green	0.15	0.15	0.15	0.23	0.23	0.23	0.10	0.29	0.29	0.09	0.27	0.27
Sat Flow, veh/h	297	2323	884	3456	1870	1524	1781	1870	2713	3456	3399	198
Grp Volume(v), veh/h	194	0	164	377	304	141	140	226	609	176	53	55
Grp Sat Flow(s),veh/h/ln	1856	0	1648	1728	1870	1524	1781	1870	1357	1728	1777	1819
Q Serve(g_s), s	6.7	0.0	6.3	6.3	10.0	5.3	5.1	6.5	9.3	3.3	1.5	1.5
Cycle Q Clear(g_c), s	6.7	0.0	6.3	6.3	10.0	5.3	5.1	6.5	9.3	3.3	1.5	1.5
Prop In Lane	0.16		0.54	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	283	0	251	802	434	354	184	545	1439	297	487	499
V/C Ratio(X)	0.69	0.00	0.65	0.47	0.70	0.40	0.76	0.41	0.42	0.59	0.11	0.11
Avail Cap(c_a), veh/h	552	0	490	1542	835	680	795	835	1858	1028	1057	1083
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	0.0	26.8	22.2	23.7	21.8	29.3	19.2	9.8	29.6	18.2	18.3
Incr Delay (d2), s/veh	2.9	0.0	2.9	0.4	2.1	0.7	6.4	0.5	0.2	1.9	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	2.6	2.5	4.4	1.8	2.4	2.7	4.0	1.4	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	0.0	29.7	22.7	25.7	22.6	35.7	19.7	10.0	31.5	18.3	18.4
LnGrp LOS	C	A	C	C	C	C	D	B	B	C	B	B
Approach Vol, veh/h		358			822			975			284	
Approach Delay, s/veh		29.8			23.8			16.0			26.5	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	23.6		14.2	10.9	22.4		19.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	20.0	30.0		20.0	30.0	40.0		30.0				
Max Q Clear Time (g_c+I1), s	5.3	11.3		8.7	7.1	3.5		12.0				
Green Ext Time (p_c), s	0.5	3.8		1.6	0.3	0.6		3.6				

Intersection Summary		
HCM 6th Ctrl Delay		21.9
HCM 6th LOS		C

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	754	44	51	677	147	35	12	14	158	14	68
Future Volume (veh/h)	185	754	44	51	677	147	35	12	14	158	14	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		1.00	0.97		0.96	0.97		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	189	769	45	52	691	0	36	12	14	161	14	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	406	1526	89	169	1121		412	124	420	431	33	
Arrive On Green	0.23	0.45	0.45	0.09	0.32	0.00	0.27	0.27	0.27	0.27	0.27	0.00
Sat Flow, veh/h	1781	3398	199	1781	3554	1585	1138	451	1528	1171	120	1585
Grp Volume(v), veh/h	189	402	412	52	691	0	48	0	14	175	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1820	1781	1777	1585	1589	0	1528	1292	0	1585
Q Serve(g_s), s	5.8	10.2	10.2	1.7	10.5	0.0	0.0	0.0	0.4	6.6	0.0	0.0
Cycle Q Clear(g_c), s	5.8	10.2	10.2	1.7	10.5	0.0	1.3	0.0	0.4	7.9	0.0	0.0
Prop In Lane	1.00		0.11	1.00		1.00	0.75		1.00	0.92		1.00
Lane Grp Cap(c), veh/h	406	798	817	169	1121		536	0	420	464	0	
V/C Ratio(X)	0.47	0.50	0.50	0.31	0.62		0.09	0.00	0.03	0.38	0.00	
Avail Cap(c_a), veh/h	450	1388	1422	309	1149		826	0	723	660	0	
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	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.1	12.4	12.4	26.8	18.4	0.0	17.1	0.0	16.8	19.9	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.5	0.5	1.0	1.0	0.0	0.1	0.0	0.0	0.5	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(50%),veh/ln	2.4	3.6	3.7	0.7	4.1	0.0	0.5	0.0	0.1	2.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.0	12.9	12.9	27.8	19.4	0.0	17.2	0.0	16.8	20.4	0.0	0.0
LnGrp LOS	C	B	B	C	B		B	A	B	C	A	
Approach Vol, veh/h		1003			743	A		62			175	A
Approach Delay, s/veh		14.6			20.0			17.1			20.4	
Approach LOS		B			B			B			C	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		21.4	9.5	32.5		21.4	18.0	24.0
Change Period (Y+Rc), s		4.0	3.5	4.0		4.0	3.5	4.0
Max Green Setting (Gmax), s		30.0	11.0	49.5		26.5	16.0	20.5
Max Q Clear Time (g_c+I1), s		3.3	3.7	12.2		9.9	7.8	12.5
Green Ext Time (p_c), s		0.3	0.0	6.0		0.9	0.3	2.9

Intersection Summary	
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	807	134	176	656	162	78
Future Volume (veh/h)	807	134	176	656	162	78
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	823	137	180	669	165	80
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1379	596	312	2268	326	290
Arrive On Green	0.39	0.39	0.17	0.64	0.18	0.18
Sat Flow, veh/h	3647	1536	1781	3647	1781	1585
Grp Volume(v), veh/h	823	137	180	669	165	80
Grp Sat Flow(s),veh/h/ln	1777	1536	1781	1777	1781	1585
Q Serve(g_s), s	9.8	3.2	4.9	4.5	4.4	2.3
Cycle Q Clear(g_c), s	9.8	3.2	4.9	4.5	4.4	2.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1379	596	312	2268	326	290
V/C Ratio(X)	0.60	0.23	0.58	0.29	0.51	0.28
Avail Cap(c_a), veh/h	2005	867	972	2268	1005	894
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.0	10.9	20.1	4.3	19.6	18.7
Incr Delay (d2), s/veh	0.4	0.2	1.7	0.1	1.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	1.0	2.0	1.0	1.8	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.4	11.1	21.8	4.4	20.8	19.2
LnGrp LOS	B	B	C	A	C	B
Approach Vol, veh/h	960			849	245	
Approach Delay, s/veh	13.0			8.1	20.3	
Approach LOS	B			A	C	

Timer - Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		14.7	13.3	25.1				38.4
Change Period (Y+Rc), s		5.0	4.0	4.5				4.5
Max Green Setting (Gmax), s		30.0	29.0	30.0				30.0
Max Q Clear Time (g_c+I1), s		6.4	6.9	11.8				6.5
Green Ext Time (p_c), s		0.7	0.5	6.1				4.8

Intersection Summary			
HCM 6th Ctrl Delay			11.8
HCM 6th LOS			B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	901	3	0	691	58	3	0	12	51	1	43
Future Volume (veh/h)	97	901	3	0	691	58	3	0	12	51	1	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	0.97		0.96	0.96		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	929	3	0	712	60	3	0	12	53	1	44
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	131	2051	7	0	1506	658	125	38	322	489	8	402
Arrive On Green	0.07	0.56	0.56	0.00	0.42	0.42	0.26	0.00	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1781	3633	12	0	3647	1553	161	144	1221	1338	30	1527
Grp Volume(v), veh/h	100	454	478	0	712	60	15	0	0	54	0	44
Grp Sat Flow(s),veh/h/ln	1781	1777	1868	0	1777	1553	1527	0	0	1368	0	1527
Q Serve(g_s), s	2.9	7.8	7.8	0.0	7.5	1.2	0.0	0.0	0.0	1.1	0.0	1.1
Cycle Q Clear(g_c), s	2.9	7.8	7.8	0.0	7.5	1.2	0.4	0.0	0.0	1.5	0.0	1.1
Prop In Lane	1.00		0.01	0.00		1.00	0.20		0.80	0.98		1.00
Lane Grp Cap(c), veh/h	131	1003	1054	0	1506	658	485	0	0	497	0	402
V/C Ratio(X)	0.76	0.45	0.45	0.00	0.47	0.09	0.03	0.00	0.00	0.11	0.00	0.11
Avail Cap(c_a), veh/h	528	1019	1071	0	2039	891	661	0	0	918	0	876
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.8	6.7	6.7	0.0	10.9	9.0	14.3	0.0	0.0	14.7	0.0	14.6
Incr Delay (d2), s/veh	8.7	0.3	0.3	0.0	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.2	2.3	0.0	2.5	0.4	0.1	0.0	0.0	0.5	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.5	7.0	7.0	0.0	11.1	9.1	14.4	0.0	0.0	14.8	0.0	14.7
LnGrp LOS	C	A	A	A	B	A	B	A	A	B	A	B
Approach Vol, veh/h		1032			772			15			98	
Approach Delay, s/veh		9.4			10.9			14.4			14.8	
Approach LOS		A			B			B			B	
Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		17.8		34.5		17.8	7.4	27.2				
Change Period (Y+Rc), s		4.0		5.0		4.0	3.5	5.0				
Max Green Setting (Gmax), s		20.0		30.0		30.0	15.5	30.0				
Max Q Clear Time (g_c+I1), s		2.4		9.8		3.5	4.9	9.5				
Green Ext Time (p_c), s		0.0		6.1		0.4	0.2	5.2				
Intersection Summary												
HCM 6th Ctrl Delay			10.4									
HCM 6th LOS			B									

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	844	57	38	632	65	51	9	54	81	16	51
Future Volume (veh/h)	61	844	57	38	632	65	51	9	54	81	16	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.95	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	64	888	60	40	665	68	54	9	57	85	17	54
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	120	1284	541	88	1220	517	119	11	611	118	13	615
Arrive On Green	0.07	0.36	0.36	0.05	0.34	0.34	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1781	3554	1496	1781	3554	1504	0	28	1555	0	34	1567
Grp Volume(v), veh/h	64	888	60	40	665	68	63	0	57	102	0	54
Grp Sat Flow(s),veh/h/ln	1781	1777	1496	1781	1777	1504	28	0	1555	34	0	1567
Q Serve(g_s), s	1.9	11.9	1.5	1.2	8.5	1.7	0.0	0.0	1.3	0.0	0.0	1.2
Cycle Q Clear(g_c), s	1.9	11.9	1.5	1.2	8.5	1.7	22.0	0.0	1.3	22.0	0.0	1.2
Prop In Lane	1.00		1.00	1.00		1.00	0.86		1.00	0.83		1.00
Lane Grp Cap(c), veh/h	120	1284	541	88	1220	517	130	0	611	131	0	615
V/C Ratio(X)	0.53	0.69	0.11	0.45	0.54	0.13	0.48	0.00	0.09	0.78	0.00	0.09
Avail Cap(c_a), veh/h	636	1554	654	636	1522	644	130	0	611	131	0	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.3	15.2	11.9	25.9	14.9	12.6	24.2	0.0	10.7	25.2	0.0	10.7
Incr Delay (d2), s/veh	3.6	1.0	0.1	3.6	0.4	0.1	2.8	0.0	0.1	25.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.4	0.5	0.6	3.1	0.5	0.9	0.0	0.4	2.2	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.9	16.3	12.0	29.5	15.2	12.8	26.9	0.0	10.8	50.2	0.0	10.8
LnGrp LOS	C	B	B	C	B	B	C	A	B	D	A	B
Approach Vol, veh/h		1012			773			120			156	
Approach Delay, s/veh		16.8			15.8			19.2			36.5	
Approach LOS		B			B			B			D	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		26.0	6.3	23.7		26.0	7.3	22.7
Change Period (Y+Rc), s		4.0	3.5	3.5		4.0	3.5	3.5
Max Green Setting (Gmax), s		22.0	20.0	24.5		22.0	20.0	24.0
Max Q Clear Time (g_c+I1), s		24.0	3.2	13.9		24.0	3.9	10.5
Green Ext Time (p_c), s		0.0	0.1	4.7		0.0	0.1	4.0

Intersection Summary	
HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	821	99	106	618	43	88	29	90	27	10	34
Future Volume (veh/h)	60	821	99	106	618	43	88	29	90	27	10	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	883	106	114	665	46	95	31	97	29	11	37
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	86	1111	487	147	1169	81	300	98	344	248	94	298
Arrive On Green	0.05	0.31	0.31	0.08	0.35	0.35	0.22	0.22	0.22	0.19	0.19	0.19
Sat Flow, veh/h	1781	3554	1557	1781	3368	233	1359	443	1559	1309	496	1574
Grp Volume(v), veh/h	65	883	106	114	351	360	126	0	97	40	0	37
Grp Sat Flow(s),veh/h/ln	1781	1777	1557	1781	1777	1824	1802	0	1559	1805	0	1574
Q Serve(g_s), s	3.4	21.6	4.8	6.0	15.3	15.3	5.6	0.0	4.9	1.7	0.0	1.9
Cycle Q Clear(g_c), s	3.4	21.6	4.8	6.0	15.3	15.3	5.6	0.0	4.9	1.7	0.0	1.9
Prop In Lane	1.00		1.00	1.00		0.13	0.75		1.00	0.72		1.00
Lane Grp Cap(c), veh/h	86	1111	487	147	617	633	398	0	344	342	0	298
V/C Ratio(X)	0.76	0.79	0.22	0.77	0.57	0.57	0.32	0.00	0.28	0.12	0.00	0.12
Avail Cap(c_a), veh/h	749	1495	655	749	747	767	758	0	656	759	0	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.7	29.9	24.1	42.7	25.3	25.3	31.0	0.0	30.8	32.0	0.0	32.0
Incr Delay (d2), s/veh	12.7	2.2	0.2	8.4	0.8	0.8	0.5	0.0	0.4	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	9.3	1.8	2.9	6.4	6.6	2.4	0.0	1.9	0.8	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.4	32.1	24.3	51.1	26.1	26.1	31.5	0.0	31.2	32.1	0.0	32.2
LnGrp LOS	E	C	C	D	C	C	C	A	C	C	A	C
Approach Vol, veh/h		1054			825			223			77	
Approach Delay, s/veh		32.9			29.5			31.4			32.1	
Approach LOS		C			C			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		26.0	11.4	34.7		23.0	8.1	38.0				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		40.0	40.0	40.0		40.0	40.0	40.0				
Max Q Clear Time (g_c+I1), s		7.6	8.0	23.6		3.9	5.4	17.3				
Green Ext Time (p_c), s		1.1	0.3	6.1		0.3	0.2	4.6				
Intersection Summary												
HCM 6th Ctrl Delay			31.4									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	785	127	89	648	1	103	0	59	0	0	3
Future Volume (veh/h)	3	785	127	89	648	1	103	0	59	0	0	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	835	135	95	689	1	110	0	63	0	0	3
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	1519	659	135	1817	3	190	0	166	0	0	25
Arrive On Green	0.00	0.43	0.43	0.08	0.50	0.50	0.11	0.00	0.11	0.00	0.00	0.02
Sat Flow, veh/h	1781	3554	1541	1781	3641	5	1781	0	1554	0	0	1572
Grp Volume(v), veh/h	3	835	135	95	336	354	110	0	63	0	0	3
Grp Sat Flow(s),veh/h/ln	1781	1777	1541	1781	1777	1869	1781	0	1554	0	0	1572
Q Serve(g_s), s	0.1	8.2	2.6	2.4	5.5	5.5	2.8	0.0	1.8	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.1	8.2	2.6	2.4	5.5	5.5	2.8	0.0	1.8	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	7	1519	659	135	887	933	190	0	166	0	0	25
V/C Ratio(X)	0.41	0.55	0.20	0.70	0.38	0.38	0.58	0.00	0.38	0.00	0.00	0.12
Avail Cap(c_a), veh/h	1009	2278	988	1389	1139	1198	1370	0	1195	0	0	974
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	23.2	10.0	8.4	21.1	7.2	7.2	19.9	0.0	19.5	0.0	0.0	22.7
Incr Delay (d2), s/veh	33.3	0.3	0.2	6.5	0.3	0.3	2.8	0.0	1.4	0.0	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.6	0.7	1.2	1.6	1.6	1.2	0.0	0.6	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.5	10.3	8.6	27.6	7.5	7.5	22.7	0.0	20.9	0.0	0.0	24.7
LnGrp LOS	E	B	A	C	A	A	C	A	C	A	A	C
Approach Vol, veh/h		973			785			173			3	
Approach Delay, s/veh		10.2			9.9			22.0			24.7	
Approach LOS		B			A			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.7	28.4		9.0	7.0	25.0		5.8				
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	26.5	30.0		36.0	36.5	30.0		29.0				
Max Q Clear Time (g_c+I1), s	2.1	7.5		4.8	4.4	10.2		2.1				
Green Ext Time (p_c), s	0.0	4.4		0.8	0.2	6.4		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		11.2
HCM 6th LOS		B

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	823	10	9	677	5	10
Future Vol, veh/h	823	10	9	677	5	10
Conflicting Peds, #/hr	0	9	9	0	9	9
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	914	11	10	752	6	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	934	0	1328	475
Stage 1	-	-	-	-	923	-
Stage 2	-	-	-	-	405	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	729	-	146	536
Stage 1	-	-	-	-	347	-
Stage 2	-	-	-	-	642	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	723	-	141	527
Mov Cap-2 Maneuver	-	-	-	-	257	-
Stage 1	-	-	-	-	339	-
Stage 2	-	-	-	-	636	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	14.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	390	-	-	723	-
HCM Lane V/C Ratio	0.043	-	-	0.014	-
HCM Control Delay (s)	14.6	-	-	10	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	937	808	10	4	6
Future Vol, veh/h	20	937	808	10	4	6
Conflicting Peds, #/hr	20	0	0	21	21	20
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	976	842	10	4	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	873	0	-	0	1419	467
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	551	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	768	-	-	-	128	542
Stage 1	-	-	-	-	371	-
Stage 2	-	-	-	-	541	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	753	-	-	-	120	521
Mov Cap-2 Maneuver	-	-	-	-	243	-
Stage 1	-	-	-	-	354	-
Stage 2	-	-	-	-	530	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	15.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	753	-	-	-	357
HCM Lane V/C Ratio	0.028	-	-	-	0.029
HCM Control Delay (s)	9.9	-	-	-	15.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

SIMTRAFFIC QUEUEING REPORTS

EXISTING CONDITIONS

AM & PM PEAK HOUR

Intersection: 1: SR-1 Ramps/Del Monte Blvd & Driveway

Movement	WB	WB	SB
Directions Served	L	R	L
Maximum Queue (ft)	32	30	31
Average Queue (ft)	7	8	4
95th Queue (ft)	26	28	20
Link Distance (ft)	148	148	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			150
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Del Monte Blvd & Reindollar Ave

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	LR	T	T	R	L	T	T
Maximum Queue (ft)	241	175	121	92	68	147	259	263
Average Queue (ft)	123	70	64	35	31	52	105	125
95th Queue (ft)	198	170	107	77	56	106	200	217
Link Distance (ft)	856		471	471			1066	1066
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		150			125	125		
Storage Blk Time (%)	2	0	0	0	0	0	3	
Queuing Penalty (veh)	8	1	0	0	0	1	3	

Intersection: 3: Del Monte Blvd & Palm Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	L	T	R	L	T	TR	L	T	T	R
Maximum Queue (ft)	147	123	88	64	47	81	139	127	97	290	295	113
Average Queue (ft)	46	59	39	18	13	34	57	48	16	141	145	18
95th Queue (ft)	100	105	75	50	39	69	114	100	59	234	245	81
Link Distance (ft)	744			828			1066	1066		1812	1812	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		100	80		50	225			150			100
Storage Blk Time (%)	1	1	1	3	0					7	18	0
Queuing Penalty (veh)	1	1	1	2	0					1	5	0

Intersection: 4: Del Monte Blvd & Reservation Rd

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	R	R	L	L
Maximum Queue (ft)	169	271	124	246	173	148	161	160	80	82	71	116
Average Queue (ft)	65	123	82	105	68	44	71	73	39	37	22	54
95th Queue (ft)	147	222	141	187	135	100	130	134	65	70	53	100
Link Distance (ft)		973		622	622			1812	1812			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	150		100			125	450			450	150	150
Storage Blk Time (%)	0	5	3	7	1	0						0
Queuing Penalty (veh)	0	6	5	14	2	0						0

Intersection: 4: Del Monte Blvd & Reservation Rd

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	124	84
Average Queue (ft)	51	16
95th Queue (ft)	102	49
Link Distance (ft)	571	571
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 5: Vista Del Camino Cir & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R
Maximum Queue (ft)	75	121	133	46	203	183	50	32	29	78	32
Average Queue (ft)	30	44	58	8	89	70	3	4	2	31	1
95th Queue (ft)	62	93	112	32	172	147	36	21	14	65	18
Link Distance (ft)		622	622		375	375		283		591	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	175			135			135		50		100
Storage Blk Time (%)					2	1	0	0		0	0
Queuing Penalty (veh)					0	1	0	0		0	0

Intersection: 6: Seacrest Ave & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	118	116	52	152	177	181	96	60
Average Queue (ft)	65	68	16	64	51	57	40	24
95th Queue (ft)	114	120	44	116	128	141	77	50
Link Distance (ft)	39	39	39		261	261		724
Upstream Blk Time (%)	14	17	1		0	0		
Queuing Penalty (veh)	27	32	2		0	0		
Storage Bay Dist (ft)				200			100	
Storage Blk Time (%)					0		0	0
Queuing Penalty (veh)					0		0	0

Intersection: 7: Driveway/Shopping Center & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	T	T	R	LTR	LT	R
Maximum Queue (ft)	68	90	92	209	207	100	33	66	50
Average Queue (ft)	32	38	49	88	84	32	2	23	18
95th Queue (ft)	60	88	98	188	189	90	15	52	40
Link Distance (ft)		73	73	220	220		474	485	
Upstream Blk Time (%)	0	1	3	0	0				
Queuing Penalty (veh)	0	4	10	1	1				
Storage Bay Dist (ft)	145					75			150
Storage Blk Time (%)	0	1			7	0			
Queuing Penalty (veh)	1	1			5	0			

Intersection: 8: De Forest Rd & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	LT	R
Maximum Queue (ft)	67	127	153	24	68	190	210	123	37	26	115	74
Average Queue (ft)	20	44	59	5	18	73	75	21	8	5	41	25
95th Queue (ft)	50	100	121	19	51	157	169	70	29	20	83	62
Link Distance (ft)		220	220			490	490		409		830	
Upstream Blk Time (%)			0									
Queuing Penalty (veh)			0									
Storage Bay Dist (ft)	200			175	175			175		200		50
Storage Blk Time (%)			0			0	1	0			6	1
Queuing Penalty (veh)			0			0	1	0			4	1

Intersection: 9: Crescent Ave & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LT	R
Maximum Queue (ft)	82	217	247	125	143	254	276	98	166	125	73
Average Queue (ft)	21	101	122	43	45	111	132	59	41	47	18
95th Queue (ft)	58	176	208	120	98	206	237	102	105	93	57
Link Distance (ft)		490	490			562	562		681	808	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	220			100	220			75			50
Storage Blk Time (%)		0	14	0	0	1		9	0	15	0
Queuing Penalty (veh)		0	10	0	0	0		9	0	4	0

Intersection: 10: California Ave & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	61	207	245	125	151	193	170	116	72	21
Average Queue (ft)	10	80	91	61	66	65	72	52	28	1
95th Queue (ft)	39	170	193	129	123	144	144	96	54	11
Link Distance (ft)		1635	1635			2271	2271	1450		183
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	75			100	150				150	
Storage Blk Time (%)	0	10	6	0	0	1		0		
Queuing Penalty (veh)	0	1	11	1	1	1		0		

Intersection: 11: Salinas Ave & Reservation Rd

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	35	37
Average Queue (ft)	6	15
95th Queue (ft)	26	34
Link Distance (ft)		445
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: Reservation Rd & Eucalyptus St

Movement	EB	EB	EB	SB
Directions Served	L	T	T	LR
Maximum Queue (ft)	6	60	67	62
Average Queue (ft)	0	5	8	21
95th Queue (ft)	4	30	40	50
Link Distance (ft)		375	375	1022
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	125			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Reservation Rd & Driveway 1

Movement	EB	EB	WB	SB
Directions Served	T	T	T	R
Maximum Queue (ft)	34	70	6	52
Average Queue (ft)	1	6	0	17
95th Queue (ft)	20	37	5	44
Link Distance (ft)	261	261	46	179
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 14: Driveway 2 & Reservation Rd

Movement	EB	EB	WB	NB
Directions Served	T	TR	T	R
Maximum Queue (ft)	45	57	3	53
Average Queue (ft)	4	10	0	23
95th Queue (ft)	24	43	3	48
Link Distance (ft)	46	46	73	240
Upstream Blk Time (%)	0	1		
Queuing Penalty (veh)	1	4		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 186

Intersection: 1: SR-1 Ramps/Del Monte Blvd & Driveway

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	L
Maximum Queue (ft)	44	30	4	44
Average Queue (ft)	12	8	0	8
95th Queue (ft)	39	28	3	31
Link Distance (ft)	148	148	557	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				150
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Del Monte Blvd & Reindollar Ave

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	LR	T	T	R	L	T	T
Maximum Queue (ft)	130	104	275	282	150	95	156	164
Average Queue (ft)	61	29	145	125	77	35	45	65
95th Queue (ft)	108	69	237	229	148	75	116	134
Link Distance (ft)	856		471	471			1066	1066
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		150			125	125		
Storage Blk Time (%)	0	0	9	4	0	0	0	
Queuing Penalty (veh)	0	0	0	14	1	0	0	

Intersection: 3: Del Monte Blvd & Palm Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	L	T	R	L	T	TR	L	T	T	R
Maximum Queue (ft)	103	88	56	91	70	233	326	321	78	171	187	125
Average Queue (ft)	37	31	17	29	19	89	147	158	21	70	80	25
95th Queue (ft)	78	63	45	69	53	174	273	282	55	139	155	85
Link Distance (ft)	744			828			1066	1066		1812	1812	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		100	80		50	225			150			100
Storage Blk Time (%)	0	0	0	5	0	0	2			1	5	0
Queuing Penalty (veh)	0	0	0	3	0	0	4			0	3	0

Intersection: 4: Del Monte Blvd & Reservation Rd

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	R	R	L	L
Maximum Queue (ft)	174	237	124	272	368	150	176	236	154	163	139	148
Average Queue (ft)	84	122	81	110	154	70	90	117	73	77	42	65
95th Queue (ft)	159	200	142	209	292	163	155	200	131	139	96	120
Link Distance (ft)		973		622	622			1812	1812			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	150		100			125	450			450	150	150
Storage Blk Time (%)	0	4	2	11	15	0					0	0
Queuing Penalty (veh)	1	6	4	20	21	0					0	0

Intersection: 4: Del Monte Blvd & Reservation Rd

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	87	58
Average Queue (ft)	27	10
95th Queue (ft)	66	37
Link Distance (ft)	571	571
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 5: Vista Del Camino Cir & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R
Maximum Queue (ft)	181	219	240	127	246	275	159	75	48	193	124
Average Queue (ft)	98	102	135	37	114	134	42	27	12	87	13
95th Queue (ft)	164	185	217	89	207	237	152	64	38	152	74
Link Distance (ft)		622	622		375	375		283		591	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	175			135			135		50		100
Storage Blk Time (%)	1	1		0	5	8	0	4	0	7	0
Queuing Penalty (veh)	2	1		0	2	11	0	1	0	5	0

Intersection: 6: Seacrest Ave & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	124	122	77	177	176	212	122	178
Average Queue (ft)	97	96	31	90	65	86	73	38
95th Queue (ft)	137	133	66	151	139	175	119	101
Link Distance (ft)	39	39	39		261	261		724
Upstream Blk Time (%)	30	31	4			0		
Queuing Penalty (veh)	95	98	12			0		
Storage Bay Dist (ft)				200			100	
Storage Blk Time (%)				0	0		4	0
Queuing Penalty (veh)				0	0		3	0

Intersection: 7: Driveway/Shopping Center & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	T	T	R	LTR	LT	R
Maximum Queue (ft)	72	108	108	218	226	100	40	60	47
Average Queue (ft)	43	69	73	113	112	34	9	23	15
95th Queue (ft)	72	115	113	207	206	96	32	51	37
Link Distance (ft)		73	73	220	220		474	485	
Upstream Blk Time (%)	1	9	12	1	1				
Queuing Penalty (veh)	0	44	59	2	2				
Storage Bay Dist (ft)	145					75			150
Storage Blk Time (%)	1	9			14	0			
Queuing Penalty (veh)	4	9			8	1			

Intersection: 8: De Forest Rd & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	LT	R
Maximum Queue (ft)	99	216	219	99	114	230	243	141	78	63	104	73
Average Queue (ft)	35	87	103	13	28	87	97	21	29	20	40	24
95th Queue (ft)	77	170	192	58	80	188	196	84	64	46	78	59
Link Distance (ft)		220	220			490	490		409		830	
Upstream Blk Time (%)	0	0	0									
Queuing Penalty (veh)	0	1	1									
Storage Bay Dist (ft)	200			175	175			175		200		50
Storage Blk Time (%)	0	0	1	0		1	1	0			7	1
Queuing Penalty (veh)	0	0	1	0		0	1	0			4	1

Intersection: 9: Crescent Ave & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LT	R
Maximum Queue (ft)	230	392	413	125	178	253	281	98	182	83	69
Average Queue (ft)	54	185	207	60	65	126	149	57	43	29	24
95th Queue (ft)	135	325	354	149	135	220	247	100	112	67	57
Link Distance (ft)		490	490			562	562		681	808	
Upstream Blk Time (%)			0								
Queuing Penalty (veh)			0								
Storage Bay Dist (ft)	220			100	220			75			50
Storage Blk Time (%)		5	29	0	0	0		10	0	7	1
Queuing Penalty (veh)		3	28	0	0	1		9	1	2	0

Intersection: 10: California Ave & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	40	327	356	125	128	151	155	112	65	29
Average Queue (ft)	3	116	135	55	48	59	63	53	22	3
95th Queue (ft)	21	248	278	133	96	122	130	96	49	17
Link Distance (ft)		1635	1635			2271	2271	1450		183
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	75			100	150				150	
Storage Blk Time (%)		13	11	0	0	0		0		
Queuing Penalty (veh)		0	14	0	0	0		0		

Intersection: 11: Salinas Ave & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB
Directions Served	T	T	R	L	T	T	LR
Maximum Queue (ft)	68	91	8	33	58	45	42
Average Queue (ft)	6	9	0	5	7	3	9
95th Queue (ft)	35	46	5	23	36	22	30
Link Distance (ft)	2271	2271			1110	1110	445
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			100	150			
Storage Blk Time (%)		0					
Queuing Penalty (veh)		0					

Intersection: 12: Reservation Rd & Eucalyptus St

Movement	EB	EB	EB	WB	WB	SB
Directions Served	L	T	T	T	TR	LR
Maximum Queue (ft)	88	214	228	54	53	39
Average Queue (ft)	12	61	84	12	15	9
95th Queue (ft)	50	158	186	43	48	32
Link Distance (ft)		375	375	39	39	1022
Upstream Blk Time (%)				1	1	
Queuing Penalty (veh)				3	4	
Storage Bay Dist (ft)	125					
Storage Blk Time (%)		2				
Queuing Penalty (veh)		0				

Intersection: 13: Reservation Rd & Driveway 1

Movement	EB	EB	WB	SB
Directions Served	T	T	TR	R
Maximum Queue (ft)	150	156	5	59
Average Queue (ft)	28	37	0	26
95th Queue (ft)	101	114	5	50
Link Distance (ft)	261	261	46	179
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 14: Driveway 2 & Reservation Rd

Movement	EB	EB	WB	WB	NB
Directions Served	T	TR	T	T	R
Maximum Queue (ft)	64	73	8	15	100
Average Queue (ft)	24	33	1	0	43
95th Queue (ft)	65	77	9	2	80
Link Distance (ft)	46	46	73	73	240
Upstream Blk Time (%)	5	7		0	
Queuing Penalty (veh)	23	35		0	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 570

SYNCHRO LEVEL OF SERVICE REPORTS

FUTURE CONDITIONS

AM & PM PEAK HOUR

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	10	60	0	562	63	392	1239
Future Vol, veh/h	10	60	0	562	63	392	1239
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	225	-	-	150	-
Veh in Median Storage, #	2	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	11	65	0	604	68	422	1332

Major/Minor	Minor1		Major1			Major2	
Conflicting Flow All	2148	336	1332	0	0	672	0
Stage 1	638	-	-	-	-	-	-
Stage 2	1510	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	41	660	203	-	-	915	-
Stage 1	488	-	-	-	-	-	-
Stage 2	169	-	-	-	-	-	-
Platoon blocked, %				-	-		-
Mov Cap-1 Maneuver	22	660	203	-	-	915	-
Mov Cap-2 Maneuver	53	-	-	-	-	-	-
Stage 1	263	-	-	-	-	-	-
Stage 2	169	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.2	0	2.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBU	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	203	-	-	53	660	915	-
HCM Lane V/C Ratio	-	-	-	0.203	0.098	0.461	-
HCM Control Delay (s)	0	-	-	89.5	11	12.2	-
HCM Lane LOS	A	-	-	F	B	B	-
HCM 95th %tile Q(veh)	0	-	-	0.7	0.3	2.5	-

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	558	71	0	467	157	86	1103
Future Volume (veh/h)	558	71	0	467	157	86	1103
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1870	1900		1870	1870	1870	1870
Adj Flow Rate, veh/h	671	0		502	169	92	1186
Peak Hour Factor	0.93	0.93		0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0		2	2	2	2
Cap, veh/h	982	444		1169	520	139	1738
Arrive On Green	0.28	0.00		0.33	0.33	0.08	0.49
Sat Flow, veh/h	3563	1610		3647	1580	1781	3647
Grp Volume(v), veh/h	671	0		502	169	92	1186
Grp Sat Flow(s),veh/h/ln	1781	1610		1777	1580	1781	1777
Q Serve(g_s), s	7.1	0.0		4.7	3.4	2.1	10.9
Cycle Q Clear(g_c), s	7.1	0.0		4.7	3.4	2.1	10.9
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	982	444		1169	520	139	1738
V/C Ratio(X)	0.68	0.00		0.43	0.33	0.66	0.68
Avail Cap(c_a), veh/h	2514	1136		2507	1115	1257	2507
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.7	0.0		11.1	10.7	19.1	8.3
Incr Delay (d2), s/veh	0.8	0.0		0.3	0.4	5.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0		1.4	1.0	1.0	2.7
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	14.6	0.0		11.4	11.1	24.4	8.8
LnGrp LOS	B	A		B	B	C	A
Approach Vol, veh/h	671			671			1278
Approach Delay, s/veh	14.6			11.3			9.9
Approach LOS	B			B			A

Timer - Assigned Phs	1	2	6	8
Phs Duration (G+Y+Rc), s	6.8	19.0	25.8	16.7
Change Period (Y+Rc), s	3.5	5.0	5.0	5.0
Max Green Setting (Gmax), s	30.0	30.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	4.1	6.7	12.9	9.1
Green Ext Time (p_c), s	0.2	3.9	7.9	2.6

Intersection Summary	
HCM 6th Ctrl Delay	11.5
HCM 6th LOS	B

Notes
User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	25	278	96	26	39	77	459	21	25	813	34
Future Volume (veh/h)	101	25	278	96	26	39	77	459	21	25	813	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	104	26	287	99	27	40	79	473	22	26	838	35
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	399	100	432	177	185	152	104	1244	58	41	1155	493
Arrive On Green	0.28	0.28	0.28	0.10	0.10	0.10	0.06	0.36	0.36	0.02	0.32	0.32
Sat Flow, veh/h	1439	360	1558	1781	1870	1532	1781	3454	160	1781	3554	1518
Grp Volume(v), veh/h	130	0	287	99	27	40	79	243	252	26	838	35
Grp Sat Flow(s),veh/h/ln	1798	0	1558	1781	1870	1532	1781	1777	1837	1781	1777	1518
Q Serve(g_s), s	3.8	0.0	10.9	3.5	0.9	1.6	2.9	6.7	6.8	1.0	13.9	1.1
Cycle Q Clear(g_c), s	3.8	0.0	10.9	3.5	0.9	1.6	2.9	6.7	6.8	1.0	13.9	1.1
Prop In Lane	0.80		1.00	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	499	0	432	177	185	152	104	640	662	41	1155	493
V/C Ratio(X)	0.26	0.00	0.66	0.56	0.15	0.26	0.76	0.38	0.38	0.64	0.73	0.07
Avail Cap(c_a), veh/h	1215	0	1052	535	561	460	535	640	662	401	1600	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	0.0	21.3	28.6	27.4	27.8	30.9	15.8	15.8	32.3	19.9	15.5
Incr Delay (d2), s/veh	1.0	0.0	6.2	2.8	0.4	0.9	10.9	1.7	1.7	15.3	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	4.5	1.6	0.4	0.6	1.5	2.8	2.9	0.6	5.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	0.0	27.5	31.4	27.8	28.7	41.9	17.5	17.5	47.5	20.9	15.6
LnGrp LOS	B	A	C	C	C	C	D	B	B	D	C	B
Approach Vol, veh/h		417			166			574			899	
Approach Delay, s/veh		25.1			30.2			20.8			21.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.0	28.5		22.5	7.4	26.2		10.6
Change Period (Y+Rc), s	3.5	4.5		4.0	3.5	4.5		4.0
Max Green Setting (Gmax), s	15.0	24.0		45.0	20.0	30.0		20.0
Max Q Clear Time (g_c+I1), s	3.0	8.8		12.9	4.9	15.9		5.5
Green Ext Time (p_c), s	0.0	2.5		5.6	0.1	5.0		0.4

Intersection Summary			
HCM 6th Ctrl Delay			22.7
HCM 6th LOS			C

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	245	141	401	178	196	221	190	355	247	243	6
Future Volume (veh/h)	16	245	141	401	178	196	221	190	355	247	243	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	275	158	451	200	220	248	213	399	278	273	7
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	373	224	721	390	321	302	516	1338	397	782	20
Arrive On Green	0.18	0.18	0.18	0.21	0.21	0.21	0.17	0.28	0.28	0.11	0.22	0.22
Sat Flow, veh/h	135	2082	1251	3456	1870	1539	1781	1870	2739	3456	3536	90
Grp Volume(v), veh/h	248	0	203	451	200	220	248	213	399	278	137	143
Grp Sat Flow(s),veh/h/ln	1864	0	1605	1728	1870	1539	1781	1870	1370	1728	1777	1850
Q Serve(g_s), s	9.1	0.0	8.6	8.6	6.8	9.5	9.7	6.7	6.4	5.6	4.7	4.7
Cycle Q Clear(g_c), s	9.1	0.0	8.6	8.6	6.8	9.5	9.7	6.7	6.4	5.6	4.7	4.7
Prop In Lane	0.07		0.78	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	334	0	287	721	390	321	302	516	1338	397	393	409
V/C Ratio(X)	0.74	0.00	0.70	0.63	0.51	0.68	0.82	0.41	0.30	0.70	0.35	0.35
Avail Cap(c_a), veh/h	516	0	444	1435	776	639	739	776	1719	956	983	1024
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	0.0	27.9	26.0	25.3	26.4	28.9	21.4	11.2	30.8	23.8	23.8
Incr Delay (d2), s/veh	3.3	0.0	3.2	0.9	1.0	2.6	5.5	0.5	0.1	2.2	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	3.4	3.5	3.0	3.6	4.4	2.8	2.7	2.3	1.9	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.4	0.0	31.0	26.9	26.4	29.0	34.4	21.9	11.4	33.0	24.3	24.3
LnGrp LOS	C	A	C	C	C	C	C	C	B	C	C	C
Approach Vol, veh/h		451			871			860			558	
Approach Delay, s/veh		31.2			27.3			20.6			28.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.3	23.9		16.9	16.3	20.0		19.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	20.0	30.0		20.0	30.0	40.0		30.0
Max Q Clear Time (g_c+I1), s	7.6	8.7		11.1	11.7	6.7		11.5
Green Ext Time (p_c), s	0.7	2.8		1.8	0.6	1.6		3.5

Intersection Summary		
HCM 6th Ctrl Delay		26.1
HCM 6th LOS		C

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	654	70	55	628	83	51	27	34	102	8	88
Future Volume (veh/h)	148	654	70	55	628	83	51	27	34	102	8	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.98	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	711	76	60	683	0	55	29	37	111	9	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	430	1561	167	191	1239		311	144	327	334	23	
Arrive On Green	0.24	0.48	0.48	0.11	0.35	0.00	0.21	0.21	0.21	0.21	0.21	0.00
Sat Flow, veh/h	1781	3234	345	1781	3554	1585	990	685	1558	1019	108	1585
Grp Volume(v), veh/h	161	390	397	60	683	0	84	0	37	120	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1803	1781	1777	1585	1675	0	1558	1127	0	1585
Q Serve(g_s), s	4.3	8.4	8.4	1.8	8.9	0.0	0.0	0.0	1.1	4.4	0.0	0.0
Cycle Q Clear(g_c), s	4.3	8.4	8.4	1.8	8.9	0.0	2.2	0.0	1.1	6.6	0.0	0.0
Prop In Lane	1.00		0.19	1.00		1.00	0.65		1.00	0.92		1.00
Lane Grp Cap(c), veh/h	430	857	870	191	1239		455	0	327	357	0	
V/C Ratio(X)	0.37	0.46	0.46	0.31	0.55		0.18	0.00	0.11	0.34	0.00	
Avail Cap(c_a), veh/h	497	1533	1555	341	1270		933	0	814	697	0	
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	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.2	9.8	9.8	23.7	15.1	0.0	18.8	0.0	18.4	21.3	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.4	0.4	0.9	0.5	0.0	0.2	0.0	0.2	0.6	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(50%),veh/ln	1.7	2.8	2.8	0.8	3.3	0.0	0.9	0.0	0.4	1.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.7	10.2	10.2	24.6	15.6	0.0	19.0	0.0	18.5	21.9	0.0	0.0
LnGrp LOS	B	B	B	C	B		B	A	B	C	A	
Approach Vol, veh/h		948			743	A		121			120	A
Approach Delay, s/veh		11.7			16.3			18.8			21.9	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	16.0	9.7	31.7	16.0	17.3	24.0
Change Period (Y+Rc), s	4.0	3.5	4.0	4.0	3.5	4.0
Max Green Setting (Gmax), s	30.0	11.0	49.5	26.5	16.0	20.5
Max Q Clear Time (g_c+I1), s	4.2	3.8	10.4	8.6	6.3	10.9
Green Ext Time (p_c), s	0.6	0.1	5.8	0.6	0.3	3.2

Intersection Summary	
HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Traffic Volume (veh/h)	679	150	167	604	162	86
Future Volume (veh/h)	679	150	167	604	162	86
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	730	161	180	649	174	92
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1359	605	313	2254	331	294
Arrive On Green	0.38	0.38	0.18	0.63	0.19	0.19
Sat Flow, veh/h	3647	1583	1781	3647	1781	1585
Grp Volume(v), veh/h	730	161	180	649	174	92
Grp Sat Flow(s),veh/h/ln	1777	1583	1781	1777	1781	1585
Q Serve(g_s), s	8.4	3.7	4.9	4.3	4.7	2.6
Cycle Q Clear(g_c), s	8.4	3.7	4.9	4.3	4.7	2.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1359	605	313	2254	331	294
V/C Ratio(X)	0.54	0.27	0.57	0.29	0.53	0.31
Avail Cap(c_a), veh/h	2021	900	979	2254	1013	901
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.7	11.2	19.9	4.3	19.4	18.6
Incr Delay (d2), s/veh	0.3	0.2	1.7	0.1	1.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	1.1	2.0	1.0	1.9	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.0	11.4	21.6	4.4	20.7	19.2
LnGrp LOS	B	B	C	A	C	B
Approach Vol, veh/h	891			829	266	
Approach Delay, s/veh	12.7			8.1	20.2	
Approach LOS	B			A	C	

Timer - Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		14.8	13.3	24.7				38.0
Change Period (Y+Rc), s		5.0	4.0	4.5				4.5
Max Green Setting (Gmax), s		30.0	29.0	30.0				30.0
Max Q Clear Time (g_c+I1), s		6.7	6.9	10.4				6.3
Green Ext Time (p_c), s		0.8	0.5	5.6				4.7

Intersection Summary		
HCM 6th Ctrl Delay		11.8
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	719	5	0	641	111	3	0	7	79	1	134
Future Volume (veh/h)	103	719	5	0	641	111	3	0	7	79	1	134
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.98	0.98		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	110	765	5	0	682	118	3	0	7	84	1	143
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, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	145	2086	14	0	1505	669	163	41	253	475	5	375
Arrive On Green	0.08	0.58	0.58	0.00	0.42	0.42	0.24	0.00	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3619	24	0	3647	1579	281	172	1057	1372	20	1569
Grp Volume(v), veh/h	110	376	394	0	682	118	10	0	0	85	0	143
Grp Sat Flow(s),veh/h/ln	1781	1777	1866	0	1777	1579	1510	0	0	1392	0	1569
Q Serve(g_s), s	2.9	5.5	5.5	0.0	6.7	2.3	0.0	0.0	0.0	2.1	0.0	3.7
Cycle Q Clear(g_c), s	2.9	5.5	5.5	0.0	6.7	2.3	0.2	0.0	0.0	2.4	0.0	3.7
Prop In Lane	1.00		0.01	0.00		1.00	0.30		0.70	0.99		1.00
Lane Grp Cap(c), veh/h	145	1024	1076	0	1505	669	457	0	0	479	0	375
V/C Ratio(X)	0.76	0.37	0.37	0.00	0.45	0.18	0.02	0.00	0.00	0.18	0.00	0.38
Avail Cap(c_a), veh/h	566	1093	1148	0	2186	972	704	0	0	1001	0	965
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.9	5.5	5.5	0.0	10.0	8.8	14.2	0.0	0.0	15.0	0.0	15.5
Incr Delay (d2), s/veh	7.9	0.2	0.2	0.0	0.2	0.1	0.0	0.0	0.0	0.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.4	1.5	0.0	2.1	0.7	0.1	0.0	0.0	0.7	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.8	5.8	5.8	0.0	10.2	8.9	14.2	0.0	0.0	15.2	0.0	16.2
LnGrp LOS	C	A	A	A	B	A	B	A	A	B	A	B
Approach Vol, veh/h		880			800			10			228	
Approach Delay, s/veh		8.8			10.0			14.2			15.8	
Approach LOS		A			B			B			B	
Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		15.6		33.1		15.6	7.5	25.6				
Change Period (Y+Rc), s		4.0		5.0		4.0	3.5	5.0				
Max Green Setting (Gmax), s		20.0		30.0		30.0	15.5	30.0				
Max Q Clear Time (g_c+I1), s		2.2		7.5		5.7	4.9	8.7				
Green Ext Time (p_c), s		0.0		5.0		0.9	0.2	5.2				
Intersection Summary												
HCM 6th Ctrl Delay			10.2									
HCM 6th LOS			B									

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	743	25	28	665	105	16	3	16	138	1	71
Future Volume (veh/h)	37	743	25	28	665	105	16	3	16	138	1	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	816	27	31	731	115	18	3	18	152	1	78
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	1228	521	74	1193	521	124	12	639	133	0	644
Arrive On Green	0.05	0.35	0.35	0.04	0.34	0.34	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	1781	3554	1509	1781	3554	1552	0	28	1563	0	1	1576
Grp Volume(v), veh/h	41	816	27	31	731	115	21	0	18	153	0	78
Grp Sat Flow(s),veh/h/ln	1781	1777	1509	1781	1777	1552	28	0	1563	1	0	1576
Q Serve(g_s), s	1.2	10.5	0.6	0.9	9.3	2.9	0.0	0.0	0.4	0.0	0.0	1.7
Cycle Q Clear(g_c), s	1.2	10.5	0.6	0.9	9.3	2.9	22.0	0.0	0.4	22.0	0.0	1.7
Prop In Lane	1.00		1.00	1.00		1.00	0.86		1.00	0.99		1.00
Lane Grp Cap(c), veh/h	91	1228	521	74	1193	521	136	0	639	134	0	644
V/C Ratio(X)	0.45	0.66	0.05	0.42	0.61	0.22	0.15	0.00	0.03	1.14	0.00	0.12
Avail Cap(c_a), veh/h	662	1618	687	662	1585	692	136	0	639	134	0	644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.8	15.0	11.7	25.2	14.9	12.8	14.9	0.0	9.5	26.8	0.0	9.9
Incr Delay (d2), s/veh	3.5	0.6	0.0	3.8	0.5	0.2	0.5	0.0	0.0	121.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.8	0.2	0.4	3.3	0.9	0.1	0.0	0.1	6.1	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.3	15.6	11.8	28.9	15.5	13.0	15.4	0.0	9.5	148.3	0.0	10.0
LnGrp LOS	C	B	B	C	B	B	B	A	A	F	A	A
Approach Vol, veh/h		884			877			39			231	
Approach Delay, s/veh		16.1			15.6			12.7			101.6	
Approach LOS		B			B			B			F	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	26.0	5.7	22.1	26.0	6.2	21.6
Change Period (Y+Rc), s	4.0	3.5	3.5	4.0	3.5	3.5
Max Green Setting (Gmax), s	22.0	20.0	24.5	22.0	20.0	24.0
Max Q Clear Time (g_c+I1), s	24.0	2.9	12.5	24.0	3.2	11.3
Green Ext Time (p_c), s	0.0	0.0	4.5	0.0	0.1	4.4

Intersection Summary	
HCM 6th Ctrl Delay	25.5
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	751	74	82	639	24	106	21	107	64	52	37
Future Volume (veh/h)	51	751	74	82	639	24	106	21	107	64	52	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	816	80	89	695	26	115	23	116	70	57	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	1047	461	117	1116	42	335	67	351	217	177	341
Arrive On Green	0.04	0.29	0.29	0.07	0.32	0.32	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1781	3554	1564	1781	3491	131	1496	299	1564	1003	817	1576
Grp Volume(v), veh/h	55	816	80	89	354	367	138	0	116	127	0	40
Grp Sat Flow(s),veh/h/ln	1781	1777	1564	1781	1777	1844	1796	0	1564	1820	0	1576
Q Serve(g_s), s	2.8	19.5	3.5	4.6	15.7	15.7	6.0	0.0	5.8	5.5	0.0	1.9
Cycle Q Clear(g_c), s	2.8	19.5	3.5	4.6	15.7	15.7	6.0	0.0	5.8	5.5	0.0	1.9
Prop In Lane	1.00		1.00	1.00		0.07	0.83		1.00	0.55		1.00
Lane Grp Cap(c), veh/h	73	1047	461	117	568	590	403	0	351	394	0	341
V/C Ratio(X)	0.76	0.78	0.17	0.76	0.62	0.62	0.34	0.00	0.33	0.32	0.00	0.12
Avail Cap(c_a), veh/h	767	1529	673	767	765	794	773	0	673	783	0	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.1	30.0	24.4	42.7	26.9	26.9	30.3	0.0	30.2	30.7	0.0	29.3
Incr Delay (d2), s/veh	14.7	1.6	0.2	9.6	1.1	1.1	0.5	0.0	0.5	0.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	8.3	1.3	2.3	6.7	6.9	2.6	0.0	2.2	2.4	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.8	31.6	24.5	52.3	28.0	27.9	30.8	0.0	30.8	31.2	0.0	29.4
LnGrp LOS	E	C	C	D	C	C	C	A	C	C	A	C
Approach Vol, veh/h		951			810			254			167	
Approach Delay, s/veh		32.6			30.6			30.8			30.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.8	9.6	32.4		25.1	7.3	34.7				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		40.0	40.0	40.0		40.0	40.0	40.0				
Max Q Clear Time (g_c+I1), s		8.0	6.6	21.5		7.5	4.8	17.7				
Green Ext Time (p_c), s		1.2	0.2	5.8		0.9	0.1	4.6				

Intersection Summary			
HCM 6th Ctrl Delay			31.5
HCM 6th LOS			C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	670	250	159	632	4	112	8	170	0	1	0
Future Volume (veh/h)	10	670	250	159	632	4	112	8	170	0	1	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	736	275	175	695	4	123	9	187	0	1	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	1307	575	233	1755	10	290	21	271	0	10	0
Arrive On Green	0.01	0.37	0.37	0.13	0.48	0.48	0.17	0.17	0.17	0.00	0.01	0.00
Sat Flow, veh/h	1781	3554	1564	1781	3622	21	1665	122	1558	0	1870	0
Grp Volume(v), veh/h	11	736	275	175	341	358	132	0	187	0	1	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1564	1781	1777	1866	1787	0	1558	0	1870	0
Q Serve(g_s), s	0.3	9.0	7.3	5.1	6.7	6.7	3.6	0.0	6.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	9.0	7.3	5.1	6.7	6.7	3.6	0.0	6.1	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	0.93		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	25	1307	575	233	861	904	311	0	271	0	10	0
V/C Ratio(X)	0.44	0.56	0.48	0.75	0.40	0.40	0.42	0.00	0.69	0.00	0.10	0.00
Avail Cap(c_a), veh/h	868	1961	863	1196	981	1030	1183	0	1032	0	998	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	26.6	13.7	13.2	22.8	8.9	8.9	20.0	0.0	21.1	0.0	26.9	0.0
Incr Delay (d2), s/veh	11.6	0.4	0.6	4.9	0.3	0.3	0.9	0.0	3.1	0.0	4.1	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(50%),veh/ln	0.2	3.2	2.3	2.3	2.1	2.2	1.4	0.0	2.3	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.2	14.1	13.8	27.7	9.2	9.2	20.9	0.0	24.2	0.0	31.0	0.0
LnGrp LOS	D	B	B	C	A	A	C	A	C	A	C	A
Approach Vol, veh/h		1022			874			319			1	
Approach Delay, s/veh		14.3			12.9			22.8			31.0	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.3	31.3		13.5	10.6	25.0		5.3				
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	26.5	30.0		36.0	36.5	30.0		29.0				
Max Q Clear Time (g_c+I1), s	2.3	8.7		8.1	7.1	11.0		2.0				
Green Ext Time (p_c), s	0.0	4.4		1.4	0.5	6.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			15.0									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	923	13	27	762	21	51
Future Vol, veh/h	923	13	27	762	21	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	150	-	-	-
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	1003	14	29	828	23	55

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1017	0	1475	502
Stage 1	-	-	-	-	1003	-
Stage 2	-	-	-	-	472	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	678	-	117	515
Stage 1	-	-	-	-	315	-
Stage 2	-	-	-	-	594	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	678	-	112	515
Mov Cap-2 Maneuver	-	-	-	-	224	-
Stage 1	-	-	-	-	301	-
Stage 2	-	-	-	-	594	-

Approach	EB		WB		NB	
HCM Control Delay, s	0		0.4		17.2	
HCM LOS					C	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	373	-	-	678	-
HCM Lane V/C Ratio	0.21	-	-	0.043	-
HCM Control Delay (s)	17.2	-	-	10.6	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	815	738	28	14	25
Future Vol, veh/h	3	815	738	28	14	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	896	811	31	15	27

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	842	0	-	0	1281	421
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	454	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	789	-	-	-	157	581
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	606	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	789	-	-	-	156	581
Mov Cap-2 Maneuver	-	-	-	-	282	-
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	606	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	789	-	-	-	421
HCM Lane V/C Ratio	0.004	-	-	-	0.102
HCM Control Delay (s)	9.6	-	-	-	14.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	33.2

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	165	171	0	1508	52	97	727
Future Vol, veh/h	165	171	0	1508	52	97	727
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	225	-	-	150	-
Veh in Median Storage, #	2	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	177	184	0	1622	56	104	782

Major/Minor	Minor1		Major1			Major2	
Conflicting Flow All	2249	839	782	0	0	1678	0
Stage 1	1650	-	-	-	-	-	-
Stage 2	599	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	~ 35	309	458	-	-	378	-
Stage 1	~ 142	-	-	-	-	-	-
Stage 2	511	-	-	-	-	-	-
Platoon blocked, %				-	-		-
Mov Cap-1 Maneuver	~ 25	309	458	-	-	378	-
Mov Cap-2 Maneuver	~ 95	-	-	-	-	-	-
Stage 1	~ 103	-	-	-	-	-	-
Stage 2	511	-	-	-	-	-	-

Approach	WB		NB			SB	
HCM Control Delay, s	263.3		0			2.1	
HCM LOS	F						

Minor Lane/Major Mvmt	NBU	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	458	-	-	95	309	378	-
HCM Lane V/C Ratio	-	-	-	1.868	0.595	0.276	-
HCM Control Delay (s)	0	-	-	$ 502.6	32.4	18.1	-
HCM Lane LOS	A	-	-	F	D	C	-
HCM 95th %tile Q(veh)	0	-	-	14.8	3.6	1.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	248	126	0	1159	510	61	576
Future Volume (veh/h)	248	126	0	1159	510	61	576
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1870	1900		1870	1870	1870	1870
Adj Flow Rate, veh/h	201	206		1246	548	66	619
Peak Hour Factor	0.93	0.93		0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0		2	2	2	2
Cap, veh/h	344	311		1730	771	106	2181
Arrive On Green	0.19	0.19		0.49	0.49	0.06	0.61
Sat Flow, veh/h	1781	1610		3647	1583	1781	3647
Grp Volume(v), veh/h	201	206		1246	548	66	619
Grp Sat Flow(s),veh/h/ln	1781	1610		1777	1583	1781	1777
Q Serve(g_s), s	5.3	6.1		14.3	14.0	1.9	4.2
Cycle Q Clear(g_c), s	5.3	6.1		14.3	14.0	1.9	4.2
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	344	311		1730	771	106	2181
V/C Ratio(X)	0.58	0.66		0.72	0.71	0.63	0.28
Avail Cap(c_a), veh/h	1034	934		2062	919	1034	2181
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	19.3		10.5	10.4	23.8	4.7
Incr Delay (d2), s/veh	1.6	2.4		1.0	2.1	5.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	2.3		4.3	4.4	0.9	0.9
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	20.6	21.7		11.5	12.5	29.7	4.7
LnGrp LOS	C	C		B	B	C	A
Approach Vol, veh/h	407			1794			685
Approach Delay, s/veh	21.2			11.8			7.1
Approach LOS	C			B			A

Timer - Assigned Phs	1	2	6	8
Phs Duration (G+Y+Rc), s	6.6	30.2	36.7	15.0
Change Period (Y+Rc), s	3.5	5.0	5.0	5.0
Max Green Setting (Gmax), s	30.0	30.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	3.9	16.3	6.2	8.1
Green Ext Time (p_c), s	0.1	8.8	4.2	1.3

Intersection Summary	
HCM 6th Ctrl Delay	12.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	25	108	35	49	33	244	1008	55	51	509	71
Future Volume (veh/h)	61	25	108	35	49	33	244	1008	55	51	509	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	62	25	109	35	49	33	246	1018	56	52	514	72
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	202	81	241	149	156	125	302	1477	81	71	1073	465
Arrive On Green	0.16	0.16	0.16	0.08	0.08	0.08	0.17	0.43	0.43	0.04	0.30	0.30
Sat Flow, veh/h	1287	519	1534	1781	1870	1500	1781	3421	188	1781	3554	1540
Grp Volume(v), veh/h	87	0	109	35	49	33	246	529	545	52	514	72
Grp Sat Flow(s),veh/h/ln	1806	0	1534	1781	1870	1500	1781	1777	1832	1781	1777	1540
Q Serve(g_s), s	2.4	0.0	3.6	1.0	1.4	1.1	7.4	13.4	13.4	1.6	6.6	1.9
Cycle Q Clear(g_c), s	2.4	0.0	3.6	1.0	1.4	1.1	7.4	13.4	13.4	1.6	6.6	1.9
Prop In Lane	0.71		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	283	0	241	149	156	125	302	767	791	71	1073	465
V/C Ratio(X)	0.31	0.00	0.45	0.24	0.31	0.26	0.81	0.69	0.69	0.73	0.48	0.15
Avail Cap(c_a), veh/h	1462	0	1242	641	673	540	641	767	791	481	1918	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	0.0	21.3	23.8	24.0	23.9	22.2	12.8	12.8	26.4	15.8	14.2
Incr Delay (d2), s/veh	2.2	0.0	4.8	0.8	1.1	1.1	2.0	5.0	4.9	5.4	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	1.5	0.4	0.6	0.4	2.9	5.3	5.5	0.7	2.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.9	0.0	26.0	24.6	25.1	25.0	24.3	17.8	17.6	31.8	16.0	14.3
LnGrp LOS	C	A	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		196			117			1320			638	
Approach Delay, s/veh		24.7			24.9			18.9			17.1	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	4	5	6	8
Phs Duration (G+Y+Rc), s	5.7	28.5	12.7	12.9	21.3	8.6
Change Period (Y+Rc), s	3.5	4.5	4.0	3.5	4.5	4.0
Max Green Setting (Gmax), s	15.0	24.0	45.0	20.0	30.0	20.0
Max Q Clear Time (g_c+I1), s	3.6	15.4	5.6	9.4	8.6	3.4
Green Ext Time (p_c), s	0.0	1.8	2.6	0.3	1.2	0.4

Intersection Summary	
HCM 6th Ctrl Delay	19.2
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	304	123	444	426	195	163	262	619	185	103	9
Future Volume (veh/h)	93	304	123	444	426	195	163	262	619	185	103	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.97	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	310	126	453	435	199	166	267	632	189	105	9
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	387	165	975	528	433	207	492	1499	279	750	63
Arrive On Green	0.19	0.19	0.19	0.28	0.28	0.28	0.12	0.26	0.26	0.08	0.23	0.23
Sat Flow, veh/h	606	2034	866	3456	1870	1534	1781	1870	2705	3456	3293	277
Grp Volume(v), veh/h	289	0	242	453	435	199	166	267	632	189	56	58
Grp Sat Flow(s),veh/h/ln	1840	0	1666	1728	1870	1534	1781	1870	1352	1728	1777	1794
Q Serve(g_s), s	13.1	0.0	12.0	9.4	18.9	9.3	7.9	10.7	12.1	4.6	2.2	2.3
Cycle Q Clear(g_c), s	13.1	0.0	12.0	9.4	18.9	9.3	7.9	10.7	12.1	4.6	2.2	2.3
Prop In Lane	0.33		0.52	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	350	0	317	975	528	433	207	492	1499	279	405	409
V/C Ratio(X)	0.83	0.00	0.77	0.46	0.82	0.46	0.80	0.54	0.42	0.68	0.14	0.14
Avail Cap(c_a), veh/h	423	0	383	1191	645	529	614	645	1719	794	817	824
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	0.0	33.4	25.8	29.2	25.8	37.5	27.6	11.7	38.9	26.8	26.8
Incr Delay (d2), s/veh	10.7	0.0	7.4	0.3	7.2	0.8	7.0	0.9	0.2	2.9	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.0	5.4	3.8	9.2	3.4	3.7	4.7	6.1	2.0	0.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	0.0	40.8	26.2	36.4	26.5	44.5	28.5	11.9	41.8	27.0	27.0
LnGrp LOS	D	A	D	C	D	C	D	C	B	D	C	C
Approach Vol, veh/h		531			1087			1065			303	
Approach Delay, s/veh		42.9			30.3			21.2			36.2	
Approach LOS		D			C			C			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	26.9		20.5	14.1	23.8		28.5				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	20.0	30.0		20.0	30.0	40.0		30.0				
Max Q Clear Time (g_c+I1), s	6.6	14.1		15.1	9.9	4.3		20.9				
Green Ext Time (p_c), s	0.5	4.0		1.4	0.4	0.6		3.6				
Intersection Summary												
HCM 6th Ctrl Delay			29.9									
HCM 6th LOS			C									

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	229	781	89	85	812	150	124	36	33	201	37	104
Future Volume (veh/h)	229	781	89	85	812	150	124	36	33	201	37	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		1.00	0.98		0.97	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	234	797	91	87	829	0	127	37	34	205	38	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	385	1244	142	210	1037		475	127	498	385	57	
Arrive On Green	0.22	0.39	0.39	0.12	0.29	0.00	0.32	0.32	0.32	0.32	0.32	0.00
Sat Flow, veh/h	1781	3189	364	1781	3554	1585	1178	392	1537	890	176	1585
Grp Volume(v), veh/h	234	444	444	87	829	0	164	0	34	243	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1776	1781	1777	1585	1571	0	1537	1066	0	1585
Q Serve(g_s), s	8.1	13.9	13.9	3.1	14.8	0.0	0.0	0.0	1.0	10.8	0.0	0.0
Cycle Q Clear(g_c), s	8.1	13.9	13.9	3.1	14.8	0.0	5.1	0.0	1.0	16.0	0.0	0.0
Prop In Lane	1.00		0.20	1.00		1.00	0.77		1.00	0.84		1.00
Lane Grp Cap(c), veh/h	385	693	693	210	1037		602	0	498	442	0	
V/C Ratio(X)	0.61	0.64	0.64	0.41	0.80		0.27	0.00	0.07	0.55	0.00	
Avail Cap(c_a), veh/h	416	1284	1283	286	1063		766	0	673	528	0	
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	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.2	17.0	17.0	28.0	22.4	0.0	17.4	0.0	16.0	23.2	0.0	0.0
Incr Delay (d2), s/veh	2.2	1.0	1.0	1.3	4.3	0.0	0.2	0.0	0.1	1.1	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(50%),veh/ln	3.5	5.3	5.3	1.3	6.4	0.0	1.9	0.0	0.4	3.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	18.0	18.0	29.3	26.7	0.0	17.6	0.0	16.1	24.3	0.0	0.0
LnGrp LOS	C	B	B	C	C		B	A	B	C	A	
Approach Vol, veh/h		1122			916	A		198			243	A
Approach Delay, s/veh		19.7			27.0			17.3			24.3	
Approach LOS		B			C			B			C	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		26.2	11.6	30.7		26.2	18.3	24.0
Change Period (Y+Rc), s		4.0	3.5	4.0		4.0	3.5	4.0
Max Green Setting (Gmax), s		30.0	11.0	49.5		26.5	16.0	20.5
Max Q Clear Time (g_c+I1), s		7.1	5.1	15.9		18.0	10.1	16.8
Green Ext Time (p_c), s		1.1	0.1	6.7		0.9	0.3	1.9

Intersection Summary	
HCM 6th Ctrl Delay	22.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	848	184	234	733	253	103
Future Volume (veh/h)	848	184	234	733	253	103
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	865	188	239	748	258	105
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1350	583	319	2247	344	306
Arrive On Green	0.38	0.38	0.18	0.63	0.19	0.19
Sat Flow, veh/h	3647	1536	1781	3647	1781	1585
Grp Volume(v), veh/h	865	188	239	748	258	105
Grp Sat Flow(s),veh/h/ln	1777	1536	1781	1777	1781	1585
Q Serve(g_s), s	10.8	4.7	6.9	5.3	7.4	3.1
Cycle Q Clear(g_c), s	10.8	4.7	6.9	5.3	7.4	3.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1350	583	319	2247	344	306
V/C Ratio(X)	0.64	0.32	0.75	0.33	0.75	0.34
Avail Cap(c_a), veh/h	1961	848	950	2247	983	875
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.8	11.9	21.2	4.7	20.7	19.0
Incr Delay (d2), s/veh	0.5	0.3	3.5	0.1	3.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	1.4	2.9	1.3	3.2	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.3	12.2	24.7	4.7	24.0	19.6
LnGrp LOS	B	B	C	A	C	B
Approach Vol, veh/h	1053			987	363	
Approach Delay, s/veh	14.0			9.6	22.7	
Approach LOS	B			A	C	

Timer - Assigned Phs	2	3	4	8
Phs Duration (G+Y+Rc), s	15.5	13.7	25.1	38.9
Change Period (Y+Rc), s	5.0	4.0	4.5	4.5
Max Green Setting (Gmax), s	30.0	29.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	9.4	8.9	12.8	7.3
Green Ext Time (p_c), s	1.1	0.6	6.4	5.4

Intersection Summary	
HCM 6th Ctrl Delay	13.5
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	968	2	0	854	89	4	0	13	83	1	46
Future Volume (veh/h)	108	968	2	0	854	89	4	0	13	83	1	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	0.97		0.96	0.96		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	998	2	0	880	92	4	0	13	86	1	47
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	146	2046	4	0	1475	644	140	39	313	497	5	412
Arrive On Green	0.08	0.56	0.56	0.00	0.42	0.42	0.27	0.00	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1781	3638	7	0	3647	1553	213	145	1162	1348	19	1529
Grp Volume(v), veh/h	111	487	513	0	880	92	17	0	0	87	0	47
Grp Sat Flow(s),veh/h/ln	1781	1777	1869	0	1777	1553	1519	0	0	1366	0	1529
Q Serve(g_s), s	3.3	8.8	8.8	0.0	10.3	2.0	0.0	0.0	0.0	2.1	0.0	1.2
Cycle Q Clear(g_c), s	3.3	8.8	8.8	0.0	10.3	2.0	0.4	0.0	0.0	2.6	0.0	1.2
Prop In Lane	1.00		0.00	0.00		1.00	0.24		0.76	0.99		1.00
Lane Grp Cap(c), veh/h	146	999	1051	0	1475	644	492	0	0	502	0	412
V/C Ratio(X)	0.76	0.49	0.49	0.00	0.60	0.14	0.03	0.00	0.00	0.17	0.00	0.11
Avail Cap(c_a), veh/h	516	999	1051	0	1992	870	646	0	0	897	0	857
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.0	7.1	7.1	0.0	12.2	9.7	14.4	0.0	0.0	15.2	0.0	14.7
Incr Delay (d2), s/veh	7.8	0.4	0.4	0.0	0.4	0.1	0.0	0.0	0.0	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.5	2.7	0.0	3.5	0.6	0.1	0.0	0.0	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	7.4	7.4	0.0	12.6	9.8	14.5	0.0	0.0	15.3	0.0	14.9
LnGrp LOS	C	A	A	A	B	A	B	A	A	B	A	B
Approach Vol, veh/h		1111			972			17			134	
Approach Delay, s/veh		9.9			12.3			14.5			15.2	
Approach LOS		A			B			B			B	

Timer - Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		18.4		35.1		18.4	7.9	27.2
Change Period (Y+Rc), s		4.0		5.0		4.0	3.5	5.0
Max Green Setting (Gmax), s		20.0		30.0		30.0	15.5	30.0
Max Q Clear Time (g_c+I1), s		2.4		10.8		4.6	5.3	12.3
Green Ext Time (p_c), s		0.0		6.5		0.6	0.2	6.3

Intersection Summary	
HCM 6th Ctrl Delay	11.3
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	898	107	56	798	71	68	11	72	92	24	57
Future Volume (veh/h)	67	898	107	56	798	71	68	11	72	92	24	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.95	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	945	113	59	840	75	72	12	76	97	25	60
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	1302	548	113	1277	541	116	11	591	112	17	595
Arrive On Green	0.07	0.37	0.37	0.06	0.36	0.36	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1781	3554	1497	1781	3554	1506	0	28	1554	0	44	1566
Grp Volume(v), veh/h	71	945	113	59	840	75	84	0	76	122	0	60
Grp Sat Flow(s),veh/h/ln	1781	1777	1497	1781	1777	1506	28	0	1554	44	0	1566
Q Serve(g_s), s	2.2	13.3	3.0	1.9	11.5	1.9	0.0	0.0	1.8	0.0	0.0	1.4
Cycle Q Clear(g_c), s	2.2	13.3	3.0	1.9	11.5	1.9	22.0	0.0	1.8	22.0	0.0	1.4
Prop In Lane	1.00		1.00	1.00		1.00	0.86		1.00	0.80		1.00
Lane Grp Cap(c), veh/h	126	1302	548	113	1277	541	126	0	591	128	0	595
V/C Ratio(X)	0.56	0.73	0.21	0.52	0.66	0.14	0.67	0.00	0.13	0.95	0.00	0.10
Avail Cap(c_a), veh/h	616	1504	634	616	1474	625	126	0	591	128	0	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.0	15.8	12.6	26.2	15.6	12.5	26.1	0.0	11.7	26.0	0.0	11.6
Incr Delay (d2), s/veh	3.9	1.5	0.2	3.7	0.9	0.1	12.4	0.0	0.1	64.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.0	0.9	0.9	4.2	0.6	1.5	0.0	0.6	3.9	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.0	17.3	12.8	29.9	16.4	12.6	38.6	0.0	11.8	90.1	0.0	11.6
LnGrp LOS	C	B	B	C	B	B	D	A	B	F	A	B
Approach Vol, veh/h		1129			974			160			182	
Approach Delay, s/veh		17.7			17.0			25.8			64.3	
Approach LOS		B			B			C			E	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		26.0	7.2	24.7		26.0	7.6	24.3				
Change Period (Y+Rc), s		4.0	3.5	3.5		4.0	3.5	3.5				
Max Green Setting (Gmax), s		22.0	20.0	24.5		22.0	20.0	24.0				
Max Q Clear Time (g_c+I1), s		24.0	3.9	15.3		24.0	4.2	13.5				
Green Ext Time (p_c), s		0.0	0.1	4.6		0.0	0.1	4.4				
Intersection Summary												
HCM 6th Ctrl Delay			21.4									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	878	121	148	755	59	134	36	133	33	13	41
Future Volume (veh/h)	64	878	121	148	755	59	134	36	133	33	13	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	69	944	130	159	812	63	144	39	143	35	14	44
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	1139	499	195	1266	98	290	78	319	240	96	292
Arrive On Green	0.05	0.32	0.32	0.11	0.38	0.38	0.20	0.20	0.20	0.19	0.19	0.19
Sat Flow, veh/h	1781	3554	1558	1781	3337	259	1416	384	1557	1290	516	1573
Grp Volume(v), veh/h	69	944	130	159	432	443	183	0	143	49	0	44
Grp Sat Flow(s),veh/h/ln	1781	1777	1558	1781	1777	1819	1800	0	1557	1806	0	1573
Q Serve(g_s), s	3.9	25.4	6.4	9.0	20.6	20.6	9.3	0.0	8.3	2.3	0.0	2.4
Cycle Q Clear(g_c), s	3.9	25.4	6.4	9.0	20.6	20.6	9.3	0.0	8.3	2.3	0.0	2.4
Prop In Lane	1.00		1.00	1.00		0.14	0.79		1.00	0.71		1.00
Lane Grp Cap(c), veh/h	91	1139	499	195	674	690	368	0	319	336	0	292
V/C Ratio(X)	0.76	0.83	0.26	0.81	0.64	0.64	0.50	0.00	0.45	0.15	0.00	0.15
Avail Cap(c_a), veh/h	690	1377	603	690	688	705	697	0	603	700	0	609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.4	32.5	26.0	44.9	26.3	26.3	36.4	0.0	36.0	35.2	0.0	35.2
Incr Delay (d2), s/veh	12.1	3.7	0.3	7.9	2.0	1.9	1.0	0.0	1.0	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	11.3	2.4	4.4	8.9	9.1	4.2	0.0	3.2	1.0	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.5	36.2	26.3	52.9	28.3	28.2	37.4	0.0	37.0	35.4	0.0	35.4
LnGrp LOS	E	D	C	D	C	C	D	A	D	D	A	D
Approach Vol, veh/h		1143			1034			326			93	
Approach Delay, s/veh		36.5			32.0			37.2			35.4	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	26.1	14.8	38.1	24.2	8.8	44.2
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	40.0	40.0	40.0	40.0	40.0	40.0
Max Q Clear Time (g_c+I1), s	11.3	11.0	27.4	4.4	5.9	22.6
Green Ext Time (p_c), s	1.6	0.4	5.7	0.4	0.2	5.4

Intersection Summary	
HCM 6th Ctrl Delay	34.8
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	814	153	144	787	1	157	0	93	0	0	3
Future Volume (veh/h)	3	814	153	144	787	1	157	0	93	0	0	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	866	163	153	837	1	167	0	99	0	0	3
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	1364	591	206	1803	2	265	0	232	0	0	25
Arrive On Green	0.00	0.38	0.38	0.12	0.50	0.50	0.15	0.00	0.15	0.00	0.00	0.02
Sat Flow, veh/h	1781	3554	1540	1781	3642	4	1781	0	1563	0	0	1570
Grp Volume(v), veh/h	3	866	163	153	408	430	167	0	99	0	0	3
Grp Sat Flow(s),veh/h/ln	1781	1777	1540	1781	1777	1870	1781	0	1563	0	0	1570
Q Serve(g_s), s	0.1	10.3	3.8	4.3	7.9	7.9	4.6	0.0	3.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.1	10.3	3.8	4.3	7.9	7.9	4.6	0.0	3.0	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	7	1364	591	206	880	926	265	0	232	0	0	25
V/C Ratio(X)	0.41	0.63	0.28	0.74	0.46	0.46	0.63	0.00	0.43	0.00	0.00	0.12
Avail Cap(c_a), veh/h	906	2046	886	1248	1023	1076	1231	0	1080	0	0	874
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	25.9	13.1	11.1	22.3	8.6	8.6	20.8	0.0	20.2	0.0	0.0	25.3
Incr Delay (d2), s/veh	33.4	0.5	0.3	5.3	0.4	0.4	2.5	0.0	1.2	0.0	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	3.6	1.1	2.0	2.4	2.6	1.9	0.0	1.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.3	13.6	11.3	27.6	9.0	9.0	23.3	0.0	21.4	0.0	0.0	27.3
LnGrp LOS	E	B	B	C	A	A	C	A	C	A	A	C
Approach Vol, veh/h		1032			991			266			3	
Approach Delay, s/veh		13.4			11.9			22.6			27.3	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	3.7	30.8		11.8	9.5	25.0		5.8
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	5.0		5.0
Max Green Setting (Gmax), s	26.5	30.0		36.0	36.5	30.0		29.0
Max Q Clear Time (g_c+I1), s	2.1	9.9		6.6	6.3	12.3		2.1
Green Ext Time (p_c), s	0.0	5.3		1.3	0.4	6.4		0.0

Intersection Summary			
HCM 6th Ctrl Delay			13.8
HCM 6th LOS			B

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	883	11	46	909	37	42
Future Vol, veh/h	883	11	46	909	37	42
Conflicting Peds, #/hr	0	9	9	0	9	9
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	981	12	51	1010	41	47

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1002	0	1606	509
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	616	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	687	-	96	509
Stage 1	-	-	-	-	320	-
Stage 2	-	-	-	-	501	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	681	-	87	500
Mov Cap-2 Maneuver	-	-	-	-	199	-
Stage 1	-	-	-	-	293	-
Stage 2	-	-	-	-	496	-

Approach	EB		WB		NB
HCM Control Delay, s	0		0.5		22.5
HCM LOS					C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	293	-	-	681	-
HCM Lane V/C Ratio	0.3	-	-	0.075	-
HCM Control Delay (s)	22.5	-	-	10.7	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	1.2	-	-	0.2	-

Intersection						
Int Delay, s/veh	0.3					
Movement	**EBL**	**EBT**	**WBT**	**WBR**	**SBL**	**SBR**
Lane Configurations						
Traffic Vol, veh/h	25	1027	971	15	5	9
Future Vol, veh/h	25	1027	971	15	5	9
Conflicting Peds, #/hr	20	0	0	21	21	20
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	1070	1011	16	5	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1048	0	-	0	1648	555
Stage 1	-	-	-	-	1040	-
Stage 2	-	-	-	-	608	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	660	-	-	-	90	475
Stage 1	-	-	-	-	302	-
Stage 2	-	-	-	-	506	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	647	-	-	-	83	457
Mov Cap-2 Maneuver	-	-	-	-	197	-
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	496	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	17.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	647	-	-	-	311
HCM Lane V/C Ratio	0.04	-	-	-	0.047
HCM Control Delay (s)	10.8	-	-	-	17.1
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

SIMTRAFFIC QUEUEING REPORTS

FUTURE CONDITIONS
AM & PM PEAK HOUR

Intersection: 1: SR-1 Ramps & Del Monte Blvd

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	79	50	4	39	174	349	299
Average Queue (ft)	25	27	0	5	116	46	23
95th Queue (ft)	77	50	2	24	187	230	170
Link Distance (ft)	309	309	545	545		487	487
Upstream Blk Time (%)						0	0
Queuing Penalty (veh)						0	0
Storage Bay Dist (ft)					150		
Storage Blk Time (%)					10	0	
Queuing Penalty (veh)					61	0	

Intersection: 2: Del Monte Blvd & Reindollar Ave

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	LR	T	T	R	L	T	T
Maximum Queue (ft)	332	175	187	167	99	150	335	325
Average Queue (ft)	166	108	102	70	40	67	156	163
95th Queue (ft)	268	211	162	138	76	138	291	287
Link Distance (ft)	856		487	487			1066	1066
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		150			125	125		
Storage Blk Time (%)	8	1	2	0	0	0	9	
Queuing Penalty (veh)	28	2	0	1	0	2	8	

Intersection: 3: Del Monte Blvd & Palm Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	L	T	R	L	T	TR	L	T	T	R
Maximum Queue (ft)	210	125	100	108	67	137	205	199	174	336	336	125
Average Queue (ft)	72	78	56	21	25	52	101	95	30	193	192	29
95th Queue (ft)	159	129	96	67	57	104	176	170	104	300	301	105
Link Distance (ft)	744			828			1066	1066		1812	1812	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		100	80		50	225			150			100
Storage Blk Time (%)	2	3	5	2	1	0	0		0	18	28	0
Queuing Penalty (veh)	5	4	3	3	1	0	0		0	4	10	0

Intersection: 4: Del Monte Blvd & Reservation Rd

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	R	R	L	L
Maximum Queue (ft)	174	441	124	305	273	149	271	205	101	109	157	169
Average Queue (ft)	114	189	95	130	92	66	145	99	48	48	66	97
95th Queue (ft)	206	347	148	240	195	140	235	176	86	91	137	163
Link Distance (ft)		973		622	622			1812	1812			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	150		100			125	450			450	150	150
Storage Blk Time (%)	1	18	7	14	4	0					0	2
Queuing Penalty (veh)	3	25	14	29	8	1					0	2

Intersection: 4: Del Monte Blvd & Reservation Rd

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	202	124
Average Queue (ft)	70	39
95th Queue (ft)	146	95
Link Distance (ft)	571	571
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	1	

Intersection: 5: Vista Del Camino Cir & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R
Maximum Queue (ft)	167	210	251	129	251	231	159	101	72	125	82
Average Queue (ft)	77	82	117	36	107	102	16	45	22	56	6
95th Queue (ft)	136	158	203	92	196	191	91	85	57	102	42
Link Distance (ft)		622	622		375	375		283		591	
Upstream Blk Time (%)					0						
Queuing Penalty (veh)					0						
Storage Bay Dist (ft)	175			135			135		50		100
Storage Blk Time (%)	0	0		0	4	3	0	10	0	2	0
Queuing Penalty (veh)	0	0		0	2	3	0	3	0	1	0

Intersection: 6: Seacrest Ave & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	122	118	87	178	179	184	123	161
Average Queue (ft)	89	88	34	88	62	65	74	37
95th Queue (ft)	133	131	70	150	139	146	119	84
Link Distance (ft)	39	39	39		261	261		724
Upstream Blk Time (%)	25	25	5		0			
Queuing Penalty (veh)	69	70	12		0			
Storage Bay Dist (ft)				200			100	
Storage Blk Time (%)				0	0		4	0
Queuing Penalty (veh)				0	0		3	0

Intersection: 7: Driveway/Shopping Center & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	T	T	R	LTR	LT	R
Maximum Queue (ft)	72	113	101	217	230	100	31	80	82
Average Queue (ft)	44	62	66	111	108	47	7	35	33
95th Queue (ft)	74	112	108	207	214	109	27	70	65
Link Distance (ft)		73	73	220	220		474	485	
Upstream Blk Time (%)	1	6	8	1	1				
Queuing Penalty (veh)	0	23	31	2	4				
Storage Bay Dist (ft)	145					75			150
Storage Blk Time (%)	1	6			11	0			
Queuing Penalty (veh)	3	6			12	1			

Intersection: 8: De Forest Rd & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	LT	R
Maximum Queue (ft)	67	186	192	57	93	251	277	176	42	30	134	73
Average Queue (ft)	24	74	89	4	19	92	96	30	9	7	51	29
95th Queue (ft)	56	151	169	17	58	198	211	107	32	24	104	66
Link Distance (ft)		220	220			490	490		409		830	
Upstream Blk Time (%)		0	0									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	200			175	175			175		200		50
Storage Blk Time (%)		0	0			1	1	0			11	1
Queuing Penalty (veh)		0	0			0	1	0			8	2

Intersection: 9: Crescent Ave & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	B34	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	TR	T	LT	R	LT	R
Maximum Queue (ft)	166	310	348	125	195	296	338	2	98	188	181	74
Average Queue (ft)	43	173	202	53	62	138	166	0	65	57	77	29
95th Queue (ft)	110	285	313	144	142	250	282	2	108	138	144	76
Link Distance (ft)		490	490			562	562	1635		681	808	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	220			100	220				75			50
Storage Blk Time (%)		3	30	0	0	1			13	1	28	1
Queuing Penalty (veh)		2	22	0	0	1			14	1	10	1

Intersection: 10: California Ave & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	79	334	378	125	170	226	205	148	132	24
Average Queue (ft)	13	134	161	88	89	84	87	62	46	1
95th Queue (ft)	49	268	318	157	156	174	175	116	90	12
Link Distance (ft)		1635	1635			2271	2271	1450		183
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	75			100	150				150	
Storage Blk Time (%)	0	19	15	1	2	1		0	0	
Queuing Penalty (veh)	0	2	38	4	5	2		0	0	

Intersection: 11: Salinas Ave & Reservation Rd

Movement	EB	WB	NB
Directions Served	R	L	LR
Maximum Queue (ft)	2	52	75
Average Queue (ft)	0	12	27
95th Queue (ft)	2	40	55
Link Distance (ft)			445
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100	150	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 12: Reservation Rd & Eucalyptus St

Movement	EB	EB	EB	WB	SB
Directions Served	L	T	T	TR	LR
Maximum Queue (ft)	28	133	164	9	78
Average Queue (ft)	2	26	37	0	30
95th Queue (ft)	15	88	116	8	65
Link Distance (ft)		375	375	39	1022
Upstream Blk Time (%)				0	
Queuing Penalty (veh)				0	
Storage Bay Dist (ft)	125				
Storage Blk Time (%)		0			
Queuing Penalty (veh)		0			

Intersection: 13: Reservation Rd & Driveway 1

Movement	EB	EB	WB	WB	SB
Directions Served	T	T	T	TR	R
Maximum Queue (ft)	91	108	3	2	65
Average Queue (ft)	12	16	0	0	24
95th Queue (ft)	55	66	3	2	51
Link Distance (ft)	261	261	46	46	179
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 14: Driveway 2 & Reservation Rd

Movement	EB	EB	WB	NB
Directions Served	T	TR	T	R
Maximum Queue (ft)	61	70	8	84
Average Queue (ft)	17	26	0	31
95th Queue (ft)	54	68	6	63
Link Distance (ft)	46	46	73	240
Upstream Blk Time (%)	2	5		
Queuing Penalty (veh)	9	18		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 607

Intersection: 1: SR-1 Ramps & Del Monte Blvd

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	296	292	6	19	170	244	223
Average Queue (ft)	278	179	0	1	100	71	59
95th Queue (ft)	304	397	4	9	190	306	280
Link Distance (ft)	280	280	552	552		479	479
Upstream Blk Time (%)	93	58				2	0
Queuing Penalty (veh)	0	0				6	0
Storage Bay Dist (ft)					150		
Storage Blk Time (%)					22	0	
Queuing Penalty (veh)					80	0	

Intersection: 2: Del Monte Blvd & Reindollar Ave

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	LR	T	T	R	L	T	T
Maximum Queue (ft)	165	144	297	277	150	114	189	195
Average Queue (ft)	80	42	165	144	103	44	62	82
95th Queue (ft)	142	101	260	250	171	91	147	164
Link Distance (ft)	856		479	479			1066	1066
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		150			125	125		
Storage Blk Time (%)	1	0	13	5	2	0	2	
Queuing Penalty (veh)	1	0	0	26	10	0	1	

Intersection: 3: Del Monte Blvd & Palm Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	L	T	R	L	T	TR	L	T	T	R
Maximum Queue (ft)	104	101	81	101	71	234	362	349	123	234	236	125
Average Queue (ft)	44	36	23	35	25	119	162	172	35	104	114	38
95th Queue (ft)	83	73	58	75	60	215	286	299	83	192	206	113
Link Distance (ft)	744			828			1066	1066		1812	1812	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		100	80		50	225			150			100
Storage Blk Time (%)	0	0	0	7	1	0	3			3	11	0
Queuing Penalty (veh)	0	0	0	5	1	2	7			2	8	0

Intersection: 4: Del Monte Blvd & Reservation Rd

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	R	R	L	L
Maximum Queue (ft)	174	573	125	512	602	150	204	249	161	164	129	149
Average Queue (ft)	156	290	98	197	356	110	98	132	76	82	46	66
95th Queue (ft)	211	552	154	456	651	199	169	226	130	138	98	121
Link Distance (ft)		973		622	622			1812	1812			
Upstream Blk Time (%)				0	2							
Queuing Penalty (veh)				0	13							
Storage Bay Dist (ft)	150		100			125	450			450	150	150
Storage Blk Time (%)	16	32	8	18	42	1					0	0
Queuing Penalty (veh)	44	77	17	39	82	3					0	0

Intersection: 4: Del Monte Blvd & Reservation Rd

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	109	75
Average Queue (ft)	29	13
95th Queue (ft)	78	44
Link Distance (ft)	571	571
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 5: Vista Del Camino Cir & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R
Maximum Queue (ft)	198	275	319	160	387	399	160	204	75	314	125
Average Queue (ft)	125	128	165	71	180	223	82	85	28	134	52
95th Queue (ft)	200	236	272	152	348	399	210	158	73	258	147
Link Distance (ft)		622	622		375	375		283		591	
Upstream Blk Time (%)					2	4				0	
Queuing Penalty (veh)					8	19				0	
Storage Bay Dist (ft)	175			135			135		50		100
Storage Blk Time (%)	4	1		0	13	24	0	28	1	19	0
Queuing Penalty (veh)	17	2		1	11	36	1	9	1	20	1

Intersection: 6: Seacrest Ave & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	128	125	90	218	255	264	124	256
Average Queue (ft)	106	103	42	120	96	123	101	84
95th Queue (ft)	134	130	79	201	207	236	142	211
Link Distance (ft)	39	39	39		261	261		724
Upstream Blk Time (%)	42	43	6		0	0		
Queuing Penalty (veh)	143	147	22		1	2		
Storage Bay Dist (ft)				200			100	
Storage Blk Time (%)				1	1		16	0
Queuing Penalty (veh)				4	1		17	0

Intersection: 7: Driveway/Shopping Center & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	T	T	R	LTR	LT	R
Maximum Queue (ft)	72	111	104	237	239	100	38	96	57
Average Queue (ft)	47	73	77	150	154	45	11	36	18
95th Queue (ft)	74	119	110	257	263	110	34	74	41
Link Distance (ft)		73	73	220	220		474	485	
Upstream Blk Time (%)	1	11	14	2	3				
Queuing Penalty (veh)	0	58	76	10	13				
Storage Bay Dist (ft)	145					75			150
Storage Blk Time (%)	1	11			19	0			
Queuing Penalty (veh)	6	12			17	1			

Intersection: 8: De Forest Rd & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	LT	R
Maximum Queue (ft)	88	216	232	199	190	300	319	200	94	67	124	72
Average Queue (ft)	37	104	123	35	46	128	145	38	37	24	51	27
95th Queue (ft)	73	199	223	120	127	245	274	137	74	52	98	65
Link Distance (ft)		220	220			490	490		409		830	
Upstream Blk Time (%)		0	1									
Queuing Penalty (veh)		2	3									
Storage Bay Dist (ft)	200			175	175			175		200		50
Storage Blk Time (%)		1	3	0	0	3	5	0			12	2
Queuing Penalty (veh)		0	3	0	0	2	3	0			7	3

Intersection: 9: Crescent Ave & Reservation Rd

Movement	EB	EB	EB	EB	WB	WB	WB	B34	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	TR	T	LT	R	LT	R
Maximum Queue (ft)	244	429	454	125	243	379	404	6	99	269	125	74
Average Queue (ft)	70	248	272	73	112	176	204	0	80	89	41	28
95th Queue (ft)	183	404	426	163	216	313	339	6	115	211	91	67
Link Distance (ft)		490	490			562	562	1635		681	808	
Upstream Blk Time (%)		0	0			0						
Queuing Penalty (veh)		0	0			0						
Storage Bay Dist (ft)	220			100	220				75			50
Storage Blk Time (%)	0	12	39	0	0	4			23	2	13	1
Queuing Penalty (veh)	0	8	47	0	1	5			30	3	5	1

Intersection: 10: California Ave & Reservation Rd

Movement	EB	EB	EB	EB	B34	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	T	L	T	TR	LT	R	LTR
Maximum Queue (ft)	44	360	391	125	5	168	252	224	189	114	30
Average Queue (ft)	4	164	188	69	0	83	95	95	77	31	3
95th Queue (ft)	24	320	359	150	5	150	201	187	145	71	17
Link Distance (ft)		1635	1635		562		2271	2271	1450		183
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	75			100		150				150	
Storage Blk Time (%)		21	18	0		1	2		1		
Queuing Penalty (veh)		1	28	1		3	3		1		

Intersection: 11: Salinas Ave & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	NB
Directions Served	T	T	R	L	T	T	LR
Maximum Queue (ft)	106	99	18	51	61	60	111
Average Queue (ft)	8	10	1	19	11	5	40
95th Queue (ft)	50	52	13	49	42	28	88
Link Distance (ft)	2271	2271			1110	1110	445
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			100	150			
Storage Blk Time (%)		0					
Queuing Penalty (veh)		0					

Intersection: 12: Reservation Rd & Eucalyptus St

Movement	EB	EB	EB	WB	WB	SB
Directions Served	L	T	T	T	TR	LR
Maximum Queue (ft)	116	283	305	62	83	60
Average Queue (ft)	16	97	129	13	19	16
95th Queue (ft)	60	216	259	47	67	49
Link Distance (ft)		375	375	39	39	1022
Upstream Blk Time (%)		0		1	3	
Queuing Penalty (veh)		0		5	16	
Storage Bay Dist (ft)	125					
Storage Blk Time (%)		5				
Queuing Penalty (veh)		1				

Intersection: 13: Reservation Rd & Driveway 1

Movement	EB	EB	WB	WB	SB
Directions Served	T	T	T	TR	R
Maximum Queue (ft)	185	185	14	16	82
Average Queue (ft)	43	54	1	1	35
95th Queue (ft)	137	152	10	11	61
Link Distance (ft)	261	261	46	46	179
Upstream Blk Time (%)			0	0	
Queuing Penalty (veh)			0	0	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 14: Driveway 2 & Reservation Rd

Movement	EB	EB	WB	WB	NB
Directions Served	T	TR	T	T	R
Maximum Queue (ft)	60	79	8	11	145
Average Queue (ft)	29	40	0	0	60
95th Queue (ft)	70	79	10	8	115
Link Distance (ft)	46	46	73	73	240
Upstream Blk Time (%)	7	9	0	0	0
Queuing Penalty (veh)	33	48	0	0	0
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 1343

SIDRA LEVEL OF SERVICE REPORTS

FUTURE CONDITIONS

AM & PM PEAK HOUR

MOVEMENT SUMMARY

Site: 101 [Del Monte/Hwy1 - AM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Highway 1 On/Off Ramp											
8	T1	604	3.0	0.319	6.6	LOS A	1.7	44.5	0.59	0.51	34.4
18	R2	68	3.0	0.319	6.5	LOS A	1.6	41.3	0.57	0.49	33.4
Approach		672	3.0	0.319	6.6	LOS A	1.7	44.5	0.59	0.51	34.3
East: Del Monte Blvd											
1	L2	11	3.0	0.013	4.3	LOS A	0.1	1.4	0.57	0.40	32.9
16	R2	65	3.0	0.071	4.6	LOS A	0.3	7.4	0.55	0.46	34.2
Approach		75	3.0	0.071	4.6	LOS A	0.3	7.4	0.55	0.45	34.0
North: Del Monte Blvd											
7	L2	422	3.0	0.557	7.9	LOS A	5.7	145.0	0.14	0.03	32.6
4	T1	1332	3.0	0.557	7.9	LOS A	5.7	145.0	0.13	0.03	33.3
Approach		1754	3.0	0.557	7.9	LOS A	5.7	145.0	0.13	0.03	33.2
All Vehicles		2501	3.0	0.557	7.4	LOS A	5.7	145.0	0.27	0.17	33.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Del Monte/Hwy1 - PM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Highway 1 On/Off Ramp											
8	T1	1622	3.0	0.583	8.9	LOS A	5.5	141.3	0.47	0.25	33.3
18	R2	56	3.0	0.583	8.8	LOS A	5.1	129.3	0.45	0.24	32.3
Approach		1677	3.0	0.583	8.9	LOS A	5.5	141.3	0.47	0.25	33.3
East: Del Monte Blvd											
1	L2	177	3.0	0.592	31.0	LOS C	2.9	73.1	0.91	1.06	24.0
16	R2	184	3.0	0.519	23.2	LOS C	2.3	58.8	0.88	0.98	26.6
Approach		361	3.0	0.592	27.0	LOS C	2.9	73.1	0.89	1.02	25.2
North: Del Monte Blvd											
7	L2	104	3.0	0.331	5.7	LOS A	2.1	53.0	0.44	0.27	34.3
4	T1	782	3.0	0.331	5.7	LOS A	2.1	53.0	0.42	0.26	34.6
Approach		886	3.0	0.331	5.7	LOS A	2.1	53.0	0.42	0.26	34.6
All Vehicles		2925	3.0	0.592	10.1	LOS B	5.5	141.3	0.50	0.35	32.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 102 [Del Monte/Reindollar - AM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Del Monte Blvd											
3u	U	11	2.0	0.245	4.5	LOS A	1.5	37.4	0.29	0.14	36.5
8	T1	534	3.0	0.245	4.5	LOS A	1.5	37.4	0.28	0.13	35.4
18	R2	169	3.0	0.245	4.5	LOS A	1.3	33.9	0.26	0.12	34.3
Approach		714	3.0	0.245	4.5	LOS A	1.5	37.4	0.27	0.13	35.2
East: Reindollar Ave											
1	L2	600	3.0	0.362	7.9	LOS A	1.9	49.3	0.67	0.63	31.6
16	R2	76	3.0	0.362	7.7	LOS A	1.8	46.2	0.64	0.61	30.9
Approach		676	3.0	0.362	7.8	LOS A	1.9	49.3	0.66	0.63	31.5
North: Del Monte Blvd											
7	L2	92	3.0	0.729	18.4	LOS B	7.4	189.0	0.92	1.10	29.0
4	T1	1186	3.0	0.729	17.9	LOS B	7.4	189.0	0.90	1.07	29.3
Approach		1278	3.0	0.729	18.0	LOS B	7.4	189.0	0.90	1.08	29.3
All Vehicles		2669	3.0	0.729	11.8	LOS B	7.4	189.0	0.67	0.71	31.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 102 [Del Monte/Reindollar - PM]

New Site
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Del Monte Blvd											
3u	U	11	2.0	0.604	9.1	LOS A	6.3	160.7	0.41	0.18	34.1
8	T1	1246	3.0	0.604	9.1	LOS A	6.3	160.7	0.40	0.18	33.1
18	R2	548	3.0	0.604	9.0	LOS A	5.7	146.3	0.37	0.17	32.1
Approach		1805	3.0	0.604	9.0	LOS A	6.3	160.7	0.39	0.18	32.8
East: Reindollar Ave											
1	L2	267	3.0	0.431	16.0	LOS B	2.0	52.3	0.81	0.89	28.6
16	R2	135	3.0	0.431	14.8	LOS B	2.0	50.4	0.79	0.86	28.9
Approach		402	3.0	0.431	15.6	LOS B	2.0	52.3	0.80	0.88	28.7
North: Del Monte Blvd											
7	L2	66	3.0	0.282	5.6	LOS A	1.6	40.8	0.51	0.37	34.5
4	T1	619	3.0	0.282	5.5	LOS A	1.6	40.8	0.48	0.35	34.7
Approach		685	3.0	0.282	5.5	LOS A	1.6	40.8	0.49	0.35	34.7
All Vehicles		2892	3.0	0.604	9.1	LOS A	6.3	160.7	0.47	0.32	32.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 104 [Del Monte/Reservation - AM]

New Site
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Del Monte Blvd											
3	L2	248	3.0	0.492	10.0	LOS A	3.0	78.0	0.72	0.76	31.6
8	T1	213	3.0	0.492	10.0	LOS A	3.0	78.0	0.72	0.76	31.5
18	R2	399	3.0	0.451	9.6	LOS A	2.8	70.8	0.74	0.76	31.8
Approach		861	3.0	0.492	9.8	LOS A	3.0	78.0	0.73	0.76	31.6
East: Reservation Road											
1	L2	451	3.0	0.488	10.3	LOS B	2.8	71.6	0.66	0.68	30.5
6	T1	200	3.0	0.488	10.3	LOS B	2.8	71.6	0.66	0.68	32.5
16	R2	220	3.0	0.488	10.3	LOS B	2.8	71.6	0.66	0.68	31.5
Approach		871	3.0	0.488	10.3	LOS B	2.8	71.6	0.66	0.68	31.2
North: Del Monte Blvd											
7	L2	278	3.0	0.440	12.3	LOS B	2.4	61.0	0.79	0.85	29.6
4	T1	273	3.0	0.404	10.7	LOS B	2.0	50.9	0.74	0.78	32.4
14	R2	7	3.0	0.404	10.7	LOS B	2.0	50.9	0.74	0.78	31.5
Approach		557	3.0	0.440	11.5	LOS B	2.4	61.0	0.76	0.81	30.9
West: Reservation Road											
5	L2	18	3.0	0.377	12.0	LOS B	1.8	46.9	0.78	0.82	31.7
2	T1	275	3.0	0.377	11.7	LOS B	1.8	46.9	0.77	0.81	31.8
12	R2	158	3.0	0.377	11.0	LOS B	1.7	44.7	0.74	0.78	31.2
Approach		452	3.0	0.377	11.5	LOS B	1.8	46.9	0.76	0.80	31.6
All Vehicles		2740	3.0	0.492	10.6	LOS B	3.0	78.0	0.72	0.75	31.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 104 [Del Monte/Reservation - PM]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Del Monte Blvd											
3	L2	166	3.0	0.502	10.8	LOS B	3.3	85.4	0.77	0.83	31.5
8	T1	267	3.0	0.502	10.8	LOS B	3.3	85.4	0.77	0.83	31.5
18	R2	632	3.0	0.688	15.5	LOS B	6.1	155.2	0.85	0.98	29.3
Approach		1065	3.0	0.688	13.6	LOS B	6.1	155.2	0.82	0.92	30.2
East: Reservation Road											
1	L2	453	3.0	0.532	11.6	LOS B	3.2	83.0	0.70	0.76	29.9
6	T1	435	3.0	0.744	19.1	LOS B	6.9	176.6	0.86	1.01	28.9
16	R2	199	3.0	0.744	19.1	LOS B	6.9	176.6	0.86	1.01	28.1
Approach		1087	3.0	0.744	16.0	LOS B	6.9	176.6	0.79	0.90	29.2
North: Del Monte Blvd											
7	L2	189	3.0	0.315	10.3	LOS B	1.3	34.2	0.73	0.74	30.4
4	T1	105	3.0	0.213	9.6	LOS A	0.9	22.6	0.73	0.73	33.0
14	R2	9	3.0	0.213	9.6	LOS A	0.9	22.6	0.73	0.73	32.0
Approach		303	3.0	0.315	10.0	LOS B	1.3	34.2	0.73	0.74	31.3
West: Reservation Road											
5	L2	95	3.0	0.346	9.2	LOS A	1.7	44.0	0.73	0.74	32.3
2	T1	310	3.0	0.346	8.9	LOS A	1.7	44.0	0.71	0.72	32.7
12	R2	126	3.0	0.346	8.6	LOS A	1.6	41.5	0.69	0.70	32.3
Approach		531	3.0	0.346	8.9	LOS A	1.7	44.0	0.71	0.72	32.6
All Vehicles		2986	3.0	0.744	13.3	LOS B	6.9	176.6	0.78	0.86	30.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 108 [Reservation/De Forest - AM]

New Site
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: De Forest Rd											
3	L2	18	3.0	0.067	7.1	LOS A	0.2	5.6	0.60	0.60	33.0
8	T1	3	3.0	0.067	7.1	LOS A	0.2	5.6	0.60	0.60	32.9
18	R2	18	3.0	0.067	7.1	LOS A	0.2	5.6	0.60	0.60	32.0
Approach		38	3.0	0.067	7.1	LOS A	0.2	5.6	0.60	0.60	32.5
East: Reservation Rd											
1	L2	31	3.0	0.339	5.9	LOS A	2.3	58.6	0.28	0.12	34.7
6	T1	731	3.0	0.339	5.9	LOS A	2.3	58.6	0.25	0.11	34.7
16	R2	115	3.0	0.339	5.9	LOS A	1.8	46.4	0.22	0.10	33.7
Approach		877	3.0	0.339	5.9	LOS A	2.3	58.6	0.25	0.11	34.5
North: De Forest Rd											
7	L2	152	3.0	0.331	9.4	LOS A	1.3	33.9	0.64	0.65	31.5
4	T1	1	3.0	0.331	9.4	LOS A	1.3	33.9	0.64	0.65	31.4
14	R2	78	3.0	0.331	9.4	LOS A	1.3	33.9	0.64	0.65	30.6
Approach		231	3.0	0.331	9.4	LOS A	1.3	33.9	0.64	0.65	31.2
West: Reservation Rd											
5	L2	41	3.0	0.389	7.3	LOS A	2.5	65.2	0.51	0.34	33.9
2	T1	816	3.0	0.389	7.1	LOS A	2.5	65.2	0.46	0.31	34.0
12	R2	27	3.0	0.389	7.0	LOS A	2.1	53.1	0.41	0.28	33.1
Approach		885	3.0	0.389	7.1	LOS A	2.5	65.2	0.46	0.31	34.0
All Vehicles		2031	3.0	0.389	6.9	LOS A	2.5	65.2	0.39	0.27	33.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 108 [Reservation/De Forest - PM]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: De Forest Rd											
3	L2	72	3.0	0.303	11.3	LOS B	1.1	28.4	0.70	0.72	31.1
8	T1	12	3.0	0.303	11.3	LOS B	1.1	28.4	0.70	0.72	31.0
18	R2	76	3.0	0.303	11.3	LOS B	1.1	28.4	0.70	0.72	30.2
Approach		159	3.0	0.303	11.3	LOS B	1.1	28.4	0.70	0.72	30.7
East: Reservation Rd											
1	L2	59	3.0	0.415	7.4	LOS A	2.9	73.4	0.48	0.31	33.8
6	T1	840	3.0	0.415	7.3	LOS A	2.9	73.4	0.44	0.28	33.9
16	R2	75	3.0	0.415	7.2	LOS A	2.3	59.6	0.39	0.25	33.0
Approach		974	3.0	0.415	7.3	LOS A	2.9	73.4	0.44	0.28	33.8
North: De Forest Rd											
7	L2	87	3.0	0.232	9.1	LOS A	0.8	20.9	0.64	0.64	31.7
4	T1	1	3.0	0.232	9.1	LOS A	0.8	20.9	0.64	0.64	31.6
14	R2	48	3.0	0.232	9.1	LOS A	0.8	20.9	0.64	0.64	30.7
Approach		137	3.0	0.232	9.1	LOS A	0.8	20.9	0.64	0.64	31.3
West: Reservation Rd											
5	L2	71	3.0	0.478	8.3	LOS A	3.6	92.0	0.51	0.33	33.3
2	T1	945	3.0	0.478	8.2	LOS A	3.6	92.0	0.47	0.30	33.4
12	R2	113	3.0	0.478	8.1	LOS A	2.9	75.0	0.42	0.27	32.6
Approach		1128	3.0	0.478	8.2	LOS A	3.6	92.0	0.46	0.30	33.3
All Vehicles		2398	3.0	0.478	8.1	LOS A	3.6	92.0	0.48	0.34	33.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 109 [Reservation/Crescent - AM]

New Site
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Crescent Ave											
3	L2	115	3.0	0.415	12.0	LOS B	1.8	46.2	0.70	0.75	30.8
8	T1	23	3.0	0.415	12.0	LOS B	1.8	46.2	0.70	0.75	30.7
18	R2	116	3.0	0.415	12.0	LOS B	1.8	46.2	0.70	0.75	29.9
Approach		254	3.0	0.415	12.0	LOS B	1.8	46.2	0.70	0.75	30.4
East: Reservation Rd											
1	L2	89	3.0	0.360	6.9	LOS A	2.3	58.0	0.50	0.34	33.7
6	T1	695	3.0	0.360	6.8	LOS A	2.3	58.0	0.45	0.31	34.1
16	R2	26	3.0	0.360	6.7	LOS A	1.8	47.3	0.41	0.28	33.3
Approach		810	3.0	0.360	6.8	LOS A	2.3	58.0	0.45	0.31	34.0
North: Crescent Ave											
7	L2	70	3.0	0.261	9.0	LOS A	1.0	24.5	0.64	0.64	32.3
4	T1	57	3.0	0.261	9.0	LOS A	1.0	24.5	0.64	0.64	32.2
14	R2	40	3.0	0.261	9.0	LOS A	1.0	24.5	0.64	0.64	31.3
Approach		166	3.0	0.261	9.0	LOS A	1.0	24.5	0.64	0.64	32.0
West: Reservation Rd											
5	L2	55	3.0	0.433	8.1	LOS A	2.9	74.3	0.57	0.41	33.4
2	T1	816	3.0	0.433	7.9	LOS A	2.9	74.3	0.52	0.38	33.6
12	R2	80	3.0	0.433	7.8	LOS A	2.4	61.2	0.47	0.34	32.8
Approach		952	3.0	0.433	7.9	LOS A	2.9	74.3	0.51	0.38	33.5
All Vehicles		2183	3.0	0.433	8.1	LOS A	2.9	74.3	0.52	0.42	33.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 109 [Reservation/Crescent - PM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Crescent Ave											
3	L2	144	3.0	0.584	18.0	LOS B	3.0	76.6	0.78	0.88	28.6
8	T1	39	3.0	0.584	18.0	LOS B	3.0	76.6	0.78	0.88	28.5
18	R2	143	3.0	0.584	18.0	LOS B	3.0	76.6	0.78	0.88	27.8
Approach		326	3.0	0.584	18.0	LOS B	3.0	76.6	0.78	0.88	28.2
East: Reservation Rd											
1	L2	159	3.0	0.489	9.3	LOS A	3.4	86.6	0.64	0.50	32.4
6	T1	812	3.0	0.489	9.0	LOS A	3.4	86.6	0.58	0.45	32.9
16	R2	63	3.0	0.489	8.9	LOS A	2.8	72.3	0.53	0.42	32.3
Approach		1034	3.0	0.489	9.1	LOS A	3.4	86.6	0.58	0.46	32.7
North: Crescent Ave											
7	L2	35	3.0	0.178	9.2	LOS A	0.6	15.4	0.67	0.67	32.2
4	T1	14	3.0	0.178	9.2	LOS A	0.6	15.4	0.67	0.67	32.1
14	R2	44	3.0	0.178	9.2	LOS A	0.6	15.4	0.67	0.67	31.3
Approach		94	3.0	0.178	9.2	LOS A	0.6	15.4	0.67	0.67	31.7
West: Reservation Rd											
5	L2	69	3.0	0.517	9.5	LOS A	3.8	98.3	0.62	0.45	32.8
2	T1	944	3.0	0.517	9.3	LOS A	3.8	98.3	0.57	0.42	32.9
12	R2	130	3.0	0.517	9.1	LOS A	3.2	81.6	0.51	0.38	32.1
Approach		1143	3.0	0.517	9.3	LOS A	3.8	98.3	0.56	0.41	32.8
All Vehicles		2597	3.0	0.584	10.3	LOS B	3.8	98.3	0.60	0.50	32.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 110 [Reservation/California - AM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: California Ave											
3	L2	123	3.0	0.233	9.4	LOS A	1.0	26.3	0.71	0.71	30.9
8	T1	9	3.0	0.233	9.4	LOS A	1.0	26.3	0.71	0.71	30.8
18	R2	187	3.0	0.271	8.5	LOS A	1.1	27.1	0.63	0.63	32.3
Approach		319	3.0	0.271	8.9	LOS A	1.1	27.1	0.67	0.67	31.7
East: Reservation Rd											
1	L2	175	3.0	0.368	6.7	LOS A	2.4	62.1	0.44	0.27	33.3
6	T1	695	3.0	0.368	6.6	LOS A	2.4	62.1	0.39	0.24	34.0
16	R2	4	3.0	0.368	6.6	LOS A	2.0	50.1	0.36	0.22	33.4
Approach		874	3.0	0.368	6.6	LOS A	2.4	62.1	0.40	0.25	33.9
North: Driveway											
7	L2	1	3.0	0.006	6.3	LOS A	0.0	0.5	0.59	0.47	33.7
4	T1	1	3.0	0.006	6.3	LOS A	0.0	0.5	0.59	0.47	33.6
14	R2	1	3.0	0.006	6.3	LOS A	0.0	0.5	0.59	0.47	32.7
Approach		3	3.0	0.006	6.3	LOS A	0.0	0.5	0.59	0.47	33.3
West: Reservation Rd											
5	L2	11	3.0	0.447	8.0	LOS A	3.1	80.4	0.53	0.36	33.7
2	T1	736	3.0	0.447	7.9	LOS A	3.1	80.4	0.50	0.34	33.7
12	R2	275	3.0	0.447	7.8	LOS A	2.6	65.8	0.44	0.30	32.7
Approach		1022	3.0	0.447	7.9	LOS A	3.1	80.4	0.48	0.33	33.4
All Vehicles		2218	3.0	0.447	7.5	LOS A	3.1	80.4	0.48	0.34	33.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 110 [Reservation/California - PM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: California Ave											
3	L2	167	3.0	0.273	9.4	LOS A	1.0	26.5	0.66	0.66	30.8
8	T1	1	3.0	0.273	9.4	LOS A	1.0	26.5	0.66	0.66	30.7
18	R2	99	3.0	0.202	10.2	LOS B	0.8	21.6	0.73	0.73	31.5
Approach		267	3.0	0.273	9.7	LOS A	1.0	26.5	0.68	0.68	31.0
East: Reservation Rd											
1	L2	153	3.0	0.417	7.6	LOS A	2.8	72.7	0.51	0.34	33.2
6	T1	805	3.0	0.417	7.4	LOS A	2.8	72.7	0.45	0.30	33.7
16	R2	1	3.0	0.417	7.3	LOS A	2.3	59.3	0.41	0.28	33.0
Approach		960	3.0	0.417	7.4	LOS A	2.8	72.7	0.46	0.31	33.6
North: Driveway											
7	L2	1	3.0	0.010	7.1	LOS A	0.0	0.8	0.63	0.55	33.7
4	T1	1	3.0	0.010	7.1	LOS A	0.0	0.8	0.63	0.55	33.6
14	R2	3	3.0	0.010	7.1	LOS A	0.0	0.8	0.63	0.55	32.6
Approach		5	3.0	0.010	7.1	LOS A	0.0	0.8	0.63	0.55	33.0
West: Reservation Rd											
5	L2	3	3.0	0.441	7.8	LOS A	3.1	80.3	0.50	0.32	33.9
2	T1	866	3.0	0.441	7.7	LOS A	3.1	80.3	0.46	0.30	33.8
12	R2	163	3.0	0.441	7.6	LOS A	2.6	65.3	0.41	0.26	32.8
Approach		1032	3.0	0.441	7.7	LOS A	3.1	80.3	0.45	0.29	33.7
All Vehicles		2264	3.0	0.441	7.8	LOS A	3.1	80.3	0.48	0.35	33.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 111 [Reservation/Salinas - AM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Salinas Ave											
3	L2	23	3.0	0.137	8.0	LOS A	0.5	11.7	0.62	0.62	33.0
18	R2	55	3.0	0.137	8.0	LOS A	0.5	11.7	0.62	0.62	32.0
Approach		78	3.0	0.137	8.0	LOS A	0.5	11.7	0.62	0.62	32.3
East: Reservation Rd											
1	L2	29	3.0	0.313	5.4	LOS A	1.7	43.2	0.12	0.04	35.0
6	T1	828	3.0	0.313	5.4	LOS A	1.7	43.2	0.12	0.04	35.0
Approach		858	3.0	0.313	5.4	LOS A	1.7	43.2	0.12	0.04	35.0
West: Reservation Rd											
2	T1	1003	3.0	0.374	6.1	LOS A	2.2	56.0	0.15	0.05	34.7
12	R2	14	3.0	0.374	6.1	LOS A	2.2	56.0	0.15	0.05	33.6
Approach		1017	3.0	0.374	6.1	LOS A	2.2	56.0	0.15	0.05	34.7
All Vehicles		1953	3.0	0.374	5.9	LOS A	2.2	56.0	0.16	0.07	34.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 111 [Reservation/Salinas - PM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Salinas Ave											
3	L2	100	3.0	0.336	10.8	LOS B	1.3	33.6	0.67	0.70	31.3
18	R2	100	3.0	0.336	10.8	LOS B	1.3	33.6	0.67	0.70	30.3
Approach		200	3.0	0.336	10.8	LOS B	1.3	33.6	0.67	0.70	30.8
East: Reservation Rd											
1	L2	50	3.0	0.408	6.8	LOS A	2.4	61.2	0.32	0.17	34.2
6	T1	988	3.0	0.408	6.8	LOS A	2.4	61.2	0.32	0.17	34.2
Approach		1038	3.0	0.408	6.8	LOS A	2.4	61.2	0.32	0.17	34.2
West: Reservation Rd											
2	T1	960	3.0	0.364	6.1	LOS A	2.1	53.1	0.21	0.08	34.7
12	R2	12	3.0	0.364	6.1	LOS A	2.1	53.1	0.21	0.08	33.6
Approach		972	3.0	0.364	6.1	LOS A	2.1	53.1	0.21	0.08	34.7
All Vehicles		2210	3.0	0.408	6.8	LOS A	2.4	61.2	0.30	0.18	34.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 113 [Del Monte/Patton Pkwy - AM]

New Site
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Del Monte Blvd											
8	T1	43	3.0	0.044	3.1	LOS A	0.2	4.9	0.19	0.07	36.3
18	R2	14	3.0	0.044	3.1	LOS A	0.2	4.9	0.19	0.07	35.2
Approach		58	3.0	0.044	3.1	LOS A	0.2	4.9	0.19	0.07	36.0
East: Patton Pkwy											
1	L2	41	3.0	0.061	3.2	LOS A	0.3	6.9	0.15	0.05	34.7
16	R2	40	3.0	0.061	3.2	LOS A	0.3	6.9	0.15	0.05	33.6
Approach		82	3.0	0.061	3.2	LOS A	0.3	6.9	0.15	0.05	34.2
North: Del Monte Blvd											
7	L2	70	3.0	0.369	6.1	LOS A	2.3	59.6	0.20	0.08	34.3
4	T1	425	3.0	0.369	6.1	LOS A	2.3	59.6	0.20	0.08	34.3
Approach		495	3.0	0.369	6.1	LOS A	2.3	59.6	0.20	0.08	34.3
All Vehicles		634	3.0	0.369	5.4	LOS A	2.3	59.6	0.19	0.07	34.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 113 [Del Monte/Patton Pkwy - PM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Del Monte Blvd											
8	T1	266	3.0	0.241	4.7	LOS A	1.3	33.1	0.14	0.05	35.4
18	R2	60	3.0	0.241	4.7	LOS A	1.3	33.1	0.14	0.05	34.3
Approach		326	3.0	0.241	4.7	LOS A	1.3	33.1	0.14	0.05	35.2
East: Patton Pkwy											
1	L2	20	3.0	0.111	4.4	LOS A	0.5	12.4	0.41	0.28	35.0
16	R2	99	3.0	0.111	4.4	LOS A	0.5	12.4	0.41	0.28	33.9
Approach		118	3.0	0.111	4.4	LOS A	0.5	12.4	0.41	0.28	34.1
North: Del Monte Blvd											
7	L2	30	3.0	0.118	3.6	LOS A	0.6	14.2	0.10	0.02	35.5
4	T1	132	3.0	0.118	3.6	LOS A	0.6	14.2	0.10	0.02	35.4
Approach		162	3.0	0.118	3.6	LOS A	0.6	14.2	0.10	0.02	35.5
All Vehicles		607	3.0	0.241	4.3	LOS A	1.3	33.1	0.18	0.09	35.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SYNCHRO LEVEL OF SERVICE REPORTS

ROAD DIET CONDITIONS

AM & PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	245	141	401	178	196	221	190	355	247	243	6
Future Volume (veh/h)	16	245	141	401	178	196	221	190	355	247	243	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	275	158	451	200	220	248	213	399	278	273	7
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	384	231	598	323	268	295	540	791	391	835	21
Arrive On Green	0.18	0.18	0.18	0.17	0.17	0.17	0.17	0.29	0.29	0.11	0.24	0.24
Sat Flow, veh/h	135	2083	1251	3456	1870	1552	1781	1870	2741	3456	3537	90
Grp Volume(v), veh/h	248	0	203	451	200	220	248	213	399	278	137	143
Grp Sat Flow(s),veh/h/ln	1864	0	1606	1728	1870	1552	1781	1870	1371	1728	1777	1850
Q Serve(g_s), s	8.3	0.0	7.8	8.2	6.6	9.1	9.0	6.1	8.1	5.2	4.2	4.3
Cycle Q Clear(g_c), s	8.3	0.0	7.8	8.2	6.6	9.1	9.0	6.1	8.1	5.2	4.2	4.3
Prop In Lane	0.07		0.78	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	344	0	296	598	323	268	295	540	791	391	420	437
V/C Ratio(X)	0.72	0.00	0.68	0.75	0.62	0.82	0.84	0.39	0.50	0.71	0.33	0.33
Avail Cap(c_a), veh/h	561	0	483	624	338	280	349	845	1238	624	776	808
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.5	0.0	25.3	26.1	25.4	26.5	26.9	19.0	19.7	28.4	21.0	21.0
Incr Delay (d2), s/veh	2.9	0.0	2.8	5.0	3.2	16.7	14.7	0.5	0.5	2.4	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	3.1	3.6	3.1	4.4	4.7	2.5	2.4	2.1	1.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	0.0	28.1	31.1	28.6	43.2	41.5	19.4	20.2	30.8	21.4	21.4
LnGrp LOS	C	A	C	C	C	D	D	B	C	C	C	C
Approach Vol, veh/h		451			871			860			558	
Approach Delay, s/veh		28.2			33.6			26.1			26.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	23.2		16.3	15.0	19.7		15.5				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	12.0	30.0		20.0	13.0	29.0		12.0				
Max Q Clear Time (g_c+I1), s	7.2	10.1		10.3	11.0	6.3		11.1				
Green Ext Time (p_c), s	0.4	2.8		1.9	0.1	1.5		0.4				

Intersection Summary		
HCM 6th Ctrl Delay		28.9
HCM 6th LOS		C

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	654	70	55	628	83	51	27	34	102	8	88
Future Volume (veh/h)	148	654	70	55	628	83	51	27	34	102	8	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.98		0.97	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	711	76	60	683	0	55	29	37	111	9	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	376	878	94	178	782		289	135	309	302	21	
Arrive On Green	0.21	0.53	0.53	0.10	0.42	0.00	0.20	0.20	0.20	0.20	0.20	0.00
Sat Flow, veh/h	1781	1659	177	1781	1870	1585	998	671	1538	995	103	1585
Grp Volume(v), veh/h	161	0	787	60	683	0	84	0	37	120	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1836	1781	1870	1585	1669	0	1538	1098	0	1585
Q Serve(g_s), s	5.3	0.0	23.9	2.1	22.6	0.0	0.0	0.0	1.3	5.4	0.0	0.0
Cycle Q Clear(g_c), s	5.3	0.0	23.9	2.1	22.6	0.0	2.6	0.0	1.3	8.0	0.0	0.0
Prop In Lane	1.00		0.10	1.00		1.00	0.65		1.00	0.92		1.00
Lane Grp Cap(c), veh/h	376	0	971	178	782		424	0	309	323	0	
V/C Ratio(X)	0.43	0.00	0.81	0.34	0.87		0.20	0.00	0.12	0.37	0.00	
Avail Cap(c_a), veh/h	421	0	1113	290	995		713	0	602	578	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.1	0.0	13.1	28.4	18.0	0.0	22.6	0.0	22.1	25.8	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	4.1	1.1	7.2	0.0	0.2	0.0	0.2	0.7	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(50%),veh/ln	2.2	0.0	9.3	0.9	10.2	0.0	1.1	0.0	0.5	1.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	0.0	17.2	29.5	25.2	0.0	22.9	0.0	22.3	26.5	0.0	0.0
LnGrp LOS	C	A	B	C	C		C	A	C	C	A	
Approach Vol, veh/h		948			743	A		121			120	A
Approach Delay, s/veh		18.4			25.6			22.7			26.5	
Approach LOS		B			C			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		17.6	10.3	39.8		17.6	17.8	32.3				
Change Period (Y+Rc), s		4.0	3.5	4.0		4.0	3.5	4.0				
Max Green Setting (Gmax), s		26.5	11.0	41.0		26.5	16.0	36.0				
Max Q Clear Time (g_c+I1), s		4.6	4.1	25.9		10.0	7.3	24.6				
Green Ext Time (p_c), s		0.5	0.0	5.2		0.6	0.3	3.6				
Intersection Summary												
HCM 6th Ctrl Delay			21.9									
HCM 6th LOS			C									

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	679	150	167	604	162	86
Future Volume (veh/h)	679	150	167	604	162	86
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	730	161	180	649	174	92
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	867	734	277	1279	287	256
Arrive On Green	0.46	0.46	0.16	0.68	0.16	0.16
Sat Flow, veh/h	1870	1583	1781	1870	1781	1585
Grp Volume(v), veh/h	730	161	180	649	174	92
Grp Sat Flow(s),veh/h/ln	1870	1583	1781	1870	1781	1585
Q Serve(g_s), s	21.1	3.7	5.8	10.3	5.6	3.2
Cycle Q Clear(g_c), s	21.1	3.7	5.8	10.3	5.6	3.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	867	734	277	1279	287	256
V/C Ratio(X)	0.84	0.22	0.65	0.51	0.61	0.36
Avail Cap(c_a), veh/h	1204	1019	290	1631	784	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.5	9.8	24.3	4.7	23.9	22.9
Incr Delay (d2), s/veh	4.0	0.1	4.7	0.3	2.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	1.2	2.7	2.6	2.4	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.5	10.0	29.1	5.0	26.0	23.8
LnGrp LOS	B	A	C	A	C	C
Approach Vol, veh/h	891			829	266	
Approach Delay, s/veh	17.0			10.2	25.2	
Approach LOS	B			B	C	

Timer - Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		14.9	13.5	32.9				46.5
Change Period (Y+Rc), s		5.0	4.0	4.5				4.5
Max Green Setting (Gmax), s		27.0	10.0	39.5				53.5
Max Q Clear Time (g_c+I1), s		7.6	7.8	23.1				12.3
Green Ext Time (p_c), s		0.8	0.1	5.3				5.2

Intersection Summary	
HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	719	5	0	641	111	3	0	7	79	1	134
Future Volume (veh/h)	103	719	5	0	641	111	3	0	7	79	1	134
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.97	0.97		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	110	765	5	0	682	118	3	0	7	84	1	143
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, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	141	1094	7	0	825	697	157	39	243	456	5	362
Arrive On Green	0.08	0.59	0.59	0.00	0.44	0.44	0.23	0.00	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1781	1856	12	0	1870	1580	279	169	1045	1353	20	1558
Grp Volume(v), veh/h	110	0	770	0	682	118	10	0	0	85	0	143
Grp Sat Flow(s),veh/h/ln	1781	0	1868	0	1870	1580	1493	0	0	1373	0	1558
Q Serve(g_s), s	3.1	0.0	14.6	0.0	16.2	2.3	0.0	0.0	0.0	2.3	0.0	3.9
Cycle Q Clear(g_c), s	3.1	0.0	14.6	0.0	16.2	2.3	0.2	0.0	0.0	2.5	0.0	3.9
Prop In Lane	1.00		0.01	0.00		1.00	0.30		0.70	0.99		1.00
Lane Grp Cap(c), veh/h	141	0	1101	0	825	697	439	0	0	461	0	362
V/C Ratio(X)	0.78	0.00	0.70	0.00	0.83	0.17	0.02	0.00	0.00	0.18	0.00	0.39
Avail Cap(c_a), veh/h	211	0	1385	0	1035	874	770	0	0	778	0	724
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.9	0.0	7.2	0.0	12.4	8.5	15.0	0.0	0.0	15.8	0.0	16.4
Incr Delay (d2), s/veh	10.2	0.0	1.1	0.0	4.6	0.1	0.0	0.0	0.0	0.2	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	4.1	0.0	6.4	0.7	0.1	0.0	0.0	0.7	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.1	0.0	8.4	0.0	17.0	8.6	15.0	0.0	0.0	16.0	0.0	17.1
LnGrp LOS	C	A	A	A	B	A	B	A	A	B	A	B
Approach Vol, veh/h		880			800			10			228	
Approach Delay, s/veh		11.5			15.8			15.0			16.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		15.8		34.8		15.8	7.5	27.3				
Change Period (Y+Rc), s		4.0		5.0		4.0	3.5	5.0				
Max Green Setting (Gmax), s		23.5		37.5		23.5	6.0	28.0				
Max Q Clear Time (g_c+I1), s		2.2		16.6		5.9	5.1	18.2				
Green Ext Time (p_c), s		0.0		5.8		0.8	0.0	3.6				

Intersection Summary			
HCM 6th Ctrl Delay			13.9
HCM 6th LOS			B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	743	25	28	665	105	16	3	16	138	1	71
Future Volume (veh/h)	37	743	25	28	665	105	16	3	16	138	1	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.99	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	816	27	31	731	115	18	3	18	152	1	78
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	908	739	72	891	744	115	11	435	124	0	444
Arrive On Green	0.05	0.49	0.49	0.04	0.48	0.48	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1781	1870	1522	1781	1870	1562	0	38	1532	0	1	1563
Grp Volume(v), veh/h	41	816	27	31	731	115	21	0	18	153	0	78
Grp Sat Flow(s),veh/h/ln	1781	1870	1522	1781	1870	1562	38	0	1532	1	0	1563
Q Serve(g_s), s	1.3	23.1	0.5	1.0	19.5	2.4	0.0	0.0	0.5	0.0	0.0	2.2
Cycle Q Clear(g_c), s	1.3	23.1	0.5	1.0	19.5	2.4	16.5	0.0	0.5	16.5	0.0	2.2
Prop In Lane	1.00		1.00	1.00		1.00	0.86		1.00	0.99		1.00
Lane Grp Cap(c), veh/h	89	908	739	72	891	744	126	0	435	124	0	444
V/C Ratio(X)	0.46	0.90	0.04	0.43	0.82	0.15	0.17	0.00	0.04	1.23	0.00	0.18
Avail Cap(c_a), veh/h	184	1015	826	184	1015	847	126	0	435	124	0	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.8	13.6	7.8	27.2	13.1	8.6	20.7	0.0	15.0	29.0	0.0	15.7
Incr Delay (d2), s/veh	3.7	10.0	0.0	4.0	4.9	0.1	0.6	0.0	0.0	156.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	10.3	0.2	0.5	7.9	0.7	0.3	0.0	0.2	7.0	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	23.6	7.8	31.1	18.0	8.7	21.3	0.0	15.1	185.5	0.0	15.8
LnGrp LOS	C	C	A	C	B	A	C	A	B	F	A	B
Approach Vol, veh/h		884			877			39			231	
Approach Delay, s/veh		23.4			17.2			18.4			128.2	
Approach LOS		C			B			B			F	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.5	5.9	31.7		20.5	6.4	31.2
Change Period (Y+Rc), s		4.0	3.5	3.5		4.0	3.5	3.5
Max Green Setting (Gmax), s		16.5	6.0	31.5		16.5	6.0	31.5
Max Q Clear Time (g_c+I1), s		18.5	3.0	25.1		18.5	3.3	21.5
Green Ext Time (p_c), s		0.0	0.0	3.1		0.0	0.0	3.9

Intersection Summary			
HCM 6th Ctrl Delay			32.6
HCM 6th LOS			C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	751	74	82	639	24	106	21	107	64	52	37
Future Volume (veh/h)	51	751	74	82	639	24	106	21	107	64	52	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	816	80	89	695	26	115	23	116	70	57	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	1078	474	114	1140	43	332	66	347	215	175	337
Arrive On Green	0.04	0.30	0.30	0.06	0.33	0.33	0.22	0.22	0.22	0.21	0.21	0.21
Sat Flow, veh/h	1781	3554	1564	1781	3491	131	1496	299	1564	1003	817	1576
Grp Volume(v), veh/h	55	816	80	89	354	367	138	0	116	127	0	40
Grp Sat Flow(s),veh/h/ln	1781	1777	1564	1781	1777	1844	1796	0	1564	1820	0	1576
Q Serve(g_s), s	2.9	19.5	3.5	4.6	15.7	15.7	6.1	0.0	5.9	5.5	0.0	1.9
Cycle Q Clear(g_c), s	2.9	19.5	3.5	4.6	15.7	15.7	6.1	0.0	5.9	5.5	0.0	1.9
Prop In Lane	1.00		1.00	1.00		0.07	0.83		1.00	0.55		1.00
Lane Grp Cap(c), veh/h	72	1078	474	114	580	603	398	0	347	390	0	337
V/C Ratio(X)	0.76	0.76	0.17	0.78	0.61	0.61	0.35	0.00	0.33	0.33	0.00	0.12
Avail Cap(c_a), veh/h	161	2042	899	161	1021	1060	516	0	449	523	0	453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.6	29.6	24.0	43.3	26.6	26.6	30.8	0.0	30.7	31.2	0.0	29.8
Incr Delay (d2), s/veh	15.1	1.1	0.2	14.7	1.0	1.0	0.5	0.0	0.6	0.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	8.3	1.3	2.5	6.7	6.9	2.7	0.0	2.2	2.5	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.7	30.7	24.2	58.1	27.6	27.6	31.3	0.0	31.3	31.7	0.0	29.9
LnGrp LOS	E	C	C	E	C	C	C	A	C	C	A	C
Approach Vol, veh/h		951			810			254			167	
Approach Delay, s/veh		31.8			31.0			31.3			31.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		25.8	9.5	33.5		25.1	7.3	35.7
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0
Max Green Setting (Gmax), s		27.0	8.5	54.0		27.0	8.5	54.0
Max Q Clear Time (g_c+I1), s		8.1	6.6	21.5		7.5	4.9	17.7
Green Ext Time (p_c), s		1.1	0.0	7.0		0.7	0.0	5.1

Intersection Summary	
HCM 6th Ctrl Delay	31.4
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	815	738	28	14	25
Future Vol, veh/h	3	815	738	28	14	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	896	811	31	15	27

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	842	0	-	0	1729	827
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	902	-
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	794	-	-	-	97	371
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	396	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	794	-	-	-	97	371
Mov Cap-2 Maneuver	-	-	-	-	231	-
Stage 1	-	-	-	-	428	-
Stage 2	-	-	-	-	396	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	18.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	794	-	-	-	305
HCM Lane V/C Ratio	0.004	-	-	-	0.141
HCM Control Delay (s)	9.6	-	-	-	18.7
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	304	123	444	426	195	163	262	619	185	103	9
Future Volume (veh/h)	93	304	123	444	426	195	163	262	619	185	103	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.96	1.00		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	310	126	453	435	199	166	267	632	189	105	9
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	413	176	1001	542	450	193	390	1367	224	744	63
Arrive On Green	0.20	0.20	0.20	0.29	0.29	0.29	0.11	0.21	0.21	0.13	0.23	0.23
Sat Flow, veh/h	606	2036	867	3456	1870	1555	1781	1870	2683	1781	3293	277
Grp Volume(v), veh/h	288	0	243	453	435	199	166	267	632	189	56	58
Grp Sat Flow(s),veh/h/ln	1840	0	1668	1728	1870	1555	1781	1870	1341	1781	1777	1794
Q Serve(g_s), s	13.7	0.0	12.5	9.9	19.9	9.6	8.4	12.2	14.3	9.6	2.3	2.4
Cycle Q Clear(g_c), s	13.7	0.0	12.5	9.9	19.9	9.6	8.4	12.2	14.3	9.6	2.3	2.4
Prop In Lane	0.33		0.52	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	373	0	338	1001	542	450	193	390	1367	224	401	405
V/C Ratio(X)	0.77	0.00	0.72	0.45	0.80	0.44	0.86	0.68	0.46	0.84	0.14	0.14
Avail Cap(c_a), veh/h	639	0	579	1424	771	641	193	507	1535	270	559	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	0.0	34.3	26.8	30.3	26.7	40.4	33.7	15.2	39.4	28.5	28.6
Incr Delay (d2), s/veh	3.4	0.0	2.9	0.3	4.1	0.7	30.1	2.5	0.2	18.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	5.2	4.0	9.3	3.6	5.2	5.6	7.1	5.2	1.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.2	0.0	37.2	27.1	34.4	27.4	70.5	36.2	15.4	57.6	28.7	28.7
LnGrp LOS	D	A	D	C	C	C	E	D	B	E	C	C
Approach Vol, veh/h		531			1087			1065			303	
Approach Delay, s/veh		37.7			30.1			29.2			46.7	
Approach LOS		D			C			C			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.6	23.2		22.7	14.0	24.8		30.7				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	14.0	25.0		32.0	10.0	29.0		38.0				
Max Q Clear Time (g_c+I1), s	11.6	16.3		15.7	10.4	4.4		21.9				
Green Ext Time (p_c), s	0.1	3.0		3.0	0.0	0.5		4.8				
Intersection Summary												
HCM 6th Ctrl Delay			32.8									
HCM 6th LOS			C									

Notes

User approved pedestrian interval to be less than phase max green.

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	229	781	89	85	812	150	124	36	33	201	37	104
Future Volume (veh/h)	229	781	89	85	812	150	124	36	33	201	37	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		1.00	1.00		0.94	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	234	797	91	87	829	0	127	37	34	205	38	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	263	876	100	151	882		398	109	412	288	42	
Arrive On Green	0.15	0.53	0.53	0.08	0.47	0.00	0.28	0.28	0.28	0.28	0.28	0.00
Sat Flow, veh/h	1781	1638	187	1781	1870	1585	1230	394	1490	825	153	1585
Grp Volume(v), veh/h	234	0	888	87	829	0	164	0	34	243	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1825	1781	1870	1585	1625	0	1490	978	0	1585
Q Serve(g_s), s	14.2	0.0	48.5	5.2	46.3	0.0	0.0	0.0	1.9	18.9	0.0	0.0
Cycle Q Clear(g_c), s	14.2	0.0	48.5	5.2	46.3	0.0	8.8	0.0	1.9	27.7	0.0	0.0
Prop In Lane	1.00		0.10	1.00		1.00	0.77		1.00	0.84		1.00
Lane Grp Cap(c), veh/h	263	0	976	151	882		507	0	412	331	0	
V/C Ratio(X)	0.89	0.00	0.91	0.58	0.94		0.32	0.00	0.08	0.74	0.00	
Avail Cap(c_a), veh/h	284	0	1036	180	953		568	0	474	389	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	46.0	0.0	23.2	48.4	27.6	0.0	32.0	0.0	29.5	43.1	0.0	0.0
Incr Delay (d2), s/veh	26.1	0.0	11.3	3.5	16.0	0.0	0.4	0.0	0.1	5.9	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(50%),veh/ln	8.1	0.0	22.7	2.4	23.7	0.0	3.6	0.0	0.7	7.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.0	0.0	34.5	51.9	43.6	0.0	32.3	0.0	29.6	49.1	0.0	0.0
LnGrp LOS	E	A	C	D	D		C	A	C	D	A	
Approach Vol, veh/h		1122			916	A		198			243	A
Approach Delay, s/veh		42.3			44.4			31.8			49.1	
Approach LOS		D			D			C			D	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		34.4	12.8	62.8		34.4	19.8	55.8
Change Period (Y+Rc), s		4.0	3.5	4.0		4.0	3.5	4.0
Max Green Setting (Gmax), s		35.0	11.1	62.4		35.0	17.5	56.0
Max Q Clear Time (g_c+I1), s		10.8	7.2	50.5		29.7	16.2	48.3
Green Ext Time (p_c), s		1.1	0.1	5.3		0.6	0.1	3.6

Intersection Summary			
HCM 6th Ctrl Delay			42.9
HCM 6th LOS			D

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	848	184	234	733	253	103
Future Volume (veh/h)	848	184	234	733	253	103
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	865	188	239	748	258	105
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	929	765	260	1301	318	283
Arrive On Green	0.50	0.50	0.15	0.70	0.18	0.18
Sat Flow, veh/h	1870	1540	1781	1870	1781	1585
Grp Volume(v), veh/h	865	188	239	748	258	105
Grp Sat Flow(s),veh/h/ln	1870	1540	1781	1870	1781	1585
Q Serve(g_s), s	32.7	5.3	10.0	15.3	10.5	4.4
Cycle Q Clear(g_c), s	32.7	5.3	10.0	15.3	10.5	4.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	929	765	260	1301	318	283
V/C Ratio(X)	0.93	0.25	0.92	0.57	0.81	0.37
Avail Cap(c_a), veh/h	979	806	260	1351	614	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	10.9	31.8	5.8	29.8	27.3
Incr Delay (d2), s/veh	14.5	0.2	35.4	0.6	5.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.1	1.7	6.7	4.5	4.8	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.3	11.0	67.2	6.4	34.8	28.1
LnGrp LOS	C	B	E	A	C	C
Approach Vol, veh/h	1053			987	363	
Approach Delay, s/veh	28.5			21.1	32.8	
Approach LOS	C			C	C	

Timer - Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		18.5	15.0	42.0				57.0
Change Period (Y+Rc), s		5.0	4.0	4.5				4.5
Max Green Setting (Gmax), s		26.0	11.0	39.5				54.5
Max Q Clear Time (g_c+I1), s		12.5	12.0	34.7				17.3
Green Ext Time (p_c), s		1.0	0.0	2.8				6.4

Intersection Summary		
HCM 6th Ctrl Delay		26.1
HCM 6th LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	968	2	0	854	89	4	0	13	83	1	46
Future Volume (veh/h)	108	968	2	0	854	89	4	0	13	83	1	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	0.94		0.93	0.93		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	998	2	0	880	92	4	0	13	86	1	47
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	142	1222	2	0	987	823	109	29	248	386	4	325
Arrive On Green	0.08	0.66	0.66	0.00	0.53	0.53	0.22	0.00	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1781	1866	4	0	1870	1560	214	130	1119	1301	18	1470
Grp Volume(v), veh/h	111	0	1000	0	880	92	17	0	0	87	0	47
Grp Sat Flow(s),veh/h/ln	1781	0	1869	0	1870	1560	1463	0	0	1319	0	1470
Q Serve(g_s), s	4.5	0.0	28.9	0.0	30.6	2.2	0.0	0.0	0.0	3.2	0.0	1.9
Cycle Q Clear(g_c), s	4.5	0.0	28.9	0.0	30.6	2.2	0.6	0.0	0.0	3.9	0.0	1.9
Prop In Lane	1.00		0.00	0.00		1.00	0.24		0.76	0.99		1.00
Lane Grp Cap(c), veh/h	142	0	1225	0	987	823	385	0	0	390	0	325
V/C Ratio(X)	0.78	0.00	0.82	0.00	0.89	0.11	0.04	0.00	0.00	0.22	0.00	0.14
Avail Cap(c_a), veh/h	183	0	1463	0	1182	985	538	0	0	532	0	485
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.9	0.0	9.3	0.0	15.3	8.6	22.3	0.0	0.0	23.5	0.0	22.8
Incr Delay (d2), s/veh	15.1	0.0	3.2	0.0	7.8	0.1	0.0	0.0	0.0	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	9.9	0.0	13.3	0.7	0.2	0.0	0.0	1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.0	0.0	12.5	0.0	23.1	8.7	22.4	0.0	0.0	23.8	0.0	23.0
LnGrp LOS	D	A	B	A	C	A	C	A	A	C	A	C
Approach Vol, veh/h		1111			972			17			134	
Approach Delay, s/veh		16.0			21.8			22.4			23.5	
Approach LOS		B			C			C			C	

Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		20.1		52.7		20.1	9.3	43.4				
Change Period (Y+Rc), s		4.0		5.0		4.0	3.5	5.0				
Max Green Setting (Gmax), s		24.0		57.0		24.0	7.5	46.0				
Max Q Clear Time (g_c+I1), s		2.6		30.9		5.9	6.5	32.6				
Green Ext Time (p_c), s		0.0		9.5		0.5	0.0	5.8				

Intersection Summary			
HCM 6th Ctrl Delay			19.0
HCM 6th LOS			B

Notes
User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	898	107	56	798	71	68	11	72	92	24	57
Future Volume (veh/h)	67	898	107	56	798	71	68	11	72	92	24	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	945	113	59	840	75	72	12	76	97	25	60
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	114	1026	832	104	1016	827	95	9	354	92	14	362
Arrive On Green	0.06	0.55	0.55	0.06	0.54	0.54	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	1870	1516	1781	1870	1522	0	38	1501	0	58	1535
Grp Volume(v), veh/h	71	945	113	59	840	75	84	0	76	122	0	60
Grp Sat Flow(s),veh/h/ln	1781	1870	1516	1781	1870	1522	38	0	1501	58	0	1535
Q Serve(g_s), s	2.7	32.3	2.5	2.3	26.1	1.7	0.0	0.0	2.9	0.0	0.0	2.2
Cycle Q Clear(g_c), s	2.7	32.3	2.5	2.3	26.1	1.7	16.5	0.0	2.9	16.5	0.0	2.2
Prop In Lane	1.00		1.00	1.00		1.00	0.86		1.00	0.80		1.00
Lane Grp Cap(c), veh/h	114	1026	832	104	1016	827	104	0	354	106	0	362
V/C Ratio(X)	0.62	0.92	0.14	0.57	0.83	0.09	0.80	0.00	0.21	1.15	0.00	0.17
Avail Cap(c_a), veh/h	153	1108	898	153	1108	902	104	0	354	106	0	362
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.9	14.4	7.7	32.1	13.3	7.7	33.3	0.0	21.5	32.9	0.0	21.3
Incr Delay (d2), s/veh	5.4	11.8	0.1	4.8	4.9	0.0	35.2	0.0	0.3	133.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	14.6	0.7	1.1	10.5	0.5	2.4	0.0	1.0	5.7	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	26.2	7.8	36.9	18.2	7.7	68.5	0.0	21.8	166.4	0.0	21.5
LnGrp LOS	D	C	A	D	B	A	E	A	C	F	A	C
Approach Vol, veh/h		1129			974			160			182	
Approach Delay, s/veh		25.0			18.5			46.3			118.6	
Approach LOS		C			B			D			F	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.5	7.6	41.9		20.5	8.0	41.5
Change Period (Y+Rc), s		4.0	3.5	3.5		4.0	3.5	3.5
Max Green Setting (Gmax), s		16.5	6.0	41.5		16.5	6.0	41.5
Max Q Clear Time (g_c+I1), s		18.5	4.3	34.3		18.5	4.7	28.1
Green Ext Time (p_c), s		0.0	0.0	4.2		0.0	0.0	5.5

Intersection Summary			
HCM 6th Ctrl Delay			30.8
HCM 6th LOS			C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	878	121	148	755	59	134	36	133	33	13	41
Future Volume (veh/h)	64	878	121	148	755	59	134	36	133	33	13	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	69	944	130	159	812	63	144	39	143	35	14	44
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	1183	519	191	1349	105	277	75	305	231	92	282
Arrive On Green	0.05	0.33	0.33	0.11	0.40	0.40	0.20	0.20	0.20	0.18	0.18	0.18
Sat Flow, veh/h	1781	3554	1559	1781	3337	259	1416	384	1556	1290	516	1572
Grp Volume(v), veh/h	69	944	130	159	432	443	183	0	143	49	0	44
Grp Sat Flow(s),veh/h/ln	1781	1777	1559	1781	1777	1819	1800	0	1556	1806	0	1572
Q Serve(g_s), s	4.1	26.1	6.6	9.5	20.7	20.7	9.8	0.0	8.8	2.5	0.0	2.6
Cycle Q Clear(g_c), s	4.1	26.1	6.6	9.5	20.7	20.7	9.8	0.0	8.8	2.5	0.0	2.6
Prop In Lane	1.00		1.00	1.00		0.14	0.79		1.00	0.71		1.00
Lane Grp Cap(c), veh/h	89	1183	519	191	718	736	352	0	305	324	0	282
V/C Ratio(X)	0.78	0.80	0.25	0.83	0.60	0.60	0.52	0.00	0.47	0.15	0.00	0.16
Avail Cap(c_a), veh/h	110	1718	754	319	1068	1093	462	0	400	451	0	392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.8	32.8	26.3	47.3	25.4	25.4	38.9	0.0	38.5	37.5	0.0	37.5
Incr Delay (d2), s/veh	23.9	1.7	0.3	9.0	0.8	0.8	1.2	0.0	1.1	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	11.3	2.5	4.7	8.7	9.0	4.4	0.0	3.4	1.1	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.7	34.5	26.5	56.3	26.2	26.2	40.1	0.0	39.6	37.7	0.0	37.7
LnGrp LOS	E	C	C	E	C	C	D	A	D	D	A	D
Approach Vol, veh/h		1143			1034			326			93	
Approach Delay, s/veh		36.0			30.8			39.9			37.7	
Approach LOS		D			C			D			D	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		26.2	16.6	41.0		24.4	8.9	48.7
Change Period (Y+Rc), s		5.0	5.0	* 5		5.0	3.5	5.0
Max Green Setting (Gmax), s		27.8	19.4	* 52		27.0	6.7	65.0
Max Q Clear Time (g_c+I1), s		11.8	11.5	28.1		4.6	6.1	22.7
Green Ext Time (p_c), s		1.4	0.2	7.9		0.3	0.0	6.8

Intersection Summary	
HCM 6th Ctrl Delay	34.5
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	1027	971	15	5	9
Future Vol, veh/h	25	1027	971	15	5	9
Conflicting Peds, #/hr	20	0	0	21	21	20
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	1070	1011	16	5	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1048	0	-	0	2183	1060
Stage 1	-	-	-	-	1040	-
Stage 2	-	-	-	-	1143	-
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	664	-	-	-	50	272
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	304	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	651	-	-	-	46	261
Mov Cap-2 Maneuver	-	-	-	-	155	-
Stage 1	-	-	-	-	321	-
Stage 2	-	-	-	-	298	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	23.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	651	-	-	-	210
HCM Lane V/C Ratio	0.04	-	-	-	0.069
HCM Control Delay (s)	10.8	-	-	-	23.4
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

SIMTRAFFIC QUEUEING REPORTS

ROAD DIET CONDITIONS

AM & PM PEAK HOUR

Intersection: 4: Del Monte Ave & Reservation Rd

Movement	EB	EB	WB	WB	WB	WB	B39	NB	NB	NB	NB	SB
Directions Served	LT	TR	L	L	T	R	T	L	T	R	R	L
Maximum Queue (ft)	256	227	125	275	261	150	24	277	176	208	160	161
Average Queue (ft)	128	76	101	139	110	74	1	147	86	107	35	116
95th Queue (ft)	226	177	148	233	207	146	30	252	148	184	109	175
Link Distance (ft)	973	973		288	288		278		1813	1813		
Upstream Blk Time (%)				0	0							
Queuing Penalty (veh)				1	2							
Storage Bay Dist (ft)			100			125		450			450	150
Storage Blk Time (%)			11	23	7	0						15
Queuing Penalty (veh)			21	46	14	0						18

Intersection: 4: Del Monte Ave & Reservation Rd

Movement	SB	SB	SB
Directions Served	L	T	TR
Maximum Queue (ft)	172	374	296
Average Queue (ft)	101	110	65
95th Queue (ft)	193	326	249
Link Distance (ft)		571	571
Upstream Blk Time (%)		1	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)	150		
Storage Blk Time (%)	15	0	
Queuing Penalty (veh)	18	0	

Intersection: 5: Vista Del Camino Cir & Reservation Rd

Movement	EB	EB	B39	B39	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	T		L	T	R	LT	R	LT	R
Maximum Queue (ft)	200	364	222	34	160	437	160	113	73	133	100
Average Queue (ft)	118	238	50	1	50	231	47	47	28	60	14
95th Queue (ft)	221	390	215	30	137	398	165	92	67	116	68
Link Distance (ft)		278	288	288		374		295		603	
Upstream Blk Time (%)		11	1	0		2					
Queuing Penalty (veh)		97	5	0		16					
Storage Bay Dist (ft)	175				135		135		50		100
Storage Blk Time (%)	0	19			0	20	0	12	3	4	0
Queuing Penalty (veh)	3	29			0	27	0	4	2	3	0

Intersection: 6: Seacrest Ave & Reservation Rd

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	R	L	T	L	R
Maximum Queue (ft)	132	76	208	260	123	180
Average Queue (ft)	108	28	100	121	81	49
95th Queue (ft)	129	65	173	231	129	123
Link Distance (ft)	39	39		260		736
Upstream Blk Time (%)	43	3		0		
Queuing Penalty (veh)	179	13		3		
Storage Bay Dist (ft)			200		100	
Storage Blk Time (%)			0	2	6	0
Queuing Penalty (veh)			3	3	5	0

Intersection: 7: Driveway/Shopping Center & Reservation Rd

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	T	R	LTR	LT	R
Maximum Queue (ft)	73	116	235	100	35	88	98
Average Queue (ft)	47	88	200	56	7	36	40
95th Queue (ft)	78	112	280	123	28	73	77
Link Distance (ft)		73	221		486	497	
Upstream Blk Time (%)	1	27	10				
Queuing Penalty (veh)	0	220	78				
Storage Bay Dist (ft)	145			75			150
Storage Blk Time (%)	1	27	33	0			0
Queuing Penalty (veh)	8	28	37	1			0

Intersection: 8: De Forest Rd & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	B40	B40	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	T	T	LT	R	LT	R
Maximum Queue (ft)	127	237	61	200	310	86	299	146	44	34	150	75
Average Queue (ft)	27	152	8	46	229	22	90	12	11	8	65	38
95th Queue (ft)	80	253	48	158	360	58	272	89	34	27	128	80
Link Distance (ft)		221			216	216	219	219	421		842	
Upstream Blk Time (%)	0	1		0	23		4	0				
Queuing Penalty (veh)	0	11		0	90		16	1				
Storage Bay Dist (ft)	200		175	175						200		50
Storage Blk Time (%)		6	0	0	27						17	5
Queuing Penalty (veh)		4	0	0	8						12	7

Intersection: 9: Cresent Ave & Reservation Rd

Movement	EB	EB	EB	EB	B40	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	T	L	T	TR	LT	R	LT	R
Maximum Queue (ft)	185	282	267	125	100	245	434	411	98	298	193	75
Average Queue (ft)	48	174	173	54	7	99	233	161	68	80	86	30
95th Queue (ft)	124	267	257	144	51	240	399	341	110	232	164	78
Link Distance (ft)		219	219		216		562	562		681	809	
Upstream Blk Time (%)	0	2	2				0	0				
Queuing Penalty (veh)	0	9	10				0	0				
Storage Bay Dist (ft)	220			100		220			75			50
Storage Blk Time (%)	0	2	26	0		0	14		20	1	34	1
Queuing Penalty (veh)	0	1	19	0		0	11		22	1	13	1

Intersection: 12: Reservation Rd & Eucalyptus St

Movement	EB	EB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	51	381	69	314
Average Queue (ft)	3	217	5	126
95th Queue (ft)	26	423	36	361
Link Distance (ft)		374	39	1034
Upstream Blk Time (%)		3	1	
Queuing Penalty (veh)		20	6	
Storage Bay Dist (ft)	125			
Storage Blk Time (%)		21		
Queuing Penalty (veh)		1		

Zone Summary

Zone wide Queuing Penalty: 1148

Intersection: 4: Del Monte Ave & Reservation Rd

Movement	EB	EB	WB	WB	WB	WB	B39	NB	NB	NB	NB	SB
Directions Served	LT	TR	L	L	T	R	T	L	T	R	R	L
Maximum Queue (ft)	957	949	125	305	366	150	200	475	1837	1843	475	162
Average Queue (ft)	759	732	100	149	251	106	27	256	1260	1298	417	145
95th Queue (ft)	1214	1217	150	258	397	196	138	551	2335	2336	622	183
Link Distance (ft)	973	973		288	288		278		1813	1813		
Upstream Blk Time (%)	42	39		1	10		1		18	20		
Queuing Penalty (veh)	0	0		5	51		9		99	111		
Storage Bay Dist (ft)			100			125		450			450	150
Storage Blk Time (%)			9	21	29	0		0	43	73	31	73
Queuing Penalty (veh)			20	47	57	1		0	69	226	97	37

Intersection: 4: Del Monte Ave & Reservation Rd

Movement	SB	SB	SB
Directions Served	L	T	TR
Maximum Queue (ft)	175	603	571
Average Queue (ft)	152	423	220
95th Queue (ft)	214	803	626
Link Distance (ft)		571	571
Upstream Blk Time (%)		62	7
Queuing Penalty (veh)		0	0
Storage Bay Dist (ft)	150		
Storage Blk Time (%)	66	0	
Queuing Penalty (veh)	34	0	

Intersection: 5: Vista Del Camino Cir & Reservation Rd

Movement	EB	EB	B39	B39	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	T		L	T	R	LT	R	LT	R
Maximum Queue (ft)	200	380	357	286	160	474	160	231	75	597	125
Average Queue (ft)	182	351	305	22	77	396	72	111	34	393	91
95th Queue (ft)	248	381	393	150	164	546	200	196	83	701	178
Link Distance (ft)		278	288	288		374		295		603	
Upstream Blk Time (%)		64	36	1		21		0		20	
Queuing Penalty (veh)		708	199	8		207		0		0	
Storage Bay Dist (ft)	175				135		135		50		100
Storage Blk Time (%)	9	62			1	37	0	42	6	72	1
Queuing Penalty (veh)	80	142			13	87	1	14	10	75	1

Intersection: 6: Seacrest Ave & Reservation Rd

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	R	L	T	L	R
Maximum Queue (ft)	130	78	225	287	125	484
Average Queue (ft)	111	27	168	219	112	169
95th Queue (ft)	119	65	265	331	143	399
Link Distance (ft)	39	39		260		736
Upstream Blk Time (%)	55	3		10		
Queuing Penalty (veh)	286	13		97		
Storage Bay Dist (ft)			200		100	
Storage Blk Time (%)			6	18	32	1
Queuing Penalty (veh)			41	43	33	2

Intersection: 7: Driveway/Shopping Center & Reservation Rd

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	T	R	LTR	LT	R
Maximum Queue (ft)	73	118	237	100	40	96	72
Average Queue (ft)	45	90	227	52	11	38	22
95th Queue (ft)	80	105	245	123	35	78	53
Link Distance (ft)		73	221		486	497	
Upstream Blk Time (%)	1	33	27				
Queuing Penalty (veh)	0	350	250				
Storage Bay Dist (ft)	145			75			150
Storage Blk Time (%)	1	33	51	0			
Queuing Penalty (veh)	11	35	46	1			

Intersection: 8: De Forest Rd & Reservation Rd

Movement	EB	EB	EB	WB	WB	WB	B40	B40	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	T	T	LT	R	LT	R
Maximum Queue (ft)	110	237	199	200	323	56	322	271	218	136	218	75
Average Queue (ft)	35	161	37	95	291	14	272	82	74	37	76	41
95th Queue (ft)	80	256	143	242	311	39	369	259	182	102	164	86
Link Distance (ft)		221			216	216	219	219	421		842	
Upstream Blk Time (%)	0	2		0	67		35	4	0			
Queuing Penalty (veh)	0	19		0	314		165	19	0			
Storage Bay Dist (ft)	200		175	175						200		50
Storage Blk Time (%)		6	0	0	68				3	0	24	14
Queuing Penalty (veh)		10	0	0	38				2	0	14	17

Intersection: 9: Cresent Ave & Reservation Rd

Movement	EB	EB	EB	EB	B40	WB	WB	WB	B34	B34	NB	NB
Directions Served	L	T	T	R	T	L	T	TR	T	T	LT	R
Maximum Queue (ft)	205	292	280	125	276	245	658	652	1643	1646	100	725
Average Queue (ft)	65	205	190	62	49	185	573	540	845	827	93	535
95th Queue (ft)	159	314	275	151	189	335	786	798	1913	1916	115	943
Link Distance (ft)		219	219		216		562	562	1635	1635		681
Upstream Blk Time (%)	0	8	7		2		71	44	12	11		57
Queuing Penalty (veh)	0	40	35		17		337	207	54	50		0
Storage Bay Dist (ft)	220			100		220					75	
Storage Blk Time (%)	0	8	32	0		1	74				79	3
Queuing Penalty (veh)	0	5	39	0		3	109				106	6

Intersection: 9: Cresent Ave & Reservation Rd

Movement	SB	SB
Directions Served	LT	R
Maximum Queue (ft)	152	75
Average Queue (ft)	47	32
95th Queue (ft)	109	73
Link Distance (ft)	809	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	16	6
Queuing Penalty (veh)	6	3

Intersection: 12: Reservation Rd & Eucalyptus St

Movement	EB	EB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	149	395	128	194
Average Queue (ft)	34	378	71	73
95th Queue (ft)	121	429	137	189
Link Distance (ft)		374	39	1034
Upstream Blk Time (%)		22	20	
Queuing Penalty (veh)		220	200	
Storage Bay Dist (ft)	125			
Storage Blk Time (%)	0	61		
Queuing Penalty (veh)	0	16		

Zone Summary

Zone wide Queuing Penalty: 5667

SIDRA LEVEL OF SERVICE REPORTS

ROAD DIET CONDITIONS

AM & PM PEAK HOUR

MOVEMENT SUMMARY

Site: 104 [Del Monte/Reservation - AM]

ROAD DIET SCENARIO
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Del Monte Blvd											
3	L2	248	3.0	0.492	10.0	LOS A	3.0	78.0	0.72	0.76	31.6
8	T1	213	3.0	0.492	10.0	LOS A	3.0	78.0	0.72	0.76	31.5
18	R2	399	3.0	0.451	9.6	LOS A	2.8	70.8	0.74	0.76	31.8
Approach		861	3.0	0.492	9.8	LOS A	3.0	78.0	0.73	0.76	31.6
East: Reservation Road											
1	L2	451	3.0	0.488	10.3	LOS B	2.8	71.6	0.66	0.68	30.5
6	T1	200	3.0	0.488	10.3	LOS B	2.8	71.6	0.66	0.68	32.5
16	R2	220	3.0	0.488	10.3	LOS B	2.8	71.6	0.66	0.68	31.5
Approach		871	3.0	0.488	10.3	LOS B	2.8	71.6	0.66	0.68	31.2
North: Del Monte Blvd											
7	L2	278	3.0	0.440	12.3	LOS B	2.4	61.0	0.79	0.85	29.6
4	T1	273	3.0	0.404	10.7	LOS B	2.0	50.9	0.74	0.78	32.4
14	R2	7	3.0	0.404	10.7	LOS B	2.0	50.9	0.74	0.78	31.5
Approach		557	3.0	0.440	11.5	LOS B	2.4	61.0	0.76	0.81	30.9
West: Reservation Road											
5	L2	18	3.0	0.466	12.9	LOS B	2.4	61.4	0.77	0.84	31.4
2	T1	275	3.0	0.466	12.9	LOS B	2.4	61.4	0.77	0.84	31.3
12	R2	158	3.0	0.279	10.2	LOS B	1.2	30.8	0.75	0.75	31.5
Approach		452	3.0	0.466	12.0	LOS B	2.4	61.4	0.76	0.81	31.4
All Vehicles		2740	3.0	0.492	10.7	LOS B	3.0	78.0	0.72	0.75	31.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 104 [Del Monte/Reservation - PM]

ROAD DIET SCENARIO
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Del Monte Blvd											
3	L2	166	3.0	0.502	10.8	LOS B	3.3	85.4	0.77	0.83	31.5
8	T1	267	3.0	0.502	10.8	LOS B	3.3	85.4	0.77	0.83	31.5
18	R2	632	3.0	0.688	15.5	LOS B	6.1	155.2	0.85	0.98	29.3
Approach		1065	3.0	0.688	13.6	LOS B	6.1	155.2	0.82	0.92	30.2
East: Reservation Road											
1	L2	453	3.0	0.532	11.6	LOS B	3.2	83.0	0.70	0.76	29.9
6	T1	435	3.0	0.744	19.1	LOS B	6.9	176.6	0.86	1.01	28.9
16	R2	199	3.0	0.744	19.1	LOS B	6.9	176.6	0.86	1.01	28.1
Approach		1087	3.0	0.744	16.0	LOS B	6.9	176.6	0.79	0.90	29.2
North: Del Monte Blvd											
7	L2	189	3.0	0.315	10.3	LOS B	1.3	34.2	0.73	0.74	30.4
4	T1	105	3.0	0.213	9.6	LOS A	0.9	22.6	0.73	0.73	33.0
14	R2	9	3.0	0.213	9.6	LOS A	0.9	22.6	0.73	0.73	32.0
Approach		303	3.0	0.315	10.0	LOS B	1.3	34.2	0.73	0.74	31.3
West: Reservation Road											
5	L2	95	3.0	0.453	10.5	LOS B	2.5	63.9	0.74	0.78	32.0
2	T1	310	3.0	0.453	10.1	LOS B	2.5	63.9	0.73	0.77	32.1
12	R2	126	3.0	0.230	7.5	LOS A	1.0	26.8	0.69	0.69	32.8
Approach		531	3.0	0.453	9.5	LOS A	2.5	63.9	0.72	0.75	32.3
All Vehicles		2986	3.0	0.744	13.4	LOS B	6.9	176.6	0.78	0.87	30.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 108 [Reservation/De Forest - AM]

ROAD DIET SCENARIO
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: De Forest Rd											
3	L2	18	3.0	0.079	8.5	LOS A	0.3	7.5	0.67	0.67	32.4
8	T1	3	3.0	0.079	8.5	LOS A	0.3	7.5	0.67	0.67	32.3
18	R2	18	3.0	0.079	8.5	LOS A	0.3	7.5	0.67	0.67	31.4
Approach		38	3.0	0.079	8.5	LOS A	0.3	7.5	0.67	0.67	31.9
East: Reservation Rd											
1	L2	31	3.0	0.669	11.5	LOS B	7.2	184.4	0.44	0.21	32.1
6	T1	731	3.0	0.669	11.5	LOS B	7.2	184.4	0.44	0.21	32.0
16	R2	115	3.0	0.669	11.5	LOS B	7.2	184.4	0.44	0.21	31.1
Approach		877	3.0	0.669	11.5	LOS B	7.2	184.4	0.44	0.21	31.9
North: De Forest Rd											
7	L2	152	3.0	0.374	11.2	LOS B	1.8	45.4	0.72	0.75	30.8
4	T1	1	3.0	0.374	11.2	LOS B	1.8	45.4	0.72	0.75	30.7
14	R2	78	3.0	0.374	11.2	LOS B	1.8	45.4	0.72	0.75	29.9
Approach		231	3.0	0.374	11.2	LOS B	1.8	45.4	0.72	0.75	30.4
West: Reservation Rd											
5	L2	41	3.0	0.767	16.4	LOS B	10.0	255.9	0.82	0.64	30.0
2	T1	816	3.0	0.767	16.4	LOS B	10.0	255.9	0.82	0.64	29.9
12	R2	27	3.0	0.767	16.4	LOS B	10.0	255.9	0.82	0.64	29.1
Approach		885	3.0	0.767	16.4	LOS B	10.0	255.9	0.82	0.64	29.9
All Vehicles		2031	3.0	0.767	13.5	LOS B	10.0	255.9	0.64	0.47	30.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 108 [Reservation/De Forest - PM]

ROAD DIET SCENARIO
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: De Forest Rd											
3	L2	72	3.0	0.362	14.6	LOS B	1.5	39.5	0.77	0.82	29.8
8	T1	12	3.0	0.362	14.6	LOS B	1.5	39.5	0.77	0.82	29.7
18	R2	76	3.0	0.362	14.6	LOS B	1.5	39.5	0.77	0.82	29.0
Approach		159	3.0	0.362	14.6	LOS B	1.5	39.5	0.77	0.82	29.4
East: Reservation Rd											
1	L2	59	3.0	0.818	19.0	LOS B	12.7	325.8	0.89	0.65	28.9
6	T1	840	3.0	0.818	19.0	LOS B	12.7	325.8	0.89	0.65	28.9
16	R2	75	3.0	0.818	19.0	LOS B	12.7	325.8	0.89	0.65	28.2
Approach		974	3.0	0.818	19.0	LOS B	12.7	325.8	0.89	0.65	28.8
North: De Forest Rd											
7	L2	87	3.0	0.271	11.1	LOS B	1.1	27.7	0.72	0.72	30.8
4	T1	1	3.0	0.271	11.1	LOS B	1.1	27.7	0.72	0.72	30.7
14	R2	48	3.0	0.271	11.1	LOS B	1.1	27.7	0.72	0.72	29.9
Approach		137	3.0	0.271	11.1	LOS B	1.1	27.7	0.72	0.72	30.5
West: Reservation Rd											
5	L2	71	3.0	0.942	32.7	LOS C	28.2	723.0	1.00	0.87	24.7
2	T1	945	3.0	0.942	32.7	LOS C	28.2	723.0	1.00	0.87	24.6
12	R2	113	3.0	0.942	32.7	LOS C	28.2	723.0	1.00	0.87	24.1
Approach		1128	3.0	0.942	32.7	LOS C	28.2	723.0	1.00	0.87	24.6
All Vehicles		2398	3.0	0.942	24.7	LOS C	28.2	723.0	0.92	0.77	26.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 109 [Reservation/Crescent - AM]

ROAD DIET SCENARIO
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Crescent Ave											
3	L2	115	3.0	0.489	15.8	LOS B	2.5	64.5	0.78	0.86	29.3
8	T1	23	3.0	0.489	15.8	LOS B	2.5	64.5	0.78	0.86	29.3
18	R2	116	3.0	0.489	15.8	LOS B	2.5	64.5	0.78	0.86	28.5
Approach		254	3.0	0.489	15.8	LOS B	2.5	64.5	0.78	0.86	28.9
East: Reservation Rd											
1	L2	89	3.0	0.710	14.0	LOS B	7.7	195.9	0.74	0.58	30.8
6	T1	695	3.0	0.710	14.0	LOS B	7.7	195.9	0.74	0.58	30.7
16	R2	26	3.0	0.710	14.0	LOS B	7.7	195.9	0.74	0.58	29.9
Approach		810	3.0	0.710	14.0	LOS B	7.7	195.9	0.74	0.58	30.7
North: Crescent Ave											
7	L2	70	3.0	0.306	11.0	LOS B	1.3	33.0	0.72	0.73	31.3
4	T1	57	3.0	0.306	11.0	LOS B	1.3	33.0	0.72	0.73	31.3
14	R2	40	3.0	0.306	11.0	LOS B	1.3	33.0	0.72	0.73	30.4
Approach		166	3.0	0.306	11.0	LOS B	1.3	33.0	0.72	0.73	31.1
West: Reservation Rd											
5	L2	55	3.0	0.854	22.8	LOS C	15.5	397.7	1.00	0.92	27.6
2	T1	816	3.0	0.854	22.8	LOS C	15.5	397.7	1.00	0.92	27.6
12	R2	80	3.0	0.854	22.8	LOS C	15.5	397.7	1.00	0.92	26.9
Approach		952	3.0	0.854	22.8	LOS C	15.5	397.7	1.00	0.92	27.5
All Vehicles		2183	3.0	0.854	17.8	LOS B	15.5	397.7	0.86	0.77	29.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 109 [Reservation/Crescent - PM]

ROAD DIET SCENARIO
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Crescent Ave											
3	L2	144	3.0	0.688	26.2	LOS C	4.4	112.5	0.85	1.04	25.9
8	T1	39	3.0	0.688	26.2	LOS C	4.4	112.5	0.85	1.04	25.8
18	R2	143	3.0	0.688	26.2	LOS C	4.4	112.5	0.85	1.04	25.3
Approach		326	3.0	0.688	26.2	LOS C	4.4	112.5	0.85	1.04	25.6
East: Reservation Rd											
1	L2	159	3.0	0.963	38.7	LOS D	29.2	747.0	1.00	1.26	23.1
6	T1	812	3.0	0.963	38.7	LOS D	29.2	747.0	1.00	1.26	23.0
16	R2	63	3.0	0.963	38.7	LOS D	29.2	747.0	1.00	1.26	22.6
Approach		1034	3.0	0.963	38.7	LOS D	29.2	747.0	1.00	1.26	23.0
North: Crescent Ave											
7	L2	35	3.0	0.216	11.7	LOS B	0.8	20.7	0.74	0.74	31.1
4	T1	14	3.0	0.216	11.7	LOS B	0.8	20.7	0.74	0.74	31.1
14	R2	44	3.0	0.216	11.7	LOS B	0.8	20.7	0.74	0.74	30.2
Approach		94	3.0	0.216	11.7	LOS B	0.8	20.7	0.74	0.74	30.7
West: Reservation Rd											
5	L2	69	3.0	1.018	50.8	LOS F	46.9	1199.6	1.00	1.42	20.6
2	T1	944	3.0	1.018	50.8	LOS F	46.9	1199.6	1.00	1.42	20.6
12	R2	130	3.0	1.018	50.8	LOS F	46.9	1199.6	1.00	1.42	20.2
Approach		1143	3.0	1.018	50.8	LOS D	46.9	1199.6	1.00	1.42	20.6
All Vehicles		2597	3.0	1.018	41.5	LOS D	46.9	1199.6	0.97	1.29	22.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 110 [Reservation/California - AM]

ROAD DIET SCENARIO
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: California Ave											
3	L2	123	3.0	0.190	7.4	LOS A	0.7	18.5	0.61	0.61	31.8
8	T1	9	3.0	0.190	7.4	LOS A	0.7	18.5	0.61	0.61	31.7
18	R2	187	3.0	0.269	8.4	LOS A	1.1	27.4	0.64	0.64	32.3
Approach		319	3.0	0.269	8.0	LOS A	1.1	27.4	0.63	0.63	32.1
East: Reservation Rd											
1	L2	175	3.0	0.718	13.7	LOS B	6.4	165.1	0.60	0.40	30.7
6	T1	695	3.0	0.718	13.7	LOS B	6.4	165.1	0.60	0.40	30.7
16	R2	4	3.0	0.718	13.7	LOS B	6.4	165.1	0.60	0.40	29.9
Approach		874	3.0	0.718	13.7	LOS B	6.4	165.1	0.60	0.40	30.7
North: Driveway											
7	L2	1	3.0	0.007	7.4	LOS A	0.0	0.6	0.66	0.53	33.2
4	T1	1	3.0	0.007	7.4	LOS A	0.0	0.6	0.66	0.53	33.1
14	R2	1	3.0	0.007	7.4	LOS A	0.0	0.6	0.66	0.53	32.2
Approach		3	3.0	0.007	7.4	LOS A	0.0	0.6	0.66	0.53	32.8
West: Reservation Rd											
5	L2	11	3.0	0.880	24.8	LOS C	18.4	470.9	1.00	0.85	27.0
2	T1	736	3.0	0.880	24.8	LOS C	18.4	470.9	1.00	0.85	27.0
12	R2	275	3.0	0.880	24.8	LOS C	18.4	470.9	1.00	0.85	26.3
Approach		1022	3.0	0.880	24.8	LOS C	18.4	470.9	1.00	0.85	26.8
All Vehicles		2218	3.0	0.880	18.0	LOS B	18.4	470.9	0.79	0.64	28.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 110 [Reservation/California - PM]

ROAD DIET SCENARIO
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: California Ave											
3	L2	167	3.0	0.272	9.3	LOS A	1.0	26.8	0.66	0.66	30.8
8	T1	1	3.0	0.272	9.3	LOS A	1.0	26.8	0.66	0.66	30.7
18	R2	99	3.0	0.160	7.7	LOS A	0.6	15.0	0.63	0.63	32.6
Approach		267	3.0	0.272	8.7	LOS A	1.0	26.8	0.65	0.65	31.4
East: Reservation Rd											
1	L2	153	3.0	0.809	18.4	LOS B	10.6	271.4	0.79	0.61	29.0
6	T1	805	3.0	0.809	18.4	LOS B	10.6	271.4	0.79	0.61	28.9
16	R2	1	3.0	0.809	18.4	LOS B	10.6	271.4	0.79	0.61	28.2
Approach		960	3.0	0.809	18.4	LOS B	10.6	271.4	0.79	0.61	28.9
North: Driveway											
7	L2	1	3.0	0.012	8.6	LOS A	0.0	1.1	0.70	0.62	33.0
4	T1	1	3.0	0.012	8.6	LOS A	0.0	1.1	0.70	0.62	32.9
14	R2	3	3.0	0.012	8.6	LOS A	0.0	1.1	0.70	0.62	31.9
Approach		5	3.0	0.012	8.6	LOS A	0.0	1.1	0.70	0.62	32.3
West: Reservation Rd											
5	L2	3	3.0	0.869	23.2	LOS C	17.1	437.6	1.00	0.78	27.6
2	T1	866	3.0	0.869	23.2	LOS C	17.1	437.6	1.00	0.78	27.5
12	R2	163	3.0	0.869	23.2	LOS C	17.1	437.6	1.00	0.78	26.8
Approach		1032	3.0	0.869	23.2	LOS C	17.1	437.6	1.00	0.78	27.4
All Vehicles		2264	3.0	0.869	19.4	LOS B	17.1	437.6	0.87	0.69	28.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

PARKING DATA COLLECTION SHEET

PARKING DATA COLLECTION SUMMARY

LOCATION: Downtown Marina/ Reservation Rd
DATE: January 22, 2019
TIME: 10:00 AM - 5:00 PM (Sundown)
TEAM: KS

Segment	Supply			10:00 AM Count			12:00 PM Count			3:00 PM Count			5:00 PM Count		
	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
1. Del Monte Blvd to Vista Del Camino	5		5	1		1	0		0	0		0	0		0
2. Vista Del Camino to Seacrest Ave		5	5		5	5		3	3		3	3		3	3
3. Seacrest Ave to Shopping Center Dwy		10	10		1	1		0	0		0	0		0	0
4. De Forest Rd to Crescent Ave		8	8		8	8		7	7		8	8		10	10
5. Crescent Ave to California Ave	47	26	73	25	7	32	22	9	31	21	10	31	24	11	35
6. California Ave to Salinas Ave	36	43	79	7	12	19	7	12	19	8	12	20	9	10	19
TOTAL	**88**	**92**	**180**	**33**	**33**	**66**	**29**	**31**	**60**	**29**	**33**	**62**	**33**	**34**	**67**

Segment	Supply			Average			Peak (5:00 PM)		
	EB	WB	Total	EB	WB	Total	EB	WB	Total
1. Del Monte Blvd to Vista Del Camino	5		5	0		0	0		0
2. Vista Del Camino to Seacrest Ave		5	5		4	4		3	3
3. Seacrest Ave to Shopping Center Dwy		10	10		0	0		0	0
4. De Forest Rd to Crescent Ave		8	8		8	8		10	10
5. Crescent Ave to California Ave	47	26	73	23	9	32	24	11	35
6. California Ave to Salinas Ave	36	43	79	8	12	20	9	10	19
TOTAL	**88**	**92**	**180**	**31**	**33**	**64**	**33**	**34**	**67**

Appendix F

Senate Bill 743 Analysis

Memorandum

To: Christine Hopper, City of Marina

From: Michael Schmitt, AICP CTP, PTP, RSP1
Chris Gregerson, P.E., T.E., PTOE, PTP

Re: DRAFT SB 743 Analysis
City of Marina Downtown Specific Plan

Date: January 7, 2021

This memorandum documents SB 743 compliant analysis completed for the proposed Downtown Marina Specific Plan in the City of Marina, CA. The proposed Downtown Specific Plan is expected to consist of multi-family residential, office buildings, and retail uses. With the passage of SB 743, Vehicle Miles Travelled (VMT) has become an important indicator for determining if new development will result in a "significant transportation impact" under the California Environmental Quality Act (CEQA). This memorandum summarizes the VMT analysis and resultant findings for the proposed Downtown Specific Plan.

Methodology and Assumptions

Based on the land use information provided, for the purposes of SB 743 analysis and the determination of transportation related significant impacts, the following land uses were analyzed:

- Residential
- Office
- Retail

For residential and office, the Association of Monterey Bay Area Governments Regional Travel Demand Model (AMBAG TDM) was used as the principle tool to determine VMT. The AMBAG TDM contains a base year of 2015 and future year of 2040, both of which were used to determine the VMT impact of the proposed residential and office land uses. Based on the nature of the land use descriptions provided, retail was analyzed qualitatively.

The City of Marina currently has draft VMT thresholds and analysis guidelines that were used as the basis of the analysis contained herein.

Project Land Use Model Input Conversion

In order to represent the land uses in the Downtown Specific Plan in the AMBAG TDM, the land uses needed to be converted into households, population, and jobs. While it is understood that the proposed Downtown Specific Plan does not have a set number of residential units or the size of the total non-residential land uses, in order to be conservative, the maximum amount of each of the three land use types were assumed as a part of this analysis. Therefore, for this analysis it is assumed that the Downtown Specific Plan is comprised of 2,904 multi-family residential units, 511,000 square-feet of office uses, and 875,000 square-feet of retail uses.

In order to convert the non-residential land uses to the number of employees input into the model, the ratio of daily trip generation rates listed in the *Trip Generation Handbook, 10th Edition* published by the Institute of Transportation Engineers (ITE) between 1,000 square-feet and employees was used. The number of daily trips produced by the size of each of the land use codes for office and retail was used to back calculate the number of employees based on each land use's equation for the number of trips that are produced by each employee.

While the AMBAG TDM uses dwelling units as its input, there is no differentiation between single-family and multi-family residential in terms of trip generation and distribution. However, the AMBAG TDM is a hybrid model as its processes follow the traditional four-step model (trip generation, trip distribution, mode choice, and trip assignment), but it also contains a population synthesis step based on socioeconomic data collected throughout the AMBAG region to produce individuals living in each household that contain their own trip making characteristics. Therefore, the population synthesis step was completed for the proposed Downtown Specific Plan to develop the population for the project. It should be noted that the AMBAG TDM provides the population synthesis process for changes in land use in the future, but not for changes in land use for the base year. However, a process was developed to use the future population synthesis step with the base model. This methodology is described in detail in the Base Year Population Synthesis section of this memorandum.

The proposed Downtown Specific Plan land uses were distributed throughout the Traffic Analysis Zones (TAZs) that represent the Specific Plan area based on the growth between the base year and future year for those zones. In order to maintain a conservative analysis, TAZs identified as having negative growth were revised to maintain the same number of households and jobs as existed in the base year of the model. It was assumed that all land uses analyzed as a part of the Downtown Specific Plan were in addition to land uses that currently exist rather than a reuse of existing buildings. Note that the growth between the base year and future year for the TAZs representing the Downtown Specific Plan were assumed to be a part of the project and the change in land uses is much smaller between 2040 No Project and 2040 Plus Project compared to 2015 No Project and 2015 Plus Project. The 2040 MTP version of the AMBAG TDM was used to represent 2040 No Project Conditions. The land use totals for the proposed Downtown Specific Plan input into the model are summarized in Exhibit 1 below.

Exhibit 1 – AMBAG TDM Land Use Inputs by Scenario

Scenario	Households	Office Employment	Retail Employment
2015 Existing (No Project)	4,707	1,364	854
2015 Plus Project	7,611	2,897	2,604
Delta (Project Land Use)	**2,904**	**1,533**	**1,750**
2040 MTP (No Project)	6,695	2,884	1,006
2040 Plus Project	7,611	2,897	2,604
Delta	**916**	**13**	**1,598**

Base Year Population Synthesis

As noted above, the AMBAG TDM process is not intended to be used for the Base Year scenario, but for the purposes of this analysis its use was required for Existing plus Project Conditions. Therefore, the process was modified slightly for use in analyzing the proposed Downtown Specific Plan. The AMBAG TDM Population Synthesis process uses the distribution of households by vehicle ownership (0, 1, 2, 3, or 4+), household size (1, 2, 3, or 4+), household income (eight categories), and the number of households without children or elderly people (under 18 or over 65, respectively). The households are distributed into these categories based on socioeconomic data collected throughout the region and grouped by TAZ.

In order to use the results of the Base Year version of the Population Synthesis process for the Existing plus Project Conditions, factors were developed on a TAZ by TAZ basis that were applied to the calculated

VMT per Capita values for each TAZ. These factors were developed by running two separate base year model runs with identical land use inputs, but with one model run where the Population Synthesis process was completed. The outputs of both model runs were then used to calculate VMT per Capita for each TAZ using the process outlined in the Analysis section of this memorandum. The factor for each TAZ was calculated by taking the inverse of the percent difference between the VMT per Capita for each model run on a TAZ by TAZ basis. For example, if the VMT per Capita was 12.0 without the Population Synthesis process being completed, but 12.4 when the Population Synthesis process was completed, the factor to get back to the original calculated VMT per Capita would be 96.67% (12.4 – 12.0 = 0.4, 0.4/12.0 = 0.033, 1- 0.033 = 0.9667 or 96.67%). The calculated factors were applied to all TAZs in the model for the Existing Plus Project scenario prior to evaluating the transportation impact.

Analysis

The following sections detail the analysis completed:

Residential and Office Land Uses

The VMT for the residential land uses was computed by combining the production VMT for all Home-Based trip purposes. VMT for non-residential land uses was computed from the attraction Home-Based Work VMT. The external VMT for residential land uses was determined by multiplying the calibrated external trip distance by TAZ determined using big data (Teralytics) by the total internal-external (I-X) Home-Based trips for that TAZ. The external VMT for non-residential land uses was determined by multiplying the calibrated external trip distance by TAZ determined previously by the total internal-external (I-X) Home-Based Work trips for that TAZ.

To determine the share of the non-residential VMT for the office land uses, the total number of trips attracted to each TAZ were calculated by multiplying the model's underlying trip generation rate for the Home-Based Work trip purpose by employment type. The office land use share of the total VMT was then calculated by dividing the number of trips by office employment by the total number of Home-Based Work Trips calculated using the trip generation rates. The VMT for the office land uses was calculated by multiplying the office land use share by the total Home-Based Work VMT (including External VMT).

Residential and office VMT per Capita and VMT per Employee, respectively, for each TAZ were computed by dividing the residential and office VMT by TAZ by the total population or total office employees. A VMT per Capita and VMT per Employee weighted average was calculated for the TAZs comprising proposed Downtown Specific Plan based on population and employment, respectively.

Kimley»Horn

Exhibit 2 summarizes the VMT per Capita and VMT per Employee for the proposed Downtown Specific Plan by scenario. As shown in

Exhibit 2, For Existing No Project and Existing Plus Project scenarios, the residential land uses result in a VMT per Capita below the City's draft threshold, but a VMT per Employee slightly above the City's draft threshold. A scenario was run where only the proposed Downtown Specific Plan's office and retail employees were added to the model to avoid completing the Population Synthesis and factoring process. This scenario resulted in similar outcomes at the other Existing scenarios.

For the 2040 No Project and 2040 Plus Project scenarios, the analysis resulted in similar outcomes. For both the 2040 No Project and 2040 Plus Project scenarios, both the residential and office land uses exceed the City's draft thresholds.

Exhibit 2 – Vehicle Miles Traveled (VMT) by Land Use and Scenario

Scenario	VMT/Capita (Residential)	VMT/Employee (Office)
Calculated VMT per Capita or VMT per Employee by Scenario		
Draft City Threshold	**10.9**	**6.6**
2015 Existing (No Project)	12.7	8.5
2015 Plus Project	11.7	8.0
2015 Plus Project (EMP Only)	11.8	8.1
2040 MTP (No Project)	13.8	8.8
2040 Plus Project	12.8	7.2
Over Threshold?		
2015 Existing (No Project)	**Yes**	**Yes**
2015 Plus Project	**Yes**	**Yes**
2015 Plus Project (EMP Only)	**Yes**	**Yes**
2040 MTP (No Project)	**Yes**	**Yes**
2040 Plus Project	**Yes**	**Yes**

Retail Land Uses

As described previously, the retail land uses were analyzed qualitatively. Page 4 and 7 of the Draft City of Marina SB 743 Implementation Guidelines[1] specifically addresses some of the key issues surrounding how a local serving retail store should be evaluated in terms of its VMT impact. As described, the threshold for significance is "a net increase." This means that if a proposed retail use results in additional VMT, it would result in a finding of significance.

Local serving retail primarily serves pre-existing needs (i.e. they do not generate new trips because they meet existing demand). Because of this, local-serving retail uses can be presumed to reduce trip lengths when a new store is proposed. Essentially, the assumption is that someone will travel to a newly constructed local serving store because of a its proximity, rather than the proposed retail store fulfilling an unmet need (i.e. the person had an existing need that was met by the retail located further away and is now traveling to the new retail use because it is closer to the person's origin location). This results in a trip on the roadway network becoming shorter, rather than a new trip being added to the roadway network, which would result in an impact to the overall transportation system. Conversely, residential and office land uses often drive new trips given that they introduce new participants to the transportation system. The Draft City of Marina SB 743 Implementation Guidelines provides for a general threshold of 50,000 square-feet as an indicator as to whether a retail store can be considered local serving or not. Based on the understanding that no single store within the estimated 875,000 square feet of retail uses will exceed 50,000 square feet, it is presumed that the proposed retail uses will not result in a net increase in VMT and would therefore not result in a significant impact.

Exhibit 3 has been provided to visually demonstrate the basis of this finding. Note that the numbers provided are for illustrative purposes as the analysis technique used is qualitative.

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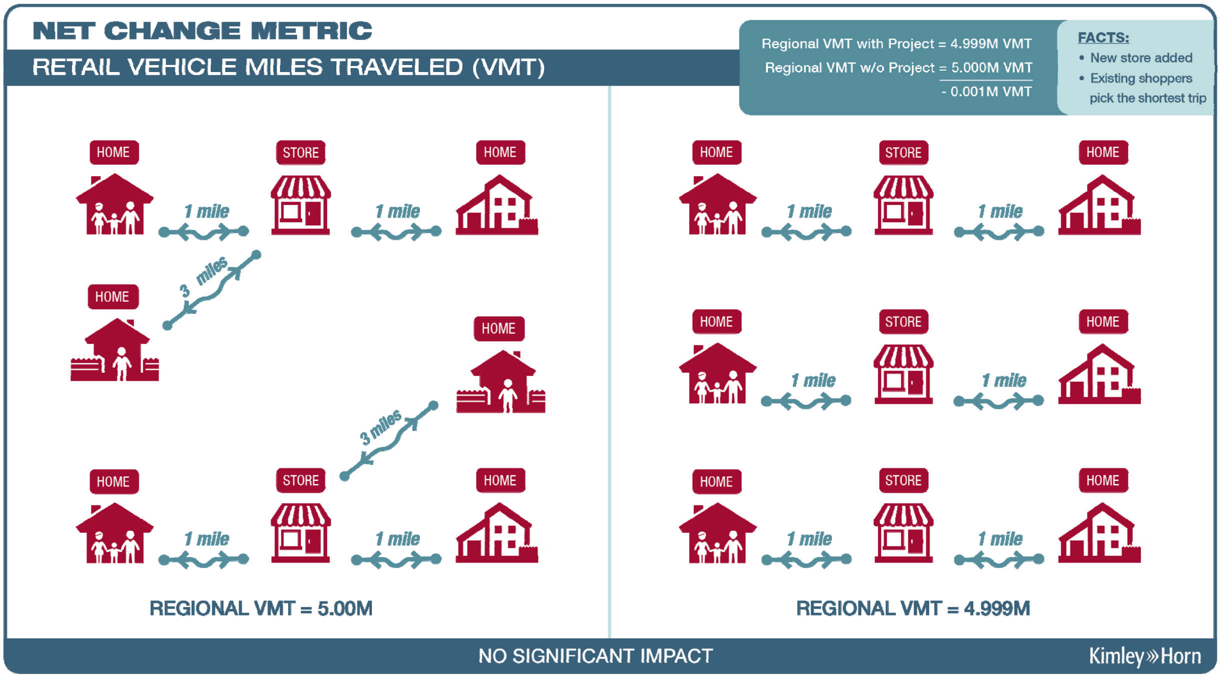
[1] *Draft City of Marina SB 743 Implementation Guidelines, December 16, 2020*

Exhibit 3 – Illustration of the VMT Reducing Effect of Local Serving Retail



If regional serving retail is ultimately determined to be part of the project, those sites will need to be evaluated on their own merits as detailed project descriptions become available in the future.

Findings

Based on the results of this analysis, the following findings are made:

- The residential land uses do exceed the threshold of significance for the Project scenarios. **The project is determined to have a significant transportation impact for residential development.**
- The office land uses do exceed the threshold for the Existing Plus Project scenario and the 2040 plus Project scenario. **As a result, the project is determined for office land uses to have a significant transportation impact.**
- The proposed project's retail stores are assumed to be smaller than 50,000 square feet per store, per the Draft City of Marina SB 743 Implementation Guidelines, **they are presumed to not have a significant impact.**

VMT Reducing Design Principles, Policies, and Improvements

Given the lack of specifics that are available for this specific level plan, it is not possible to fully account for the effect of specific design principles, policies, and improvements that will reduce VMT as part of this analysis. However, these approaches are still important considerations in evaluating the results of this VMT analysis and as appropriate they should be accounted for in subsequent VMT evaluations within the Downtown Specific Plan area.

VMT Reducing Design Principles
Design elements of the project that are VMT reducing, may reduce project VMT. The following are considerations consistent with the Downtown Specific Plan:

- Compactness of design/Transit Oriented Development,
- A range of housing options,
- Mixed uses,
- Walkable community, and
- A variety of transportation options, and
- The preservation of open space.

Transit Oriented Development
The Marina Transit Station, which is also planned to accommodate the new SURF BRT project, is within walking distance from Downtown. Bus stops will be at the station and also on Del Monte Boulevard at Palm Avenue.

Mixed-Use Specific Principles
Mixed-Use combines two or more types of land uses into a building or set of buildings that are physically or functionally integrated. Mixed-Use, as planned for the Downtown, seeks to promote smart growth principles including:

- Diversity and appropriate mix of uses
- Pedestrian Orientation
- Community Focal Point
- Excellence in Design
- Coordination of development strategies
- Sustainability

The plan includes guidance for specific use types (commercial, residential, etc.) and based on location (downtown, mixed-use/commercial areas, etc.) that contribute to favorable conditions for active transportation through denser development. As the AMBAG Model does not include specific functionality to reflect the impact of many of the design principles outlined and the exact nature, location, and timing of these VMT reducing considerations is not known, the additional impact of these design features will need to be evaluated at the individual project-level rather than at the programmatic level. However, it should be noted that these considerations will have a material impact on development project analysis although it will vary on the location and design features selected.

VMT Reducing Policies and Improvements
This section discusses the establishment of a framework for a programmatic approach to policies and improvements that respond to the need for feasible Vehicle Miles Travelled (VMT) mitigation within the Downtown Specific Pan Plan area. Identified VMT mitigation opportunities include:

1. Transportation Demand Measures
2. Implementation of Marina's SB 375 Measures
3. Transit and Multimodal Improvements
4. Establishment of a VMT Bank/Exchange

Transportation Demand Measures

VMT mitigation often relies heavily on Transportation Demand Measures (TDMs). These measures generally represent two basic approaches: policy and infrastructure. The California Air Pollution Control Officers Association (CAPCOA) guide for Quantifying Greenhouse Gas Mitigation Measures, last updated in 2010, is one of the primary bases for estimating mitigation effects in California. Although this resource is invaluable, care needs to be taken in terms of its application given that some TDMs have limited sample sizes and many of the measures are based on experiences in highly urbanized areas. Depending on the selected TDMs, it can be challenging from the standpoint of mitigation monitoring and are often unpopular with project applicants because they may need to be managed and paid for in perpetuity. These limitations have led jurisdictions to increasingly consider programmatic approaches to VMT mitigation.

As part of the Marina's development of its SB 743 Guidance, a review of TDM measures was undertaken for the purpose of identifying TDMs that are both appropriate to the City and setting reasonable maximums for their resultant VMT reductions. Future project level analyses should rely on the City's current TDM options and associated maximum reductions as provided for in its SB 743 Guidance. Although, many of the TDM options may be appropriate to individual project implementation, many of the identified TDMs may be better suited to a programmatic approach where they are implemented across the entire Downtown Specific Plan area. The following TDMs have been identified as the potential basis for a programmatic approach to TDM implementation within the Downtown Specific Plan Area:

- Reduce Parking Supply
- Transit Stops
- Mandatory Travel Behavior Change Program
- Promotions & Marketing
- Emergency Ride Home (ERH) Program
- Bike Share
- Implement on-street and on-site Pedestrian facilities
- Implement/Improve on-street and on-site Bicycle facilities
- Traffic Calming Improvements

Implementation of the City of Marina SB 375 Measures

Pursuant to Senate Bill (SB) 375, AMBAG prepared a Sustainable Communities Strategy (SCS) that was incorporated into the Regional Transportation Plan (RTP). SB 375 requires that the RTP include an SCS, which outlines growth strategies that better integrate land use and transportation planning and help reduce the state's greenhouse gas emissions from cars and light trucks. There are two mutually important facets to the SB 375 legislation: reducing VMT and encouraging more compact, complete, and efficient communities for the future. As identified in the AMBAG RTP/SCS, the region is projected to meet or exceed these targets, and significantly lower greenhouse gas emissions by 2040. The AMBAG RTP/SCS has also identified several strategies to achieve these goals. The strategies focus on integrating land use planning and transportation improvements. Some of the key strategies identified in the RTP/SCS that would apply to the Downtown Specific Plan are mentioned below:

Land Use Strategies

- Improve job-housing balance in the region
- Focus new growth around transit

Transportation Strategies

- Improve transit network
- Promote and improve active transportation
- Promote shared mobility

Multimodal Improvements

In terms of transit, the AMBAG model currently includes the Marina Transit Station located within the Downtown Specific Plan Area. MST is currently planning the implementation of the SURF BRT service that will connect Marina to Monterey, a primary commute route. It is reasonable to assume that at a minimum of a 4% mitigation effect would result if a supporting transit infrastructure, as are being planned along this route. It is likely the potential impact of transit may be higher given that Highway 1 and Highway 68 is not planned to be improved in the future and growth will continue to occur as shown in the AMBAG model.

Participation in a VMT Bank

Programmatic approaches that rely on collectively funding larger infrastructure projects appear to hold great promise for VMT mitigation as they allow a project to obtain an amount of mitigation commensurate with their impact, include only a single payment without the complexity of ongoing management, and do not require on-going mitigation monitoring. Programmatic approaches can also provide a public benefit in terms of funding transportation improvements that would not otherwise be constructed, resulting in improvements to congestion, GHG emissions, increased transportation choices, and additional opportunities for active transportation.

Under a VMT Banking framework, multiple VMT reducing projects are grouped together and their associated VMT reductions are monetized in the form of credits. These credits are then purchased for the purposes of mitigating VMT in excess of determined impact thresholds. The underlying projects may be either regionally or locally beneficial to the area in which the project is located.
The City will most likely develop a VMT Banking program or similar, however it is early in development so there is insufficient detail to estimate the impact on VMT mitigation of such a program. However, the implementation of a VMT Bank could provide meaningful opportunities for development projects that might otherwise not have the ability to mitigate their impact.

VMT Mitigation

As discussed previously, given the lack of specifics that are available for this downtown level plan, it is not possible to fully account for the effect of specific design principles, policies and improvements that will reduce VMT as part of this analysis. Although many of the VMT reducing design principles, policies, and improvements that are described in the prior section may ultimately mitigate and/or potentially reduce the VMT impacts outlined in this evaluation, necessary details to assure implementation and appropriately evaluate their effect are not yet available.

It is important to note that the approaches to VMT reduction described in the prior section are supportive of existing City policies and guidelines. However, the VMT reducing approaches cited in the prior section will require further planning and development as well as committed funding sources including those from participants in the development community (many of which many not be identified yet as large areas of land may be further subdivided into specific projects and developments). As such, it is reasonable to assume that the findings of this analysis reflect a worst-case scenario given the guidance within the City of Marina SB 743 Guidance.

Conclusion

Based on the results of this analysis, the following findings are made:

- The residential land uses do exceed the threshold of significance for the Project scenarios. **The project is determined to have a significant transportation impact for residential development.**
- The office land uses do exceed the threshold for the Existing Plus Project scenario and the 2040 plus Project scenario. **As a result, the project is determined for office land uses to have a significant transportation impact.**
- The proposed project's retail stores are assumed to be smaller than 50,000 square feet per store, per the Draft City of Marina SB 743 Implementation Guidelines, **they are presumed to not have a significant impact.**

Note that specific development projects may perform better or worse than the overall impacts determined by this programmatic level analysis. However, in the aggregate it is likely that this VMT analysis represents a worst-case scenario given that it does not fully represent the effect of planned VMT reducing design principles or the effect that targeted mitigation measures may ultimately have on development projects.

Appendix G

Energy Calculations

Marina DVSP

Last Updated: April 19, 2023

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Concrete/Industrial Saw	1	8	81	0.73	Demo	116,055.93
Excavators	3	8	158	0.38	Demo	318,000.13
Dozers	2	8	247	0.40	Demo	348,860.91
Dozers	3	8	247	0.40	Site Prep	22,561.06
Tractors/Loaders/Backhoes	4	8	97	0.37	Site Prep	12,148.12
Excavators	2	8	158	0.38	Grading	23,611.99
Graders	1	8	187	0.41	Grading	15,076.04
Dozers	1	8	247	0.40	Grading	19,427.58
Scrapers	2	8	367	0.48	Grading	69,278.61
Tractors/Loaders/Backhoes	2	8	97	0.37	Grading	15,691.32
Cranes	1	7	231	0.29	Building Construction	101,875.26
Forklifts	3	8	89	0.20	Building Construction	103,177.75
Generator Sets	1	8	84	0.74	Building Construction	120,103.54
Tractors/Loaders/Backhoes	3	7	97	0.37	Building Construction	182,031.93
Welders	1	8	46	0.45	Building Construction	39,995.87
Air Compressors	1	6	78	0.48	Arch Coating	4,356.26
Pavers	2	8	130	0.42	Paving	15,238.61
Paving Equipment	2	8	132	0.36	Paving	13,262.62
Rollers	2	8	80	0.38	Paving	9,432.36
					Total Fuel Used	**1,550,185.90**
						(Gallons)

Construction Phase	Days of Operation
Demolition	4175
Site Preparation	180
Grading	465
Building Construction	4110
Paving	330
Architectural Coating	330

WORKER TRIPS				
Constuction Phase	**MPG [2]**	**Trips**	**Trip Length (miles)**	**Fuel Used (gallons)**
Demolition	24.0	15	10.8	28,181.25
Site Preparation	24.0	18	10.8	1,458.00
Grading	24.0	20	10.8	4,185.00
Building Construction	24.0	2,534	10.8	4,686,633.00
Paving	24.0	15	10.8	2,227.50
Architectural Coating	24.0	507	10.8	75,289.50
			Fuel	**4,797,974.25**

VENDOR TRIPS				
Constuction Phase	**MPG [2]**	**Trips**	**Trip Length (miles)**	**Fuel Used (gallons)**
Demolition	7.4	-	7.3	-
Site Preparation	7.4	-	7.3	-
Grading	7.4	-	7.3	-
Building Construction	7.4	537	7.3	2,177,244.73
Paving	7.4	-	7.3	-
Architectural Coating	7.4	-	7.3	-
			Fuel	**2,177,244.73**

HAULING TRIPS				
Trip Class	**MPG [2]**	**Trips**	**Trip Length (miles)**	**Fuel Used (gallons)**
Hauling Trips	7.4	7,523	20.0	20,332.43
			Fuel	**20,332.43**

Total Gasoline Consumption (gallons)	**4,797,974.25**
Total Diesel Consumption (gallons)	**3,747,763.06**

Sources:

[1] United States Environmental Protection Agency. 2018. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES2014b* . July 2018. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100UXEN.pdf.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2018. *National Transportation Statistics 2018* . Available at: https://www.bts.gov/sites/bts.dot.gov/files/docs/browse-statistical-products-and-data/national-transportation-statistics/223001/ntsentire2018q4.pdf.

Marina DVSP

Last Updated: April 19, 2023

Populate one of the following tables (Leave the other blank):

Annual VMT	
Annual VMT:	35,699,555

OR

Daily Vehicle Trips	
Daily Vehicle Trips:	
Average Trip Distance:	

Fleet Class	Fleet Mix
Light Duty Auto (LDA)	0.574472
Light Duty Truck 1 (LDT1)	0.023499
Light Duty Truck 2 (LDT2)	0.208360
Medium Duty Vehicle (MDV)	0.100658
Light Heavy Duty 1 (LHD1)	0.009582
Light Heavy Duty 2 (LHD2)	0.003700
Medium Heavy Duty (MHD)	0.020556
Heavy Heavy Duty (HHD)	0.046714
Other Bus (OBUS)	0.003193
Urban Bus (UBUS)	0.001632
School Bus (SBUS)	0.001047
Motorhome (MH)	0.000482
Motorcycle (MCY)	0.006105

Fuel Economy (MPG)	
Passenger Vehicles	24.0
Light-Med Duty Trucks	17.4
Heavy Trucks/Other	7.4
Motorcycles	43.9

Fleet Mix

Vehicle Type	Percent	Fuel Type	Annual VMT: VMT	Vehicle Trips: VMT	Fuel Consumption (Gallons)
Passenger Vehicles	*57.45%*	*Gasoline*	20,508,395	0.00	854,516.45
Light-Medium Duty Trucks	*33.25%*	*Gasoline*	11,870,709	0.00	682,224.65
Heavy Trucks/Other	*8.69%*	*Diesel*	3,102,506	0.00	419,257.50
Motorcycle	*0.61%*	*Gasoline*	217,946	0.00	4,964.60

Total Gasoline Consumption (gallons)	**1,541,705.70**
Total Diesel Consumption (gallons)	**419,257.50**